

NON-MOTORIZED TRANSPORTATION PLAN

West Earl Township, Lancaster County

West Earl Township, 157 West Metzler Road, Brownstown, PA 17508

RETTEW Project No. 046472000

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RETTEWSM

West Earl Township Non-Motorized Transportation Plan

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Introduction

Community Background

West Earl Township is located in Lancaster County, approximately 10 miles northeast of the City of Lancaster. The township borders Akron Borough and Earl, Ephrata, Manheim, Upper Leacock and Warwick Townships in Lancaster County. The Cocalico Creek forms the western boundary of West Earl Township, which is the boundary with Warwick Township. Significant natural resources in the township include the Conestoga River and fertile agricultural soils.

Land use in West Earl Township varies from very rural to suburban landscapes. Much of the land in the eastern, central, and southern parts of the township is being actively used for agriculture as evidenced by large parcels devoted to crop production. Population is centered around the three villages of Brownstown, Farmersville, and Talmage and several residential subdivisions located along the US-222, PA-272, and PA-772 corridors. Most commercial and industrial uses are located near the US-222, PA-272, and PA-772 interchange. These three arterial roads are the main thoroughfares through the township. Most of the roadways maintained by the Township are low volume and less congested but also less suited to multiple modes of transportation. Other than trail sections in the three Township parks and scattered sidewalk throughout the villages and subdivisions, there exists little to no non-motorized infrastructure for travel between destinations.

Benefits of Non-Motorized Transportation

The following are benefits of non-motorized transportation:

- Increased public health benefits through recreational use and physical activity
- Reduced automobile use as short trips can be made by non-motorized travel
- Improvements to local air quality through reduction of automobile use
- Enhanced quality of life through increased alternative transportation opportunities
- Increased property values near non-motorized transportation modes and trails
- Increased economic activity through spending at local businesses
- Increased access to cultural and historical resources

For the purposes of this plan, non-motorized transportation modes include walking, running, and bicycling. Also considered are the use of scooters and strollers. These modes may be used for recreational purposes, to reach a destination, or to commute to work. As development and the price of fuel increase, and people look to improve their own health and the health of the environment, the number of people opting for non-motorized transportation is only expected to increase. In Lancaster County, recreational bicycling and walking is increasing in popularity, and new and existing rail-to-trail facilities are either being constructed or extended. Per the Centers for Disease Control and Prevention, regular physical activity is

one of the most important things people can do for their health. It can help individuals control weight, reduce risk of cardiovascular disease, reduce risk for type 2 diabetes and metabolic syndrome, reduce risk of some cancers, strengthen bones and muscles, and improve mental health and mood. Further, the Community Preventive Services Task Force, an independent, nonfederal, voluntary panel of public health and prevention experts, found that physical activity increased among individuals in communities with new or improved projects or policies combining transportation (e.g., pedestrian or cycling paths) with land use and design components (e.g., access to public parks).

Plan Approach, Purpose, and Goals

The Township understands the vision of a connected, safe, pedestrian and bicycle friendly community is a long-term goal to be achieved over the next 20-30 years. The Township's vision of a non-motorized transportation system is to provide opportunities for people to be more physically active, for children to walk or bike to school, for people to commute to work without their cars, and to connect local communities and destinations.

West Earl Township recognizes the public health crisis of obesity and inactivity both in Pennsylvania and across the nation which is caused in part by dependence on motorized transportation. The Township acknowledges that the primary mode of transit for most residents and visitors is by automobile and that non-motorized transportation is a secondary consideration. To that end, the Township has determined that it is necessary to plan for and implement safe and appropriate transportation facilities to accommodate pedestrians and bicyclists. This Plan:

- Serves as a supplement to the existing Conestoga Valley Region Strategic Comprehensive Plan and will lay the foundation for a network of non-motorized transportation facilities within the township that provides safe, accessible connections between destinations within and surrounding West Earl Township.
- Gathers relevant non-motorized transportation data, identifies current and future needs and opportunities, and incorporates key stakeholder and public input.
- Discusses private and public implementation methods for initiating construction and installation of non-motorized transportation facilities and signage, identifies the key stakeholders, and lays out a phasing plan for the Township to prioritize short- and long-term improvements.

This Plan is meant to be used and handled often as the Township moves forward with implementation. The implementation methods and phasing plan are meant to be used as a checklist to "get work done." The top priority projects are detailed to thoroughly describe the project and provide typical cross-sections for reference and consideration during the design phase of these and similar improvement projects. As key projects are implemented, the Township will review and update the Plan to define new short term improvements.

Public Involvement

West Earl Township formed a steering committee that included an elected official on the Township Board of Supervisors, Township employees, representatives from businesses, organizations, Conestoga Valley School District, the Lancaster County Planning Commission, Township residents, and the consulting team. The Steering Committee participated in the planning process throughout the development of this Plan and met twice during the project. Two public meetings were held at regularly scheduled West Earl Township Planning Commission meetings, and key observations and suggestions were received from Planning Commission members and the Township Engineer.

Existing Conditions / Data Collection and Analysis

Areas of Existing Sidewalk / Bike Routes

Areas of existing sidewalk are located primarily in isolated pockets throughout West Earl Township with minimal interconnectivity between these locations. These pockets correlate with residential subdivisions that have an internal pedestrian network but few options for easily and safely reaching desired destinations without the use of an automobile. The Village of Brownstown is located in close proximity to the US-222, PA-272, and PA-772 interchange and has a long history as the heart of West Earl Township. As such, there is a concentration of residences, businesses, and community facilities typical of core communities. The Village of Brownstown contains the largest concentration of sidewalk and the greatest potential for an interconnected pedestrian network that would allow all users to safely and conveniently navigate to their destination.

Included as Appendix II to this Plan is Existing Sidewalk Conditions mapping that depicts all properties in West Earl Township on which sidewalk is present and assigns a rating of "Good", "Repair", or "Replace" to each property. The mapped information is derived from a data table the Township created in order to assess sidewalk condition and to assist in code enforcement. As part of this planning process, the consulting team performed a field view to confirm and update the Township's existing sidewalks assessment. These updates are reflected on the Existing Sidewalk Conditions mapping.

Currently in West Earl Township there are no designated or dedicated bicycle facilities or routes. There are trails within the three Township parks; otherwise, there are only on-road connections to designated bicycle routes or trails outside the township, which include the Warwick-Ephrata Rail Trail (WERT) in Akron Borough and a designated primarily on-road bicycle route into Lancaster City, starting at the Oregon Road/Oregon Pike intersection in Manheim Township.

Data Collection and Analysis

To gauge the existing motorized and non-motorized transportation demand in West Earl Township, available U.S. Census data was gathered and presented in the following table:

S0801: Commuting Characteristics by Sex

Geographic Area: West Earl Township, Lancaster County, Pennsylvania

SUBJECT	2009 PERCENT	2016 PERCENT	CHANGE 2009 TO 2016
Workers 16 years or over	100.0	100.0	
Male	58.7	51.8	-6.9
Female	41.3	48.2	+6.9
Mode to Work			
Drove alone	70.0	70.7	+0.7
2-person carpool	12.8	2.7	-10.1
3-or-more person carpool	1.6	4.7	+3.1
Public Transportation (excluding taxicab)	0.0	1.0	+1.0
Bicycle or walked	6.0	8.0	+2.0
Taxicab, motorcycle, or other mode	1.0	1.5	+0.5
Worked at home	8.6	11.5	+2.9

Source: U.S. Census Bureau's 2005-2009 and 2012-2016 American Community Survey 5-Year Estimates

Based on this U.S. Census data, bicycling or walking as a mode of travel to work has increased by 2% between 2009 and 2016. Although more detailed datasets are not available, it is important to note that bicycling and walking trips are often for social, school, errands, recreation, and other types of trips that are not included in the U.S. Census data. The more people that choose non-motorized transportation as a preferred mode for either commuting to work, recreation, or another purpose, the greater the need for non-motorized transportation facilities in the township that are safe and provide as direct a route as possible between destinations.

Based on input and experience provided by Township residents and staff, there are formal and recreational bicycle rides that occur within the township, and up to six bicycling and running events are held each year. Roads upon which bicyclists frequent are Farmersville Road, West Metzler Road, Turtle Hill Road, and Locust Street. A discussion of potential measures, locations, and design guidelines for these roads can be found in the Project Selection, Evaluation, and Design section of this Plan.

Identification of Destinations and Connections / Project Selection, Evaluation, and Design

Destinations and Connections

Pedestrians and bicyclists who are not outside for recreational purposes are ultimately trying to reach a predetermined destination, whether it is to their place of residence, school, work, park, bus stop, commercial area, or other community facility. Through this planning process, key destination types identified included schools, businesses, restaurants, and mass transit stops. For West Earl Township, the top priority locations (where all key destination types are represented and clustered) were determined to be the **Village of Brownstown** and the **Oregon Pike (PA-272) corridor / Schaum's Corner**. These identified locations are considered to be key destinations of significant importance and those that promote a high level of human activity.

Future non-motorized connections between specific destinations were identified and appear in the following table and in Appendix III:

CONNECTING TO		VIA
• Village of Brownstown	<ul style="list-style-type: none"> • Sylvan B. Fisher Park • Township Community Park • Village of Talmage 	South State Street (PA-772)
• Village of Brownstown	<ul style="list-style-type: none"> • Oregon Pike (PA-272) corridor • Red Rose Transit Authority (RRTA) bus stop 	West Main Street (SR 1010)
• Village of Brownstown	<ul style="list-style-type: none"> • Oregon Pike (PA-272) corridor 	North State Street (PA-772)
• Village of Brownstown	<ul style="list-style-type: none"> • Oregon Pike (PA-272) corridor • Red Rose Transit Authority (RRTA) bus stop 	North Church Street (T-676)
• Village of Brownstown	<ul style="list-style-type: none"> • Village of Farmersville 	W. Farmersville Road (SR 1010)
• South State Street (PA-772)	<ul style="list-style-type: none"> • Brownstown Elementary School 	School Lane Avenue (T-778)

CONNECTING TO		VIA
<ul style="list-style-type: none"> • Creek Hill Subdivision • Oregon Pike (PA-272) corridor • Red Rose Transit Authority (RRTA) bus stop • Westgate Subdivision 	<ul style="list-style-type: none"> • Sylvan B. Fisher Park • Township Community Park 	Stone Quarry Road (T-397)
<ul style="list-style-type: none"> • West Earl Township Building 	<ul style="list-style-type: none"> • Oregon Pike (PA-272) corridor 	W. Metzler Road (T-603) North Church Street (T-676)
<ul style="list-style-type: none"> • Eagle View Estates Subdivision/Township Park 	<ul style="list-style-type: none"> • Akron Borough • Oregon Pike (PA-272) corridor 	Tobacco Road (SR 1022) Old Akron Road (SR 1041)
<ul style="list-style-type: none"> • Fairmount Homes Retirement Community 	<ul style="list-style-type: none"> • Village of Farmersville 	Katze Boucle Weeg (SR 1013) E. Farmersville Road (SR 1010)

Projects and Preliminary Costs

West Earl Township is actively involved in a multi-phase project on East Main Street in the Village of Brownstown to address existing deteriorated curbs and sidewalks that compromise safety for pedestrians and children walking to Brownstown Elementary School and various other nearby community facilities. The translation of the identified connections above into projects for implementation, incorporating other identified projects, and determining priorities is occurring with the recognition that the East Main Street curb and sidewalk improvements are the #1 priority for the Township.

In determining priority projects, West Earl Township considered the following three factors:

- Overall Benefit / Completes a Necessary Link
- Ease of Implementation / Total Project Cost
- Public Input

The top two priority sidewalk projects for this Plan evolved from feedback received through the Steering Committee and the public meetings of the Township Planning Commission. These two groups achieved a consensus on the top priority locations of the **Village of Brownstown** and the **Oregon Pike (PA-272) corridor / Schaum's Corner**. The top priority projects of **South State Street** and **North Church Street**, as described below, may need to be phased as funding becomes available through various sources.

PROJECT	LENGTH	DESCRIPTION	DESTINATIONS	NOTES	COST
South State Street (between just south of School Lane Ave and just south of Township Park)	2,050'	<ul style="list-style-type: none"> • 1,300 linear feet of curb and sidewalk • 750 linear feet of sidewalk only • 3 crosswalks • 4 ADA curb ramps 	<ul style="list-style-type: none"> • Village of Brownstown • Sylvan B. Fisher Park • Township Community Park • Village of Talmage 	<ul style="list-style-type: none"> • Shared implementation with developer 	\$189,250
North Church Street (between the church and W. Metzler Road)	2,100'	<ul style="list-style-type: none"> • 2,100 linear feet of curb and sidewalk • 5 crosswalks • 10 ADA curb ramps 	<ul style="list-style-type: none"> • Oregon Pike (PA-272) corridor • Red Rose Transit Authority (RRTA) bus stop • Village of Brownstown • West Earl Township Building 	<ul style="list-style-type: none"> • Residents already walking this street to businesses and RRTA bus stop on Oregon Pike (PA-272) • Context-sensitive design, with curbing to be determined at time of design 	\$250,750

For these top priority projects, the estimated costs for curb and sidewalk construction shown were based on actual bid results from PennBID (Pennsylvania's Electronic Document and Bid Management Program).

- Curb - \$35 per linear foot (LF)
- Sidewalk - \$12 per square foot (SF)

For the total costs shown above, the cost for each crosswalk was assumed to be \$250 for standard 6" white line striping (2 lines), and the length of each crosswalk was assumed to be 25 feet. The cost for each ADA curb ramp was assumed to be \$5,000. Other additional costs may include addressing environmental clearances, historical and natural resources impacts, engineering costs, additional stormwater, pavement restoration, utility relocation, and construction contingencies. These factors may raise the overall cost of a particular project considerably; therefore, separate construction cost opinions, prepared when preliminary design discussions are had, will be required for each curb and sidewalk project that is considered for public funding.

In contrast, bicyclists in West Earl Township primarily travel rural roads, and these are not well suited to the construction of dedicated bike lanes or paths as active farmland comes right up to the edge of the paved cartway. However, the consulting team, via field view, identified locations along these roads where pedestrians and bicyclists might need to stop and rest while climbing up a steep hill. At those locations, the Township intends to work with adjoining property owners to have asphalt surface "pull-off rest areas"

constructed and related signage installed as opportunities present themselves and funding allows. Locations where “pull-off rest areas” are to be constructed along the shoulder of a road are described as follows:

STREET/ROAD	DIRECTION	LOCATION
Turtle Hill Road (T-783)	Heading East	Steep uphill just west of 114 Turtle Hill Road
Turtle Hill Road (T-783)	Heading East	Steep uphill at Belle & Evans
Turtle Hill Road (T-783)	Heading East	Long uphill between Hurst Produce Auction and 262 Turtle Hill Road
Turtle Hill Road (T-783)	Heading east at Old Farmersville Road Bridge	Steep uphill to cross bridge and beyond – place pull-off just before bridge and stop sign
W. Metzler Road (T-603)	Heading West	Long uphill between 470 W. Metzler Road and High Road intersection
W. Metzler Road (T-603)	Heading East	Long uphill from the Pool Road intersection
Locust Street (T-795)	Heading West	Long uphill west of N. Maple Avenue intersection and east of Township Wastewater Treatment Plant

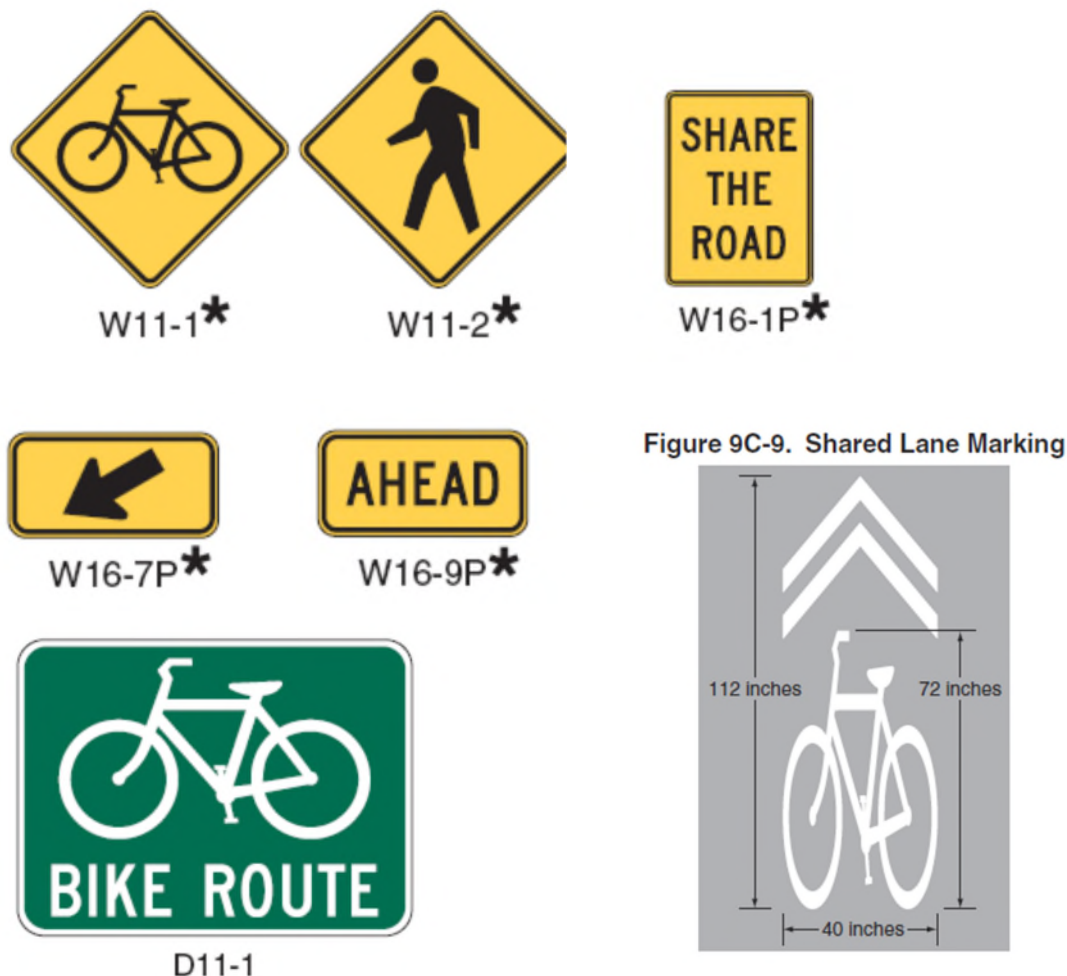
These identified locations for pull-off rest areas are on Township-owned and maintained roadways. Additional factors, such as the existing grade and any right-of-way acquisition, will be addressed at the design stage; however, the estimated cost for a pull-off rest area, dimensioned at 8' x 50' (400 square feet), is approximately \$1,780. This figure assumes a unit cost of \$40 per square yard (SY) that is equivalent to a paved trail.

Design Guidelines

Typical cross-sections for reference and consideration during future curb and sidewalk design and construction will guide the Township in determining where curb and sidewalk (with no grass strip), curb and sidewalk (with grass strip), and sidewalk only should be placed. This determination is site specific and will be based on the location of existing curb and sidewalk facilities, physical constraints (e.g. building locations, walls, utility poles, drainage, etc.) and pedestrian safety. The assignment of a specific cross-

section to a specific project or portions of a project should be done in consultation with the West Earl Township Planning Commission and PennDOT, as applicable. These typical cross-sections for each of the curb and sidewalk options are included as Appendix IV to this Plan.

The previously specified pull-off rest areas should be used in conjunction with signage. Signing of shared roadways should indicate to bicyclists that advantages exist to using these routes as compared with alternative routes. It will be important that the Township continuously maintain these routes so that they continue to remain adequate for bicycle travel. Signage also helps to alert motorists that bicycles may be present and may include such signage, as specified by the U.S. Department of Transportation, Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* 2009.



Source: U.S. Department of Transportation, Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* 2009

Policy and Implementation

It is important to establish a framework for both private and public implementation so the Township's effort can be focused. The heart of the community is the Village of Brownstown and is the area of the township where public funding options are most feasible.

In West Earl Township, the following key stakeholders involved with curb and sidewalk replacement and/or installation have been identified:

- Developers (either already having sidewalk deferred or looking to develop property in the township)
- Property owners
- Conestoga Valley School District
- Municipal government of West Earl Township
- Pennsylvania Department of Transportation (PennDOT)

The following methods of implementation the Township might take to construct and/or repair curb and sidewalk have been identified:

- Calling in sidewalk deferrals that were granted to developers and businesses
- Requiring new developers to install or improve sidewalk per cross-section
- Pursuing outside grant funding sources, with financial contribution toward a required local match by affected property owners
- Code enforcement in areas of high priority locations/projects
- Private construction of sidewalk through a sidewalk installation/maintenance ordinance

PUBLIC IMPLEMENTATION

Potential Funding Sources

The Village of Brownstown is located in close proximity to the US-222, PA-272, and PA-772 interchange and has a long history as the heart of West Earl Township. As such, there is a concentration of residences, businesses, and community facilities typical of core communities. The Village of Brownstown contains the largest concentration of sidewalk and the greatest potential for an interconnected pedestrian network that would allow all users to safely and conveniently reach their desired destination. However, poor sidewalk condition and discontinuity presents a variety of challenges and is a safety concern for pedestrians, who are using the street as a more feasible walking route in many areas. The close distribution of community facilities, existing sidewalk deficiencies, and the Township's intent to improve safety, walkability and connectivity make the Village of Brownstown a good fit for public funding programs.

Public funding resources include federal, state, regional, and local government and quasi-government grant and loan programs. These programs may be offered on an annual basis, or may be a one-time funding opportunity, and they may or may not require matching funds. The Township may wish to consider requiring affected residents and businesses to contribute to any match.

There are a multitude of funding programs that could be used to help fund curbs and sidewalks. A table of potential funding sources and related details is included as Appendix V to this Plan.

PRIVATE IMPLEMENTATION

West Earl Township views the implementation of this Plan as a shared initiative. To that end, private property owners, including developers, are considered part of the solution. The Township has adopted a Sidewalk Ordinance, which contains provisions, including, but not limited to, the following:

- The Board of Supervisors shall determine where sidewalks shall be constructed and surfaced along the public highway and streets of the Township.
- Upon the enactment of an ordinance requiring installation of sidewalks along one or more identified streets, the Code Enforcement Officer shall serve written notice to require property owners to install sidewalk within 180 days from the date of such notice.
- The need for and the type of repairs or resurfacing to be made to existing sidewalks shall be determined by the Code Enforcement Officer.

Shared Responsibility and Collaboration

1. The Township may require additional standards in Chapter 152: Streets and Sidewalks of the Township's Code of Ordinances, per the typical cross-sections, to clarify the requirements for developers to install curb and sidewalk.
2. The Township may consider requiring repair and/or installation of curb and sidewalk via code enforcement in areas of high priority locations/projects. Chapter 152: Streets and Sidewalks of the Township's Code of Ordinances makes clear that the property owner is responsible.

Proposed Policies

- Utilize current sidewalk alignment where sidewalks are in reasonably good condition. Utilize typical cross-sections in a context-sensitive manner and where no sidewalks (and curbs) are present or are in poor condition.
- Provide for shared bicycle use with pedestrian or motor vehicle traffic, typically on lower volume roadways with a signed route ("Bike Route", "Share The Road") with pull-off rest areas / bicycle lanes / sharrows where appropriate.
- Create 8' wide paved cartway shoulder, where possible, in conjunction with or separate from curb and sidewalk installation/replacement work.
- Accept right-of-way dedication in rural areas of the township through the plan submission process in order to make accommodations for future pedestrian and bicycle facilities.
- Utilize the PennDOT Connects Program to identify priority transportation areas and communicate them to PennDOT.

Phasing Plan

This section sets forth a phasing plan for all identified projects. For each project, the table lists the responsible party/parties, proposed type of improvement, the ease of implementation, the priority status, and the timeframe to implement. These qualifiers are described in more detail below.

- Ease of Implementation – classified as easy, moderate, or challenging, this field rates the level of difficulty of the proposed project and lists key steps that will be required to complete the project.
- Priority Status – classified as low, medium, or high, this field can also be thought of as the level of importance or criticality to the township's non-motorized transportation system. Priority status does not necessarily correspond directly to the implementation timeframe, as there could be projects that are considered a low priority, but are easy to implement, and are therefore projected to be completed in a short or medium timeframe. Conversely, there may also be proposed projects that are of a medium to high priority, but due to circumstances surrounding the project (e.g. necessary partners or other project components that are not yet constructed), they may not be completed in the near term.
- Timeframe to implement – classified as short, medium, or long, this field identifies when the project will be implemented. Although the Township will first focus on short term improvements, it should also consider components of medium to long term projects that may take multiple years to implement.

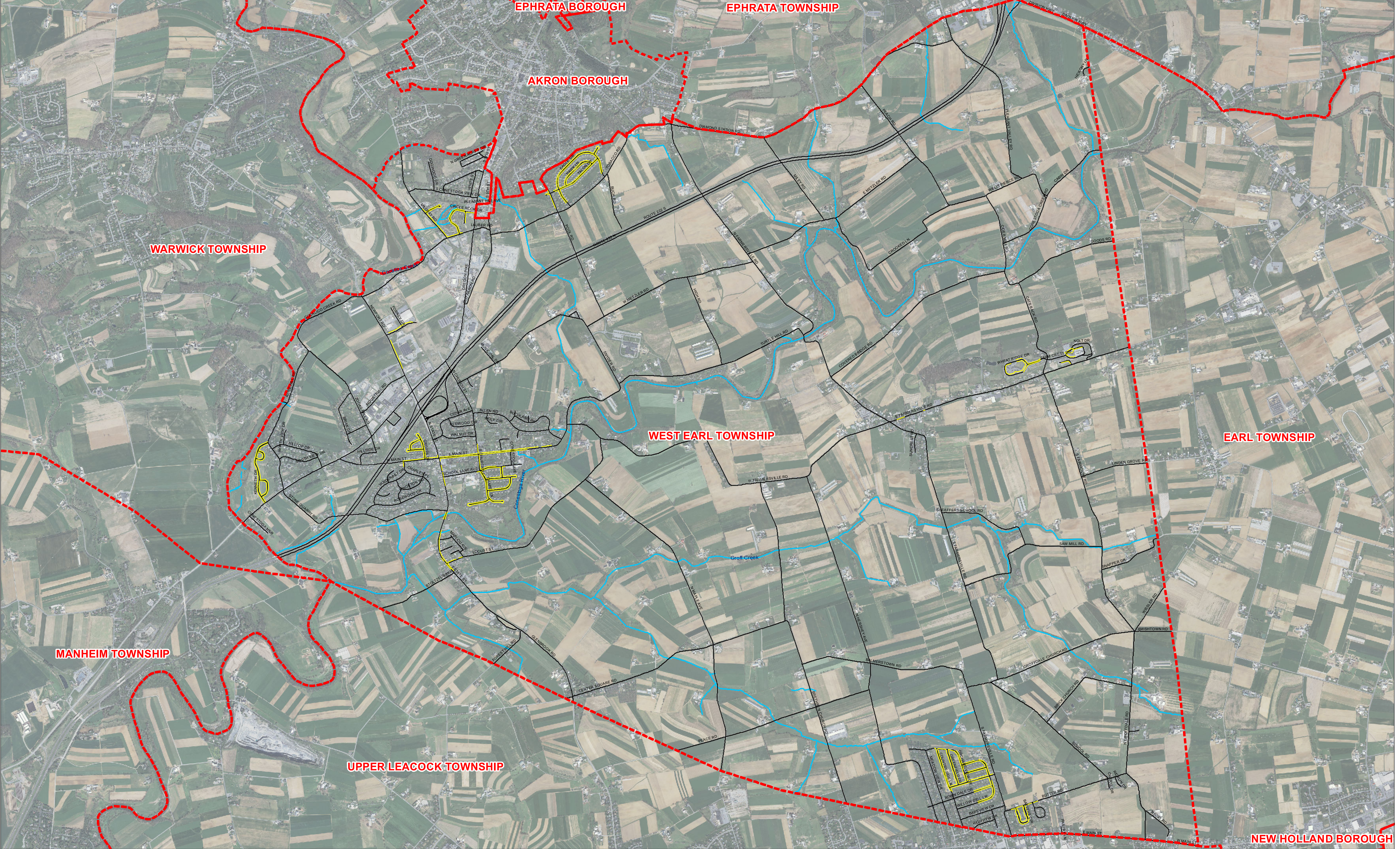
PROJECT	RESPONSIBILITY	TYPE OF IMPROVEMENT	EASE OF IMPLEMENTATION	PRIORITY STATUS	TIMEFRAME TO IMPLEMENT
South State Street (between just south of School Lane Ave and just south of Township Park)	<ul style="list-style-type: none"> • West Earl Township • PennDOT • Developers 	<ul style="list-style-type: none"> • Curb and Sidewalk 	Easy <ul style="list-style-type: none"> • PennDOT permits required • Developer intends to construct portion of curb and sidewalk 	High	Short
North Church Street (between the church and W. Metzler Road)	<ul style="list-style-type: none"> • West Earl Township • Property owners 	<ul style="list-style-type: none"> • Curb and Sidewalk 	Easy <ul style="list-style-type: none"> • Easements may be required 	High	Short to Medium

PROJECT	RESPONSIBILITY	TYPE OF IMPROVEMENT	EASE OF IMPLEMENTATION	PRIORITY STATUS	TIMEFRAME TO IMPLEMENT
North State Street (between Main Street and Oregon Pike)	<ul style="list-style-type: none"> West Earl Township PennDOT Developers Property owners 	<ul style="list-style-type: none"> Curb and Sidewalk 	Challenging <ul style="list-style-type: none"> Easements may be required PennDOT permits required Providing bicycle facilities complicated by highway interchange 	Medium	Medium to Long
West Main Street (between State Street and Oregon Pike)	<ul style="list-style-type: none"> West Earl Township PennDOT Property owners 	<ul style="list-style-type: none"> Curb and Sidewalk 	Moderate <ul style="list-style-type: none"> Easements may be required PennDOT permits required 	Medium	Medium to Long
School Lane Avenue (between school and South State Street)	<ul style="list-style-type: none"> West Earl Township School District Property owners 	<ul style="list-style-type: none"> Curb and Sidewalk 	Moderate <ul style="list-style-type: none"> Easements may be required Tight right-of-way 	Medium	Medium
PA-272/Church Street intersection	<ul style="list-style-type: none"> West Earl Township PennDOT Developers 	<ul style="list-style-type: none"> Curb and Sidewalk Pedestrian Improvements at intersection 	Moderate <ul style="list-style-type: none"> Contingent upon development timeline PennDOT permits required Access will be required to RRTA bus stop 	Medium	Medium
PA-772/Main Street intersection	<ul style="list-style-type: none"> West Earl Township PennDOT Property owners 	<ul style="list-style-type: none"> Traffic Signal Upgrade Pedestrian Improvements at intersection 	Moderate <ul style="list-style-type: none"> Easements may be required PennDOT permits required 	Medium	Medium

PROJECT	RESPONSIBILITY	TYPE OF IMPROVEMENT	EASE OF IMPLEMENTATION	PRIORITY STATUS	TIMEFRAME TO IMPLEMENT
W. Metzler Road (between Township building and North Church Street)	<ul style="list-style-type: none"> West Earl Township 	<ul style="list-style-type: none"> Sidewalk Shared Roadway/Use Path 	Moderate <ul style="list-style-type: none"> Easements may be required 	Medium	Long
Pull-off rest areas	<ul style="list-style-type: none"> West Earl Township Property owners 	<ul style="list-style-type: none"> Bicycle/Pedestrian pull-off rest areas and signage 	Moderate <ul style="list-style-type: none"> Easements may be required Property owner involvement Tight rights-of-way 	Medium	Long
Stone Quarry Road (between Oregon Pike and South State Street)	<ul style="list-style-type: none"> West Earl Township Property owners PennDOT 	<ul style="list-style-type: none"> Shared Roadway 	Challenging <ul style="list-style-type: none"> Length of project Tight right-of-way Roadway geometry 	Low	Long
Trails at Township Building	<ul style="list-style-type: none"> West Earl Township 	<ul style="list-style-type: none"> Trail Loop 	Moderate <ul style="list-style-type: none"> Land donation anticipated 	Low	Long
Village of Farmersville Sidewalk	<ul style="list-style-type: none"> West Earl Township PennDOT Property owners 	<ul style="list-style-type: none"> Curb and Sidewalk (internal network) 	Challenging <ul style="list-style-type: none"> Easements may be required PennDOT permits required 	Low	Long

APPENDIX I.

AREAS OF EXISTING SIDEWALK



client: location: legend: scale: date: map data: file number: 12-213-01

West Earl Township
Existing Sidewalk Map

West Earl Township,
Lancaster County, PA

Existing Sidewalks

Municipalities

Road Centerline

1"=1200'

9/9/15

File Name: WestEarTwp_StreetMap
Project Number: 12-213-01
Data Source: Lancaster County GIS Department
Coordinate System: State Plane, Zone 3702, Pennsylvania South
Horizontal Datum: NAD 1983
Vertical Datum: NAVD 1988

1200 600 0 1200 2400

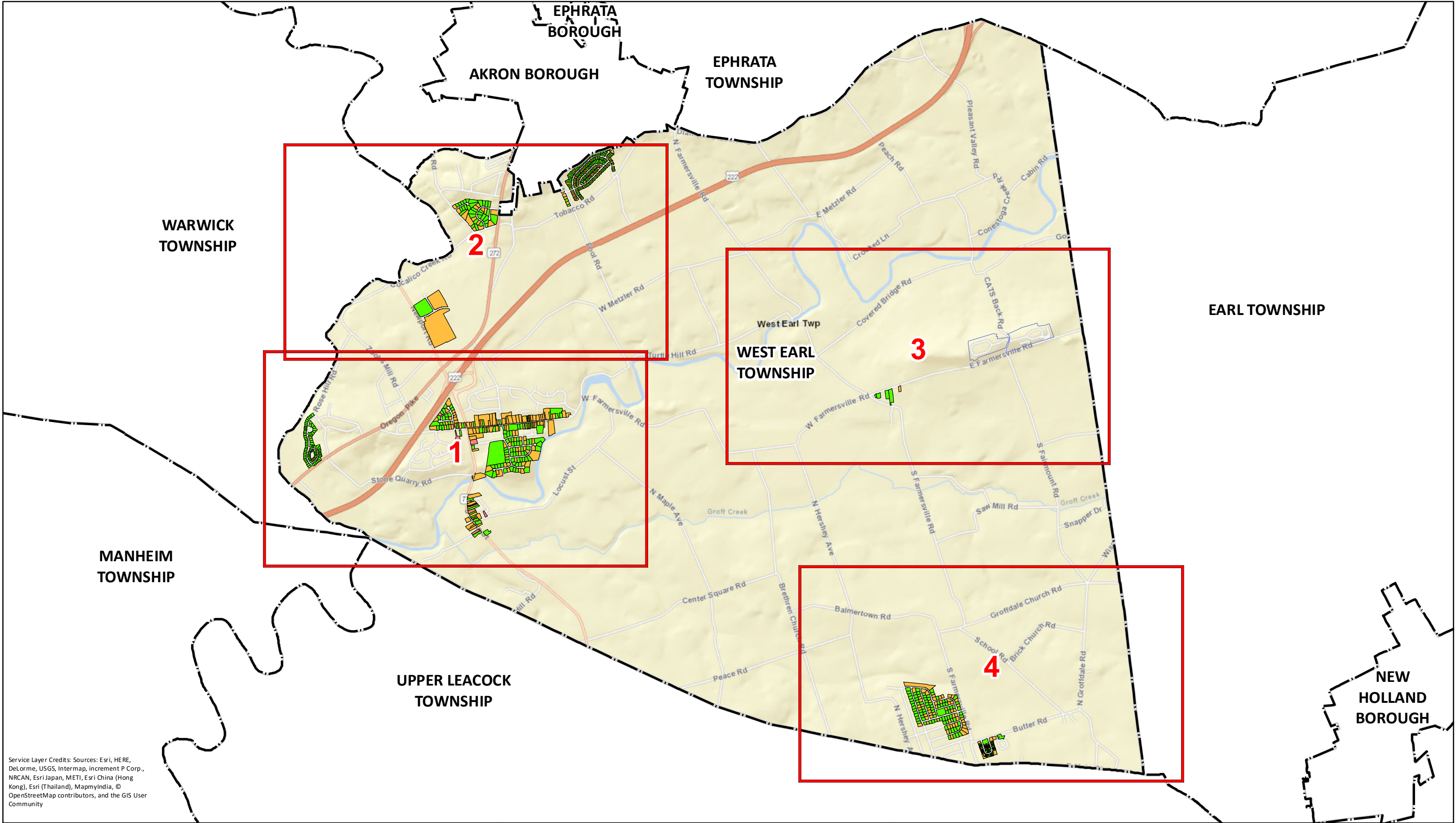
Feet

b

BECKER
ENGINEERING
115 MILLERSVILLE ROAD
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APPENDIX II.

EXISTING SIDEWALK CONDITIONS MAPPING



West Earl Township

Non-Motorized Transportation Plan Existing Sidewalk Conditions

Key Map

Project No. 046472000

Sidewalk Condition

Good

Repair

Replace

Stream

Private Property

Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018

N

W

E

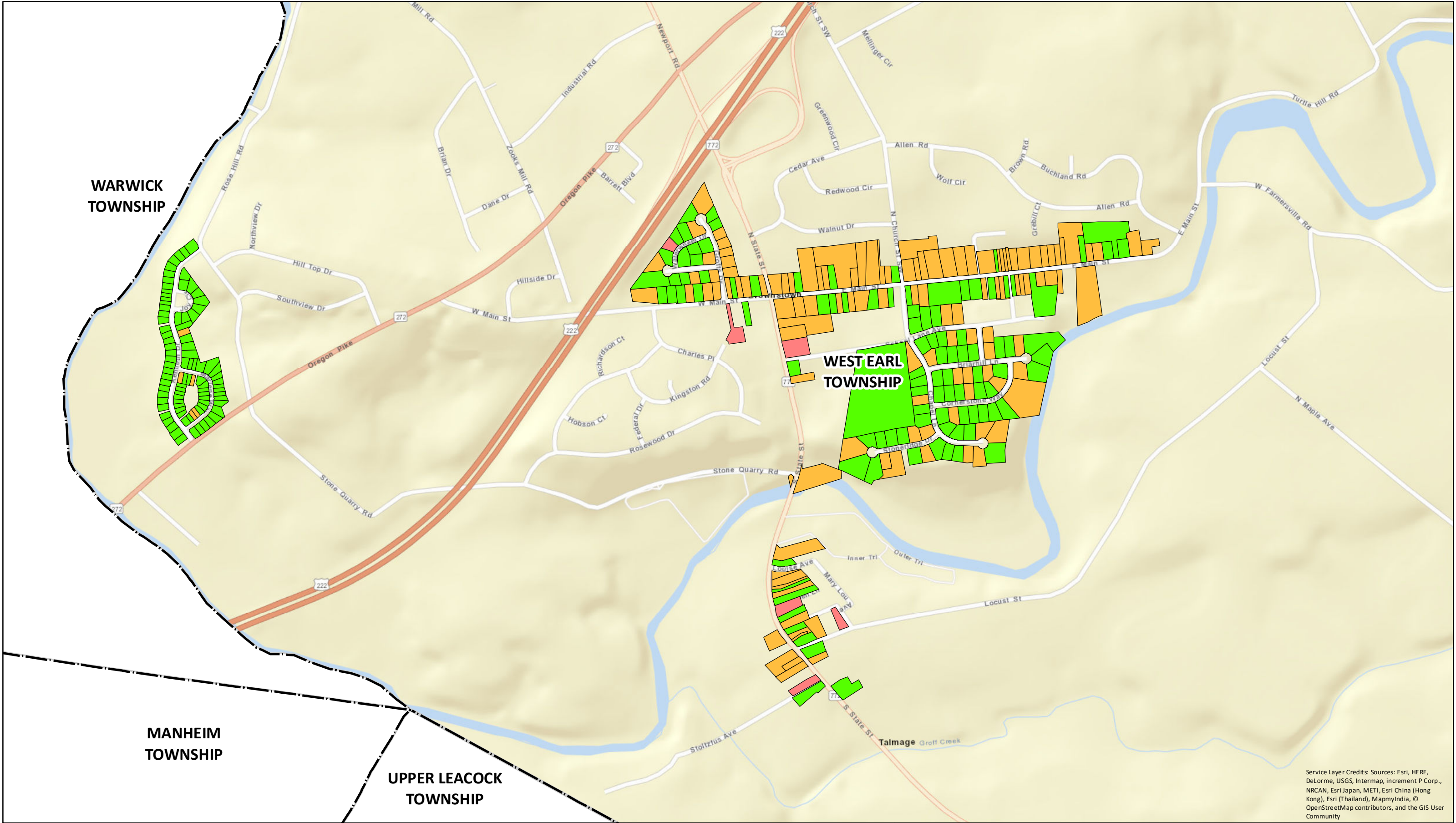
S

1 inch = 3,000 feet

0

3,000

Feet



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

West Earl Township

Non-Motorized Transportation Plan Existing Sidewalk Conditions

Sheet 1 of 4

Project No. 046472000

Sidewalk Condition

Good

Repair

Replace

Stream

Private Property

Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018

N

E

S

W

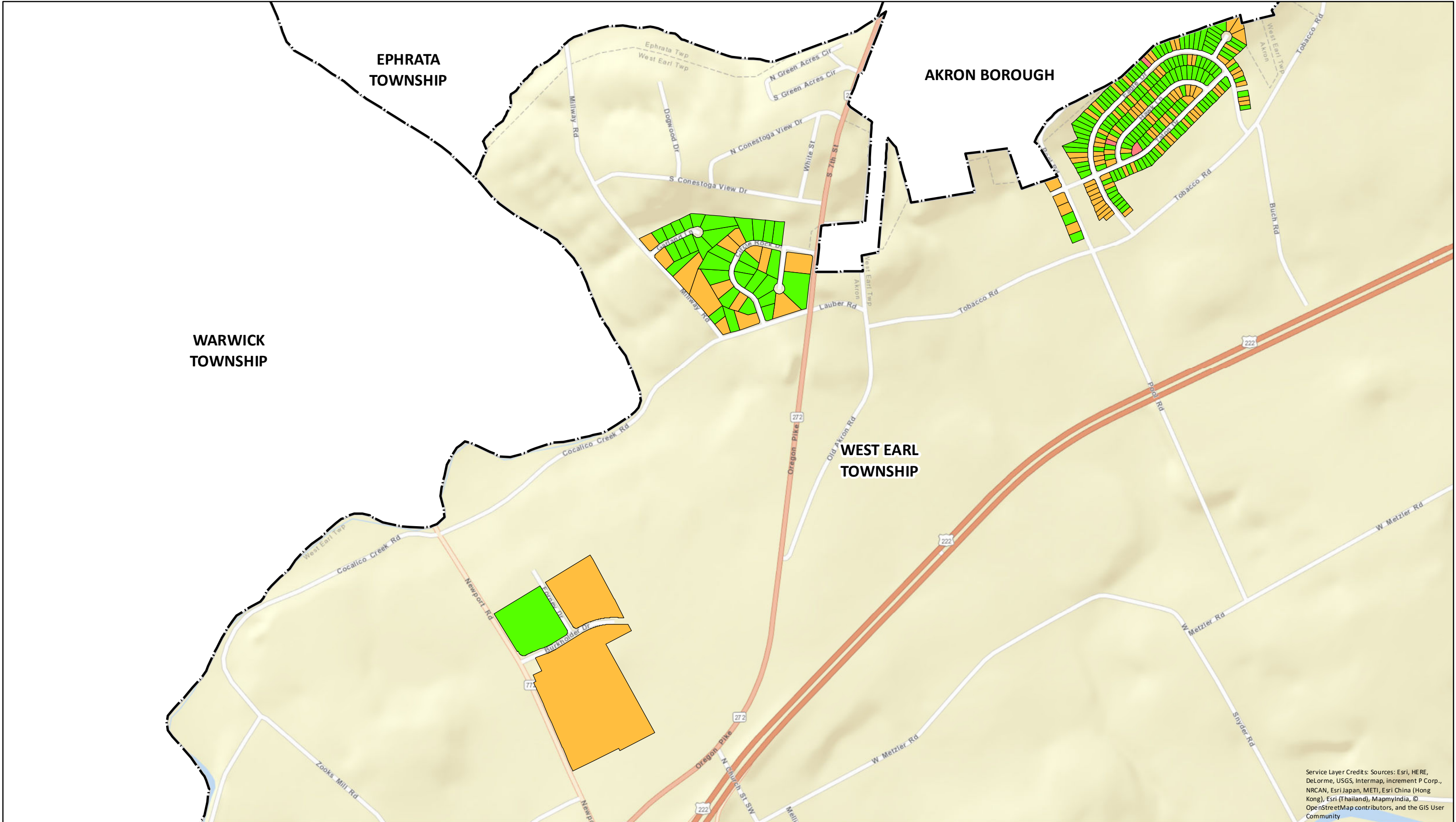
1 inch = 800 feet

0

800

Feet

RETTEW



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

West Earl Township

Non-Motorized Transportation Plan Existing Sidewalk Conditions

Sheet 2 of 4

Project No. 046472000

Sidewalk Condition

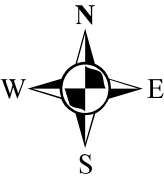
- Good
- Repair
- Replace

- Stream
- Private Property
- Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018



1 inch = 800 feet





West Earl Township

Non-Motorized Transportation Plan Existing Sidewalk Conditions

Sheet 3 of 4

Project No. 046472000

Sidewalk Condition

Good

Repair

Replace

Stream

Private Property

Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018

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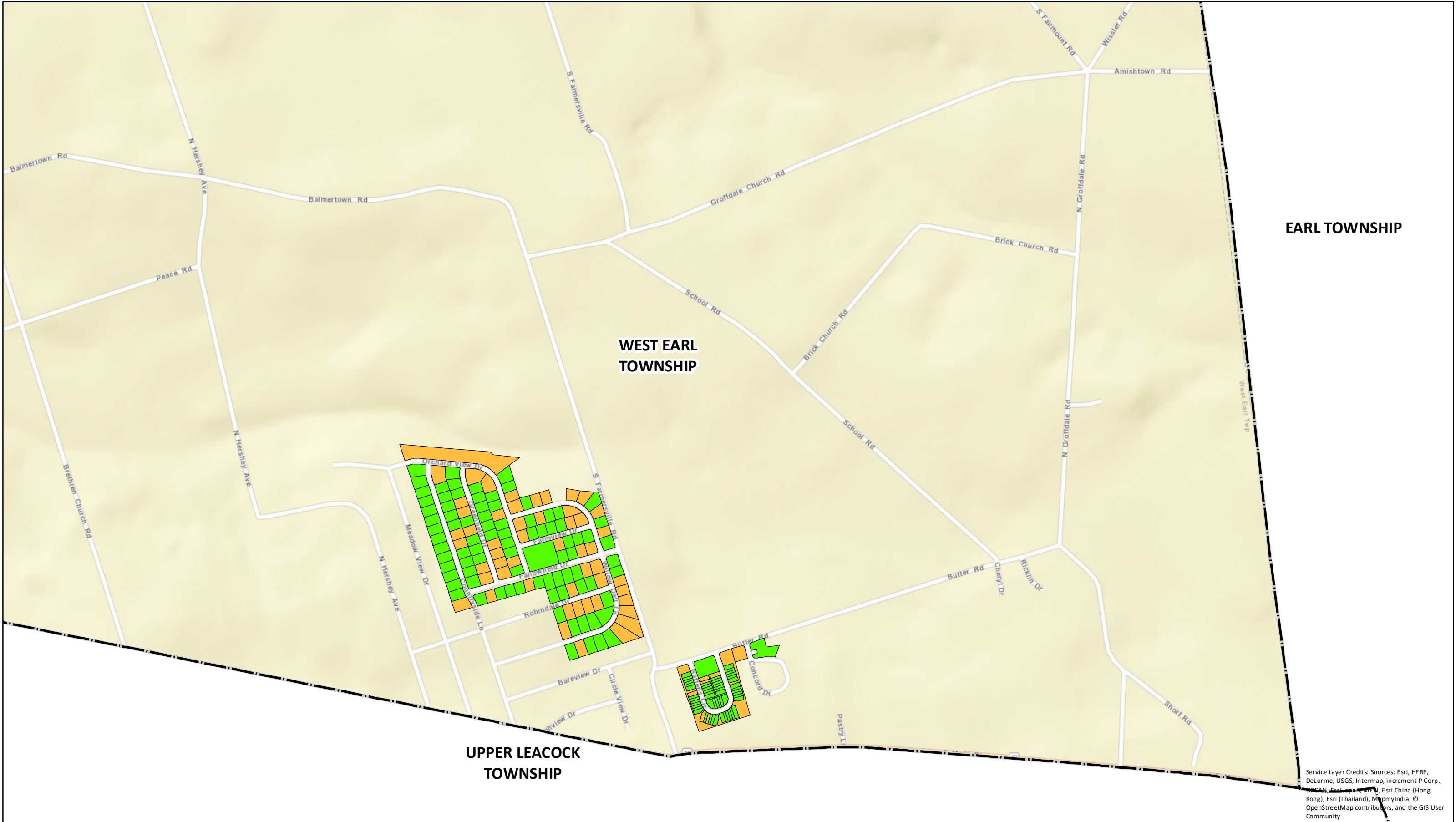
1 inch = 800 feet

0

800

Feet

RETTEW



Service Layer Credits: Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., Swisstopo, Esri Japan, Esri Korea, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

West Earl Township

Non-Motorized Transportation Plan Existing Sidewalk Conditions

Sheet 4 of 4

Project No. 046472000

Sidewalk Condition

Good

Repair

Replace

Stream

Private Property

Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018

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1 inch = 800 feet

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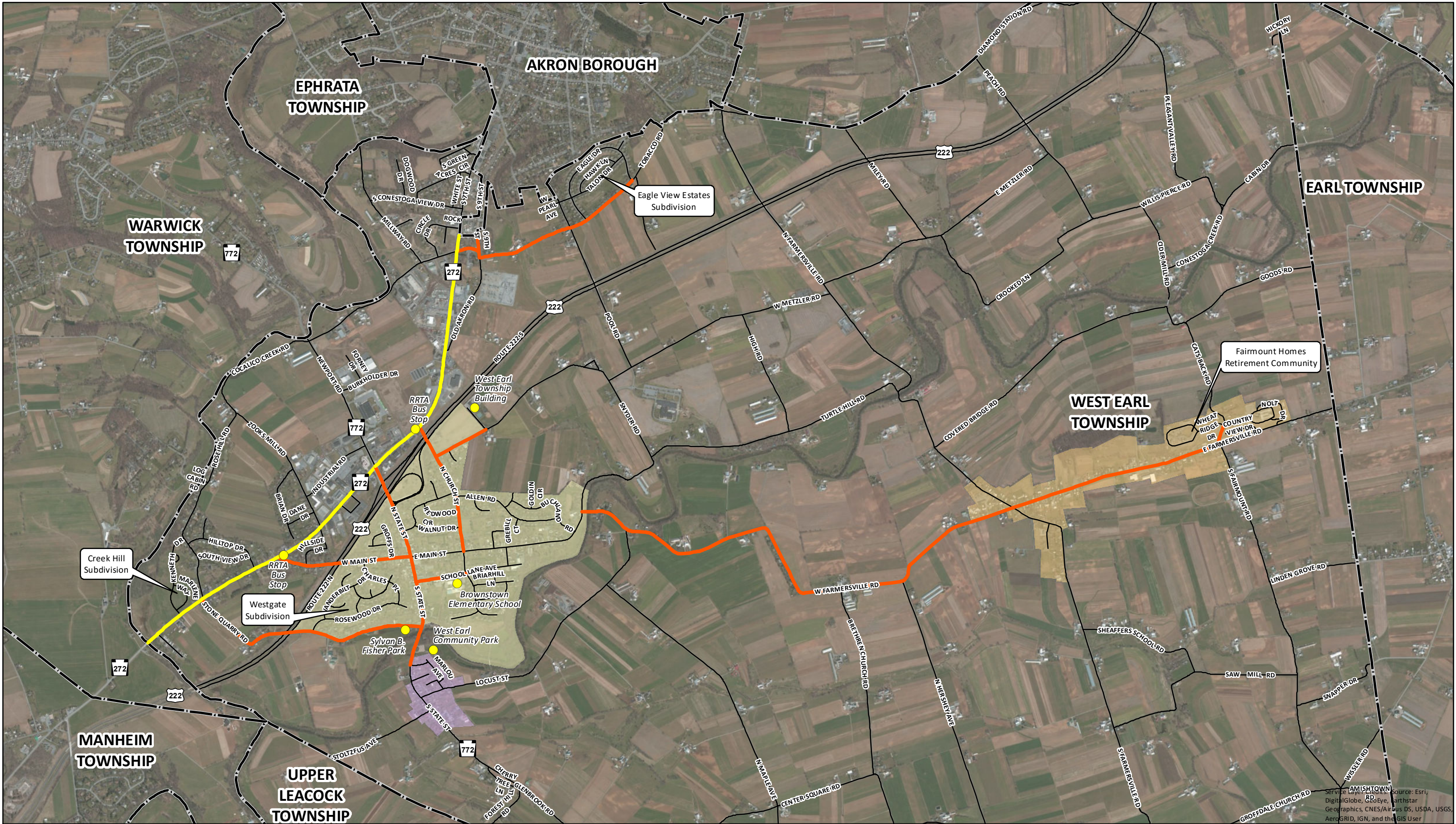
800

Feet

RETTEW

APPENDIX III.

DESTINATIONS AND CONNECTIONS



West Earl Township

Non-Motorized Transportation Plan Destinations and Connections

Project No. 046472000

- Destination
- Destination
- Connection
- Road / Street

Village Name	
●	Brownstown
●	Farmersville
●	Talmage

Municipal Boundary

Projection: PA State Plane South, NAD 1983 (feet)

Basemap Source:
Lancaster County GIS
RETTEW Associates, Inc.

Map Date: 6/6/2018

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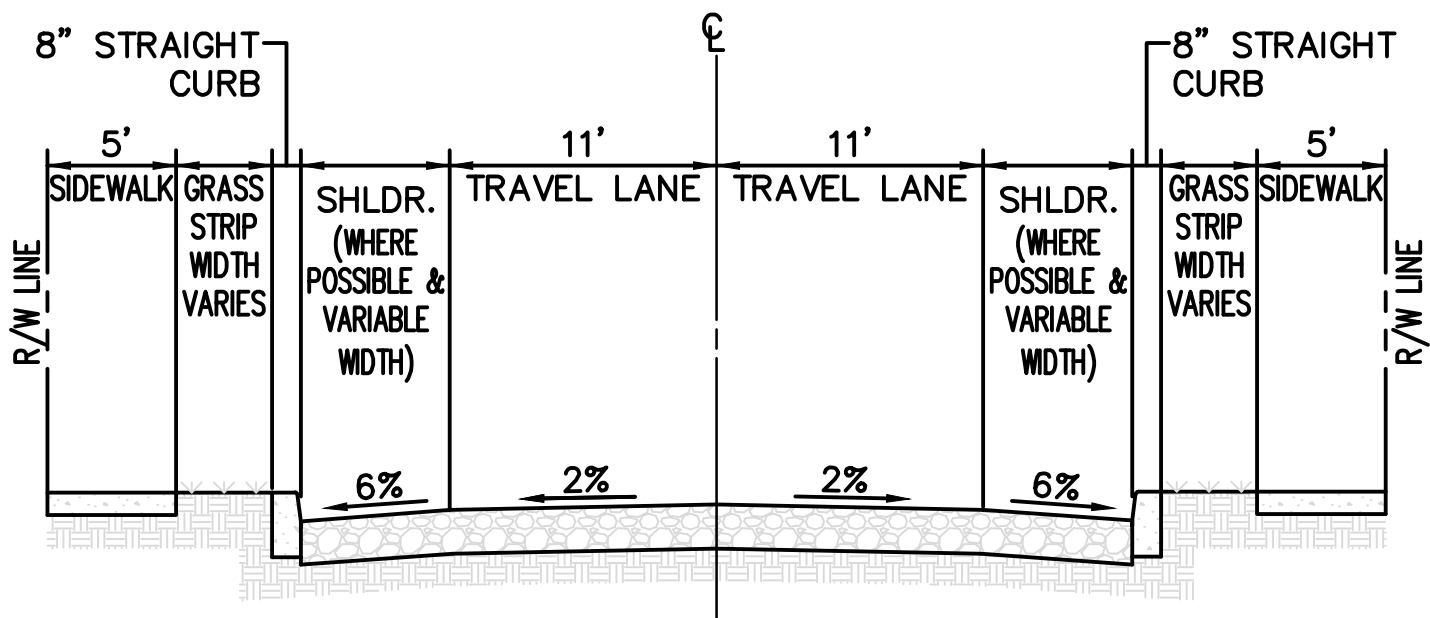
1 inch = 2,000 feet

0 2,000
Feet

N:\Shared\Projects\04647\046472000\2018 EOR\GIS\MapDocs\046472000_Destinations_Connections_11x17.mxd

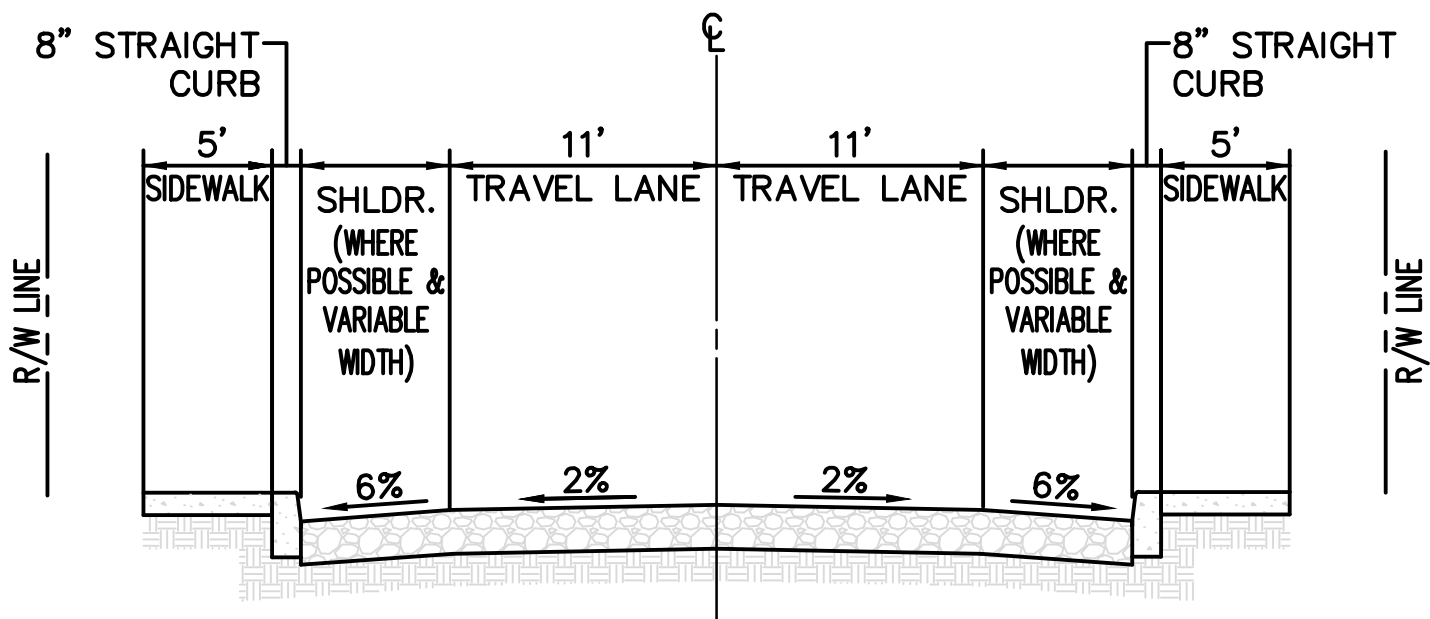
APPENDIX IV.

TYPICAL CROSS-SECTIONS



CURBED SECTION VIEW (WITH GRASS STRIP)

NOT TO SCALE



CURBED SECTION VIEW (NO GRASS STRIP)

NOT TO SCALE

TYPICAL CROSS SECTIONS

NON-MOTORIZED TRANSPORTATION PLAN

WEST EARL TOWNSHIP

LANCASTER COUNTY, PA

RETTEW

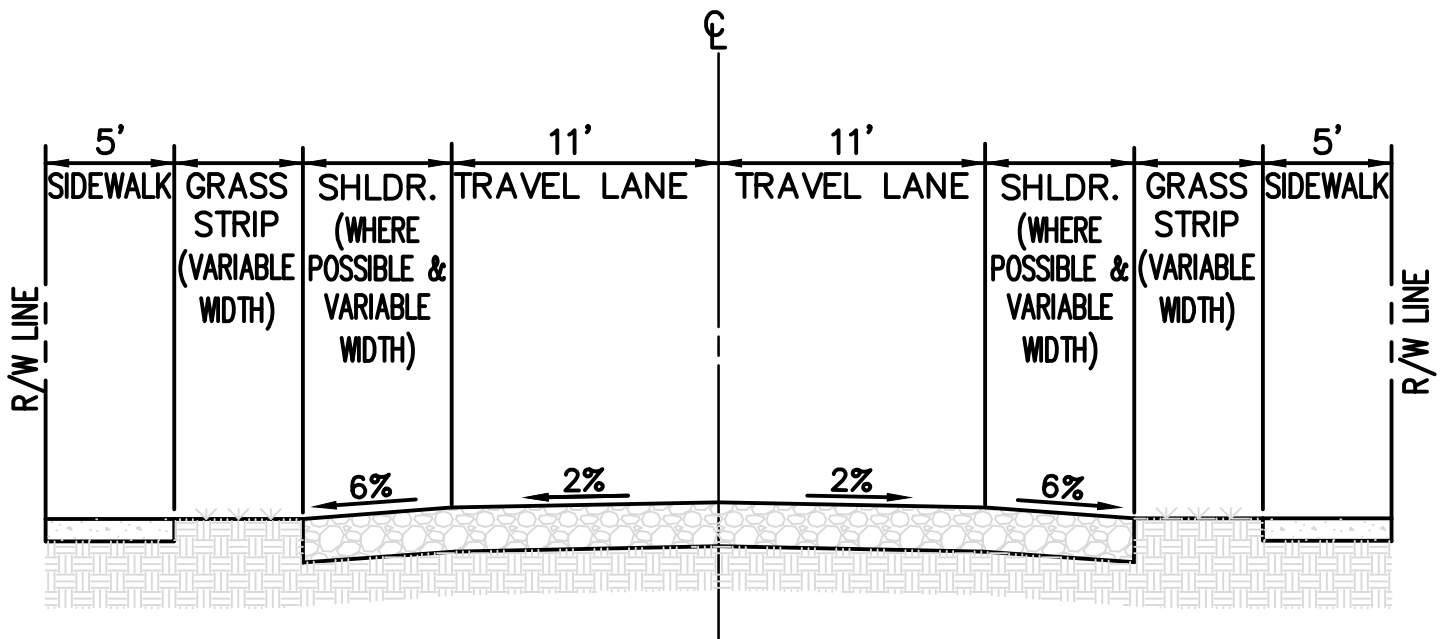
RETTEW Associates, Inc.
3020 Columbia Ave., Lancaster, PA 17603
Phone (717) 394-3721 • Fax (717) 394-1063

DRAWN BY: ELN

DATE: MAY 1, 2018

SCALE: NOT TO SCALE

DWG. NO. 046472000



UNCURBED SECTION VIEW (SIDEWALK ONLY)

NOT TO SCALE

TYPICAL CROSS SECTIONS

NON-MOTORIZED TRANSPORTATION PLAN

WEST EARL TOWNSHIP

LANCASTER COUNTY, PA

RETTEW

RETTEW Associates, Inc.
3020 Columbia Ave., Lancaster, PA 17603
Phone (717) 394-3721 • Fax (717) 394-1063

DRAWN BY: ELN

DATE: MAY 1, 2018

SCALE: NOT TO SCALE

DWG. NO. 046472000

APPENDIX V.

POTENTIAL FUNDING SOURCES

POTENTIAL FUNDING SOURCES

West Earl Township Non-Motorized Transportation Plan

Funding Program	Funding Entity	Type of Projects Funded/Guidelines	Award Amount	Minimum Match	Application Deadline
Lancaster County Community Development Block Grant (CDBG)	U.S. Department of Housing and Urban Development (HUD)	<ul style="list-style-type: none"> Funds can be used for construction costs only. At least five percent (5%) of the cost of construction contracts must be paid with non-CDBG funds. Project sponsors are responsible for covering all legal, advertising, right-of-way acquisition, engineering, and design (soft) costs. All CDBG Projects must be designed to serve those areas of the community with the highest percent of low- and moderate-income (LMI) persons, using current census data or recent income survey results. If a census block group does not meet the 39.79% LMI threshold, an income survey must be conducted and the respondents must be comprised of at least 51% LMI. The project area must be primarily residential. 	Maximum \$200,000	20% match required	Letters of Intent generally due in late winter/early spring, applications due in spring
Multimodal Fund	PA Department of Community and Economic Development (DCED), through the Commonwealth Financing Authority (CFA)	Provides grants to encourage economic development and ensure safe and reliable systems of transportation. Funds may be used for transportation projects such as streetscape improvements, lighting, sidewalk enhancements, pedestrian safety, connectivity of transportation assets, and transit-oriented development. Projects on state roads are eligible to receive funding, with documentation from the appropriate PennDOT Engineering District.	The minimum total project cost is \$100,000	30% local match of the non-federal share of project costs is required	Next round anticipated in Summer 2018
Multimodal Fund	PA Department of Transportation (PennDOT)	Provides grants to ensure safe and reliable systems of transportation. Funds may be used for transportation projects such as streetscape improvements, lighting, sidewalk enhancements, pedestrian safety, connectivity of transportation assets, and transit-oriented development.	\$100,000 minimum - \$3 million maximum	30% local match	TBD Next round anticipated in 2019

Funding Program	Funding Entity	Type of Projects Funded/Guidelines	Award Amount	Minimum Match	Application Deadline
Transportation Alternatives Program	PennDOT	Transportation alternatives projects include the construction of bicycle and pedestrian facilities; conversion of abandoned railway corridors to trails; historic preservation and rehabilitation of historic transportation facilities; and stormwater management.	Minimum \$50,000 project cost; \$1 million maximum	20% match required	TBD Next round anticipated in Fall 2018
Smart Growth Transportation Program	PennDOT/Lancaster County Transportation Coordinating Committee (LCTCC)	Transportation projects/studies located in Lancaster County's designated Growth Areas that support non-motorized transportation facilities. At least 80% of the funding will be directed to construction projects and no more than 20% to studies.	No maximum stated	20% match required for studies; pre-construction costs for construction projects	TBD Next round anticipated in 2019
Transportation Alternatives Program	PennDOT/Lancaster County Transportation Coordinating Committee (LCTCC)	Transportation alternatives projects include the construction of bicycle and pedestrian facilities; conversion of abandoned railway corridors to trails; historic preservation and rehabilitation of historic transportation facilities; and stormwater management.	No maximum stated	20% match required for studies; pre-construction costs for construction projects	TBD Next round anticipated in 2019
Automated Red Light Enforcement (ARLE) Grant Program	PennDOT	Provides grants to local governments for transportation enhancement projects that focus on highway safety or mobility, and which can be completed at relatively low cost. Eligible projects vary widely from traffic signal improvements and roadway improvements at signalized intersections, to projects involving school zones, guide rail, and roadside safety.	No maximum stated	Match encouraged	June 30 th each year