



CHADDS FORD TOWNSHIP COMPREHENSIVE PLAN



On the Cover:

TOP:

The stone mill built by Joseph Turner in 1868 was home to Howard Pyle's Summer School of Art at the end of the 19th Century where N.C. Wyeth spent "five glorious summers."

The building was used as a residence in the first half of the 20th Century until destroyed by fire in the 1950's.

The mill remained vacant for the next five decades.

BOTTOM:

Turner's Mill was reconstructed in the early part of the 21st Century by Chadds Ford Township and now serves as home to our municipal government. This building stands as a symbol of our community spirit integrating old and new.

The Heritage Commission of Delaware County recognized this landmark Adaptive Reuse at their annual Preservation Awards ceremony, May 2, 2006.

COMPREHENSIVE PLAN FOR CHADDS FORD TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA

Chadds Ford Township

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Gary Whelan – *Planning Commission*

TOWNSHIP STAFF:

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ADOPTED: May 5, 2010

RAY OTT & ASSOCIATES

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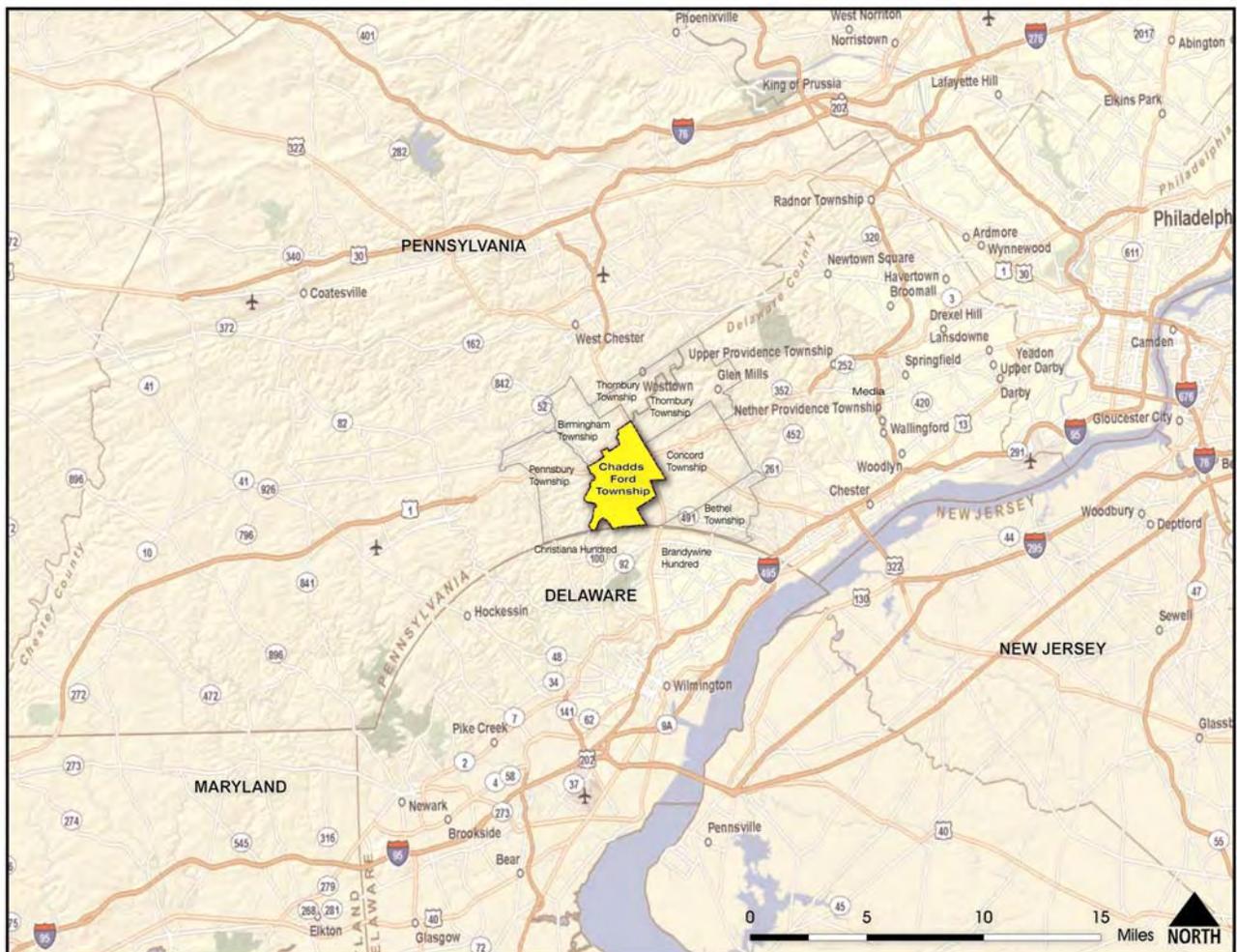
1. INTRODUCTION, GOALS & OBJECTIVES

Chadds Ford Township's last comprehensive plan was adopted in 1972. This update of the Chadds Ford Township Comprehensive Plan (Plan) makes Chadds Ford Township (CFT) consistent with the goals and objectives included in Delaware County policies, provides CFT with an opportunity to proactively implement policy objectives that positively influence its future, and seeks to promote responsible land use and environmental stewardship. In addition, this update incorporates the vision for the future development of CFT as expressed by Township residents. This chapter provides introductory information about CFT; the definition, history, purpose, content and adoption process of the Plan; and the goals and objectives of the Plan.

A. REGIONAL SETTING

Chadds Ford Township, Delaware County is approximately 8.8 square miles in area and is classified as a township of the second class with a population of 3,170 (according to the 2000 census). The Township is located approximately 28 miles southwest of Philadelphia, in the southwest portion of Delaware County (see Map 1 below).

Map 1: Regional Context



Chadds Ford is bordered on the northeast by Thornbury Township, Delaware County, to the east by Concord Township, and to the northwest by Birmingham Township, Chester County. The Brandywine Creek forms the western boundary between Chadds Ford and Pennsbury Township, Chester County and the southern boundary between Chadds Ford and Birmingham Township, Chester County. South of Chadds Ford is New Castle County, Delaware. Concord Township is located east of Chadds Ford. A major east-west transportation route, U.S. Rt. 1, passes through the northern portion of the Township. U.S. Route 202, another major Township corridor, traverses the east side of the Township. Routes 202 and 1 intersect at the Township's eastern border.

B. TOWNSHIP GOVERNANCE

As a township of the second class, Chadds Ford is governed by a three (3) member Board of Supervisors (BOS) elected to six (6) year staggered terms, with the assistance of an appointed Township Manager/Roadmaster and Secretary/Treasurer. The BOS appoints Solicitors to represent the Township, the Planning Commission, and the Zoning Hearing Board. Additional appointed professional consultants include a Township Engineer and a Code Enforcement Officer/Building Inspector. Other elected positions include Auditors and the Tax Collector.

Pennsylvania townships can be organized as first class, second class or home rule townships. There are currently 91 first class, 1,457 second class, and 27 home rule townships in Pennsylvania.

The primary difference between first and second class townships is structural. In townships of the first class, the governing body is made up of elected 'commissioners.' There are either five commissioners elected at large or up to 15 elected by wards. The commissioners have four-year overlapping terms. The governing body of second class townships is composed of three 'supervisors' who are elected at large. Two additional supervisors may be elected if approved by referendum. All are elected at large for six-year terms.

Home rule gives municipalities -- cities, boroughs and townships -- the power to determine the structure of their government and what services it will perform. A home rule municipality no longer has its powers and organization determined by the state legislature. A home rule municipality drafts and amends its own charter and can exercise any power or perform any function not denied by the state Constitution, the General Assembly or its home rule charter.

Other elected township officials may include a tax assessor, tax collector (second class), three auditors or controller, and a treasurer (first class). Appointive officers include the secretary, township manager if desired, chief of police, fire chief, engineer, solicitor and others.

To become a township of the first class, a second class township must have a population density of 300 persons per square mile (*Chadds Ford currently has 381 residents per square mile*), and voters must approve a change of classification in a referendum. Many townships meeting the density requirement have remained second class. Since 1972, twelve townships of the first class have adopted home rule charters.

C. COMPREHENSIVE PLAN

Comprehensive plans and their contents with regard to MPC requirements are generally described below.

1. Definition and Purpose

A comprehensive plan is a document that sets forth municipal goals, objectives and policies that guide future growth and development. The MPC requires that municipal comprehensive plans be “generally consistent” with the policies of county comprehensive plans.

2. Plan History

The existing Chadds Ford Township (formerly Birmingham Township) Comprehensive Plan was incorporated into the Township code in 1972 and contained recommendations for land use and infrastructure requirements intended to be “reviewed and updated periodically.”

3. Plan Content

The contents of the Plan are derived from several sources including MPC requirements, input from Township residents, and documented inconsistencies with county policy documents.

MPC Requirements

The MPC, Article III, "Comprehensive Plan," Section 301 states that comprehensive plans should include maps, tables, and text regarding the following plan elements:

- A statement of community goals and objectives concerning the timing, location and character of future development;
- A plan for land use identifying the amount, intensity, character and timing of land use;
- A plan to meet the housing needs of present and future residents, as well as accommodating new housing in different dwelling types and at appropriate densities for households of all income levels;
- A transportation plan;
- A statement of the interrelationship of plan elements and of the plan to contiguous communities, including an assessment of the land use plans of adjacent municipalities;
- A community facilities plan;
- A discussion of short- and long-range implementation strategies;
- A plan for the protection of historic and natural resources; and
- A water facilities plan.

4. Public Participation

This Plan incorporates the vision for the future development of the Township as expressed by Township residents in a series of public meetings. Additional input was obtained from personal interviews with interested residents and members of the business community, and through a Township-wide resident survey. See Appendix F for more details of the public participation process and the results obtained.

5. Plan Adoption Process

In order for this Plan to be adopted and become Township policy, the Township must adhere to the following series of steps prescribed in the Municipalities Planning Code:

- The Chadds Ford Township Planning Commission presents the *Draft Plan* at a public meeting.

- The Planning Commission meets to discuss and approve changes to the *Draft Plan* to address comments at the Public Presentation and from the County review. The Planning Commission recommends the *Final Draft Plan* to the Board of Supervisors.
- At least forty-five (45) days prior to the public hearing, the Board of Supervisors distributes copies of the *Final Draft Plan* to the Delaware County Planning Department, adjacent municipalities [Birmingham, Pennsbury, Thornbury, and Concord Townships, and New Castle County, Delaware] and the Unionville-Chadds Ford School District for review and comment. Review comments from the County, School District and adjacent municipalities shall be made to the BOS within forty-five (45) days of receipt of the *Final Draft Plan*.
- The BOS holds a public hearing on the *Final Draft Plan* pursuant to public notice.
- The BOS votes to adopt the Plan by resolution.
- The BOS approves and publishes the Plan.

D. PLAN GOALS AND OBJECTIVES

The goal statements included in this Plan are utilized to formulate specific land use and infrastructure policies, objectives and implementation strategies. They are organized according to eight (8) categories that reflect the MPC technical requirements for Plans and specific areas of concern indicated during the public participation process:

1. Community Character

Preserve and enhance visual quality, streetscape development and general public space.

Goal	Objectives
Provide for the maintenance of the Township's streetscapes, public spaces and existing neighborhoods.	<ol style="list-style-type: none"> 1. Enhance and improve Chadds Ford Village. 2. Enhance and improve the US Rt. 202 corridor: <ol style="list-style-type: none"> a) Encourage the use of visual buffering and noise abatement from adjacent/nearby residential neighborhoods; b) Encourage a non-stop flow of US Rt. 202 traffic through the Township; c) Discourage the use of Township residential roads as alternatives to US Rt. 202. 3. Improve the Route 1 corridor through Chadds Ford Village. <ol style="list-style-type: none"> a) Enhance pedestrian circulation and the flow of local traffic. b) Preserve this existing Scenic Resource as the "Scenic Gateway to the Village of Chadds Ford" (as shown on Map 6-9 of the Township Open Space Plan). 4. Identify current significant landscapes and scenic areas in the Township. 5. Designate scenic roadways through the Township and develop criteria and tools to help ensure the maintenance of their scenic qualities. 6. Require development initiatives to relate lots and buildings to the specific conditions of the site, including both natural and man-made resources.

2. Environmental, Cultural and Historical Resources

Preserve and enhance the natural, cultural and architectural integrity of the Township, including parks and open space, historic structures and natural resources.

Goal 1	Objectives
<p>Permanently protect Chadds Ford's open spaces – its farm fields and meadows, woods, stream valleys, and other water resources, historic sites and structures and scenic resources – which, in combination, create the Township's unique community character, remaining rural atmosphere and quality of life.</p>	<p>A. Implement the Township's <i>2007 Open Space Plan</i> objectives, as set forth below:</p> <ol style="list-style-type: none"> 1. Promote and facilitate the placement of voluntary and permanent easements on Chadds Ford's critical and sensitive open spaces; utilize other appropriate tools for permanent protection as needed, including outright acquisition or identification as significant resources using applicable county, state or federal programs. 2. Work toward permanent conservation of extensive areas of prime and significant agricultural soils to assure the potential for a range of farm-based businesses. 3. Pursue permanent conservation of woodlands, especially those 50 years and older that have significant areas of forest interior. 4. Promote the permanent protection of significant wildlife habitats, unique natural areas, and those locales that support rare plant species. 5. Seek to permanently preserve continuous riparian or open space buffers along stream corridors, as well as in and around areas of wetlands and steep slopes; seek to restore woody vegetation to these areas where needed. 6. Facilitate creation of permanently protected greenway corridors to link existing protected open space areas through land preservation or purchase of easements and rights-of-way. 7. Pursue protective strategies for the natural and historic resources identified, assessed and prioritized in the Township Open Space Plan. 8. Encourage and facilitate the work of the Chadds Ford Historical and Architectural Review Board to fully implement and administer the Township's Act 167 Historic District ordinance. 9. Promote the permanent protection of historic <i>resources</i> and locally-significant landscape elements such as walls, hedgerows, meadows, large fields, and woodlands. 10. Encourage the cooperative efforts of the Brandywine Battlefield Task Force (BBTF) and surrounding municipalities to preserve lands within the Brandywine Battlefield National Historic Landmark, which is located within both Chester and Delaware Counties. 11. Broaden the appreciation and protection of Chadds Ford's historic resources through Township sponsorship of measures such as an historic preservation plan. 12. Pursue permanent protection of Chadds Ford's scenic areas and vistas, especially where those areas also contain other significant natural and/or cultural resources. 13. Seek to maintain the essential qualities of the Township's scenic roadways (e.g., width, curvature, roadside trees, walls, structures) while planning for needed improvements. 14. Encourage the cooperative efforts of the Brandywine Valley Scenic Byway Commission (BVSBC) to protect the scenic nature of the Brandywine Valley Scenic Byway. 15. Maintain and improve watershed and subwatershed water balances within and downstream of Chadds Ford to maintain flow levels, protect water supplies and shelter the integrity of aquatic life. 16. Educate Chadds Ford residents and taxpayers regarding the financial benefits of open space protection (i.e., schools and other services required of ongoing development of unprotected open space are not cost-effective). 17. Coordinate open space planning and protection with neighboring municipalities in Delaware County, Chester County, the State of Delaware, the Delaware Valley Regional Planning Commission, and Greenspace Alliance to protect shared

	<p>resources and achieve common goals.</p> <p>18. Strive to achieve consistency with and otherwise support development of County-level open space and greenway planning efforts.</p> <p>19. Fully utilize technical assistance, educational, and/or funding resources that may be available from governmental and nongovernmental organizations.</p> <p>20. Maximize use of Township open space protection revenue collected pursuant to the May 2005 referendum under PA Act 153 to leverage open space protection funds from county, state and other potential sources.</p> <p><u>New Objectives</u></p> <p>B. Promote cooperation and coordination among historical organizations.</p>
Goal 2	Objectives
Assure provision of an adequate level of recreational services and facilities to Township residents.	<ol style="list-style-type: none"> 1. Coordinate with other public, quasi-public, and private agencies to maximize use of recreational lands, facilities and programs that these organizations may provide and that may be available to Township residents. 2. Formalize a program and fund for acceptance of cash contributions to Township recreational efforts, including but not limited to, provisions for dedication of “fees in lieu thereof” (i.e., pursuant to the Municipalities Planning Code) for recreational lands from residential and nonresidential developers. 3. Consider the Township’s growing population when planning future recreational facilities. 4. Work toward establishment of a Township trails system, addressing appropriate linkages, destinations, accessibility, general suitability, and appropriate uses (e.g., pedestrian, bicycling, equestrian, and cross-country ski) considerations. Specifically, seek to interconnect protected open spaces, recreational areas, and residential neighborhoods. 5. Consider applicable standards and criteria for recreational facilities for Township residents. 6. Pursue funding sources for recreational development through county, state and other potential funding sources. 7. Encourage the cooperative efforts of the BVSBC to improve the recreational attributes of the Brandywine Valley Scenic Byway.

3. Land Use

Review existing and future land development issues.

Goal	Objectives
Provide for future development in a manner that will protect and enhance the general welfare and quality of life in the Township.	<ol style="list-style-type: none"> 1. Guide the location and intensity of future development to protect existing neighborhoods and open space. 2. Coordinate future land development with the logical and efficient extension of public utilities and services. 3. Ensure that any commercial development along the U.S. Rt. 202 corridor does not detract from the quality of life in the adjacent residential neighborhoods. 4. Support and participate in regional planning efforts.

4. Transportation

Adopt the regional circulation plan and the need to address public transit alternatives, pedestrian and bicycle circulation, and traffic congestion.

Goal	Objectives
Provide and maintain a high quality, safe road network that serves the needs of all residents and encourages the development of alternative modes of transportation, including rail and bus service.	<ol style="list-style-type: none"> 1. Inventory existing transportation and road improvement needs. 2. Identify and recommend traffic calming techniques in the Township to ensure the safe movement of vehicles through residential areas. 3. Investigate opportunities to create pedestrian trail and bikeway linkages between residential neighborhoods and community facilities. 4. Prepare a pedestrian and bicycle circulation plan for the Township. 5. Implement mechanisms to require new development to accommodate pedestrian and bicycle circulation. 6. Coordinate planning with neighboring communities to enhance the flow of vehicular traffic through the region and provide for linkages of walking and bicycle paths. 7. Investigate alternative modes of public transportation.

5. Housing

Ensure that a range of affordable housing exists.

Goal	Objectives
Ensure that the Township has adequate housing options.	<ol style="list-style-type: none"> 1. Explore affordable housing options to address the needs of the Township's population. 2. Explore opportunities for regional planning of alternative housing.

6. Economic Development

Maintain the current level of existing businesses.

Goal	Objectives
Continue to provide for appropriate commercial activities in the Township.	<ol style="list-style-type: none"> 1. Maintain and improve the economic viability of the U.S. Rt. 202 Business District. 2. Improve the streetscape of the U.S. Rt., particularly in the Chadds Ford Village vicinity.

7. Community Facilities and Services

Identify current and future needs for police, emergency services, administrative, public works, and other services and facilities provided by the Township.

Goal	Objectives
Provide community facilities and services to meet current and future residential and business requirements in the Township.	<ol style="list-style-type: none"> 1. Investigate and prioritize the following community services and facilities, and make recommendations to address issues: <ol style="list-style-type: none"> a) Public water and sewer service. b) Police and emergency services. c) Township administration and code enforcement. d) Road maintenance and public works. e) Trash and recycling services. f) Park and recreational facilities and services.

8. Regional Coordination

Identify opportunities for coordination of planning issues with surrounding townships and Delaware County.

Goal	Objectives
Encourage and participate in regional planning activities.	<ol style="list-style-type: none"> 1. Participate in regional planning initiatives, such as the Oakland Road Corridor Scenic Easement Program and the Brandywine Valley Scenic Byway Study. 2. Coordinate planning with neighboring communities to encourage the provision of public transportation. 3. Coordinate planning with neighboring communities to enhance the flow of vehicular traffic through the region and provide for linkages of walking and bicycle paths. 4. Coordinate planning with neighboring communities to ensure compatible land use for adjoining areas. 5. Participate in multi-municipal planning initiatives for compatible development, continuation of historic community patterns, and coordination of infrastructure development. 6. Coordinate with area communities and PennDOT regarding detailed plans for the US Rt. 202 improvement project.

2. PLAN RECOMMENDATIONS

Comprehensive plan recommendations are presented in this chapter. Plan recommendations are based on observations and concerns expressed at citizen participation meetings, Task Force workshops, the resident survey, and the goals and objectives set forth in Chapter 1.

It is recommended that this Plan be reviewed and updated by the Planning Commission every three (3) years to keep it current with land use and development changes. Moreover, it is recommended that progress against the tasks identified in Chapter 3 be reviewed each year and an annual plan for task completion be formulated at the beginning of each year. The ultimate time horizon for this Plan is ten (10) years; the implementation strategies set forth in Chapter 3 should be completed by this time, and the plan should be reviewed again in 2019, in accordance with the PA MPC requirements.

The Plan recommendations are presented according to the specific plan elements as required in Section 301 of the PA MPC, discussed in Chapter 1 of this plan.

A. PLAN FOR LAND USE

Goals and Objectives

The land use goal is to *“Provide for future development in a manner that will protect and enhance the general welfare and quality of life in the Township.”* Land use objectives include directing new development so that existing open space is protected and coordinating future land development with the logical and efficient extension of public utilities and services.

Background

Planning implications of the Existing Land Use Inventory and Zoning Analysis (see Appendix B) include the need for the reevaluation of Township zoning to accommodate the recommendations of Chadds Ford Open Space Plan (2008) and a determination of the appropriate density and intensity of development based on the results of the residential and commercial build-out analysis. As evidenced by the resident survey and interviews, it is very important to the Township to maintain its rural character and lifestyle. The preservation of open space in Chadds Ford is key to this objective.

The Future Land Use Map (Map 2) shows the areas of the Township where the following recommendations concerning land use, zoning and development should be implemented.

1. Zoning/Conservation Easement Analysis.

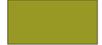
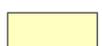
It is recommended that a detailed zoning/conservation easement analysis be pursued with the objective of evaluating the extent to which the Chadds Ford Township Open Space Plan (2008) “Open Space Focus Areas” can be protected. Objectives for this analysis are as follows:

Housing Needs. The analysis should seek to accommodate the development of approximately 800 new dwelling units, which will be the housing needs for the Township’s future population through the year 2025 as projected in the Open Space Plan.

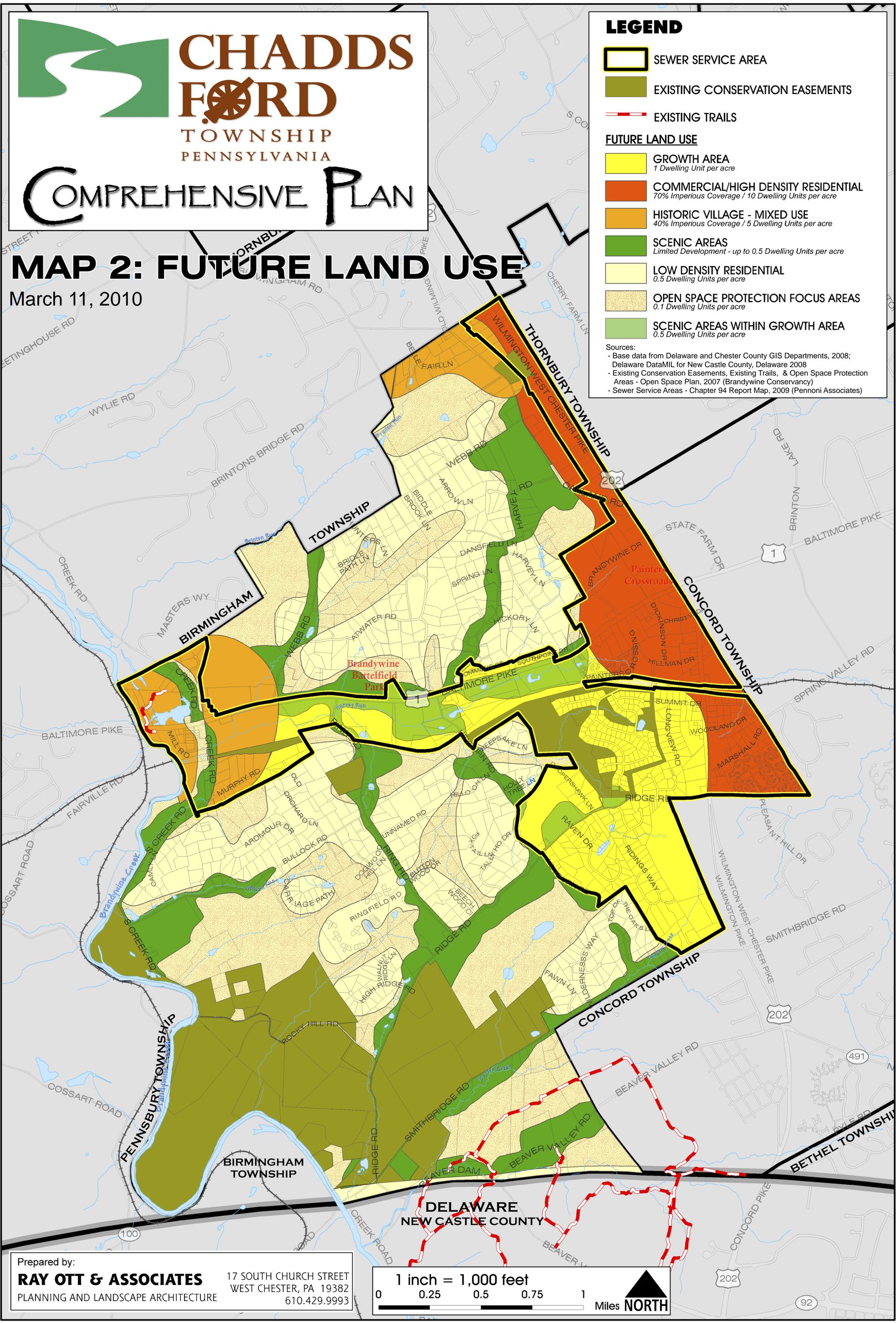
MAP 2: FUTURE LAND USE

March 11, 2010

LEGEND

-  SEWER SERVICE AREA
-  EXISTING CONSERVATION EASEMENTS
-  EXISTING TRAILS
- FUTURE LAND USE**
-  GROWTH AREA
1 Dwelling Unit per acre
-  COMMERCIAL/HIGH DENSITY RESIDENTIAL
70% Imperious Coverage / 10 Dwelling Units per acre
-  HISTORIC VILLAGE - MIXED USE
40% Imperious Coverage / 5 Dwelling Units per acre
-  SCENIC AREAS
Limited Development - up to 0.5 Dwelling Units per acre
-  LOW DENSITY RESIDENTIAL
0.5 Dwelling Units per acre
-  OPEN SPACE PROTECTION FOCUS AREAS
0.1 Dwelling Units per acre
-  SCENIC AREAS WITHIN GROWTH AREA
0.5 Dwelling Units per acre

Sources:
 - Base data from Delaware and Chester County GIS Departments, 2008;
 - Delaware DataMIL for New Castle County, Delaware 2008
 - Existing Conservation Easements, Existing Trails, & Open Space Protection Areas - Open Space Plan, 2007 (Brandywine Conservancy)
 - Sewer Service Areas - Chapter 94 Report Map, 2009 (Pennoni Associates)



MAP 3: TRANSPORTATION RECOMMENDATIONS

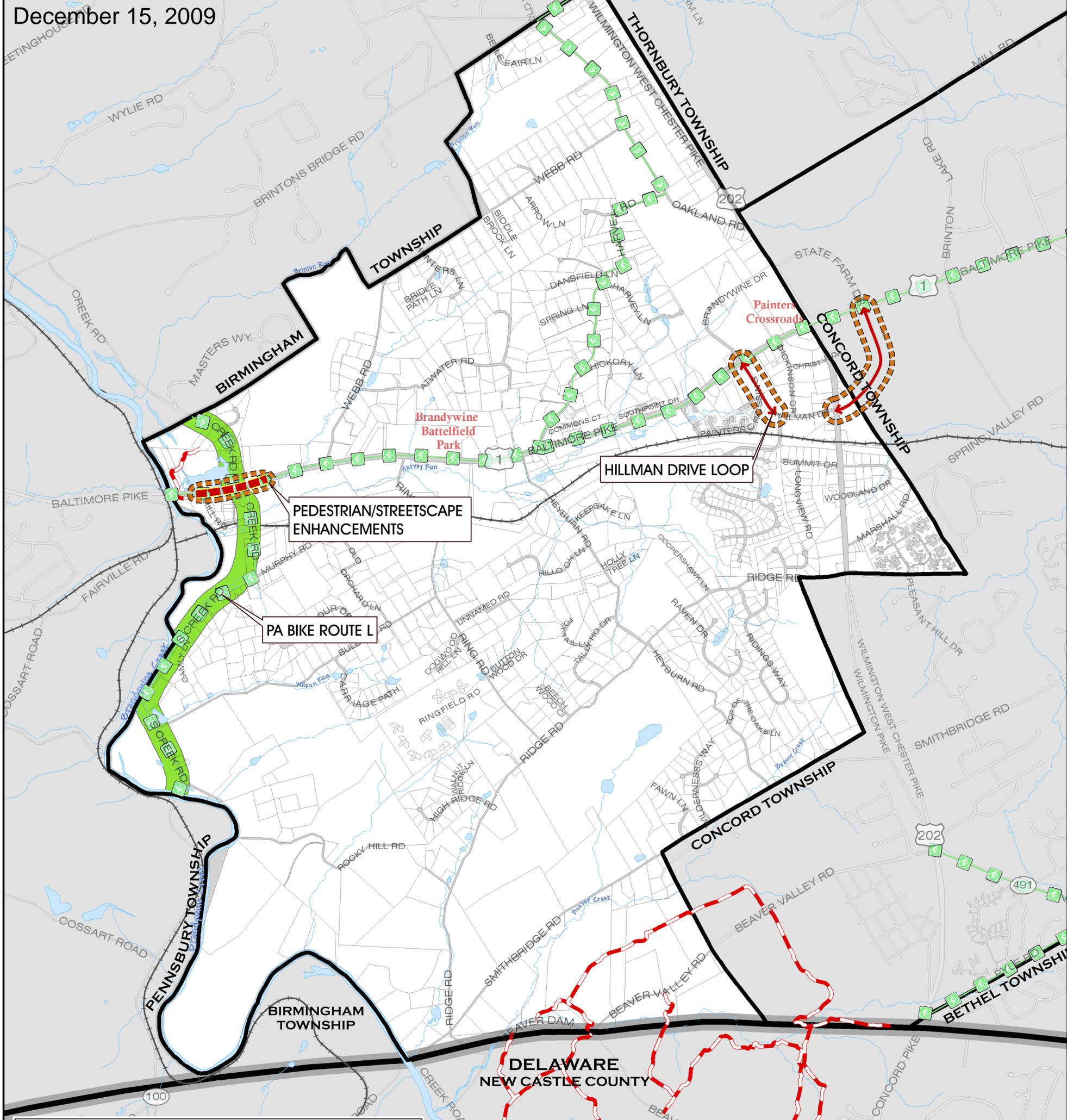
December 15, 2009

LEGEND

-  RECOMMENDED IMPROVEMENTS
-  PEDESTRIAN/STREETScape ENHANCEMENTS
-  HILLMAN DRIVE LOOP
-  SIGNED BIKE ROUTES: DELAWARE CO. BICYCLE PLAN*
-  BRANDYWINE VALLEY SCENIC BYWAY
-  EXISTING TRAILS

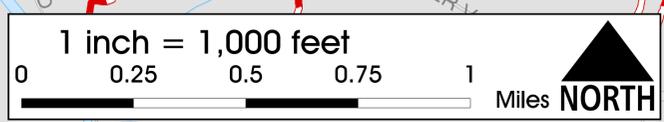
* BIKE ROUTES ARE ACKNOWLEDGED, BUT NOT ENDORSED BY CHADDS FORD TOWNSHIP

Sources:
 - Base data from Delaware and Chester County GIS Departments, 2008;
 - Delaware DataMILL for New Castle County, Delaware 2008
 - 2009 DCPD Bicycle Plan



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MAP 4: HISTORIC AND NATURAL RESOURCES PLAN RECOMMENDATIONS

December 15, 2009

LEGEND

EXISTING PROTECTED RESOURCES

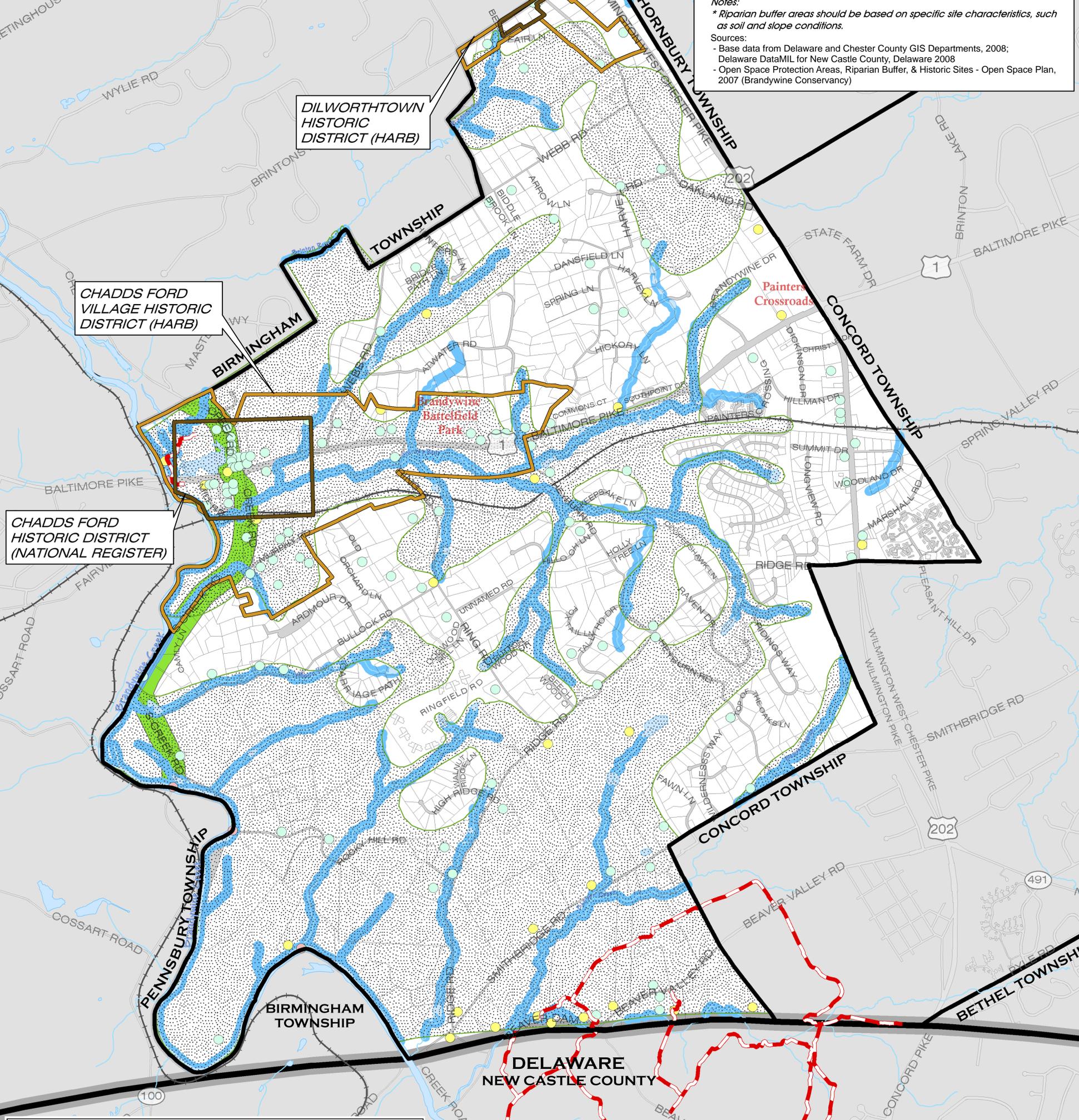
- NATIONAL REGISTER HISTORIC DISTRICT
- HISTORIC DISTRICTS (HARB)

RECOMMENDED RESOURCE PROTECTION AREAS

- HISTORIC FORDS
- HISTORIC SITES
- HISTORIC STRUCTURES
- OPEN SPACE PROTECTION AREAS
- BRANDYWINE VALLEY SCENIC BYWAY
- RIPARIAN BUFFER*

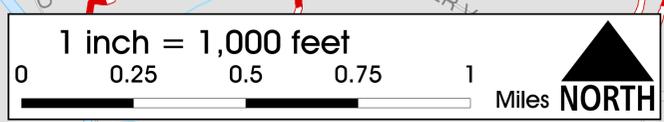
Notes:
* Riparian buffer areas should be based on specific site characteristics, such as soil and slope conditions.

Sources:
- Base data from Delaware and Chester County GIS Departments, 2008; Delaware DataMIL for New Castle County, Delaware 2008
- Open Space Protection Areas, Riparian Buffer, & Historic Sites - Open Space Plan, 2007 (Brandywine Conservancy)



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Open Space Focus Areas. The Open Space Focus Areas should form the basis for designating areas to be protected from future development. If necessary to provide areas for future development, a priority system should be used that excludes development from some resource areas, while allowing development in other resource areas according to specific guidelines to ensure basic protection goals for the resource. Scenic Resources and Greenway Corridors, as depicted on Maps 6-9 and 6-3 of the Open Space Plan, should be given first and second priority, respectively.

Conservation Easements. Because it is anticipated that development rights for some land parcels may be significantly diminished, the analysis should identify parcels for the purchase (or dedication) of conservation easements.

Transfer of Development Rights. The analysis should evaluate the feasibility of adopting a Transfer of Development Rights Ordinance in order to help compensate landowners for the preservation of their property. A market for the potential supply of TDRs from the preservation “sending areas” needs to be provided with an adequate TDR “receiving area.” This analysis should therefore designate receiving areas sufficient in area and permitted development densities to ensure that there will be a market for the estimated number of TDRs in the sending areas.

Future Development Areas. Future development should be directed to areas within the current sewer service areas, the Rt. 202 corridor and to the Villages of Chadds Ford and Dilworthtown.

2. Future Land Use

Future land use should focus upon the preservation of the remaining rural character of the Township through active preservation of open space and protection of natural, scenic, and historic resources. Designations for future land use are shown on Map 2 and described below. Although not technically a ‘land use,’ all areas in the Township under Conservation Easement are also identified on the Future Land Use map, and it is assumed that no future development will occur on these lands.

Growth Area: This is shown as the Township’s current sewer service area, and it is a recommendation of this plan that this area not be expanded. Future growth should be directed to this area, while respecting important historic and scenic features, as represented by Chadds Ford Village and the scenic landscapes along Route 1. Because the area is serviced with public water and sewer, it can support higher development densities – including residential densities of up to 1 dwelling unit per acre and impervious coverage limits of up to 40% for nonresidential development. The area also includes the Commercial/High Density Residential and Chadds Ford Village Mixed Use areas, which are discussed below.¹

Commercial/High Density Residential: This area is located along the Route 202 corridor and currently includes almost all of the Township’s commercial office and retail development. All of this area is also within the recommended Growth Area. The plan recommends residential densities of up to 10 dwelling units per acre and impervious coverage limits for nonresidential development of up to 70% in this area.

Historic Village Mixed Use: These areas include Chadds Ford Village and the Chadds Ford Township portion of Dilworthtown Village. The plan recommends residential densities of up to 5 dwelling units per acre and impervious coverage limits for nonresidential development of up to 40% in these areas.

¹ Although this plan designates the current (2009) sewer service as a “Growth Area,” this is not meant to imply that the sewer service area should not be expanded if necessary to address future needs.



Figure 1: Chadds Ford Village

Chadds Ford Village

- a) Master Plan. A master plan should be prepared that illustrates how the Village should ultimately be developed. Key elements are:
 - Accommodate retail, office and residential uses.
 - Promote shared parking and interconnected vehicular and pedestrian circulation systems.
 - Provide design guidelines that promote new development within the context of a pedestrian scale village that complements the Village's historic architecture and development pattern.
 - Recommend design improvements along the Village section of Rt. 1 that accommodate a safe pedestrian crosswalk, slow traffic through the Village, and accommodate sidewalks and street trees. Popular terms for these design schemes include "traffic calming" and "complete streets."²
 - Accommodate development and land use limitation associated with the portions of Chadds Ford Village within the Brandywine Creek floodplain.
- b) Revise the zoning ordinance and map to create a new base zoning district, the Historic Village Mixed Use District. These ordinance and map changes should be based on the recommendations of the Chadds Ford Village Master Plan report.

² For more information about complete streets, see the National Complete Streets Coalition's website: www.completestreets.org. PennDOT provides an online Traffic Calming Handbook on its website: www.dot.state.pa.us/Internet/Bureaus/pdBHSTE.nsf/infoTrafficCalming.



Figure 2: Dilworthtown Village

Dilworthtown Village

- a) It is recommended that the zoning ordinance and map be revised to create a new base zoning district, the Historic Village Mixed Use District. This new district should accommodate commercial retail, office and residential uses.

Scenic Areas: These areas were identified in the Township Open Space Plan (2008) as viewshed corridors along scenic roadways through the Township, including the Brandywine Valley Scenic Byway. It is recommended that the integrity of the viewsheds and existing woodlands be protected in these areas. It is also recommended that limited development be accommodated within Scenic Areas, but only after careful site planning to preserve the integrity of these viewsheds. The average residential density in these areas should be no greater than 0.5 dwelling unit per acre. Scenic Areas should be high priority target areas for the acquisition of conservation easements or Transfer Development Rights to ensure their preservation.

Open Space Protection Focus Areas: These areas were identified in the Township Open Space Plan (2008) for the Township to 'focus' land conservation efforts. It is recommended that residential development in these areas be restricted to one dwelling unit per 10 acres (0.1 dwelling unit per acre).

Low Density Residential: These areas are composed of all lands not identified in other Future Land Use areas. They consist of most of the existing suburban development in the Township. It is recommended that residential development in these areas be restricted to one dwelling per 2 acres (0.5 dwelling unit per acre).

Future Land Use Build-Out Analysis

In order to estimate the number of dwelling units and commercial floor space accommodated in the Future Land Use Plan, the “build-out “ capacity of the Township’s remaining undeveloped land was prepared using the dwelling unit density and impervious coverage limitations included in the above recommended plan. These results are shown in the following table by land use categories.

Table 1: Future Land Use Build-Out Analysis

FUTURE LAND USE AREAS	GROSS ACRES %	AVAILABLE ACRES [1] %	RECOMMENDED		POTENTIAL NEW DWELLING UNITS	NONRESIDENTIAL FLOOR AREA [3]
			UNITS/ ACRE	IMPERVIOUS COVERAGE [2]		
GROWTH AREA (net of other districts) [4]	650.4 12%	192.8 9%	1.0		193	
COMMERCIAL/HIGH DENSITY RESIDENTIAL [5]	501.9 9%	44.6 2%	10.0	70%	149	465,355 s.f.
HISTORIC VILLAGE - MIXED USE [6]	305.1 5%	60.0 3%	5.0	40%	200	178,708 s.f.
SCENIC AREAS	649.6 12%	213.1 10%	0.5		0 [7]	
SCENIC AREAS within Growth Area	157.6 3%	36.2 2%	0.5		18 [7]	
OPEN SPACE FOCUS AREAS	1,149.2 20%	1,274.1 61%	0.1		127	
LOW DENSITY RESIDENTIAL	1,298.5 23%	283.2 13%	0.5		142	
EXISTING CONSERVATION EASEMENTS	898.8 16%	0.0 0%	0.0		0	
TOTAL FUTURE DEVELOPMENT					829	644,063
EXISTING [8]					1,498	1,725,977
TOTAL	5,611.2 100%	2,104.1 100%			2,327	2,370,040

Notes:

- [1] Based on an analysis of undeveloped parcels and parcels not developed at recommended Future Land Use densities.
- [2] Recommended impervious coverage limit for area permitting nonresidential development.
- [3] Nonresidential development potential floor area in square feet estimated as a function of recommended impervious coverage for 2 story buildings with 5 parking spaces per 1,000 s.f. of floor area.
- [4] The Growth Area includes all areas within the current sewer service area, which also includes all of the Commercial/High Density Residential area and most of the Chadds Ford Village Mixed Use area. Portions of the Growth Area that are also within Scenic Areas have been excluded from this calculation.
- [5] Analysis assumes 2/3rds of the Commercial/High Density Residential Area to be nonresidential development.
- [6] Analysis assumes 1/3rd of the Historic Village Mixed Use area to be nonresidential development.
- [7] This analysis anticipates the acquisition of conservation easements/development rights within Scenic Areas that are outside of the Growth Area boundary. It is estimated that this area could otherwise accommodate 88 additional dwelling units.
- [8] Existing development based on 2006 Delaware County Tax Assessment data.

3. Open Space Protection Techniques

The Township should revise current development provisions of the zoning ordinance to better encourage and require the following objectives:

- a) Open Space Protection Focus Areas. Preserve significant natural, scenic and historic resources, according to the “Open Space Protection Focus Areas” shown on Map 8-1 of the Chadds Ford Township Open Space Plan of 2007. This can be accomplished with one or more of the following mechanisms:
 - Amend the zoning ordinance PRD provisions to require that at least 60% of the tract area be set aside as permanent open space.
 - Amend the zoning ordinance to require that areas within the “Open Space Protection Focus Areas” shown on Map 8-1 of the Chadds Ford Township Open Space Plan of 2007 be included in all designated open space areas for new development projects.
 - Prepare a Transfer of Development Rights (TDR) ordinance that includes the “Open Space Protection Focus Areas” in all development rights sending areas.

- b) Brandywine Valley Scenic Byway. Creek Road is included as a component of the current “Brandywine Valley Scenic Byway.” A Corridor Management Plan is currently being developed by the Brandywine Valley Scenic Byway Commission. When available, the recommendations of this project should be considered for incorporation into zoning and land development ordinance provisions to protect the scenic integrity of this corridor.



Figure 3: Brandywine Valley

- c) Baltimore Pike Overlay District. The Baltimore Pike Overlay District was adopted in 2005. Its primary objective is the preservation of natural, scenic and historic resources along properties adjacent to or near Route 1. This is achieved through a new definition of “Lot Area” which excludes certain percentages of resource areas and easements from development. Additionally, the Baltimore Pike Overlay District reduces the maximum permitted building coverage in the R-1 District to 12%. This overlay district also sets a maximum of 5,000 square feet of floor area within Historic Overlay Districts. It is recommended that the Baltimore Pike Overlay District Ordinance be reviewed and updated to ensure that it conforms to the recommended Historic Village Mixed Use District and other ordinance amendments resulting from this plan.

B. PLAN TO MEET HOUSING NEEDS

Goals and Objectives

The housing goal is to “*Ensure that the Township has adequate housing options.*” Housing objectives include providing affordable housing options and housing alternatives.

Background

The Demographic and Housing Inventory and Analysis (see Appendix A) includes the statistic that over one quarter of the Township population was over 55 in 2000. The residential build-out analysis prepared for this plan (see Appendix B) estimates that approximately 1,500 new dwelling units could be constructed in the Township under the provisions and requirements of the existing zoning ordinance. DVRPC’s 2035 population estimates include an increase of only 616 people in Chadds Ford, which equates to about 250 dwelling units, while the Township Open Space Plan (2008) population projections result in a need for approximately 800 new housing units by 2030. The permitted densities of Chadds Ford Township’s current zoning ordinance more than provide for the anticipated future housing needs in the Township.

1. **Variety of Housing Types.** Chadds Ford Township provides a wide variety of both owner-occupied and rental housing units, over half of which have been constructed since 1980. According to the 2000 Census data, the Township's renter-occupied housing accounted for 14% of all units. It is recommended that the Township continue policies to maintain this variety of housing opportunities.
2. **Future Housing Needs.** The residential build-out analysis prepared for the Future Land Use recommendations predicts that this Plan accommodates approximately 830 new dwelling units, which addresses the housing needs for the Township's projected population by 2030, as incorporated in the Township Open Space Plan (2008).

C. **TRANSPORTATION AND CIRCULATION PLAN**

Goals and Objectives

The transportation goal from Chapter 1 is *"Provide and maintain a high quality, safe road network that serves the needs of all residents and encourages the development of alternative modes of transportation, including rail and bus service."* Objectives include the development of pedestrian and bicycle routes that link to key destinations in the Township, as well as the implementation of traffic calming techniques within the Village of Chadds Ford.

Background

Planning implications for transportation and circulation (see Appendix C: Transportation and Circulation Inventory and Analysis) include the potential need for the extension of bus service within the Township, the need to provide connected trails for pedestrians and bicyclists, and the need to address traffic congestion, in part through the completion of the connection of Hillman Drive at US Route 1 and US Route 202.

The Circulation Map (Map 3) shows the areas of the Township where the following recommendations concerning roadway improvements, trails, and scenic roads should be implemented. Recommendations regarding scenic roads are also included in the Chadds Ford Township Open Space Plan of 2007.

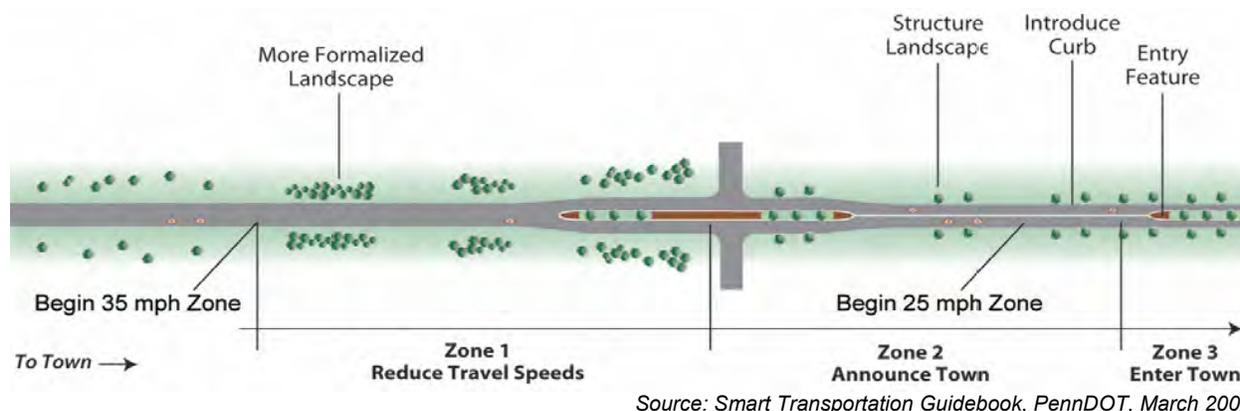


Figure 4: Traffic Speed Transitions Techniques

1. **Road Functional Classification.** It is recommended that the road functional classification systems shown on the Circulation Plan Map (see Appendix C, pages C-3 and C-4) be used to guide the maintenance and future improvements of this road system.

MAP 3: TRANSPORTATION RECOMMENDATIONS

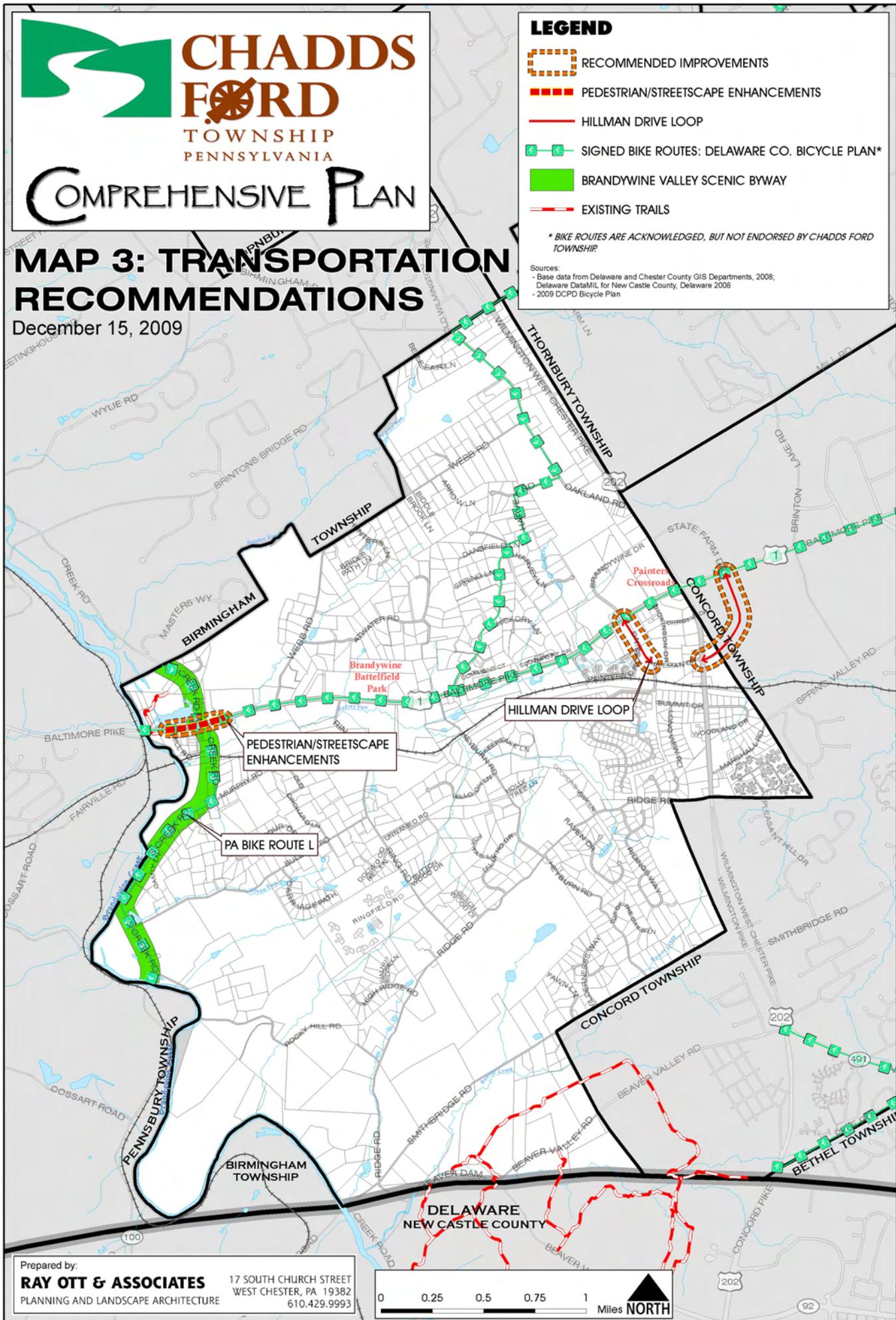
December 15, 2009

LEGEND

-  RECOMMENDED IMPROVEMENTS
-  PEDESTRIAN/STREETSCAPE ENHANCEMENTS
-  HILLMAN DRIVE LOOP
-  SIGNED BIKE ROUTES: DELAWARE CO. BICYCLE PLAN*
-  BRANDYWINE VALLEY SCENIC BYWAY
-  EXISTING TRAILS

* BIKE ROUTES ARE ACKNOWLEDGED, BUT NOT ENDORSED BY CHADDS FORD TOWNSHIP.

Sources:
 - Base data from Delaware and Chester County GIS Departments, 2008;
 - Delaware DataMIL for New Castle County, Delaware 2008
 - 2009 DCPD Bicycle Plan



2. Scenic Byway. Recommendations concerning the Brandywine Valley Scenic Byway are included in the Chadds Ford Township Open Space Plan of 2007. A Corridor Management Plan is currently being developed by the Brandywine Valley Scenic Byway Commission. When available, the recommendations of this project should be considered for incorporation into zoning and land development ordinance provisions to protect the scenic integrity of this corridor.
3. Rt. 1 through Chadds Ford Village. Design improvements along the Chadds Ford Village section of Rt. 1 that incorporate “traffic calming” and “complete streets” techniques and provide for safe pedestrian crosswalks. This recommendation is included above under the Future Land Use Recommendation for a Chadds Ford Village Master Plan.



Figure 5: US Route 1 in Chadds Ford Village

4. Bicycle Routes. Acknowledge bicycle routes along existing public roads through the Township as designated in the 2009 Delaware County Planning Department (DCPD) Bicycle Plan, but not endorsed by the Township.
5. Township-wide Bicycle and Trail Plan. Prepare a Township-wide Bicycle and Trail Plan. The Township Open Space Committee is currently pursuing a grant to prepare a trail network plan. This plan should explore the feasibility of providing an effective pedestrian circulation system in the Township that provides opportunities for destination walking (such as to recreational and commercial areas), recreational walking and hiking, and access to the Brandywine Battlefield Historic Site. It should also incorporate the Bicycle Route recommendations discussed above. Public participation should be an important component of this project.
6. Traffic Impact Study. Major subdivision and land development applications should include a Traffic Impact Study. The Traffic Impact Study should identify the amount of traffic expected to be generated by development and how the traffic will be distributed over time to the surrounding roads. Traffic Impact Studies should also identify road improvements that would be needed to handle the increased traffic volumes. Based on this study, responsibility for implementation of needed improvements can be identified.
7. US Route 202 Section 100: Land Use and Coordination Study (2008). In 2008, the Delaware Valley Regional Planning Commission (DVRPC) prepared the US Route 202 Section 100: Land Use and Coordination Study, that includes recommendations from a 2001 report, the status of these recommendations as of 2007, as well as some new recommendations. All recommendations pertinent to Chadds Ford Township should be reviewed as to their current status/implementation. The Township should work with DVRPC and adjacent municipi-

palties to enhance the Route 202 functionality and streetscape in order to improve overall capacity.

8. Hillman Drive “Loop.” Pursue the completion of the connection of Hillman Drive at US Route 1 and US Route 202, and work with Concord Township to complete the southeast quadrant of this loop drive.

D. PLAN FOR THE PROTECTION OF NATURAL AND HISTORIC RESOURCES

Goals and Objectives

Chapter 1’s goals for natural and historic resources are [1] *“Permanently protect Chadds Ford’s open spaces – its farm fields and meadows, woods, stream valleys, and other water resources, historic sites and structures and scenic resources – which, in combination, create the Township’s unique community character, remaining rural atmosphere and quality of life; and [2] Assure provision of an adequate level of recreational services and facilities to Township residents.”* Numerous objectives were set forth in the 2007 Open Space Plan, all of which were carried forward to this Comprehensive Plan. These objectives include the expanded protection and conservation of open space, natural, scenic and historic resources throughout the Township.

Background

Planning implications for natural and historic resources include the need for greater protection for all of the Township environmental, scenic and historic resources. (See Appendix D: Environmental, Cultural and Historic Resource Inventory and Analysis.)

The Chadds Ford Township Open Space Plan of 2007 was adopted as a component of the Comprehensive Plan, and as such, all open space and recreation recommendations and implementation strategies set forth in the Open Space Plan of 2007 should be considered to be the open space and recreation recommendations of this Comprehensive Plan. Map 4 shows Township resource areas to be protected. Historic resources inventories for the Open Space Plan are also shown on Map 4. A complete list of these resources is included in the Open Space Plan.

1. Open Space Protection Focus Areas. The protection of Open Space Focus areas is addressed in Section 2.A.3.a of the Plan for Land Use.
2. Water Supply and Water Quality.
 - Riparian Buffer Zones. Amend the zoning ordinance to require buffer areas along all streams in the Township. The actual buffer boundary should be based on site specific criteria, such as local slope and soil conditions.
 - Stormwater Management. The Pennsylvania Department of Environmental Protection (DEP) is responsible for administering the State’s stormwater management programs. Act 167 requires municipalities in a watershed with an adopted stormwater management plan to adopt the plan’s model ordinance. The Township has adopted Ordinance 104 for Chester Creek municipality-wide. Under a DEP directive, the County will be preparing a new model ordinance for Countywide use. Chadds Ford will need to adopt this new ordinance.

MAP 4: HISTORIC AND NATURAL RESOURCES PLAN RECOMMENDATIONS

December 15, 2009

LEGEND

EXISTING PROTECTED RESOURCES

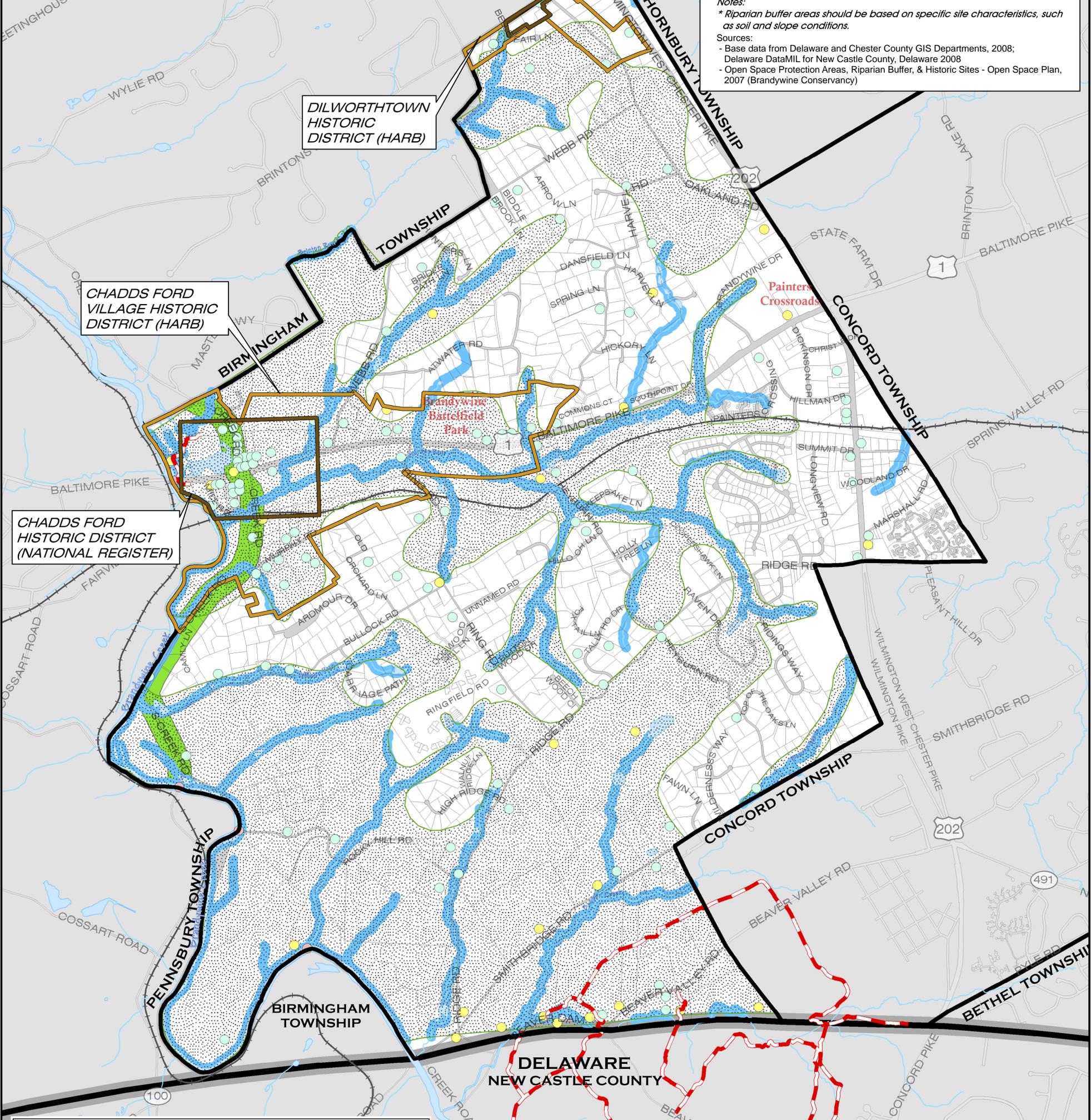
- NATIONAL REGISTER HISTORIC DISTRICT
- HISTORIC DISTRICTS (HARB)

RECOMMENDED RESOURCE PROTECTION AREAS

- HISTORIC FORDS
- HISTORIC SITES
- HISTORIC STRUCTURES
- OPEN SPACE PROTECTION AREAS
- BRANDYWINE VALLEY SCENIC BYWAY
- RIPARIAN BUFFER*

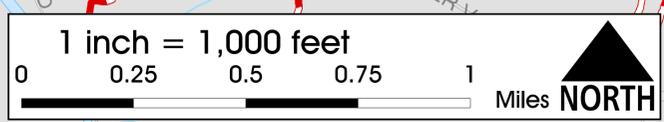
Notes:
* Riparian buffer areas should be based on specific site characteristics, such as soil and slope conditions.

Sources:
- Base data from Delaware and Chester County GIS Departments, 2008; Delaware DataMIL for New Castle County, Delaware 2008
- Open Space Protection Areas, Riparian Buffer, & Historic Sites - Open Space Plan, 2007 (Brandywine Conservancy)



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DEP also administers the federal NPDES program, which requires municipalities with municipal separate storm sewer systems (MS4s) to obtain a permit containing six minimum control measures. Chadds Ford has obtained a permit. In addition, the State's NPDES stormwater program establishes permitting requirements for earth disturbance over one acre and for industrial sites.

- Work with an engineering consultant to determine ways to improve flood conditions along roadways within the Township.
- 3. Historical Commission. Establish a Township Historical Commission to oversee the Township's individual historic resources. While the HARB currently reviews development projects within the Chadds Ford Village and Dilworthtown Historic Districts, there are no current mechanisms to protect individual historic structures.
- 4. Delaware County Natural Heritage Inventory. The Delaware County Planning Department is currently working on a Delaware County Natural Heritage Inventory. This report should be reviewed and considered by the Township when it is available.
- 5. Brandywine Battlefield National Historic Landmark. Work with the Brandywine Battlefield National Historic Landmark Task Force to help preserve this significant historic resource.

E. COMMUNITY FACILITIES AND SERVICES PLAN

Goals and Objectives

Chapter 1's goal for community facilities is "*Provide community facilities and services to meet current and future residential and business requirements in the Township.*"

Background

Planning implications for community facilities and services include the following: [1] Additional capacity is available at the Turners Mill and Ridings Wastewater Treatment Plants; [2] A line item should be included in the Township budget for parks and recreation; [3] and that the Township provides basic administrative and code enforcement services.³

The Community Facilities Plan consists of the following recommendations concerning public services.

1. Recycling. The Township should consider the November 2008 recommendations of the Township's Recycling Task Force in the development of a Township recycling program.

³ During the writing of this Comprehensive Plan, Chadds Ford Township's First Township Manager was appointed.

2. Parks and Recreation

- a. The recreational recommendations set forth in Chapter 9 of the Township Open Space Plan of 2007 should be incorporated herein.
- b. Prepare a Community Trails Feasibility Study and Master Plan.

3. Sanitary Sewer Service

- a. The Chadds Ford Township Sewer Authority contracts with the Delaware County Regional Water Quality Control Authority to operate and maintain both the Ridings and Turners Mill Wastewater Treatment Plants. The Ridings plant is permitted for 80,000 gallons per day (GPD) and is currently (2008) treating an average of 36,000 GPD, which in conjunction with an additional 23,870 GPD in committed usage, leaves 20,130 GPD available. The Turners Mill Plant is permitted for 140,000 GPD, and has an available capacity of 63,243 GPD. Together the two plants have 83,373 GPD in available capacity to serve future needs. At the current average daily usage rate of 217 GPD per household, this leaves a reserve capacity to service 384 households -- which is also known as an "equivalent dwelling units" or "EDUs."

An analysis of existing public sewer capacity and development accommodated in the Future Land Use recommendations of this plan is presented in Table 2. Based on a build-out analysis of the Future Land Use recommendations, this plan provides for 542 new dwelling units and 610,000 square feet of nonresidential development within these existing sewer service areas. This new growth would require approximately 823 EDUs in sewer capacity, which exceeds the existing available capacity by 439 EDUs. Sewer capacities should be evaluated, and existing infrastructure should be enhanced and upgraded as necessary to accommodate this planned growth when needed.

Table 2: Evaluation of Public Sewer Capacity

	Permitted Capacity [1]	Current Usage [1]	Committed Usage [2]	Available Capacity	Available EDUs [3]	Comprehensive Plan Future Land Use		
						Dwelling Units	Non-Residential Floor Area	EDUs [4]
Ridings Plant	80,000	36,000	23,870	20,130	93	122	435,000	322
Turners Mill Plant [5]	140,000	50,500	26,257	63,243	291	420	175,000	501
	220,000	86,500	50,127	83,373	384	542	610,000	823

[1] Current usage in gallons per day (GPD) for 2008. Township "Chapter 94 Report."

[2] Usage committed but not currently utilized for 2008. Township "Chapter 94 Report."

[3] EDU (Equivalent Dwelling Unit) = 217 GPD (gallon per day)

[4] EDUs calculated at 1 per dwelling unit and 100 gpd (0.46 EDUs) per 1,000 sq.ft. of floor area.

[5] The Turner's Mill sewer transmission system was designed and balanced to handle the planned load at the time of construction. While the plant is rated at 140,000 GPD, and significant development would require concurrent transmission capacity be provided.

F. INTERRELATIONSHIP OF PLAN ELEMENTS

The individual plan elements required by the MPC interrelate to comprise the Comprehensive Plan for the Township. This section discusses these interrelationships and how they affect plan recommendations.

Chapter 1 of the plan sets forth the goals and objectives formed by the Township and includes Township history and MPC requirements for the preparation of a Comprehensive Plan. Methods to effectively implement the objectives and meet the goals were considered throughout the

preparation of this plan and are directly addressed through the implementation schedule set forth in Chapter 3.

Appendix A of the Plan sets forth Census data and provides population and housing projections to 2020. The chapter also discusses current employment and housing characteristics in the Township. Ways to accommodate anticipated population increases and housing demands without compromising the Township's rural landscapes are discussed throughout the Plan. Specifically, Appendix B, Existing Land Use and Zoning, includes residential and commercial build-out analyses which estimate the number of new housing units and commercial square feet that could be built in the Township given available land and current zoning ordinance standards.

Appendix C, Transportation and Circulation, discusses the road network serving the Township, which relates to Appendix F, Community Facilities and Services, in that it indicates existing roads that require improvement. Transportation and circulation recommendations are provided in Chapter 3. The provision of community facilities and services directly relates to housing and population estimates, discussed in Appendix A.

Environmental, Cultural and Historic Resources, Appendix D, discusses Township natural and cultural resources in need of protection, and relates to Appendix B, Existing Land Use and Zoning.

G. STATEMENT OF DEVELOPMENT COMPATIBILITY WITH CONTIGUOUS MUNICIPALITIES

Issues and opportunities involving adjacent communities are discussed and analyzed throughout the plan. The populations of adjacent townships and projections for those townships are discussed in Appendix A. As noted in Appendix B, Existing Land Use and Zoning, the adjacent municipalities of Pennsbury Township and Birmingham Township, Chester County, Concord Township, Delaware County, and New Castle County, Delaware, all have generally compatible zoning along the borders of Chadds Ford Township. Appendix C, Transportation and Circulation, discusses transit facilities in the region that serve the Township, as well as the Brandywine Valley Scenic Byway, which includes multiple municipalities. The area roadway network is discussed which includes descriptions of arterial roadways which serve the region. Appendix D, Environmental, Cultural and Historic Resources, includes discussions of natural resources, which are not delineated by municipal boundaries. These resources include watersheds that are divided by topography and affect the drainage of stormwater in municipalities based on slope. Streams also transcend municipal boundaries; downstream townships are affected by the land development standards and practices of upstream neighbors. Appendix E, Community Facilities and Services, includes a discussion of services such as police, fire and emergency services, which are provided by various companies on a regional level.

H. RELATIONSHIP TO REGIONAL AND COUNTY PLANS AND TRENDS

The MPC requires that municipal comprehensive plans be somewhat consistent with county comprehensive plans. At this time, Delaware County has no formal Comprehensive or Policy Plan. However, individual studies and plans, such as the County Bicycle Plan, are referred to in this Township Comprehensive Plan.

3. STRATEGIC IMPLEMENTATION PLAN

The Comprehensive Plan Implementation Plan is shown in Table 3 on the following page, which provides a prioritized list of each recommendation described in the preceding chapter. According to Pennsylvania Municipalities Planning Code, the Plan should be reviewed again in 2019.

For each recommendation the table lists the following implementation strategies:

PRIORITY: Each recommendation is assigned a high, medium and low priority. This is not meant to imply that recommendations receiving a 'low' priority are not as important as those receiving a 'high' priority, but it rather a recommendation as to the order in which tasks should be pursued.

COMPLETION TIME FRAME: This is meant as an estimate of the time frame in which a specific task can be completed. Because some tasks will take longer to initiate and complete, the time frame does not necessarily relate to the task priority.

RESPONSIBILITY: This column identifies the Chadds Ford Township committees most responsible for overseeing the implementation of each recommendation, including the Board of Supervisors, Planning Commission, Open Space Committee or Sewer Authority.

IMPLEMENTATION METHOD: These methods identify whether the recommendation implementation will require a special study or plan, a new ordinance or physical improvement.

POTENTIAL FUNDING SOURCE: This column lists potential grant funding sources that could be used to supplement Township funds. These include state funding sources -- the Department of Conservation and Natural Resources (DCNR), the Department of Environmental Protection (DEP), the Department of Community & Economic Development (DCED); and other grants, such as federal Community Development funds administered by Delaware County.

While the Implementation Plan (Table 3) includes priorities and time frames, the Comprehensive Plan should be utilized as a dynamic document. The Township should use the Implementation Plan as a guide to track progress on the various Plan Recommendations. As such, it is envisioned that Implementation Plan should be reviewed periodically and updated to reflect current Township priorities.

Table 3: Implementation Plan

	RECOMMENDATION	PRIORITY [1]	COMPLETION TIME FRAME [1]	RESPON-SIBILITY [2]	METHOD OF IMPLEMENTATION	POTENTIAL FUNDING SOURCES [2]
A. PLAN FOR LAND USE						
1	Zoning/Conservation Easement Analysis	High	1 to 3 years	BOS, PC	Special Study	DCED, DelCo
2	Amend Zoning Ordinance to implement Future Land Use Recommendations	High	2 to 4 years	BOS, PC	Prepare zoning amendment	DCED, DelCo
3	Prepare Chadds Ford Village Master Plan.	Medium	2 to 4 years	BOS, PC	Special Project	PennDOT, DCED, DelCo
4	Incorporate / Implement the Brandywine Valley Scenic Byway study recommendations (as appropriate) when available.	Medium	2 to 4 years	PC, OS Committee	Prepare ordinance amendments	PennDOT
B. PLAN TO MEET HOUSING NEEDS						
1	Continue to accommodate current housing mix.	High	1 year	BOS, PC	Adopt Comprehensive Plan	N/A
C. TRANSPORTATION & CIRCULATION PLAN						
1	Adopt Road Functional Classification System	High	1 year	BOS, PC	Adopt Comprehensive Plan	N/A
2	Scenic Byway	Medium	2 to 4 years	BOS, PC	Possible zoning amendments	PennDOT, DCED, DelCo
3	Rt. 1 / Chadds Ford Pedestrian / Streetscape enhancements	Medium	2 to 4 years	BOS, PC	Design and construction	PennDOT, DCED, DelCo
4	Bicycle Routes	Low	3+ years	BOS, PC	Install signage	PennDOT, DCED, DelCo
5	Township-wide Trail Plan	Medium	2 to 4 years	Open Space Com.	Prepare plan	PA-DCNR
6	Traffic Impact Study	High	1 year	BOS, PC	Prepare/adopt ordinance	N/A
7	US Rt. 202 DVRPC Study	Low	3+ years	BOS, PC	Review study, participate in regional planning	N/A
8	Hillman Drive Loop	High	1 to 3 years	BOS, PC	Design and construction	PennDOT, private development funds
D. PLAN FOR THE PROTECTION OF HISTORIC & NATURAL RESOURCES						
1	Amend Zoning Ordinance to protect "Open Space Focus Area" recommended in the OS Plan.	High	2 to 4 years	BOS, PC	Prepare/adopt zoning amendment	DCED, DelCo
2	Water Quality - Riparian Buffer Zones	Medium	2 to 4 years	BOS, PC	Prepare/adopt zoning amendment	DCED, DelCo
3	Establish a Township Historical Commission.	High	1 to 3 years	PC, HARB	Prepare zoning amendment	N/A
E. COMMUNITY FACILITIES PLAN						
1	Implement recommendations of Township Recycling Task Force.	High	1 year	PC, BOS	ZO, SALDO, special projects	DEP
2	Parks and Recreation - Township Trail Plan	see C.5 above				
3	Sanitary Sewer Service	High	on-going	Sewer Authority	monitor capacity	

Notes:

[1] The Township should use the Implementation Plan as a guide to track progress on the various Plan Recommendations. As such, it is envisioned that Implementation Plan be reviewed periodically and updated to reflect current Township priorities.

[2] BOS=Board of Supervisors, PC=Planning Commission, ZO=Zoning Ordinance, SALDO=Subdivision and Land Development Ordinance; DEP: DCNR: Department of Conservation and Natural Resources; DEP: Department of DEP: Department of Environmental Protection; DCED: PA Department of Community & Economic Development; DelCo: Delaware County administered Community Development funds.

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APPENDIX A: DEMOGRAPHICS AND HOUSING INVENTORY AND ANALYSIS

Using 2000 Census data, the following section examines population forecasts and characteristics as well as housing and employment patterns for Chadds Ford Township and the region. These data provide a basis for many of the Township's land use, community services and transportation policy decisions to be made over the next decade, and will facilitate determination of Township resource allocations with respect to policy objectives.

1. POPULATION FORECASTS

Table 1: Population Trends

AREA		1960	1970	1980	1990	2000	FORECASTS [1]		
							2010	2020	2030
Chadds Ford	Population	1,093	1,281	2,057	3,118	3,170	3,317	3,352	3,704
	% Change		17.2%	60.6%	51.6%	1.7%	4.6%	1.1%	10.5%
C. F. Region*	Population	7,666	11,754	16,335	21,069	27,917	34,799	36,759	38,919
	% Change		53.3%	39.0%	29.0%	32.5%	24.7%	5.6%	5.9%
Delaware Co.	Population	553,154	603,646	555,023	547,651	550,864	556,117	557,795	559,288
	% Change		9.1%	-8.1%	-1.3%	0.6%	1.0%	0.3%	0.3%
New Castle Co., DE**	Population	307,446	385,856	398,115	441,946	500,265	539,987	556,766	594,978
	% Change		25.5%	3.2%	11.0%	13.2%	7.9%	3.1%	6.9%
Pennsylvania	Population	11,319,000	11,794,600	11,863,895	11,881,643	12,281,054	12,365,000	12,683,000	12,768,184
	% Change		4.2%	0.6%	0.1%	3.4%	0.7%	2.6%	0.7%

[1] Delaware Valley Regional Planning Commission, Regional, County & Municipal Population and Employment Forecasts, 2005-2035, August 2007.

* Includes Concord, Thornbury, and Chadds Ford, Delaware County, and Birmingham and Pennsbury Townships, Chester County.

Population **projection data for New Castle County, DE is provided from the Delaware Population Consortium - 2008 Delaware Population Projection Summary Table, 7/1/2008.

Source: U.S. Bureau of Census, Census Data for 1960, 1970, 1980, 1990 and 2000.

Population forecasts are a type of population projection that estimates future population based on past demographic trends using fertility (birth rates), mortality (death rates) and net migration rates. Unlike fertility and mortality rates, net migration depends more on economic factors and is more difficult to determine since it is affected by planning policies, housing prices and job availability.

Table 1 includes data for Chadds Ford, adjacent PA townships (the Chadds Ford Region), Delaware Co., New Castle Co., DE, and PA. Chadds Ford's 1973 Comprehensive Plan projected a 1990 population of 3,620 and a 2000 population of 4,700. As can be seen from Table 1-1, these projections overestimated the actual numbers.

- Chadds Ford Twp.'s population nearly tripled between 1960 and 1990.
- The Chadds Ford region (including Chadds Ford, Thornbury and Concord Townships in Delaware Co. and Pennsbury and Birmingham Twps., Chester Co.) had significant population increases between 1960 and 2000, with the regional population increasing almost a third from 1990 to 2000.
- Delaware Co. lost population from 1970 to 1990, and increased by only 0.6% from 1990 to 2000. South of Chadds Ford, in New Castle Co., DE, the population increased steadily from 1980 to 2000, from almost 400,000 people to over 500,000.

Table 2: Township Population and Housing Projections

		1990	2000	FORECASTS			INCREASE
				2010	2020	2030	2000 - 2030
DVRPC [1]	Population	3,118	3,170	3,317	3,352	3,704	534
	% Change		1.7%	4.6%	2.0%	10.5%	
Average Household Size			2.41	2.41	2.41	2.41	
Occupied Housing Units			1,315	1,376	1,391	1,537	222
2025*							
OPEN SPACE PLAN [2]	Population		3,170	3,822	4,616	5,080	1,910
	% Change		1.7%	20.6%	20.8%	10.1%	
Average Household Size			2.41	2.41	2.41	2.41	
Occupied Housing Units			1,315	1,586	1,915	2,108	793
COMPREHENSIVE PLAN [3]	Population		3,170	3,822	4,616	5,169	1,999
	% Change		1.7%				
Average Household Size			2.41	2.41	2.41	2.41	
Occupied Housing Units			1,315	1,586	1,915	2,145	829

[1] Delaware Valley Regional Planning Commission, Regional, County & Municipal Population and Employment Forecasts, 2005-2035, August 2007.

[2] Projections based on the 'average' of three projection methodologies included in the Chadds Ford Township Open Space Plan, 2007, p. 4-3.

[3] The population projections from the Chadds Ford Open Space Plan are used in this plan. A build-out analysis of recommended Future Land Use Plan component of this Comprehensive Plan estimates that this plan will accommodate 829 new dwelling units.

<p>Table 2 also presents population forecasts and projections for the Township included in the 2007 Township Open Space Plan and those published by the Delaware Valley Regional Planning Commission. The DVRPC projections foresee a population increase of 534 by the year 2030, which at the current average household size of 2.41 occupants per dwelling unit would result in a projected need of 222 new dwelling units by 2030. The projections used in the Open Space Plan foresee a population increase of 1,910 over the same period.</p>	<ul style="list-style-type: none"> • Slight to modest growth is expected for CFT, with an increase of between 534 to 1,910 people from 2010 to 2030, depending on the statistic examined. • This population increase will result in an additional 222-793 occupied housing units.
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2. POPULATION CHARACTERISTICS

Township population characteristics are described below.

Age																																																																	
<p>Table 3 provides data from the 2000 Census regarding Township residents' ages.</p> <ul style="list-style-type: none"> The average age of Twp. residents is relatively young, but six (6) years older than the County average. The largest age groups are those between the ages of 25 and 54, which was 45.1% of the total population. Residents aged 55 years and older comprised 27.9% of the population in 2000. Only 18.7% of CFT's population was comprised of school-aged children (5 - 19 years old). 	<p>Table 3: Age</p> <table border="1"> <thead> <tr> <th>Age</th> <th>2000</th> <th>Twp.</th> <th>County</th> </tr> </thead> <tbody> <tr><td>Under 5</td><td>156</td><td>4.9%</td><td>6.2%</td></tr> <tr><td>5-9</td><td>188</td><td>5.9%</td><td>7.0%</td></tr> <tr><td>10-14</td><td>210</td><td>6.6%</td><td>7.3%</td></tr> <tr><td>15-19</td><td>195</td><td>6.2%</td><td>7.3%</td></tr> <tr><td>20-24</td><td>105</td><td>3.3%</td><td>5.9%</td></tr> <tr><td>25-34</td><td>323</td><td>10.2%</td><td>12.5%</td></tr> <tr><td>35-44</td><td>496</td><td>15.6%</td><td>16.2%</td></tr> <tr><td>45-54</td><td>611</td><td>19.3%</td><td>13.4%</td></tr> <tr><td>55-59</td><td>261</td><td>8.2%</td><td>4.7%</td></tr> <tr><td>60-64</td><td>178</td><td>5.6%</td><td>3.7%</td></tr> <tr><td>65-74</td><td>291</td><td>9.2%</td><td>7.6%</td></tr> <tr><td>75-84</td><td>128</td><td>4.0%</td><td>5.9%</td></tr> <tr><td>85+</td><td>28</td><td>0.9%</td><td>2.0%</td></tr> <tr><td>Total</td><td>3,170</td><td></td><td></td></tr> <tr><td>Median Age (yrs.)</td><td></td><td>43.5</td><td>37.4</td></tr> </tbody> </table> <p>Source: 2000 U.S. Census.</p>	Age	2000	Twp.	County	Under 5	156	4.9%	6.2%	5-9	188	5.9%	7.0%	10-14	210	6.6%	7.3%	15-19	195	6.2%	7.3%	20-24	105	3.3%	5.9%	25-34	323	10.2%	12.5%	35-44	496	15.6%	16.2%	45-54	611	19.3%	13.4%	55-59	261	8.2%	4.7%	60-64	178	5.6%	3.7%	65-74	291	9.2%	7.6%	75-84	128	4.0%	5.9%	85+	28	0.9%	2.0%	Total	3,170			Median Age (yrs.)		43.5	37.4
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<p>Table 4 provides data regarding school enrollment in Chadds Ford.</p> <ul style="list-style-type: none"> About ¼ of Twp. residents were enrolled in school. Of those enrolled in school, 41.6% were in elementary school, 26.8% in high school and 15.5% in college or graduate school. 	<p>Table 4: School Enrollment</p> <table border="1"> <thead> <tr> <th>Grade/Level</th> <th>2000</th> <th>Twp.</th> <th>County</th> </tr> </thead> <tbody> <tr><td>Nursery school, preschool</td><td>72</td><td>9.8%</td><td>7.5%</td></tr> <tr><td>Kindergarten</td><td>46</td><td>6.3%</td><td>5.1%</td></tr> <tr><td>Elementary School (grades 1-8)</td><td>306</td><td>41.6%</td><td>41.2%</td></tr> <tr><td>High School (grades 9-12)</td><td>197</td><td>26.8%</td><td>20.6%</td></tr> <tr><td>College or Graduate school</td><td>114</td><td>15.5%</td><td>25.7%</td></tr> <tr><td>Total</td><td>735</td><td></td><td></td></tr> </tbody> </table> <p>Source: 2000 U.S. Census.</p>	Grade/Level	2000	Twp.	County	Nursery school, preschool	72	9.8%	7.5%	Kindergarten	46	6.3%	5.1%	Elementary School (grades 1-8)	306	41.6%	41.2%	High School (grades 9-12)	197	26.8%	20.6%	College or Graduate school	114	15.5%	25.7%	Total	735																																						
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<p>Data about educational attainment in the Twp. for those residents 25 years of age and older are shown in Table 5.</p> <ul style="list-style-type: none"> Twp. residents are well educated, with over 57% having at least a bachelor's degree as compared to 30% of County residents. Over one-quarter (28.4%) of CFT residents have a graduate or professional degree, as compared to just 11.8% of the County. 	<p>Table 5: Educational Attainment</p> <table border="1"> <thead> <tr> <th>Level/Degree[1]</th> <th>2000</th> <th>Twp.</th> <th>County</th> </tr> </thead> <tbody> <tr><td>Less than 9th grade</td><td>16</td><td>0.7%</td><td>3.7%</td></tr> <tr><td>9th to 12th grade, no diploma</td><td>40</td><td>1.7%</td><td>9.8%</td></tr> <tr><td>High school graduate [2]</td><td>432</td><td>18.7%</td><td>33.1%</td></tr> <tr><td>Some college, no degree</td><td>351</td><td>15.2%</td><td>17.3%</td></tr> <tr><td>Associate degree</td><td>157</td><td>6.8%</td><td>6.1%</td></tr> <tr><td>Bachelor's degree</td><td>667</td><td>28.8%</td><td>18.2%</td></tr> <tr><td>Graduate or professional degree</td><td>658</td><td>28.4%</td><td>11.8%</td></tr> <tr><td>Total</td><td>2,316</td><td></td><td></td></tr> </tbody> </table> <p>Source: 2000 U.S. Census. Notes: [1] Over the age of 25. [2] Includes high school equivalency.</p>	Level/Degree[1]	2000	Twp.	County	Less than 9th grade	16	0.7%	3.7%	9th to 12th grade, no diploma	40	1.7%	9.8%	High school graduate [2]	432	18.7%	33.1%	Some college, no degree	351	15.2%	17.3%	Associate degree	157	6.8%	6.1%	Bachelor's degree	667	28.8%	18.2%	Graduate or professional degree	658	28.4%	11.8%	Total	2,316																														
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<p>Table 6 provides data regarding the race/ ethnicity of Township residents.</p> <ul style="list-style-type: none"> • <i>Similar to Delaware Co., Twp. residents are 95% Caucasian.</i> • <i>Other racial groups are African-American, 1.1% of the Twp. population, and Asian and Hawaiian / Pacific Islands, 2.8%.</i> • <i>45 residents were listed as Hispanic or Latino of any race.</i> 	<p>Table 6: Race & Ethnicity</p> <table border="1"> <thead> <tr> <th>Race/Ethnicity</th> <th>2000</th> <th>Twp.</th> <th>County</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>3,020</td> <td>95.3%</td> <td>80.3%</td> </tr> <tr> <td>African-American</td> <td>34</td> <td>1.1%</td> <td>14.5%</td> </tr> <tr> <td>Native-American</td> <td>2</td> <td>0.1%</td> <td>0.1%</td> </tr> <tr> <td>Asian</td> <td>88</td> <td>2.8%</td> <td>3.3%</td> </tr> <tr> <td>Native Hawaiian / Pacific Isl.</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Some other race</td> <td>15</td> <td>0.5%</td> <td>0.6%</td> </tr> <tr> <td>Two or more races</td> <td>11</td> <td>0.3%</td> <td>1.2%</td> </tr> <tr> <td></td> <td>3,170</td> <td>100.0%</td> <td>100.0%</td> </tr> <tr> <td>Hispanic or Latino (any race)</td> <td>45</td> <td>1.4%</td> <td>1.5%</td> </tr> </tbody> </table> <p><i>Source: 2000 U.S. Census.</i></p>	Race/Ethnicity	2000	Twp.	County	White	3,020	95.3%	80.3%	African-American	34	1.1%	14.5%	Native-American	2	0.1%	0.1%	Asian	88	2.8%	3.3%	Native Hawaiian / Pacific Isl.	-	-	-	Some other race	15	0.5%	0.6%	Two or more races	11	0.3%	1.2%		3,170	100.0%	100.0%	Hispanic or Latino (any race)	45	1.4%	1.5%
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<p>Table 7 provides data regarding the place of birth of Township residents.</p> <ul style="list-style-type: none"> • <i>49.9% of Twp. residents were born in PA, less than the County (77%) and the average for PA (78%).</i> • <i>Foreign-born residents account for 9.8% of the Twp., more than the County (6.7%) and for PA (4.1%).</i> 	<p>Table 7: Place of Birth</p> <table border="1"> <thead> <tr> <th></th> <th>2000</th> <th>Twp.</th> <th>County</th> </tr> </thead> <tbody> <tr> <td>Native</td> <td></td> <td></td> <td></td> </tr> <tr> <td>- State of residence</td> <td>1,583</td> <td>49.9%</td> <td>77.0%</td> </tr> <tr> <td>- Different state</td> <td>1,264</td> <td>39.9%</td> <td>15.0%</td> </tr> <tr> <td>- Born outside the U.S.</td> <td>11</td> <td>0.3%</td> <td>0.7%</td> </tr> <tr> <td>Foreign born</td> <td>312</td> <td>9.8%</td> <td>6.7%</td> </tr> <tr> <td>Total</td> <td>3,170</td> <td></td> <td></td> </tr> </tbody> </table> <p><i>Source: 2000 U.S. Census.</i></p>		2000	Twp.	County	Native				- State of residence	1,583	49.9%	77.0%	- Different state	1,264	39.9%	15.0%	- Born outside the U.S.	11	0.3%	0.7%	Foreign born	312	9.8%	6.7%	Total	3,170														
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3. EMPLOYMENT AND INCOME CHARACTERISTICS

An overview of resident employment characteristics is presented in Table 8 below.

Table 8: Resident Employment and Income Characteristics

Industry	2000	Twp.	County	Occupation	2000	Twp.	County
Agriculture, forestry, etc.	-	-	0.2%	Managerial, professional	866	50.5%	39.3%
Construction	73	4.3%	5.7%	Services	106	6.2%	13.3%
Manufacturing	169	9.9%	9.9%	Sales and office	600	35.0%	29.3%
Wholesale trade	44	2.6%	3.1%	Farming, forestry...	-	-	0.1%
Retail trade	159	9.3%	11.2%	Construction, maintenance...	73	4.3%	8.4%
Transportation & warehousing	58	3.4%	5.7%	Production, transportation...	69	4.0%	9.7%
Information	83	4.8%	3.5%	Total	1,714		
Finance, insurance, & real estate	294	17.2%	8.9%				
Professional, scientific, management, etc.	280	16.3%	11.7%				
Education, health & social services	287	16.7%	25.5%	Income (1999)		Twp.	County
Arts, recreation, accommodation, food services	131	7.6%	6.2%	Per capita		\$52,974	\$50,092
Other services	88	5.1%	4.9%	Median household		\$84,100	\$61,590
Public administration	48	2.8%	3.5%	Median family		\$100,795	\$25,040
Total	1,714						

Source: U.S. Bureau of the Census, Census 2000, Profile of Selected Economic Characteristics.

Industry	Employment/Occupation	Income
<ul style="list-style-type: none"> • The top industries that CFT's residents are employed in are "finance, insurance, and real estate" (17.2%), "education, health and social services" (16.7%), and "professional, scientific, management, etc." (16.3%). At the County level, employment is somewhat concentrated in the "education, health & social services" sector (25.5%). • The industries with the lowest number of employees were wholesale trade (2.6%) and public administration (2.8%). • In 2000, no CFT resident reported being employed in agriculture or forestry. 	<ul style="list-style-type: none"> • Most CFT residents classified their occupation as "managerial and professional related" (50.5%) or "sales and office" (35.0%). • At a distant third was "services," at 6.2%. • No one in CFT reported an occupation in farming or forestry. 	<ul style="list-style-type: none"> • Per capita income for CFT was slightly higher than that for the County. • Median household income was significantly higher for CFT than the County income (\$84,100 versus \$61,590). • Median family income was 4 times higher in CFT than for the County.

4. HOUSING AND HOUSEHOLD CHARACTERISTICS

The Census records information for both "family households" and "non-family households."¹ Housing characteristics recorded in the 2000 Census are presented in Table 8 below.

Housing

Table 9: Housing Characteristics

Tenure / Occupancy	Units	Twp.	County	Year Built	Units*	Twp.	County
Occupied Units				1990 and later	172	12.9%	5.5%
Owner-occupied	1,129	85.9%	71.9%	1980-1989	528	39.5%	6.2%
Rental	185	14.1%	28.1%	1970-1979	325	24.3%	9.3%
	1,314			1960-1969	111	8.3%	13.2%
Vacant	24	1.8%	4.9%	1940-1959	119	8.9%	41.7%
Total	1,338			1939 and earlier	83	6.2%	24.2%
					1,338		

Unit Type	Units*	Twp.	County	Values / Rents	Twp.	County
Single-family detached	745	56.2%	60.7%	Owner-occupied, median	\$298,700	\$128,800
Row / townhouses / twins	328	24.7%	15.6%	Median rent	\$1,000	\$662
2 to 9 unit apartment	126	9.5%	9.2%			
10+ unit apartment	127	9.6%	9.5%			
Mobile homes	-	-	-			
Total	1,326					

* Unit types and age based on sample, so total units do not match actual figures.

Source: 2000 U.S. Census.

Housing Occupancy	Housing Unit Type	Housing Costs
<ul style="list-style-type: none"> The Census reported a total of 1,338 housing units in Chadds Ford Twp. Most households (85.9%) owned their home; 14.1% rented. The proportion of rental housing is significantly lower than the County, where 28.1% of the housing units were renter occupied. 	<ul style="list-style-type: none"> The majority of units were single-family detached units (745 units or 56.2%). Over 76% of the units have been built since 1970, which is also reflected in the 147% increase in population over the past 30 years 24% of housing unit types were attached, and 19% of units were described as apartments. 	<ul style="list-style-type: none"> The median home value is \$298,700, much higher than the \$128,800 for Delaware County. Median rents are also high, \$1,000 as compared to \$662 for all Delaware County municipalities.

¹ **Family Households:** includes a householder and one or more people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A family household may contain people not related to the householder, but those people are not included as part of the householder's family in census tabulations. Thus, the number of family households is equal to the number of families, but family households may include more members than do families. A household can contain only one family for purposes of census tabulations.

Non-family Households: Non-family households consist of a householder living alone or with non-relatives only.

Households: A household can refer to either a family or non-family household, and includes all of the people who occupy a housing unit. People not living in households are classified as living in "group quarters." In most cases, the "householder" is the person, or one of the people, in whose name the home is owned, being bought, or rented. If there is no such person in the household, any adult household member 15 years old and over could be designated as the householder.

Fair Share Analysis

In Pennsylvania, "fair share" generally refers to a municipality's obligation to accommodate local and regional housing needs. PA courts have developed the following three-part test for determining whether or not a municipality has accommodated these housing needs:

- 1) Is the community in a logical area for development and population growth?
- 2) Is the community in the path of development/population growth?
- 3) Is the percentage of land available under the zoning ordinance sufficient and appropriate considering development pressure and projected population growth?

In addition, Pennsylvania's fair share analysis focuses on whether or not a municipality is providing its fair share of housing types, and not on whether it is providing affordable housing.

Courts have rejected claims that a municipality is failing to meet its fair share requirements because lot size restrictions would not permit the construction of homes that could be afforded by those with low to moderate incomes.

Is Chadds Ford Township in a logical area for development and population growth?

Yes. Adjacent Concord Township, as well as Wilmington, DE and West Chester, PA are creating added development pressure for Chadds Ford Township, which has a significant amount of developable land. The Township is directly served by two major arterial routes (Rts. 1 and 202), but is not adequately served by transit.

Is the community in the path of development/population growth?

After significant growth in the 1970s and 1980s, the Township population only grew by 1.7% between 1990 and 2000 and is expected to grow by only 5.7% by 2020.

Is the percentage of land available under the zoning ordinance sufficient and appropriate considering development pressure, population growth and projected population growth?

Yes. According to a build-out analysis based on the Township's current zoning requirements, there is more that sufficient land available to more that double the existing Township population, while the Delaware Valley Regional Planning Commission projects that Chadds Ford Township population will increase 5.7% by 2020.

5. SUMMARY AND PLANNING IMPLICATIONS

- a. Over one quarter of the Township population was over 55 in 2000. CFT should consider the need for housing options for over 55 residents.
- b. Only slight to moderate population growth is anticipated to the year 2030.
- c. No residents reported being engaged in agriculture within the Township.

APPENDIX B: EXISTING LAND USE INVENTORY AND ZONING INVENTORY AND ANALYSIS

This section provides an inventory and analysis of current land uses and zoning districts that serve as a basis for accommodating and planning future development in the Township.

1. EXISTING LAND USE

Table 10 provides a summary of existing land uses and dwelling units in the Township, and the, Existing Land Use Map, shows distribution of land uses in the Township.

Table 10: Existing Land Use

Generalized Land Use	Parcels	Acres	Percent	Avg. Lot Size (acres)
Single-family Attached	387	15.92	0.3%	0.04
Single-family Detached	1,069	3,349.41	63.1%	3.13
Apartment	2	0.49	0.0%	0.25
Agricultural	1	141.20	2.7%	141.20
Commercial - Retail & Service	78	176.13	3.3%	2.26
Office & Storage	11	30.13	0.6%	2.74
Institutional	4	53.67	1.0%	13.42
Recreation	3	48.60	0.9%	16.20
Open Space	101	1,119.73	21.1%	11.09
Utility	6	5.54	0.1%	0.92
Vacant	172	370.61	7.0%	2.15
Total	1,834	5,311.42		

Sources: Delaware County Planning Department and ROA, 2008.

Residential Uses	Nonresidential Uses
<ul style="list-style-type: none"> 63.4% (3,364 acres) of CFT is in residential use Most residential land consists of 1,069 parcels containing single-family detached dwelling units These lots account for 96% of CFT's residential land, and 81% of the total dwelling units 	<ul style="list-style-type: none"> 1,945 acres (36.6%) of CFT are in non-residential use 176 acres of CFT are in commercial use 53.6 acres are in institutional use 5.5 acres are in utility uses 141.2 acres of CFT (2.7%) are classified as agricultural
Open Space & Recreational Uses	Vacant Land
<ul style="list-style-type: none"> 21.1% (1,119 acres) is open space 	<ul style="list-style-type: none"> 7% (370 acres) of CFT is described as vacant

1. 1973 Birmingham Township Comprehensive Plan - Land Use Plan

The existing Chadds Ford Township (formerly Birmingham Township) Comprehensive Plan was originally adopted in December 1972 and revised in May 1973. It provides documentation of conditions in the Township during the early 1970s using 1970 Census demographic data. The "Proposed Land Use Plan" section included several general recommendations:



CHADDS FORD

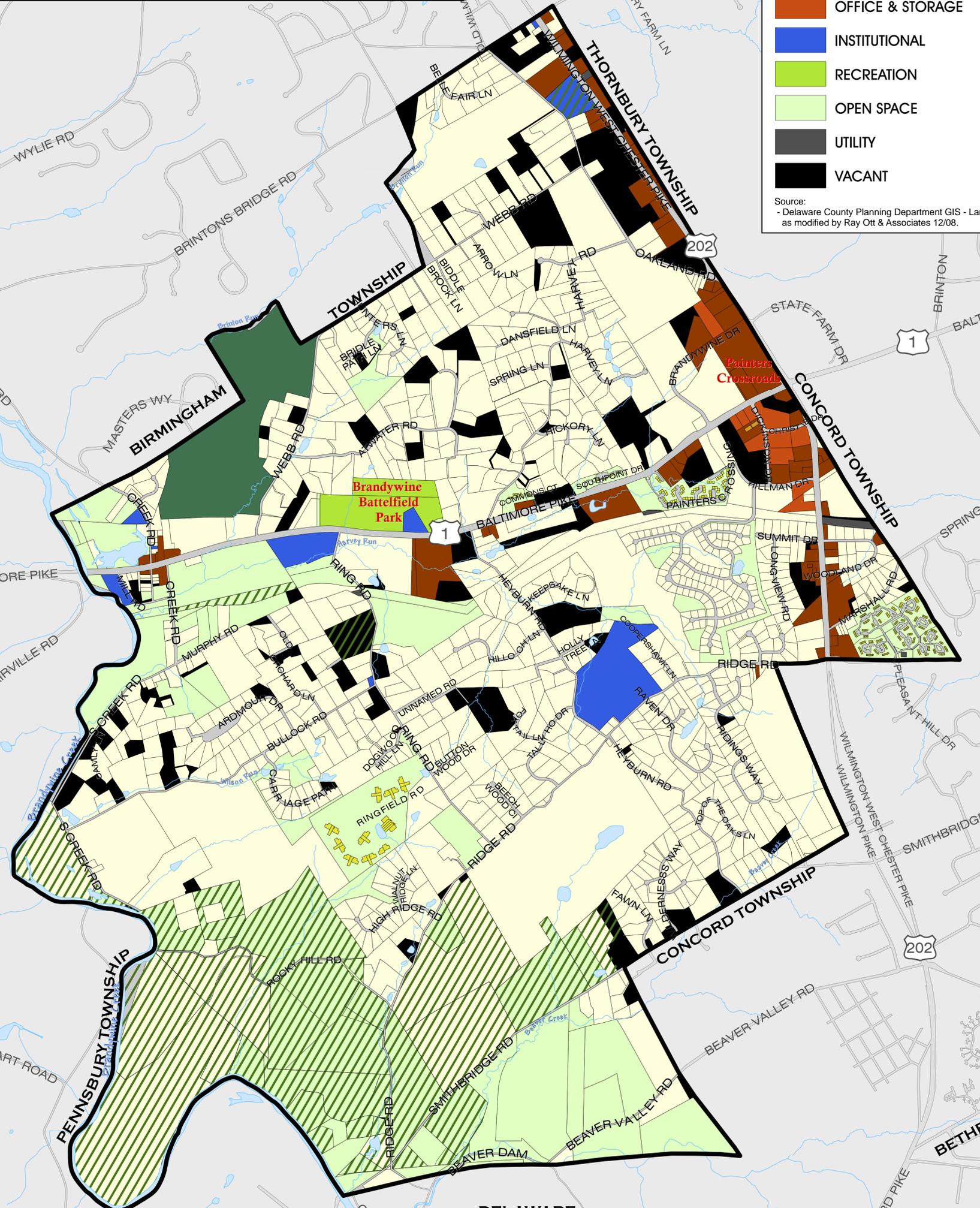
TOWNSHIP
PENNSYLVANIA

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LEGEND

-  EX. CONSERVATION EASEMENTS
- LAND USE - GENERALIZED**
-  SINGLE FAMILY DETACHED
-  SINGLE FAMILY ATTACHED
-  APARTMENT
-  AG - FARMLAND
-  COMMERCIAL - RETAIL & SERVICE
-  OFFICE & STORAGE
-  INSTITUTIONAL
-  RECREATION
-  OPEN SPACE
-  UTILITY
-  VACANT

Source:
- Delaware County Planning Department GIS - Land Use File 2005
as modified by Ray Ott & Associates 12/08.



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MAP B-1: EXISTING LAND USE

CHADDS FORD TOWNSHIP ZONING DISTRICTS										
Base Zoning Districts										
Zoning Abb.	Zoning Name	Section	Amendments	Permitted Use	Min. Lot Area	Residential Density	Building Coverage	Impervious Coverage	Height	Parking Requirement
B	Business	12.61	#64	Office, Retail, General Commercial	1 ac		25%	65%	40 ft.	5 / 1,000 sq. ft.
B-1	Business	12.64	#64n	Office, Retail, General Commercial, Auto	1 ac		25%	65%	40 ft.	4 to 10 / 1,000 sq. ft.
LI	Light Industrial	12.71	#15, 64c	Office, Manufacturing & Assembly	3 ac		30%	not specified	80 ft.	2 / 1,000 sq. ft.
PBC	Planned Business Center	12.62	#64c, 64q	Shopping, Retail, Service, Office	4 ac		25%	65%	40 ft.	4 / 1,000 sq. ft.
PBC-1	Planned Business Center	12.65	#64n	Shopping, Retail, Service, Office, Auto	4 ac		25%	65%	40 ft.	4 / 1,000 sq. ft.
POC	Planned Office Center	12.63	#64g, 64q	Office, Schools	4 ac		25%	65%	40 ft.	4 / 1,000 sq. ft.
R-1	Residence	12.31		SFD	2 ac	0.5 d.u./Gross Acre	15%	not specified	40 ft.	2 per unit
R-2	Residence	12.36	#91	SFD, SFA	1 ac	1 d.u./Gross Acre	15%	not specified	40 ft.	2 per unit
R-A	Residence/Apartment	12.41		Apartments	2 ac	12 d.u./Gross Acre	20%	not specified	40 ft.	2 per unit
R-M	Residence/Multi-Family	12.52	#52	SF Detached, apartment, townhouses	2 ac	6 d.u./Gross Acre	not specified	20%	40 ft.	1 per bedroom
Overlay Districts										
Overlay Abb.	Overlay Name	Ordinance	Amendments	Permitted Use	Min. Lot Area	Residential Density	Building Coverage	Impervious Coverage	Height	Parking Requirement
F-P	Floodplain Overlay	12.76	#27, 38, 47, 64a, 86							
H	Historic Overlay (HARB)	12.125	#69	All underlying zoning						
PRD-1	Planned Residential Development	12.51	#24, 41, 63, 92	SFD, SFA	50 ac	2 d.u./Net Acre				2 per unit
PRD-2	Planned Residential Development	12.51	#63, 92	SFD, SFA, Mobile Home, Retirement Com.	50 ac	4 d.u./Net Acre*				2 per unit
T	Towers - Cellular & Wireless	12.122		Communications Towers						
BPO	Baltimore Pike Overlay	12.78	#110	All underlying zoning				12%		

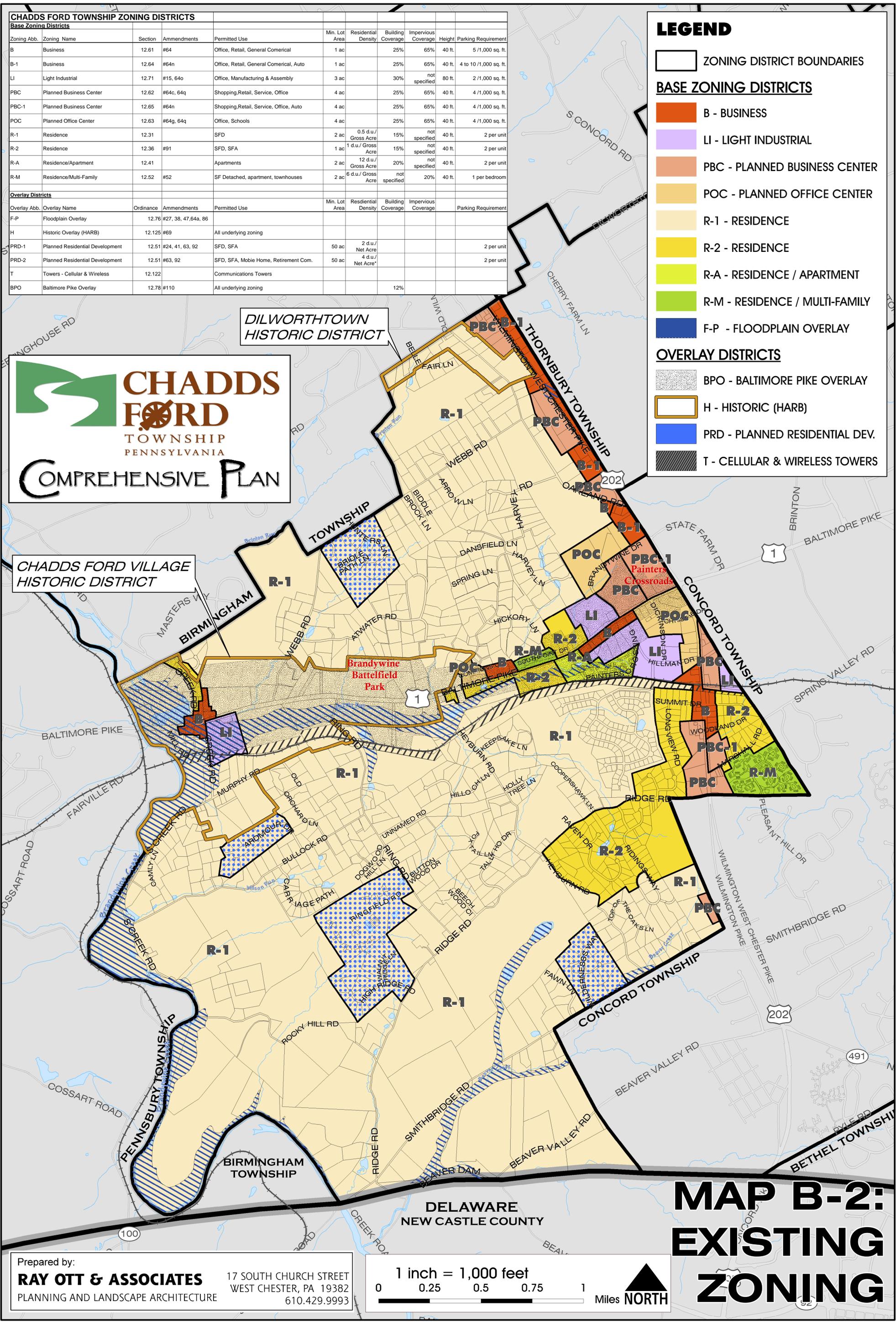
LEGEND

- ZONING DISTRICT BOUNDARIES
- BASE ZONING DISTRICTS**
- B - BUSINESS
- LI - LIGHT INDUSTRIAL
- PBC - PLANNED BUSINESS CENTER
- POC - PLANNED OFFICE CENTER
- R-1 - RESIDENCE
- R-2 - RESIDENCE
- R-A - RESIDENCE / APARTMENT
- R-M - RESIDENCE / MULTI-FAMILY
- F-P - FLOODPLAIN OVERLAY
- OVERLAY DISTRICTS**
- BPO - BALTIMORE PIKE OVERLAY
- H - HISTORIC (HARB)
- PRD - PLANNED RESIDENTIAL DEV.
- T - CELLULAR & WIRELESS TOWERS

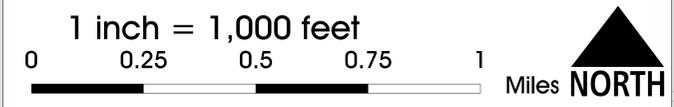


DILWORTH TOWN HISTORIC DISTRICT

CHADDS FORD VILLAGE HISTORIC DISTRICT



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**MAP B-2:
 EXISTING
 ZONING**

<i>Residential Development</i>	Medium- and high-density residential development areas at the Township's eastern edge and medium density residential development north of Chadds Ford.
<i>Commercial Development</i>	The great bulk of the commercial development should be located at the eastern edge of the Township. Strip sprawl should be avoided.
<i>Highways and Roads</i>	Rt.1's major value to the Township is as a through route. Every effort should be made to preserve this arterial as a free-flowing expressway.
<i>Parks, Recreation and Major Historic Sites</i>	Additional open space areas should be acquired while land prices remain relatively low. A prime site for acquisition would be the right-of-way of the Octoraro Railway should that facility be abandoned.
<i>Community Facilities</i>	The current municipal building will eventually become inadequate as the Township grows. A decision will then have to be made about where the new building should be located.

2. CHADDS FORD TOWNSHIP ZONING

Chadds Ford Township's current zoning map is on the following page. Current zoning is described as follows:

Table 11: Current Zoning

Base Zoning Districts										
Zoning Abb.	Zoning Name	Section	Amendments	Permitted Use	Min. Lot Area	Residential Density	Building Coverage	Impervious Coverage	Height	Parking Requirement
B	Business	12.61	#64	Office, Retail, General Commercial	1 ac		25%	65%	40 ft.	5 /1,000 sq. ft.
B-1	Business	12.64	#64n	Office, Retail, General Commercial, Auto	1 ac		25%	65%	40 ft.	4 to 10 /1,000 sq. ft.
LI	Light Industrial	12.71	#15, 64o	Office, Manufacturing & Assembly	3 ac		30%	not specified	80 ft.	2 /1,000 sq. ft.
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PBC-1	Planned Business Center	12.65	#64n	Shopping, Retail, Service, Office, Auto	4 ac		25%	65%	40 ft.	4 /1,000 sq. ft.
POC	Planned Office Center	12.63	#64g, 64q	Office, Schools	4 ac		25%	65%	40 ft.	4 /1,000 sq. ft.
R-1	Residence	12.31		SFD	2 ac	0.5 d.u./ Gross Acre	15%	not specified	40 ft.	2 per unit
R-2	Residence	12.36	#91	SFD, SFA	1 ac	1 d.u./ Gross Acre	15%	not specified	40 ft.	2 per unit
R-A	Residence/ Apartment	12.41		Apartments	2 ac	12 d.u./ Gross Acre	20%	not specified	40 ft.	2 per unit
R-M	Residence/ Multi-Family	12.52	#52	SF Detached, apartment, townhouses	2 ac	6 d.u./ Gross Acre	not specified	20%	40 ft.	1 per bedroom

Overlay Districts										
Overlay Abb.	Overlay Name	Ordinance	Amendments	Permitted Use	Min. Lot Area	Residential Density	Building Coverage	Impervious Coverage		Parking Requirement
F-P	Floodplain Overlay	12.76	#27, 38, 47,64a, 86							
H	Historic Overlay (HARB)	12.125	#69	All underlying zoning						
PRD-1	Planned Residential Development	12.51	#24, 41, 63, 92	SFD, SFA	50 ac	2 d.u./ Net Acre				2 per unit
PRD-2	Planned Residential Development	12.51	#63, 92	SFD, SFA, Mobie Home, Retirement Com.	50 ac	4 d.u./ Net Acre*				2 per unit
T	Towers - Cellular & Wireless	12.122		Communications Towers						
BPO	Baltimore Pike Overlay	12.78	#110	All underlying zoning				12%		



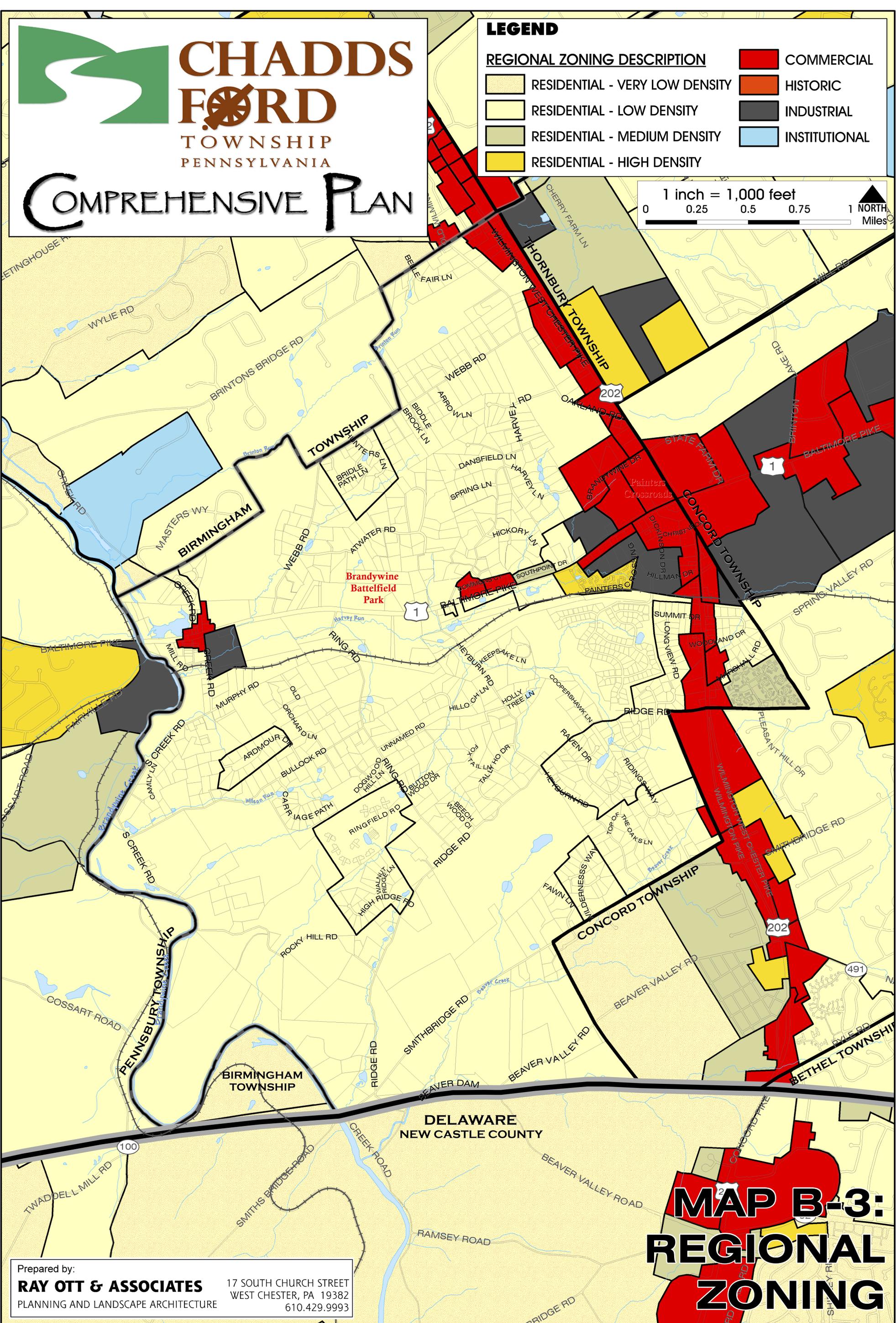
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REGIONAL ZONING DESCRIPTION

	RESIDENTIAL - VERY LOW DENSITY		COMMERCIAL
	RESIDENTIAL - LOW DENSITY		HISTORIC
	RESIDENTIAL - MEDIUM DENSITY		INDUSTRIAL
	RESIDENTIAL - HIGH DENSITY		INSTITUTIONAL

1 inch = 1,000 feet



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MAP B-3: REGIONAL ZONING

3. ADJACENT MUNICIPAL ZONING

The Regional Zoning Map, represents the existing zoning districts in Chadds Ford and the adjacent townships of Thornbury and Birmingham, in Chester County, and in and Concord and Thornbury Township, Delaware County.

Thornbury Township, Delaware County

Thornbury Township borders Chadds Ford Township to the east. The residential zoning districts are compatible along this boundary, ranging from medium- to high-density residential uses and industrial uses.

Concord Township, Delaware County

Concord Township, Delaware County creates a portion of Chadds Ford's southern and eastern boundaries. To the south, Concord is zoned very low- and medium-density residential. To the east along Wilmington - West Chester Pike, it is zoned commercial and low-density residential. North of the rail line, Concord is zoned industrial, as are portions of Chadds Ford.

Birmingham Township, Chester County

Birmingham Township forms the entire northern border of Chadds Ford Township. The majority of Birmingham Township along the border is zoned low-density residential, except for one small area to the east, which is zoned commercial. A discontinuous portion of Birmingham Township is located along the southern border of Chadds Ford Township, north of the Delaware State line, and is zoned very low density residential.

Pennsbury Township, Chester County

Pennsbury Township lies west of Chadds Ford Township, on the opposite side of the Brandywine Creek. The northern half of the border is zoned industrial and medium-density residential. The southern half of the border is zoned low-density residential, as is Chadds Ford.

New Castle County, Delaware

New Castle County creates a portion of the Chadds Ford's southern border, and is zoned very low-density residential.

4. RESIDENTIAL BUILD-OUT ANALYSIS

Using the existing zoning parameters, a "build out" analysis was prepared to estimate the total capacity for new residential development (see the "Residential Build-Out Analysis Map" on the following page). The build-out analysis was prepared using current tax assessment files (2006) to calculate the size and number of tax parcels in each residential zoning district. The acreage of each parcel was then adjusted to exclude floodplains and hydric soils to estimate a net developable lot area. The zoned density requirements were then used to estimate the number of total dwelling units that could theoretically be built on each parcel, the sum of which is used estimate the total number of dwelling units that could be built in the Township according to the current zoning requirements. All publically owned, deed restricted and otherwise development-restricted land was excluded from these calculations. Based on this analysis, with 1,496 existing dwelling units, the Township is presently about 49% developed.

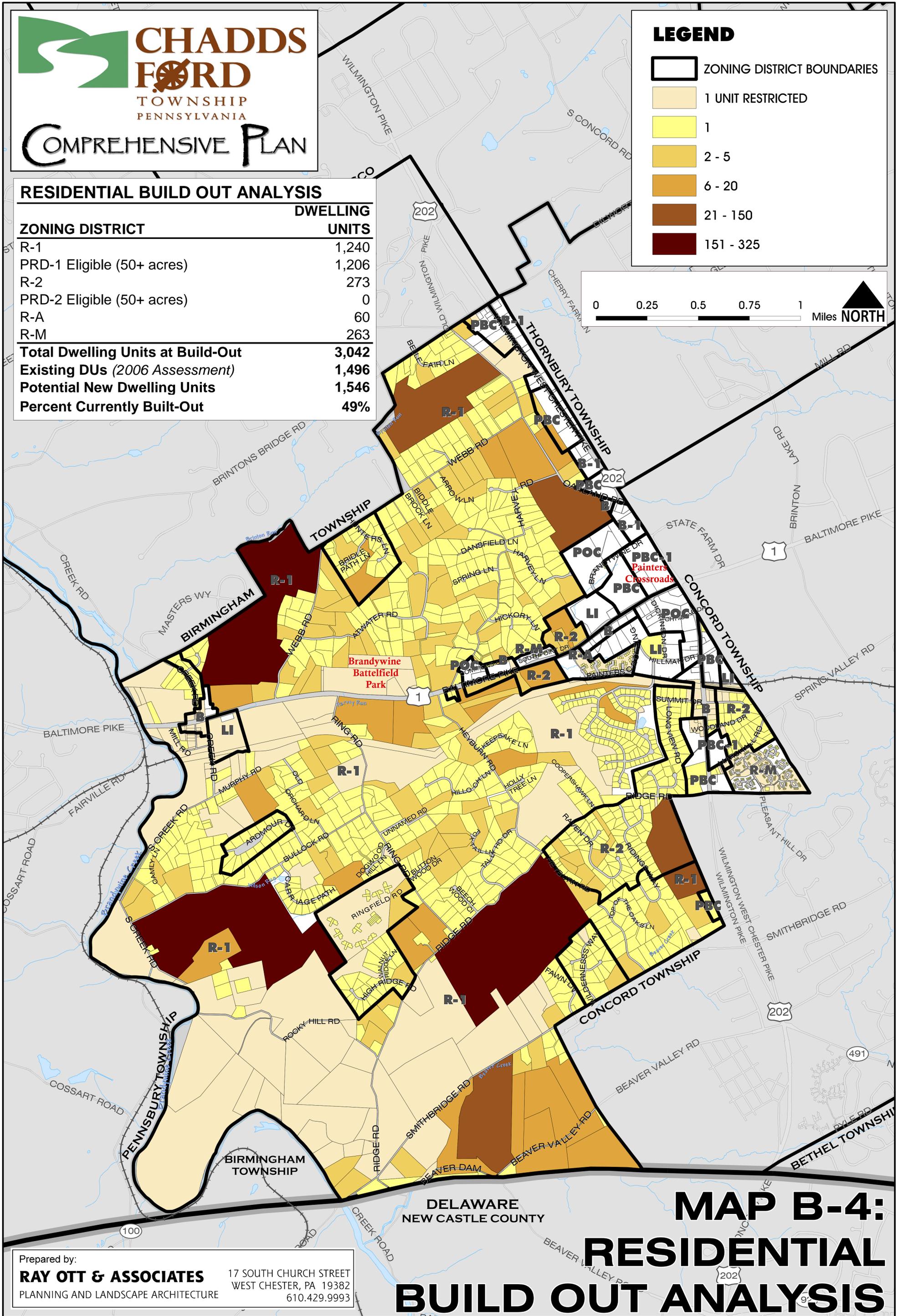
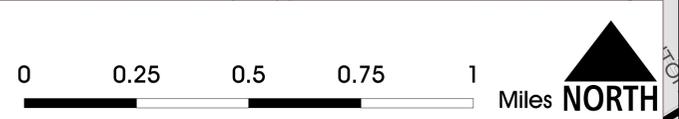
The results of the residential build-out analysis reveal that an additional 1,546 dwelling units can potentially be built in the Township, for a total of 3,042 units.

RESIDENTIAL BUILD OUT ANALYSIS

ZONING DISTRICT	DWELLING UNITS
R-1	1,240
PRD-1 Eligible (50+ acres)	1,206
R-2	273
PRD-2 Eligible (50+ acres)	0
R-A	60
R-M	263
Total Dwelling Units at Build-Out	3,042
Existing DUs (2006 Assessment)	1,496
Potential New Dwelling Units	1,546
Percent Currently Built-Out	49%

LEGEND

-  ZONING DISTRICT BOUNDARIES
-  1 UNIT RESTRICTED
-  1
-  2 - 5
-  6 - 20
-  21 - 150
-  151 - 325



**MAP B-4:
RESIDENTIAL
BUILD OUT ANALYSIS**

5. COMMERCIAL BUILD OUT ANALYSIS

The commercial build-out analysis also utilized 2006 tax assessment data and was prepared by estimating the total floor area that could be built on each parcel according to the building coverage limits required in each nonresidential zoning district (See the Commercial Build-out Map on the following page). It was also assumed that these buildings would be one-story. Chadds Ford has 1,725,977 square feet of commercial floor area, according to the 2006 County Assessment data.

The results of the commercial build out analysis reveal that an additional 2,483,178 square feet of commercial development could be potentially built within the Township, or 59% more than is currently developed in the Township. Total commercial square footage at full build out is estimated to 4,209,155 square feet.

6. SUMMARY AND PLANNING IMPLICATIONS

- a. With regard to the residential build-out analysis, using the average Township household size of 2.41 people from the 2000 Census, the Township's total population at full residential build-out could potentially reach 7,550, which is over double the 2000 Census population of 3,170.
- b. Nonresidential office and retail development could potentially increase by as much as 2,483,178 square feet, which is 59% more that currently exists in the Township.
- c. Based on these build-out estimates, it is apparent that the Township is currently zoned to provide for a significant increase in both residential and nonresidential development. This zoning should be evaluated to ensure that it meets Township development objectives and projections for the region.



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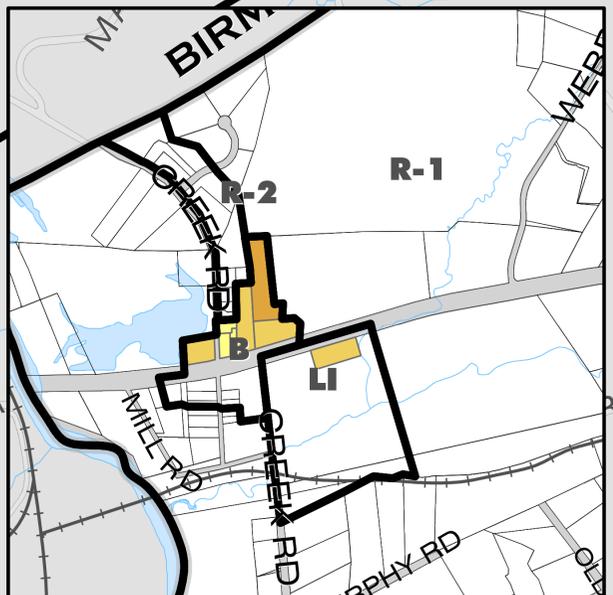
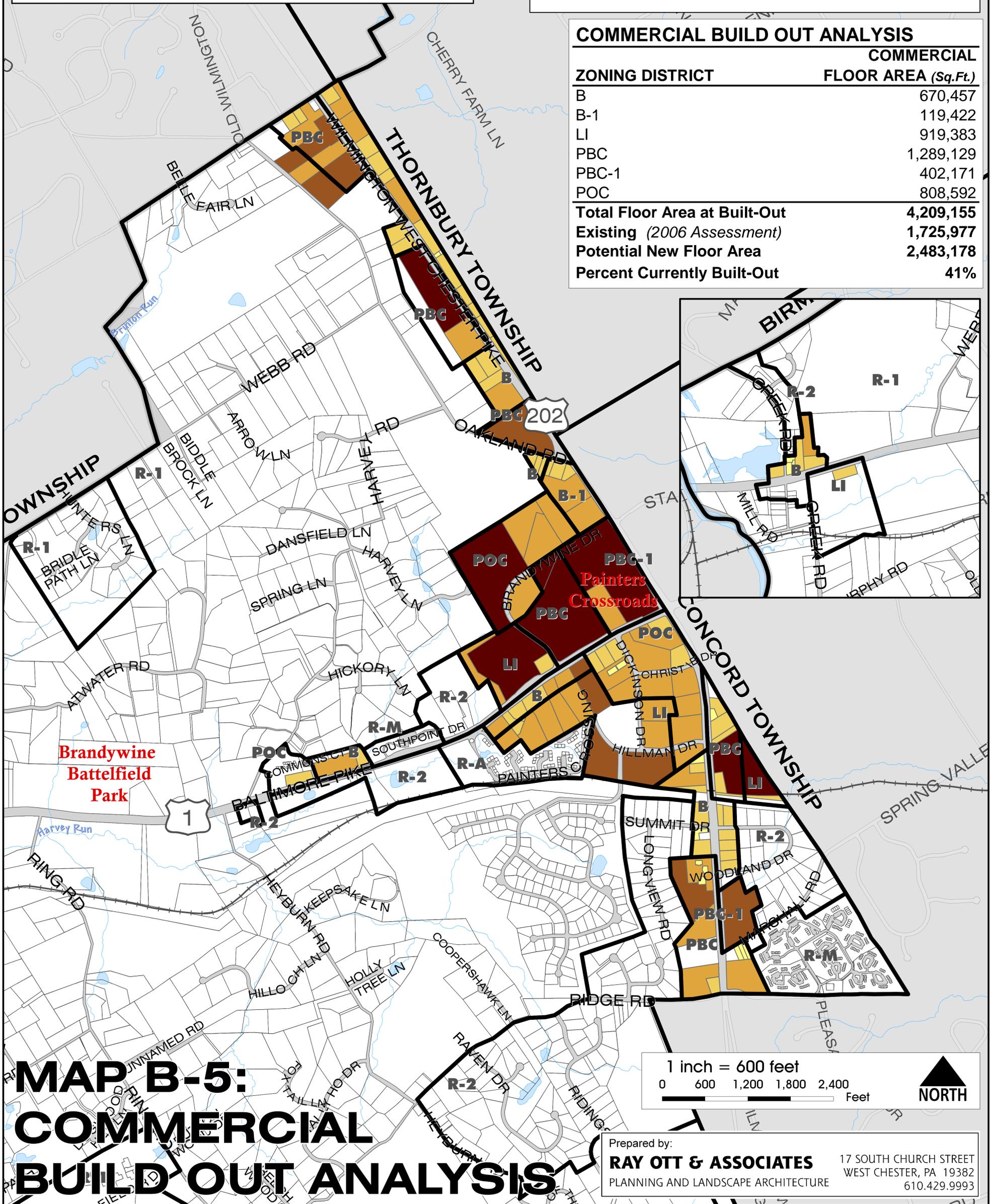
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NON-RESIDENTIAL ZONING COMMERCIAL SQ FT YIELD

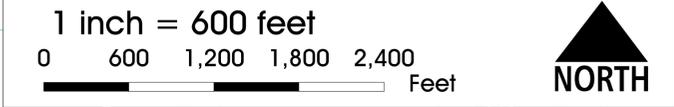
- < 5,000 SQ FT
- 5,000 - 20,000 SQ FT
- 20,000 - 60,000 SQ FT
- 60,000 - 100,000 SQ FT
- 100,000 - 275,000 SQ FT

COMMERCIAL BUILD OUT ANALYSIS

ZONING DISTRICT	COMMERCIAL FLOOR AREA (Sq.Ft.)
B	670,457
B-1	119,422
LI	919,383
PBC	1,289,129
PBC-1	402,171
POC	808,592
Total Floor Area at Built-Out	4,209,155
Existing (2006 Assessment)	1,725,977
Potential New Floor Area	2,483,178
Percent Currently Built-Out	41%



MAP B-5: COMMERCIAL BUILD OUT ANALYSIS



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APPENDIX C: TRANSPORTATION AND CIRCULATION PLAN AND ANALYSIS

This chapter addresses the elements of existing transportation, road circulation, and bike routes and trail systems in the Township. A summary is provided at the end of the chapter.

1. COMMUTING TO WORK

Table C-1, Commuting to Work, illustrates how Township residents travel to work. While Delaware County residents reported that 75% of them drive alone to work, Chadds Ford Township residents report that 82.5% of workers drive to work alone. The Township has 13 residents who walk to work, and 35 residents report using public transportation as a means of traveling to work.

Table C- 1: Commuting to Work

	<i>2000</i>	<i>Twp.</i>	<i>County</i>
Workers 16 years and older	1,714	100.0%	100.0%
Drove alone (car, truck or van)	1,414	82.5%	75.0%
Carpooled (car, truck or van)	143	8.3%	9.7%
Public Transportation*	35	2.0%	7.8%
Walked	13	0.8%	3.7%
Other means	15	0.9%	0.7%
Worked At Home	94	5.5%	2.7%

Avg. travel time to work (minutes)		28.3	27.1

* Used public transit as part of commute.

Source: 2000 U.S. Census.

2. PUBLIC TRANSPORTATION

As discussed above, only 35 of 1,714 working residents of the Township used public transportation to commute to work. The public transportation choices for the residents of the Township are both limited and inconvenient. This limited access to public transportation not only affects residents' commuting choices but also the choices of those who work in the Township but live outside the Township.

Rail Service

The Township does not have SEPTA regional rail service within the township limits. Residents desiring to use regional rail service must use roadways to access transit stations located in surrounding areas such as Marcus Hook (R2 Marcus Hook/Wilmington) or Elwyn (R3 Media/Elwyn); while both stations are in Delaware County, they are both a distance from the township. Both regional rail systems provide service between southern and central Delaware County to the City of Philadelphia, respectively. Townships residents can also access SEPTA regional rail in nearby eastern Chester County at the Exton Station (R5 Paoli/Thorndale). The Exton Station is also an Amtrak station stop servicing New York City, Washington D.C. and beyond.

Bus Service

Currently, SEPTA operates a single bus route which serves the Township. SEPTA Route 111 provides service to the Shopping Center at Painters Crossing and the Chadds Ford Business Campus. Route 111 terminates at the 69th Street Terminal Station providing access to multiple bus routes and the Market-Frankfort Line light rail service. On weekdays Route 111 service is provided during the AM/PM peak travel times and hourly on the weekends.

Trolley/Subway Service

There is no trolley or subway service to or between locations in the Township. There is service between Philadelphia and Media and Sharon Hill in Delaware County; however Township residents must travel to transit stations via alternate means to access this service.

ADA Paratransit Service

In accordance with the Americans with Disabilities Act (ADA), SEPTA provides comparable service for residents with disabilities who are functionally unable to use regular accessible fixed route bus service. This service would apply only to those eligible individuals needing to use the Route 111 service and beyond in SEPTA's coverage area.

Delaware County Transit Options

The Community Transit of Delaware County provides door-to-door transportation service for medically qualified and elderly qualified residents of Delaware County. The service requires an advanced reservation and operates on a first come, first served basis. The Community Transit services destinations within Delaware County and Philadelphia, and destinations within Montgomery and Chester Counties on a more limited basis.

3. CIRCULATION SYSTEM

The existing road network plays a significant role in providing transportation services to Township residents. In this section, the system is inventoried as follows:

- *Roadway Functional Classification*
- *Roadway Inventory (including traffic volumes, typical cross sections and traffic control devices)*

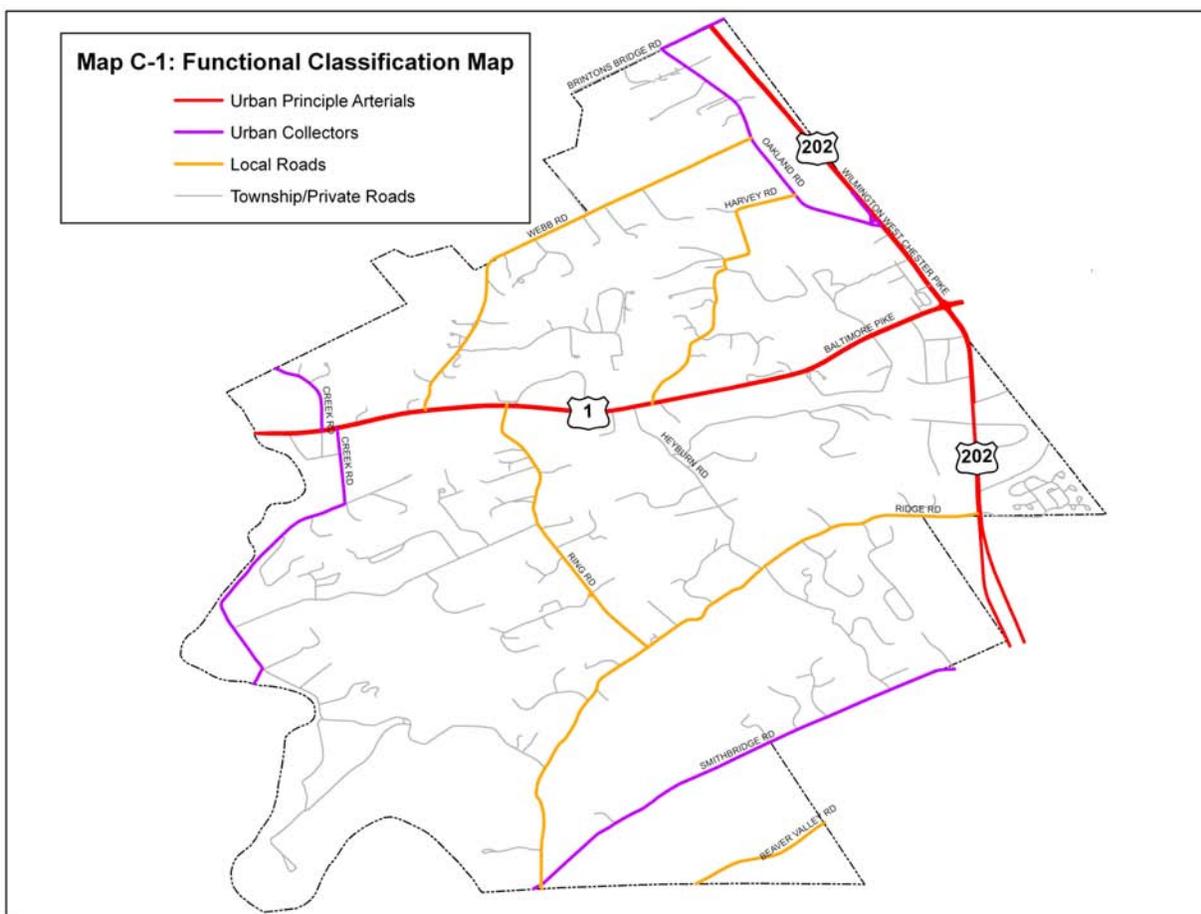
Roadway Functional Classification

Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Basic to this process is the recognition that individual roads and streets do not serve travel independently in any major way. Rather, most travel involves movement through a network of roads. The Functional Classifications presented in the following section were gathered using PennDOT Functional Classification Maps for Delaware County. Urbanized areas are designated as such by the Bureau of the Census. Delaware County has been designated as an urban area and

thus certain functional classifications apply. The four functional systems for urbanized areas are urban principal arterials, minor arterial streets, collector streets, and local streets.

The Township has a total of approximately 33.2 miles of roads within its boundaries, excluding privately owned and maintained roads. These roads are owned and maintained either by the Township or the State. The State owns approximately 19.2 miles, while the Township owns the remaining 14 miles. The remaining roads are privately owned roads which serve small groups of residences within the township. There are 10 traffic signals within, or on the boundaries of the Township.

The different classifications for roadways found within the township are shown on Map C-1. Details on road classifications and traffic count information are further described below.



Urban Principal Arterials

Roads in Township: US Route 202 (Wilmington Pike)
US Route 1 (Baltimore Pike)

The principal arterial system carries the major portion of trips entering and leaving urban areas, as well as the majority of through movements desiring to bypass an area. Because of the nature of the travel served by the principal arterial system, almost all fully and partially controlled access facilities will be part of this functional system. However, this system is not restricted to controlled access routes. There are approximately 6.2 miles of Urban Principal Arterials in the Township.

Urban Minor Arterials

Roads in Township: None in Township

The minor arterial street system should interconnect with and augment the urban principal arterial system and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. This system also distributes travel to geographic areas smaller than those identified with the higher system.

Urban Collectors

Roads in Township: Brintons Bridge Road
Creek Road
Marshall Road
Oakland Road
Smith Bridge Road

The collector street system provides both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. It differs from the arterial system in that facilities on the collector system may penetrate residential neighborhoods, distributing trips from the arterials through the area to the ultimate destination. Conversely, the collector street also collects traffic from local streets in residential neighborhoods and channels it into the arterial system. There are approximately 6.5 miles of Urban Collectors in the Township.

Local Roads

Roads in Township: Remainder of public roads in the Township.

The local road system comprises all facilities not on one of the higher systems. It serves primarily to provide direct access to abutting land and access to the higher order systems. It offers the lowest level of mobility and usually contains no bus routes. Service to through traffic movement usually is deliberately discouraged. There are approximately 20.5 miles of Local Roads in the Township.

Private Roads

Roads in Township: Roads owned and maintained by Homeowners Associations or private individuals.

Private roads provide access to adjacent land, typically only for residential uses. They typically provide connectivity to the network at a single point as their intent is to serve at least three residences. There are 16.9 miles of private roads in the township.

Road Inventory

Atwater Road (T390)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.9 miles

Number of Lanes: 2

Lane Width: 11 feet

Shoulders: No

Center Median: No

Speed Limit: 25 mph



Atwater Road runs from Webb Road to a dead end, and intersects one state road. Intersections where only Atwater Road is stop controlled include Webb Road.

Beaver Valley Road (S.R. 3044)

Ownership: State
Func. Class: Local Road
ADT: 633
Year of ADT: 2007
Roadway Length: 0.6 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: 40 mph



Roadway runs from the Delaware State line – just north of Beaver Dam Road - to the township line – just west of a private roadway, and intersects no state or township roads.

Beechwood Circle (T402)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Beechwood Circle runs from Ridge Road to a dead end, and intersects one state road. Intersections where only Beechwood Circle is stop controlled include Ridge Road.

Bellefair Lane (T410)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not available



Bellefair Lane runs from Brinton's Bridge Road to a dead end, and intersects one state road. Intersections where only Bellefair Lane is stop controlled include Brinton's Bridge Road.

Brandywine Drive (T419)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.6 miles
Number of Lanes: 2
Lane Width: 18 feet
Shoulders: No, raised curbing along both edges and some sidewalk
Center Median: No
Speed Limit: Not posted



Brandywine Drive runs from US 1 to US 202, and intersects two state roads. Signalized intersections include US 1 and US 202.

Brinton's Bridge Road (S.R.4016)

Ownership: State
Func. Class: Urban Collector
ADT: 2,510
Year of ADT: 2002
Roadway Length: 0.9 miles
Number of Lanes: 2
Lane Width: 11 feet
Shoulders: No
Center Median: No
Speed Limit: 40 mph



Brinton's Bridge Road runs from South New Street to just west of Cherry Farm Lane, and intersects one state road and two township roads. Intersections where only the minor leg is stop controlled include Bellefair Lane. Intersections where all legs are stop controlled include Oakland Road. Signalized intersections include US 202.

Bullock Road (T326)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 1.3 miles
Number of Lanes: 2
Lane Width: 9 feet
Shoulders: No
Center Median: No
Speed Limit: 25 mph



Bullock Road runs from Ring Road to Creek Road, and intersects two state roads and one township road. Intersections where only the minor leg is stop controlled include Carriage Path. Intersections where only Bullock Road is stop controlled include Ring Road and Creek Road.

Buttonwood Drive (T395)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Buttonwood Drive runs from Ring Road to a dead end, and intersects one state road. Intersections where only Buttonwood Drive is stop controlled include Ring Road.

Carnation Lane

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



Carnation Lane runs from Harvey Drive to a dead end, and intersects one state road. Intersections where only Carnation Lane is stop controlled include Harvey Drive.

Carriage Path (T404)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.4 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Carriage Path runs from Bullock Road to a dead end, and intersects one township road. Intersections where only Carriage Path is stop controlled include Bullock Road.

Cooper's Hawk Lane (T409)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



Cooper's Hawk Lane runs from Ridge Road to a dead end, and intersects one state road. Intersections where only Cooper's Hawk Lane is stop controlled include Ridge Road.

Creek Road (S.R. 3101)

Ownership: State

Func. Class: Urban Collector

ADT: North of US 1: 3,537

South of US 1: 2,514

Year of ADT: 2007

2006

Roadway Length: 1.9 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No

Center Median: No

Speed Limit: 40 mph



Creek Road runs from Delaware State line just south of Rocky Hill Road to the Chester County line just north of Upper Bank Drive, and intersects two state roads and two township roads. Intersections where only the minor leg is stop controlled include Bullock Road and Station Way Road. Intersections where only the south leg of Creek Road is stop controlled include US 1. Signalized intersections include US 1 / Station Way Road.

Dogwood Hill Lane (T405)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.1 miles

Number of Lanes: 2

Lane Width: 12 feet

Shoulders: No

Center Median: No

Speed Limit: Not posted



Dogwood Hill Lane runs from Ring Road to a dead end, and intersects one state road. Intersections where only Dogwood Hill Lane is stop controlled include Ring Road.

Eagle Circle (T408)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curb along both edges
Center Median: No
Speed Limit: Not posted



Eagle Circle runs from Raven Drive to a dead end, and intersects one township road. Intersections where only Eagle Circle is stop controlled include Raven Drive.

Grouse Trail (T414)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curb along both edges
Center Median: No
Speed Limit: Not posted



Grouse Trail runs from Pheasant Lane to a dead end, and intersects one township road. Intersections where only Grouse Trail is stop controlled include Pheasant Lane.

Harvey Drive (S.R. 4020)

Ownership: State

Func. Class: Local Road

ADT: 442

Year of ADT: 2008

Roadway Length: 1.4 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No

Center Median: No

Speed Limit: 40 mph



Harvey Drive runs from US 1 to Oakland Road, and intersects one state road and three township roads. Intersections where only the minor leg is stop controlled include Spring Lane and Carnation Lane. Intersections where only Harvey Drive is stop controlled include US 1. Intersections where all legs are stop controlled include Oakland Road.

Heyburn Road (T304)

Ownership: Township

Func. Class: Local Road

ADT: 994

Year of ADT: 2009

Roadway Length: 1.8 miles

Number of Lanes: 2

Lane Width: 9 feet

Shoulders: No

Center Median: No

Speed Limit: 25 mph



Heyburn Road runs from Smith Bridge Road to US 1, and intersects three state roads and four township roads. Intersections where only the minor leg is stop controlled include Top of the Oaks, Tally Ho Drive, Holly Tree Lane, and Hilloch Lane. Intersections where only Heyburn Road is stop controlled include Smith Bridge Road and US 1. Intersections where all legs are stop controlled include Ridge Road.

High Ridge Road (T415)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.4 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



High Ridge Road runs from Ridge Road to a dead end, and intersects one state road and one township road. Intersections where only the minor leg is stop controlled include Walnut Ridge Lane. Intersections where only High Ridge Road is stop controlled include Ridge Road.

Hilloch Lane (T397)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.4 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



Hilloch Lane runs from Heyburn Road to a dead end, and intersects one township road. Intersections where only Hilloch Lane is stop controlled include Heyburn Road.

Hoffman's Mill Road (T302)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.2 miles

Number of Lanes: 2

Lane Width: 12 feet

Shoulders: No

Center Median: No

Speed Limit: Not posted



Hoffman's Mill Road runs from Station Way Road to US 1, and intersects one state road and one township road. Intersections where only Hoffman's Mill Road is stop controlled include Station Way Road and US 1.

Holly Tree Lane (T417)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.1 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No, low profile curb and gutter along both edges

Center Median: No

Speed Limit: Not posted



Holly Tree Lane runs from Heyburn Road to a dead end, and intersects one township road. Intersections where only Holly Tree Lane is stop controlled include Heyburn Road.

Hunter's Lane (T398)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.3 miles
Number of Lanes: 2
Lane Width: 11 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



Hunter's Lane runs from Webb Road to a dead end, and intersects one state road. Intersections where only Hunters Lane is stop controlled include Webb Road.

Kelly Drive

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Kelly Drive runs from Smith Bridge Road to a dead end, and intersects one state road. Intersections where only Kelly Drive is stop controlled include Smith Bridge Road.

Longview Road (T394)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.3 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Longview Road runs from Summit Drive to a dead end, and intersects one township road. Intersections where only Longview Road is stop controlled include Summit Drive.

Marshall Road (T325)

Ownership: Township
Func. Class: Urban Collector
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.4 miles
Number of Lanes: 2
Lane Width: 9 feet
Shoulders: No
Center Median: No
Speed Limit: 35 mph



Marshall Road runs from US 202 to the township line, and intersects one state road. Intersections where only Marshall Road is stop controlled include US 202.

Mountain View Trail (T401)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, low profile curb and gutter along north edge
Center Median: No
Speed Limit: Not posted



Mountain View Trail runs from Wilderness Way to a dead end, and intersects one township road. Intersections where only Mountain View Trail is stop controlled include Wilderness Way.

Oakland Road (T389)

Ownership: Township
Func. Class: Urban Collector
ADT: 3,670
Year of ADT: 2006
Roadway Length: 1.3 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: 35 mph



Oakland Road runs from Brinton's Bridge Road to US 202, and intersects four state roads. Intersections where only the minor leg is stop controlled include the off ramp from US 202. Intersections where all legs are stop controlled include Brinton's Bridge Road, Webb Road, and Harvey Road. Signalized intersections include US 202.

Pheasant Lane (T413)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Pheasant Lane runs from Ridge Road to a dead end, and intersects one state road and one township road. Intersections where only the minor leg is stop controlled include Grouse Trail. Intersections where only Pheasant Lane is stop controlled include Ridge Road.

Raven Drive (T407)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.5 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Raven Drive runs from Ridge Road to a dead end, and intersects one state road and one township road. Intersections where only the minor leg is stop controlled include Eagle Circle. Intersections where only Raven Drive is stop controlled include Ridge Road.

Ridge Road (S.R. 3048)

Ownership: State

Func. Class: Local Road

ADT: 3,401

Year of ADT: 2004

Roadway Length: 2.8 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No

Center Median: No

Speed Limit: 40 mph



Ridge Road runs from US 202 to Smith Bridge Road, and intersects three state roads and nine township roads. Intersections where only the minor leg is stop controlled include Pheasant Lane, Ridings Boulevard, Cooper's Hawk Lane, Raven Drive, Tally Ho Drive, Beechwood Circle, Ring Road, High Ridge Road, and Rocky Hill. Intersections where only Ridge Road Drive is stop controlled include Smith Bridge Road. Intersections where all legs are stop controlled include Heyburn Road. Signalized intersections include US 202.

Ridings Boulevard (T411)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.1 miles

Number of Lanes: 2

Lane Width: 14 feet

Shoulders: No, raised curbing along
both edges

Center Median: Yes, raised grass and concrete

Speed Limit: Not posted



Ridings Boulevard runs from Ridge Road to Ridings Way, and intersects one state road and one township road. Intersections where only Ridings Boulevard is stop controlled include Ridge Road and Ridings Way.

Ridings Way (T412)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.8 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Ridings Way runs from a dead end to Ridings Way, and intersects two township roads. Intersections where only the minor leg is stop controlled include Ridings Boulevard. Intersections where only Ridings Way is stop controlled include Ridings Way.

Ring Road (S.R. 3027)

Ownership: State
Func. Class: Local Road
ADT: 1,782
Year of ADT: 2004
Roadway Length: 1.4 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: 40 mph



Ring Road runs from Ridge Road to US 1, and intersects two state and three township roads. Intersections where only the minor leg is stop controlled include Buttonwood Drive, Dogwood Hill Lane, and Bullock Road. Intersections where only Ring Road is stop controlled include Ridge Road. Signalized intersections include US 1.

Rocky Hill (T387)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 9 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Rocky Hill runs from Ridge Road to a dead end, and intersects one state road. Intersections where only Rocky Hill is stop controlled include Ridge Road.

Smith Bridge Road (S.R. 3046)

Ownership: State
Func. Class: Urban Collector
ADT: 1,146
Year of ADT: 2006
Roadway Length: 2.0 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: 45 mph



Smith Bridge Road runs from Delaware State line – just west of Ridge Road - to just west of Feldspar Drive, and intersects one state road and three township roads. Intersections where only the minor leg is stop controlled include Heyburn Road, Wilderness Way, Kelly Drive, and Ridge Road.

South View Path (T400)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.1 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, low profile curb and gutter along both edges
Center Median: No
Speed Limit: Not posted



South View Path runs from Wilderness Way to a dead end, and intersects one township road. Intersections where all legs are stop controlled include Wilderness Way – except northbound lane of Wilderness Way.

Spring Lane (T406)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Spring Lane runs from Harvey Drive to a dead end, and intersects one state road. Intersections where only Spring Lane is stop controlled include Harvey Drive.

Springhill Drive (T403)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 14 feet
Shoulders: No, raised curbing along both edges
Center Median: No
Speed Limit: Not posted



Springhill Drive runs from US 202 / Ridge Road to Pleasant Hill Drive, and intersects one state road. Signalized intersections include US 202 / Ridge Road.

Station Way Road

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 12 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Station Way Road runs from Creek Road to US 1. The section of roadway between Hoffman's Mill Road and US 1 is a one way road running towards US 1, and intersects two state roads and one township road. Intersections where only the minor leg is stop controlled include Hoffman's Mill Road. Intersections where only Station Way is stop controlled include Creek Road. Signalized intersections include US 1.

Summit Drive (T393)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.2 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Summit Drive runs from US 202 to a dead end, and intersects one state road and one township road. Intersections where only the minor leg is stop controlled include Longview Road. Intersections where only Summit Drive is stop controlled include US 202.

Tally Ho Drive (T396)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.4 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No
Center Median: No
Speed Limit: Not posted



Tally Ho Drive runs from Ridge Road to a dead end, and intersects one state road and one township road. Intersections where only Tally Ho Drive is stop controlled include Ridge Road and Heyburn Road.

Top of the Oaks (T418)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.3 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No

Center Median: No

Speed Limit: 25 mph



Top of the Oaks runs from Heyburn Road to a dead end, and intersects one township road. Intersections where only Top of the Oaks is stop controlled include Heyburn Road.

US 1; Baltimore Pike (S.R. 0001)

Ownership: State

Func. Class: Principal Arterial Highway

ADT: At US 202 At Chadd's Ford Village

NB: 21,682 NB: 15,539

SB: 14,151 SB: 14,214

Year of ADT: 2007

Roadway Length: 2.8 miles

Number of Lanes: 4

Lane Width: 12 feet

Shoulders: Yes, variable width

Center Median: Yes, raised concrete

Speed Limit: 45-55 mph



Baltimore Pike runs from just west of Hoffman's Mill Road to US 202, and intersects six state roads and three township roads. Intersections where only the minor leg is stop controlled include Hoffman's Mill Road, Creek Road south of US 1, Webb Road, Heyburn Road, and Harvey Road. Signalized intersections include Creek Road / Station Way Road, Ring Road, Brandywine Drive / Hillman Drive (private road), and US 202.

US 202; Wilmington / West Chester Pike (S.R. 0202)

Ownership: State

Func. Class: Principal Arterial Highway

ADT: North of US 1 South of US 1

NB: 21,888 NB: 18,944

SB: 20,937 SB: 18,661

Year of ADT: North of US 1: 2007

South of US 1: 2006

Roadway Length: 3.4 miles

Number of Lanes: 4

Lane Width: 12 feet

Shoulders: Yes, variable width

Center Median: Yes, raised concrete

Speed Limit: 45 mph



Wilmington / West Chester Pike runs from Brinton's Bridge Road to just north of Smith Bridge Road, and intersects three state roads and five township roadways. Intersections where only the minor leg is stop controlled include Summit Drive / Woodland Drive, Woodland Drive, and Marshall Road. Signalized intersections include Brinton's Bridge Road, Oakland Road, Brandywine Drive, US 1, Hillman Drive (private road), Applied Card Way (private road), and Ridge Road / Springhill Drive.

Walnut Ridge Lane (T416)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.1 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No, low profile curb and gutter along both edges

Center Median: No

Speed Limit: Not posted



Walnut Ridge Lane runs from High Ridge Road to a dead end, and intersects one township road. Intersections where only Walnut Ridge Lane is stop controlled include High Ridge Road.

Webb Road (S.R. 4022)

Ownership: State
Func. Class: Local Road
ADT: 1,949
Year of ADT: 2005
Roadway Length: 2.0 miles
Number of Lanes: 2
Lane Width: 9 feet
Shoulders: No
Center Median: No
Speed Limit: 40 mph



Webb Road runs from US 1 to Oakland Road, and intersects one state road and three township roads. Intersections where only the minor leg is stop controlled include Atwater Road and Hunters Lane. Intersections where only Webb Road is stop controlled include US 1. Intersections where all legs are shop controlled include Oakland Road.

Wilderness Way (T399)

Ownership: Township
Func. Class: Local Road
ADT: Not available
Year of ADT: Not available
Roadway Length: 0.3 miles
Number of Lanes: 2
Lane Width: 10 feet
Shoulders: No, raised curbing along west edge
Center Median: No
Speed Limit: Not posted



Wilderness Way runs from Smith Bridge Road to a dead end, and intersects one state road and two township roadways. Intersections where only the minor leg is stop controlled include Mountain View Trail. Intersections where only Wilderness Way is stop controlled include Smith Bridge Road. Intersections where all legs are shop controlled include South View Path – except northbound leg of Wilderness Way.

Woodland Drive (T392)

Ownership: Township

Func. Class: Local Road

ADT: Not available

Year of ADT: Not available

Roadway Length: 0.5 miles

Number of Lanes: 2

Lane Width: 10 feet

Shoulders: No, low profile curb and gutter along both edges

Center Median: No

Speed Limit: Not posted



Woodland Drive runs from US 202 to US 202, and intersects one state road and one township road. Intersections where only Woodland Drive is stop controlled include US 202 / Summit Drive and US 202.

4. ROADWAY CONDITIONS

Average Daily Traffic

Average Annual Daily Traffic (AADT) is the total 24-hour traffic volume, in both directions, on a road segment for a typical weekday. ADT data is be used to gauge both the use and performance of these roadways. Traffic volumes were gathered using PennDOT's Internet Traffic Monitoring System (iTMS) where available. The iTMS program is supported by PennDOT's Bureau of Planning and Research which is responsible for capturing, analyzing and reporting roadway data to various agencies and the public. This data was supplemented with a smaller data collection effort at specific sites helping to provide overall insight into circulation of vehicles within and through the Township.

Table C-2, Roadway Segment AADT contains the AADT volumes that were compiled and used for analysis in this study. Not surprisingly, US 202 (Wilmington/West Chester Pike) and US 1 (Baltimore Pike) carry the largest daily volumes through the township at roughly 43,000 and 36,000 vehicles, respectively. Oakland Road, Creek Road Ridge Road, Marshall Road and Brintons Bridge Road carry between 3,700 and 2,000 vehicles daily through and within the Township. Webb Road, Ring Road Smith Bridge Road, Heyburn Road, Beaver Valley Road Beaver Dam Road and Brandywine Drive carry 1,900 or less vehicles daily. For more details on the AADTs please see Table C-2; for roadway performance figures please see Table C-3 in the Roadway Performance section.

Table C-2: Roadway Segment AADT

Road Name	AADT ¹
<i>Other Principal Arterial Highways</i>	
US-1; Baltimore Pike	
At Village of Chadds Ford	29,250
Near US-202	35,983
US-202; Wilmington / West Chester Pike	
North of US-1	43,005
South of US-1	37,763

<i>Urban Collector</i>	
Brinton's Bridge Road	2,521
Creek Road	
North of US-1	3,552
South of US-1	2,525
Marshall Road	3,251
Oakland Road	3,685
Smith Bridge Road	1,151

<i>Local Road</i>	
Beaver Valley Road	636
Harvey Road	442
Heyburn Road ²	1,071
Ridge Road	3,415
Ring Road	1,789
Webb Road	1,957

¹ Unless noted, AADT values from PennDOT iTMS

² AADT collected as part of this effort

Accident Reports

Crash data for Baltimore Pike & Heyburn Road and Ridge Road & Heyburn Road were retrieved utilizing PennDOT's database. At this time reportable crash data more recent than 2007 is not available, therefore this effort focused on data from 2003 to 2007. A review of the crash history at the intersection of US 1 & Heyburn Road and Ridge Road & Heyburn Road were conducted to determine if the type of crashes occurring at either intersection warranted installing a traffic signal or other modification of existing traffic control.

US 1 & Heyburn Road

The review of crash data at the intersection of US 1 & Heyburn Road was conducted to determine if the recent fatality that occurred in December 2008 was preceded by accidents within the intersection that could be corrected by a traffic signal. Crash data was provided by PennDOT for the past full five years, 2003 – 2007, for approximately 500 feet in each direction along US 1 where the intersection is located. During this time period there were a total of 9 reportable crashes involving 20 vehicles. Unfortunately the most recent fatality in December 2008 was not available from PennDOT's records, but further research of a police report may provide the cause of the crash.

Based on the review of crash data available for US 1 & Heyburn Road only 2 of the 9 accidents are correctable through the use of a traffic signal. The vehicle action that can be corrected by a traffic signal includes a car turning left at the intersection onto Heyburn Road and being hit by oncoming traffic.

Ridge Road & Heyburn Road

The review of crash data at the intersection of Ridge Road & Heyburn Road was conducted to determine if the stop controlled intersection would warrant modification of existing traffic control based on the accidents recorded along Ridge Road. Crash data was provided by PennDOT for the past full five years, 2003 – 2007. During this time period there were a total of 3 reportable crashes involving 4 vehicles.

Based on the review of the crash data for Ridge Road & Heyburn Road none of the reported accidents are correctable through modification of existing traffic control, including a traffic signal. The reported crashes at this intersection involve careless driving by the motorist traveling too fast and either hitting a fixed object or sideswiping a car traveling in the same direction.

Data Collection Effort

Data collection was performed at strategic sites within the Township to gain a better understanding of the circulation of vehicles throughout the Townships roadway network. This data collection effort was used to supplement the existing data available, details of the analysis can be found in the Roadway Performance section. The following sites were collected:

Turning Movement Counts

Intersection turning movement counts were performed from 7AM-9AM and 4PM-6PM on February 25, 2009. This data is used to generate intersection performance figures and can be used for signal warrant analysis. All intersection movements were captured at the following intersections.

- ❖ US 202 (Wilmington/West Chester Pike) & Marshall Road
- ❖ US 1 (Baltimore Pike) & Heyburn Road
- ❖ Ridge Road & Heyburn Road

Automatic Tube Recorders

Automatic Tube Recorders (ATR) were installed within the Township to gather roadway classification data. These ATRs gather both weekday and weekend data as well as vehicle classification providing insight into the type of vehicles using the Township roadways. The following sites were collected.

- ❖ Oakland Road – between Webb Road and Brinton's Bridge Road
- ❖ Webb Road – between Arrow Land and Oakland Road
- ❖ Heyburn Road – between US 1 (Baltimore Pike) and Ridge Road
- ❖ Ring Road – between US 1 (Baltimore Pike) and Ridge Road
- ❖ Ridge Road – between US 202 (Wilmington/West Chester Pike) and Pheasant Lane

Roadway Performance

Using both data available from PennDOT iTMS and data collected as part of this effort the following roadway performance figures were developed. Analysis was performed using Highway Capacity Manual (2000) standards and HCS 2000 software. Levels of Service (LOS) presented in the following table, Table C-3, are a quality measure describing operational conditions within the traffic stream. These measures relate to speed, travel time, freedom to maneuver, traffic interruptions and comfort and convenience. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. The LOS values in Table C-3 are capacity driven based on vehicle volumes and geometric parameters of the roadways.

Table C-3: Roadway Segment LOS

Road Name	LOS
<i>Other Principal Arterial Highways</i>	
US-1; Baltimore Pike At Village of Chadds Ford	NB: C SB: C
Near US-202	NB: E SB: C
US-202; Wilmington / West Chester Pike North of US-1	NB: C SB: C
South of US-1	NB: D SB: D

<i>Urban Collector</i>	
Brinton's Bridge Road	A
Creek Road	
North of US-1	A
South of US-1	A
Marshall Road	A
Oakland Road	A
Smith Bridge Road	A

<i>Local Road</i>	
Beaver Valley Road	A
Harvey Road	A
Heyburn Road	A
Ridge Road	A
Ring Road	A
Webb Road	A

Intersection turning movement counts also provide Level of Service indicators similar to roadway segments. Intersection levels of service are primarily driven by the type of traffic control present and the demand for the potential allowable movements. Table C-4: Intersection LOS details the LOS by approach for the intersections where turning movement counts were performed.

Table C-4: Intersection LOS

Road Name	LOS
US-1; Baltimore Pike & Heyburn Road	
Westbound Lefts	C
AM Northbound Lefts	E
Northbound Rights	D
Northbound Approach	D
Westbound Lefts	B
PM Northbound Lefts	D
Northbound Rights	B
Northbound Approach	C

US 202; Wilmington/West Chester Pike & Marshall Road	
Southbound Lefts	C
AM Westbound Lefts	F
Westbound Rights	C
Westbound Approach	F
Southbound Lefts	C
PM Westbound Lefts	F
Westbound Rights	C
Westbound Approach	F

Heyburn Road & Ridge Road	
Eastbound	A
Westbound	A
AM Northbound	A
Southbound	A
Intersection LOS	A
Eastbound	A
Westbound	A
PM Northbound	A
Southbound	A
Intersection LOS	A

Circulation Analysis

Understanding the circulation on the Townships Road Network can provide essential guidance to future planning decision. Using the data collected from the 5 ATR sites, some conclusions can be drawn about how vehicles are using the Townships roadways.

Oakland Road

During the AM peak travel time Oakland Road recorded 337 southbound vehicles, which appear to be headed to US 202 (Wilmington/West Chester Pike). The evening peak travel time only recorded 241 of those vehicles returning, on the northbound direction. This gives the appearance that morning commuters are using Oakland Road as a through route to US 202 (Wilmington/West Chester Pike), bypassing the intersection of PA 926 & US 202 (Wilmington/West Chester Pike).

Ridge Road to Ring Road

During the AM peak travel time both Ring and Ridge Roads see modest volumes of 75 southbound and 171 eastbound vehicles, respectively. Comparing this to the PM peak travel time there is an increase to 248 westbound vehicles on Ridge Road and 153 northbound vehicles on Ring Road. It appears that this increase is caused by through vehicles wishing to avoid the signal at US 202 (Wilmington/West Chester Pike) & US 1 (Baltimore Pike). These vehicles are cutting through the township roads to access the less congested signal at US 1 (Baltimore Pike) & Ring Road to continue southbound on Baltimore Pike.

5. BIKE ROUTES AND TRAILS

As noted in the Chadds Ford Township Open Space Plan there is a high demand for improving the hiking / biking trail system in the Township. Currently the only designated trail in the Township is the Brandywine River Trail, which connects the Chadds Ford Historical Society building and the Brandywine Conservancy. These trails are valuable as a recreational resource for pedestrians, equestrians, bicyclists, cross-country skiers, etc., and they can be used as an alternative means of transportation in the Township.

The Open Space Plan recommends the connection of the Brandywine River Trail with a new trail that connects to the Chadds Ford Township building, and the potential for connecting this network of trails with existing / planned trails in Birmingham Township, Chester County. Other potential connections for the trail – as provided by the Open Space Plan – include: the Estates at Chadds Ford, Brandywine Battlefield Park, Brandywine Creek Park, Dilworthtown, and Painters Crossing. Additionally, the plan recommends working with the committees responsible for planning the Brandywine Valley Scenic Byway and the Brandywine Greenways to promote preservation of open spaces along these routes and the inclusion of trails along these routes. The implementation of trail planning as noted in the Open Space Plan should be encouraged as it outlines a clear path for providing the desired comprehensive trail system in Chadds Ford Township.

Other bicycle trails within the Township include one of BicyclePA's designated bicycle routes, route L. This route follows Creek Road from the township line to township line. In future planning efforts, where feasible, steps should be considered to add bicycle compatibility along Creek Road.

6. SUMMARY AND PLANNING IMPLICATIONS

The purpose of the following observations and implications are to ensure that the Townships goals are both achieved and preserved in future planning efforts. the following observations were drawn from a combination of field views, traffic data collections and meetings with the Comprehensive Plan Task Force.

	Observation	Implication
Public Transportation	Public Transportation is limited to 2 stops at the eastern edge of the Township	Based on Township needs, expansion of service to Chadds Ford Village mat be appropriate. This will provide workers at Village businesses an alternative means of travel to work
Roadway Conditions	Degrading Levels of Service on US 202 & US 1	As Levels of Service along and at the intersection of US 202 & US 1 continue to degrade, traffic will continue to seek alternate paths through township roadways. The connection of Hillman Drive to the signal at Brandywine Drive & US 1 will give through traffic a better option reducing its impact on other township roadways
	The Township's existing circulation system functions and serves the township quite well	Adherence to context sensitive planning principles in accordance with Township goals and the requirement of traffic impact studies for future developments will preserve these levels of service
Bike Routes and Trails	The Chadds Ford Open Space Plan calls for a bicycle and trail system; BicyclePA designates Creek Road as a cross state bicycle trail	Future planning efforts should consider the creation of dedicated facilities for both hikers and bikers. This will also provide alternative modes for residents commuting to work

APPENDIX D: ENVIRONMENTAL, CULTURAL AND HISTORIC RESOURCES INVENTORY AND ANALYSIS

Chadds Ford Township adopted an Open Space Plan in 2007 that includes a detailed inventory, analysis and mapping of the Township's natural, cultural and historic resources. Information from this Plan is summarized in this section, and shown on the Biotic Resources Map (Map 6-1) of the Township's Open Space Plan.

1. ENVIRONMENTAL RESOURCES

The Township retains significant areas of natural resources, including woodlands, stream valleys, surface water and open space/meadow areas.

Woodlands	Woodlands comprise 36% (1,988 acres) of the Twp., most of which is located in areas of hydric soils, floodplains and steep slopes and have been somewhat protected from development encroachment. Only 230 acres (11%) of Twp. woodlands are forested interiors, which are measured as 300 feet from any outer edge.
Stream Valleys and Riparian Areas	Stream valleys are areas containing stream channels (including creeks, streams and rivers) and associated banks that may contain slopes and woodlands. Floodplains, wetlands, and hydric soils form stream valleys and represent the most extensive and contiguous areas of undeveloped land in the Twp. This is due to the fact that these areas present major impediments for development. They frequently flood, and hydric soils areas are either seasonally covered with standing water or have high water tables that present problems for the construction of foundations and basements. These stream valleys are protected through floodplain and wetland regulations in the Twp. zoning and land development ordinances. The 2007 Open Space Plan included a riparian analysis that defined Township riparian areas as land within 100 feet of a stream. The analysis determined that 708 acres within the Township can be classified as riparian areas, and that half of this land is fully buffered.
Watersheds	Watersheds are areas of land that drain into a river or body of water; usually divided by topography or ridge lines. Chadds Ford Twp. is within the Brandywine Creek and Chester Creek major watersheds. The Brandywine Creek watershed accounts for 92% (5,104 acres) of the Twp., and the Chester Creek accounts for the other 8% (468 acres). Minor watersheds include: Harvey Run (2,449 acres, 44% of the Twp.), Brandywine Creek (1,192 acres, 21%), Beaver Creek (861 acres, 15%), Wilson Run (376 acres, 7%), West Branch Chester Creek (250 acres, 5%), Brinton Run (226 acres, 4%), Chester Creek (218 acres, 4%).
Floodplains	The Twp. Open Space Plan states "a floodplain is defined by the boundary of land subject to flooding by an adjacent stream when that floodplain occurs within a storm event with a frequency of at least once every 100 years." The Township's primary water body associated with floodplains is Harvey Run, which flows through the middle portion of the Township.
Slopes and Woodlands	Most of the Township's steeply sloped areas (slopes of 15-25% and 25% or greater) are also wooded and adjacent to stream valleys. Sloped areas remain mostly wooded since they were also difficult to farm and develop, and they are now also protected by regulations in the Township's zoning and land development ordinances. In addition to their scenic landscape quality, woodlands also provide wildlife habitat and are extremely effective in enhancing groundwater recharge and limiting soil erosion. The Township has 1,038 acres of slopes between 15% and 25% (19% of the Twp.) and 452 acres of land over 25% slope (8% of the Township).

<p>Wetlands and Hy-dric Soils</p>	<p>Wetlands are low-lying areas inundated by water at a frequency and duration sufficient to support wetland vegetation (wetlands include swamps, marshes and wet meadows). Wetlands remove pollutants through chemical, physical, and biological mechanisms. Wetlands recharge groundwater and help purify surface waters, serving many functions in the ecosystem. While the final determination must be made by a trained biologist or soil scientist on a site-by-site basis, several areas have been mapped from existing sources: the National Wetlands Inventory and hydric soils, mapped from the U.S. Department of Agriculture (USDA), Soil Conservation Service soil survey. The Open Space Plan counted 65 known individual wetland areas in Chadds Ford Twp., totaling 115 acres (2% of the Township). Hydric soils are generally unsuitable for development due to high water tables. These soils, as mapped from the USDA Soil Conservation Service Soil Survey, are shown on Map6-5 of the Township Open Space Plan. The Twp. contains 1,135 acres of hydric soils, which comprises roughly 20% of the Township. The largest area of hydric soils is located along Harvey Run.</p>
<p>Prime Agricultural Soils</p>	<p>Prime Agricultural Soils are soil types that are fertile and considered productive for agriculture. They consist of capability Classes I, II, and III soils, as defined by the US Dept. of Agriculture (USDA) Natural Resources Conservation Service. Capability classification is a grouping of soils that shows how suitable they are for most kinds of farming. Class I is the best-suited soils types for crop growing. Class II and III soils have limitations which reduce the choice of plants that can be successfully grown in them and may also require special conservation practices.² Prime agricultural soils are located virtually in all areas outside of the stream valleys of the Township. The Open Space Plan indicates that CFT has 1,780 acres of prime agricultural soils, accounting for 32% of the Township.</p>

2. CULTURAL AND HISTORIC RESOURCES

Historic Resources are shown on Map 6-7 of the Township Open Space Plan.

<p>Cultural Resources</p>	<p>The Township's cultural landscape was shaped by several key factors, including the aftermath of the Battle of Brandywine (1777), post-war industrial activities including farming and clay mining, and the establishment and success of the local artist community as illustrated by the Wyeth family, the Brandywine School and the Brandywine River Museum.</p>
<p>Historic Properties</p>	<p>The Township contains many significant structures designated as "historic," including National Historic Landmarks and properties listed in the National Register of Historic Places (a list maintained by the U.S. Department of the Interior). While these designations provide a form of official recognition, none of these designations provide any significant degree of protection. Three (3) properties are National Landmarks including the Brinton 1704 House, the N.C. Wyeth Studio and homestead, and a large portion of the Brandywine Battlefield National Historic Landmark.</p> <p>The Twp. has two National Register Historic Districts, including the Chadds Ford Village Historic District and the Dilworthtown Historic District. Additionally, the Twp. has several individual buildings listed on the National Register, including the John Chads House, Twa-dels Mill and House, the William Painter Farm and the Gilpin Homestead. (A complete list of historic and archaeological resources and mapping is included in the Township's 2007 Open Space Plan.)</p>
<p>Scenic Resources</p>	<p>Scenic areas in the Township are shown on Map 6-9 of the Open Space Plan, and include areas along and adjacent to Route 1, Webb Road, Harvey Road, Ridge Road, Smithbridge Road, and Beaver Valley Road.</p>

² *Soil Survey, Chester and Delaware Counties, USDA Soil Conservation Service, pp. 4-5.*

3. OPEN SPACE

Chadds Ford Township adopted its Open Space Plan in December 2007. Preparation of the Plan was partially funded through the PECO Green Region Program, administered by the Natural Lands Trust.

Map 7-1 "Recreational Open Space" of the Open Space Plan shows open space throughout the Chadds Ford region. Chadds Ford Township has no developed parkland, however the map shows one area of land classified as municipal open space, located south of Route 1 and east of Heyburn Road.

The Brandywine Battlefield Historic Site is state-owned and located on the north side of Route 1. A large area of land, located in the southwest portion of the Township is shown on Map 7-1 as "conservation easement" land. Approximately eight (8) residential developments in the Township have private open space owned by Homeowners Associations.

4. SUMMARY AND PLANNING IMPLICATIONS

- a. Greater protection should be provided for forests/woodlands through the Township zoning ordinance.
- b. Greater protection should be provided for riparian buffer areas through the Township zoning ordinance.
- c. Further protection and enhancement of riparian buffers and open space areas will protect/improve the Township's watersheds.
- d. Steep slopes must continue to be protected from development and woodland clearing.
- e. Hydric soils are typically unsuited for on-lot septic systems and these areas should be avoided for the placement of these facilities.
- f. Prime agricultural soils should be protected from future development through the Township zoning ordinance.
- g. Several resources have received a Determination of Eligibility (DOE) by the National Register, including: The Thomas Speakman House, Brandywine Baptist Church Parsonage, Ring-Kreuner Farm, Samuel Painter Farm, Philadelphia and Central Railroad, and the expansion of the Dilworthtown Historic District. National Register nominations should be pursued for these important resources.
- h. Scenic road designations can be used as a basis for guiding the future use and improvements to the road and for implementing controls via zoning and land development ordinances to help protect the landscapes along these roads.

APPENDIX E: COMMUNITY FACILITIES & SERVICES INVENTORY / ANALYSIS

Community facilities and services are provided by both the public and private sectors and include code enforcement, police protection, trash and recycling collection, schools, hospitals, and sewer and water service. This section inventories the services and facilities provided by Chadds Ford Township and other organizations and assesses the extent to which they meet existing and future needs.

1. TOWNSHIP FACILITIES AND INFRASTRUCTURE

Township facilities, services and infrastructure are described below.

Township Facilities	The Township administrative offices are located at 10 Ring Road, Chadds Ford, PA, Delaware County. There are no developed municipal parks in the Township.
Township Infrastructure Services	
Roads and Snow Removal	The Township contracts with private contractors for Township owned local road maintenance and snow removal. State highways, such as U.S. Rt. 202 and Rt. 1, are maintained by PennDOT. There are no road maintenance shops or storage facilities in the Township. Private roads are maintained by their respective homeowners associations. The Township currently has a volunteer Roadmaster.
Water and Sewer Service	While most CFT households use on-site wells and septic systems, several areas of the Township are serviced with public or community systems. These public and community water and sewer services areas are depicted on the Community Facilities and Services Map. Water supply for the Twp. is provided by a combination of public water through Chester Water Authority (CWA) and private, on-lot wells.
Public Water Supply	Public water supply in CFT is provided by CWA, a municipal authority established in 1939 serving Delaware and Chester Counties, PA and New Castle County, DE. CWA supplies residential, industrial, and commercial customers, and other water companies in PA and DE. Sources for CWA include the Conowingo Pool of the Susquehanna River and Octoraro Reservoir on Octoraro Creek, which are both surface water supplies. CWA has capacity at its Octoraro Treatment Plant to treat up to 60 million gallons per day (MGD), and in 2007 produced an average of 34 MGD. CWA is a not-for-profit water supplier with comprehensive plans for present-day facility operation and maintenance and future upgrades and expansions. All water quality standards set by the US Environmental Protection Agency (EPA) and PA Dept. of Environmental Protection (DEP) were met in 2007. CWA supplies water to Twp. residents, as well as to commercial and institutional development, in the village and around the Route 202/Route 1 intersection, including the Estates at Chadds Ford, Springhill Farm, and Painters Crossing Condominiums. CWA has no plans to extend public water within the Twp., but has indicated that it could if requested.
Private Water Supply	Private wells provide drinking water for many of the Township's residents.
Wastewater	<p>Sewer service is concentrated along the Route 1 and Route 202 corridors, with additional service area in the southeastern portion of the Township, along Ridings Way, Ridge Road, and Heyburn Road. Sewage collection systems in these areas include two systems owned by the Township and two private systems. Properties outside of the sewer service area are served by on-lot disposal systems.</p> <p>CFT created The Chadds Ford Township Sewer Authority (CFTSA) to manage the Township public sewer system. CFTSA consists of five board members appointed by the Township Board of Supervisors. Delaware County Regional Water Quality Control Authority (DELCORA) provides operation, monitoring, and preventative maintenance of the treatment facilities and collection systems on a contract basis, and Pennoni Associates provides engineering services. CFTSA-owned wastewater treatment plants (WWTP) include Ridings WWTP and Turners Mill WWTP. For planning purposes, CFTSA uses an equivalent dwelling unit (EDU) gallons per day (GPD) figure of 217. This is based on a flow per EDU of 90 gallons per capita per day. At 2.41 people per household in Chadds Ford Twp., each EDU is 217 GPD.</p>

<p>Public Wastewater Treatment Plants</p>	<p><i>Ridings WWTP:</i> Located in the southeast portion of the Twp., Ridings WWTP began operations in October 1994 and discharges treated wastewater to an unnamed tributary of Harvey Run. The facility is permitted an average monthly flow of 80,000 GPD. Ridings WWTP is fed by a combination of gravity lines and force mains, which require three pumping stations in the collection system and one at the WWTP. The treatment process consists of a dual basin sequencing bath reactor discharging to an equalization basin, tertiary effluent disc filter, chlorination, and dechlorination prior to release to the receiving stream.</p> <p>Ridings WWTP treated an average of 40,000 GPD in 2007, with the majority (about 75%) of influent being domestic residential wastewater and the remainder nonresidential, including restaurants, shops, offices, and a school. The average daily flow of the highest three consecutive months was 51,400 GPD in 2007. Five-year flow projections by Pennoni Associates show that Ridings WWTP will be operating below the permit level for the average daily flow on a monthly basis.</p> <p>Problems with effluent quality and permit violations resulted in the execution of a Consent Order and Agreement (CO&A) between PA DEP and CFTSA in 2008. Issues were related to the performance of the plant's sand filter and inflow/infiltration (I/I), and in 2007 CFTSA implemented a systematic procedure for inspection and repairs.</p> <p><i>Turners Mill WWTP:</i> Turners Mill WWTP was constructed by agreement between Toll Brothers and CFT, and serves Toll Brothers' Estates at Chadds Ford development and other areas in the Township, including the Village of Chadds Ford. Transfer of the Turners Mill WWTP to the CFTSA was completed in August 2008. The treatment plant is located adjacent to the Township Building, along Rt. 1, and discharges to Harvey Run.</p> <p>Turners Mill WWTP is permitted for 150,000 GPD, and is fed by a combination of gravity lines and force mains, including a low pressure sewer system (LPSS) along Rt. 1 that calls for a small pump on-site at each residence or business. Two pump stations are also part of the system: one at the Estates at Chadds Ford and one at the current site of the private Pantos WWTP. The Pantos WWTP was decommissioned and its flows redirected to the Turners Mill WWTP. The Turners Mill plant consists of two extended aeration treatment trains, mechanical screen with manual bar screen by-pass, concrete tanks with package treatment units, and ultraviolet disinfection. Discharge is a combination of stream and wetland discharge for polishing and additional treatment. Initial connections to Turners Mill WWTP are still underway. Act 537 planning for Turners Mill WWTP projected 473.75 EDUs and flows of 102,804 GPD by the end of 2008. Five-year flow projections by Pennoni estimate 544.50 EDUs and flows of 118,156 GPD by the end of 2012, well below the permitted 150,000 GPD. These figures include the redirection of the private Pantos WWTP and its collection system to Turners Mill WWTP.</p> <p>As a new system, the Turners Mill WWTP is in good condition. The pump station located at the former site of the Pantos WWTP will be privately owned and maintained, as will the pump station located at the Estates at Chadds Ford (Sunset Hill Pump Station).</p>
<p>Private Wastewater Treatment Plants</p>	<p>There are currently two private wastewater treatment plants located in the Twp: Knights Bridge WWTP and Springhill Farm WWTP. A third private system, Pantos WWTP, has recently been decommissioned and its flows directed to Turners Mill WWTP. Knights Bridge WWTP is located along the Rt. 202 corridor, and primarily serves the commercial businesses located to the northwest of the Rt. 202/Rt. 1 intersection. The Springhill Farm WWTP is located southeast of the Rt. 202/Rt. 1 intersection, and serves primarily residences and a limited number of businesses in this area.</p>
<p>On-lot Disposal Systems</p>	<p>Outside of the Rt. 1 and Rt. 202 corridors, CFT is dominated by residential land uses, which primarily use on-lot disposal systems (OLDS) for wastewater disposal and treatment. CFT contracts with a certified Sewage Enforcement Officer (SEO) for regulation of these systems. According to the SEO, these systems typically perform well. New development is required to test for both a primary and alternate location, providing for a backup when the primary system fails. Typically, existing failing systems are not malfunctioning to the surface, but rather fail a certification process required by transfer of ownership. Systems are typically replaced following a certification failure. Finding an appropriate site for a replacement system is generally not a problem due to suitable soils and large lot sizes. Areas with</p>

	past problems, notably along Heyburn Road and in the Village of Chadds Ford, are being connected to public sewer (Turners Mill WWTP).
Storm Water Management	Stormwater management is required under Act 167 for all new development projects, as a component of the subdivision and land development ordinance. The design criteria generally require that stormwater systems be designed to permit no increase in the rate of runoff over that which currently exists at a site. Most of the existing stormwater management systems include retention basins that are maintained by homeowner's associations, and there are no Township owned stormwater management facilities.
Solid Waste	CFT does not provide trash and recycling collection. Property owners and HOA's must individually contract with private haulers for this service.

2. PUBLIC SAFETY AND EMERGENCY SERVICES

Township public safety and emergency services are described below.

Public Safety	Police services are provided by the Pennsylvania State Police. There are no police, fire or ambulance facilities in Chadds Ford Township. Code Enforcement services are provided by the Township.
Emergency Services	<u>Ambulance Service:</u> Ambulance service is provided by Concordville Fire and Protective Association, Ambulance Division, in Concordville, and Lima Volunteer Fire Company No. 1, located on Baltimore Pike. CFT makes regular contributions for this service. <u>Fire Service:</u> Fire protection is provided by Concordville Fire Company, and Lima Volunteer Fire Company No. 1. CFT participates in providing this protection with annual contributions to the fire company, and provides additional donations when requested for specific projects.

3. SCHOOLS, HOSPITALS AND LIBRARIES

Schools, medical and library facilities are described below.

Schools	CFT is within the Unionville – Chadds Ford School District. A private school, St. Cornelius, is located within CFT, at 160 Ridge Road.
Hospitals/Medical Centers	No hospitals are located within the Township. The closest hospital facilities to the Township are Chester County Hospital in West Chester and Riddle Memorial Hospital on Baltimore Pike in Media. Pioneer Urgent Care is located at 1572 Wilmington Pike in CFT. Additionally, a new hospital is planned for adjacent Concord Township.
Libraries	No public libraries are located in CFT. The closest library is the Rachel Kohl Library located at 687 Smithbridge Road in Glen Mills.

4. REVENUES AND EXPENDITURES

The Township's current budget is discussed below.

Revenues	Table 12 shows CFT's 2008 General Fund Budget, and includes the percentage each account represents in the budget. CFT operates with an annual general fund budget of about \$1,294,000. The majority of annual revenues (57%) are from local real estate, real estate transfer, emergency services and business privilege taxes. Other revenues are from permit and service fees, fines, rents and interest.
Expenditures	Community Development, Building Expenses and Engineering account for about fifty-eight percent (58%) of Township expenditures. Liquid fuels expenses accounted for 8% of the expenditure budget.

Table 12: Township General Fund Budget, 2008

GENERAL FUND	Percent	
Receipts:		
Real Estate Taxes	\$382,165	30%
Real Estate Transfer, EMS & Business Privilege Tax	\$347,500	27%
Franchise Fees	\$52,000	4%
Fines and Forfeitures	\$3,208	0.25%
Interest Earned	\$22,390	2%
Miscellaneous Receipts	\$141,736	11%
General Fees	\$176,940	14%
Fees - Permit, Application and Recoverable	\$169,045	13%
Total Receipts	\$1,294,984	100%
Expenditures:		
Township Officials	\$27,405	2%
Tax Collection & Consulting Expenses	\$32,350	2%
Solicitor	\$54,000	4%
Township Secretary	\$36,112	3%
Office Expenses	\$26,925	2%
Engineer	\$225,000	17%
Building Expenses	\$276,261	21%
Inspections	\$82,822	6%
Zoning & Planning	\$8,895	1%
SEO	\$19,600	2%
Roadways, Snow Removal & Traffic Signals, Lights	\$90,550	7%
Storm Sewers	\$2,000	0.15%
Signage	\$2,500	0.19%
Other Roadways	\$15,800	1%
Liquid Fuels Expenses	\$102,000	8%
Fire Hydrants	\$13,700	1%
Community Development	\$249,114	19%
Miscellaneous	\$3,700	0%
Insurance Expenses	\$26,250	2%
Total Expenditures	\$1,294,984	100%

Source: 2008 Annual Budget , Chadds Ford Township, 2008

5. SUMMARY AND PLANNING IMPLICATIONS

- a. Both Ridings and Turners Mill Wastewater Treatment Plants are operating below the permitted maximum.
- b. Knights Bridge WWTP is not known to have any violations, and could expand if additional commercial development occurs in the vicinity.
- c. On lot disposal systems can continue to be used throughout CFT, except in the areas where problems have been documented in the past.
- d. CFT provides basic administrative and code enforcement services. Police, fire, and ambulance services are provided by other organizations. The Township uses outside contractors for road maintenance.
- e. The CFT budget does not currently include a line item for open space or recreation. CFT should consider enacting an ordinance for a fee in lieu of program for which could be used for the acquisition and protection of open space in the Township. Grant funding is one primary source than can be utilized to support acquisition, planning/design and development costs for new parks and recreation facilities. Significant funding is available through county and state programs.
- f. The Township passed a referendum for open space acquisition.
- g. The Township passed a fee-in-lieu ordinance for the provision of recreation facilities associated with new developments.

APPENDIX F: PUBLIC PARTICIPATION PROCESS

This section discusses the public participation process that was involved in the update of the Chadds Ford Township Comprehensive Plan. The results of the public participation process are described below.

1. COMPREHENSIVE PLAN TASK FORCE

A Comprehensive Plan Task Force consisting of local elected and appointed officials, volunteers and other interested parties was organized to oversee the Comprehensive Plan project. The Study Committee met regularly throughout the project to review project progress, discuss project issues and review project mapping. Additionally, key person interviews were held with local individuals to discuss issues relevant to the future planning of Chadds Ford Township. This process served to both inform the community of the Plan project and provide insight regarding community opinions about the quality of life in the Township and residents' concerns about future growth and development. Task Force members are listed below.

Joseph Barakat
Planning Commission

Gary Whelan
Planning Commission

George Kobryn/Sam
Haber
DelCo Planning Department

Maurice Todd
Planning Commission

Paul Vernon
Planning Commission

Lois Saunders
Open Space Committee

William Taylor
Planning Commission, Chair

Gary Sharp
HARB Chair

Ed Wandersee
ZHB Chair

Bob Hobbs
Resident

2. PUBLIC MEETINGS AND WORKSHOPS

A public meeting was held on June 5, 2008. The minutes of the meetings are set forth below.

Chadds Ford Comprehensive Plan Public Workshop

Meeting: Thursday, June 5, 2008 – 7:30 PM
Township Building

Minutes:

Attending:

Comprehensive Plan Task Force

William Taylor, Paul Vernon, Ed Wandersee, Maurice Todd, George Kobryn, Joe Barakat, Bob Hobbs, Gary Whelan

Workshop Participants

Approximately 42 residents

Others

Ray Ott & David Sweet, Project Consultants

1. Paul Vernon introduced the Task Force and gave a brief overview of the project.
2. Ray Ott presented some slides showing the legal framework for Comprehensive Plans, the scope and schedule for the project, and some demographic trends for Chadds Ford and adjacent municipalities. He then explained the objectives for the workshop and provided a handout that included the agenda, copies of the presentation slides and instructions for the workshop. The participants formed four workshop groups, and each were given a large

scale map of the Township to mark up as needed to illustrate the groups issues and concerns.

3. The four Workgroups discussed issues for about ½ hour, after which they presented their findings to the group as a whole and provided the consultants with a marked-up map and written list of planning issues.
4. In general discussion, the group expressed their desire to be able to access information about the Comprehensive Plan Update project and other planning documents – such as the recently adopted Chadds Ford Township Open Space Plan – via the Township’s website, <http://www.chaddsfordpa.net>. Ray explained that a website has been set up for the Task Force, but that this would be modified to provide a link via the Township’s website and to create a public information section for the site. He also said he would let the Township know of the group’s request for access to the Open Space Plan.
5. Ray explained that the results of the Workshop and the Household Survey (about 250 have been returned of about 1,500 sent out) will be presented at the next Task Force meeting on July 3, 2008 @ 6:30 PM.
6. Next Task Force Meeting: Thursday, July 3rd Task Force @ 6:30 PM
7. Meeting adjourned, 9:30 PM.

Respectfully submitted,
Ray Ott, Ray Ott & Associates
June 10, 2008
Corrected - June 23, 2008

3. COMMUNITY SURVEY

A total of 353 surveys were returned to the Township. Of the 1,314 households (2000 U.S. Census), that represents a return rate of approximately 26.8%. The results of the Community Survey are shown on the following page.

Chadds Ford Township Comprehensive Plan Update Community Questionnaire

Please take a few minutes to complete this questionnaire. Chadds Ford Township is updating its Comprehensive Plan. The Comprehensive Plan will establish land use planning, zoning and public services/facilities policies to direct and guide future development in the township. Your responses will assist us in developing the goals and objectives for this planning effort.

- I. Name / street where you live: **353 responses out of about 1,300 mailed -- response rate of 27%**
name (optional) street address
- II. Number of people in your household by age group: **62** 0-9 **90** 10-19 **63** 20-29 **150** 30-49 **250** 50-64 **136** 65+
- III. How long have you lived in Chadds Ford Township? **47** 0-3 yrs. **99** 4-10 yrs. **82** 11-20 yrs. **107** 20+ yrs.

Please rank the importance of the following items by circling the appropriate number.

IV. Significant features of Chadds Ford Township

Indicate what you like most about living in or what attracted you to Chadds Ford Township.

	Total	Importance					Avg.
		Less 1	2	3	4	More 5	
1. Safety, health & recreation services							
a) Police (state police)	323	52 16%	41 13%	91 28%	55 17%	84 26%	3.2
b) Road maintenance	329	41 12%	44 13%	110 33%	83 25%	51 16%	3.2
c) Recreation	320	64 20%	57 18%	95 30%	62 19%	42 13%	2.9
d) Trash collection	319	89 28%	49 15%	92 29%	53 17%	36 11%	2.7
e) Twp. Admin. services	325 1	74 23%	63 19%	117 36%	51 16%	20 6%	2.6
2. Community features							
a) Neighbors nearby	334	73 22%	55 16%	91 27%	74 22%	41 12%	2.9
b) Variety of housing types	334	65 19%	56 17%	88 26%	80 24%	45 13%	3.0
c) Retail services	328	75 23%	59 18%	91 28%	64 20%	39 12%	2.8
d) Seclusion / privacy	335	5 1%	15 4%	27 8%	85 25%	203 61%	4.4
e) Access to urban centers	337	28 8%	25 7%	80 24%	115 34%	89 26%	3.6
f) Rural character / lifestyle	339	3 1%	8 2%	22 6%	77 23%	229 68%	4.5
3. Recreation opportunities							
a) Parks & playgrounds	321	68 21%	44 14%	87 27%	58 18%	64 20%	3.0
b) Youth athletic programs	316	117 37%	57 18%	72 23%	37 12%	33 10%	2.4
c) Senior programs	313	128 41%	63 20%	78 25%	28 9%	16 5%	2.2
d) Trails/paths	330	60 18%	33 10%	72 22%	81 25%	84 25%	3.3
e) Bicycling	318	101 32%	45 14%	65 20%	49 15%	58 18%	2.7
4. Natural/cultural features							
a) Scenic natural landscapes	320	5 2%	3 1%	19 6%	62 19%	250 78%	4.9
b) Historic architecture/settings	306	10 3%	5 2%	32 10%	97 32%	194 63%	4.8
c) Farmlands	288	21 7%	9 3%	42 15%	81 28%	177 61%	4.8
d) Stream/groundwater quality	301	17 6%	10 3%	34 11%	74 25%	200 66%	4.8

V. Improvement needs in Chadds Ford Township

Indicate what you feel could or should be done to improve the quality of living in Chadds Ford Township.

	Total	Importance					Avg.
		Less 1	2	3	4	More 5	
1. Better traffic circulation	350	18 5%	32 9%	62 18%	74 21%	164 47%	4.0
2. Open space preservation	332	6 2%	3 1%	26 8%	65 20%	232 70%	4.5
3. More housing opportunities							
a) Affordable housing	328	123 38%	55 17%	68 21%	41 13%	41 13%	2.5
b) Variety of housing types	330	95 29%	61 18%	91 28%	43 13%	40 12%	2.6
4. Business district / commercial opportunities							
a) More opportunities for dining out	339	97 29%	61 18%	88 26%	68 20%	25 7%	2.6
b) More/ better variety of shops	334	117 35%	63 19%	95 28%	39 12%	20 6%	2.3
c) More parking	324	138 43%	72 22%	76 23%	25 8%	13 4%	2.1
d) Special events	331	80 24%	63 19%	101 31%	63 19%	24 7%	2.7
e) Improve streetscape/lighting	329	96 29%	59 18%	81 25%	61 19%	32 10%	2.6
f) Increase size of business district	263	96 37%	85 32%	51 19%	18 7%	13 5%	2.1
g) Walk to work & shopping	360	145 40%	95 26%	62 17%	34 9%	24 7%	2.2
h) Don't need more comm. svcs.	331	62 19%	13 4%	61 18%	44 13%	151 46%	3.6
5. More health, safety & rec. svcs.							
a) More police protection	189	35 19%	17 9%	60 32%	33 17%	44 23%	3.2
b) Road maint. & snow removal	321	35 11%	26 8%	104 32%	82 26%	74 23%	3.4
c) Better access to Twp. admin. svcs.	339	50 15%	62 18%	113 33%	68 20%	46 14%	3.0
d) More parks / recreation opps.	319	54 17%	34 11%	81 25%	73 23%	77 24%	3.3
e) Opportunities for walking / biking	330	45 14%	32 10%	79 24%	65 20%	109 33%	3.5
f) Expanded access to public sewer	328	105 32%	46 14%	75 23%	50 15%	52 16%	2.7

4. KEY PERSON INTERVIEWS AND FOCUS GROUPS

Eleven (11) community members were interviewed, and two (2) focus group meetings were conducted as part of the public participation process. A list of the interviewees is set forth below.

Name	Organization	Position
<i>Richard Jensen</i>	<i>Chadds Ford Township</i>	<i>Zoning Officer</i>
<i>Ed Wandersee</i>	<i>Unionville-Chadds Ford SD School Board</i>	<i>Representative</i>
<i>Jim Leader</i>	<i>Chadds Ford Business Association</i>	<i>Member</i>
<i>Beth Rump</i>	<i>Brandywine Battlefield State Park</i>	<i>Site Administrator</i>
<i>Mary Kot</i>	<i>CF Twp Republican Party</i>	<i>Chairman</i>
<i>Peter Jesson</i>	<i>CF Twp Democratic Party</i>	<i>Chairman</i>
<i>Ron Coates</i>	<i>Painter's Crossing Subdivision</i>	<i>President, Condo Assoc.</i>
<i>Mary Walters</i>	<i>Spring Hill Subdivision, Sewer Authority</i>	<i>HOA</i>
<i>Ginger Tucker</i>	<i>Chadds Ford Historical Society</i>	<i>Director</i>
<i>Gary Sharp</i>	<i>Brandywine Battlefield Nat'l Historic Task Force & CFT HARB</i>	
<i>Garry Paul</i>	<i>Supervisor Liaison - Sewer Authority & Board of Supervisors</i>	<i>Supervisor</i>
<i>Group Meeting</i>	<i>Delaware County Planning Department</i>	
<i>Group Meeting</i>	<i>Township Open Space Committee</i>	

Summary of Key Person Interviews Responses

1. As you view current conditions in the Twp. [e.g., public services or facilities; trends in land use, auto and pedestrian movement], what things are:

a. Particularly positive, contribute to your interests/objectives, should continue:

Land use/Development:

- BOS doing a good job of managing development; traffic is biggest impact.
- The Township manages development and developers well; the Board is tough but effective, and pursues the community's best interests.
- '73 comp plan should have been adhered to. Small steps taken of late, but no tie between decisions and strategic impacts
- Land use changes are more gradual, less tumultuous than in a Township like Concord. After a relative boom in the 1980s, development has been of a smaller scale and controlled pace. Owners of large properties hold the key, and most do not seem bent on development; however, that is what the

- comp plan update needs to stay ahead of. Conservancy has set a density-modifying tone since late 1960s; Woodlawn Trustees also a key owner.
- School Board might favor an increase in nonresidential tax base, but local impacts from that development argue against it. Also, no real commercial needs that cannot be met easily outside the Township.
 - Supported unsuccessful move toward cluster development regulations, but happy with current predominant 1- and 2-acre lot pattern and remaining larger properties. Not really rural, but the roads have that character and should stay that way.
 - Township is doing well on a limited tax base. Should aim to continue record of no tax increase, especially in the face of U/CF school taxes. Many long-term residents are land-poor.
 - Positive negotiations have occurred with developers, e.g., the 58 acres of open space coming from Toll Bros. The density increase under PRD is justified.
 - Spring Hill Farms would like to see no more development in the Township. Open space protection is good, but should include playgrounds and trails for the increasing # of families with young children.
 - Emphasis on Chadds Ford Village as a town center would be positive; should seek more community-fostering businesses there. The Twp. Bldg./Museum trail also would enhance this goal.
 - BoS seems to find Concord a good example re: land use and development; residents may disagree.
 - From Zoning Officer view, concern about amount of ordinance change that could be coming, especially in response to possible growth stimulus from sewer plant.
 - Dilworthtown area quite sensitive
 - Other than Watkins tract, not much left on 202
 - Several smaller, but key, developable parcels on Rt. 1
 - Chadds Ford Village would be nice as a village (two corners in one ownership), but several major constraints make a true village unlikely:
 - Rt. 1 as barrier
 - Need more regulatory control than just HARB process
 - North on Creek Rd., several residential buildings difficult to adapt
 - Station Way Rd. limited, and floodplain condition an obstacle
 - Dilworthtown a more promising village area; ability to control traffic, could work collaboratively with Birmingham, adjust zoning toward a village concept

Trails/Open Space

- Trails are a positive but should not be at the expense of individual property rights; a loop connecting Chadds Ford Historical Society, Brandywine River Museum, Township Bldg., and Battlefield State Park could meet both objectives
- Open space and trails: the Township's approach here is excellent. A Township park would be a positive, although not sure how well it would be used. Any Rails-to-Trails proposal for the adjacent rail bed would be firmly opposed by PC. A possible connecting/loop trail within Chadds Ford Village is a good idea.
- Open space protection: important to achieve; loss of Girl Scout camp should not have happened
- Support trails, a good means for community interaction; just need to take proper account of private property rights
- Girl Scout camp will be a tax drain; it should have been protected open space.
- Preservation of open space and historic resources is the key objective. Township is not responsible for current amount of protected open space, rather the Conservancy and the state park. Suggests placing the state park in an Act 167 district.
- Supports trails, but more interested in open space.
- Girl Scout camp tract an aberration, but was well-handled, especially re: access and traffic.
- Trails are a benefit, and best suited within development open space, e.g., a PRD. Owners of large open ground may still feel threatened. Use of eminent domain to secure trail links is unlikely.
- Some additional public recreation/field space would be desirable. At eastern end of the school district, residents get less benefit from U-CF recreational facilities.

- More trails also desirable, another recreational asset. But need to be well-planned with ongoing management addressed. A subdivision ordinance requirement for trails on developing tracts would be positive.
- The trail connecting the Brandywine River Museum and CFHS is very positive.
- The Brandywine Battlefield Associates (friends group) positively contribute to an understanding of the history and significance. The Site (park) is the 'gateway' to the National Historic Landmark District.
- The new traffic light has been a great improvement.
- Open space referendum funds will enable open space preservation; landowners need to be advised that the Township is a player and can use open space funds.

Roads/Traffic:

- The PC Condo. Assoc. has some concerns about possible impacts from the proposed loop road; it could lead to a change to a gated community.
- PC has continued interest in the future of the Ciccarone parcel on the north side of Rt. 1; its development will have implications for PC.
- Traffic on Rt. 1 and Rt. 202 a major impact on community; a two-edged sword, good for business but increasing effects on Township population. CFBA has supported improvements to Rt. 202; overdue, delays unfortunate.
- Traffic: some of the increase can be attributed to increased development within the Township, as well as growth in Concord Twp.
- Traffic increases are from external forces. BoS has tried to control development on Rt. 202, but without much success. Real regulatory emphasis is on protection of historic resources, Chadds Ford Village, and Rt. 1 corridor.
- Loop road is progressing, but completion likely 2-5 years away

Township Services:

- Could use a Health Officer for restaurant inspection [perhaps joint municipal position]
- Sewer Authority doing good work, but sees eventual need for most of Township to be served by a public system
- Recycling program should be initiated by the Township, but not mandatory [in line with preference for limited government]
- Volunteer committee members have little knowledge of ordinance content; HARB also does not recognize its potential clout
- 681 Webb Rd. and PRD on Atwater Rd. are examples of deficient ordinance standards and administrative practice

Other

- CFHS has teamed with the Civic Assoc. of Chadds Ford Twp. in very positive activities, including Chadds Ford Community Days and two June events. These have not occurred recently, however.
- CFHS is a private nonprofit, and has received no funding from the County or Township. Conducts 3 fundraisers: Chadds Ford Days; pumpkin carve; and Christmas candlelight tour.

b. Troubling issues/obstacles that should be addressed

- Only have State Police service, which takes from 10 to 30 minutes to respond (although calls have only been for false alarms on their system).
- Could use public water. Their well water is frequently dirty. Also recently installed a fire suppression system that uses the well water.
- Tax revenues cannot keep up with infrastructure needs; this hurts the tax-payer base. Part of problem is Pa. unfunded mandates.

- Stormwater management: none prior to 1974. Now retain 10-yr. storm, release at 2-yr. rate, but still have stormwater and erosion/sedimentation problems. Often a spending choice between this or roads.
- Infrastructure costs will increase; attempting to establish capital reserve fund.
- DEP wants The Ridings sewer plant upgraded; this will cost more than \$0.5 million.
- With no County health inspection service, may join in a multi-municipal position.
- Relying too much on parttime staff and volunteers; Township role should be expanded. Need a Township Manager (only Del. Co. township without one) due to increased rules, growth impacts, need for grants and financial planning; an increase in paid staff will pay for itself.
- Post Office parking lot is too small, dangerous.
- Lack of pedestrian access in Chadds Ford Village, e.g., from Brandywine River Hotel to 1/100 intersection; also needed in front to Post Office, Leader's, and a Rt. 1 crosswalk
- Lack of vegetation at 1/100 intersection; should be a Township initiated plan to beautify, with trees, and employing landscape expertise. Build on Rt. 1 corridor protection.

8. Is the current Township role and functioning appropriate, too much, too little?

- The Township's current role and extent of operations is very appropriate. Expansion of the Board to 5 members and/or creation of a Township Manager position would be supported.
- The BOS and volunteer board members are doing good jobs. They are willing to listen; and have been actively seeking grants.
- Township services and policies generally ok. Some CFBA members may feel the Township undervalues the need for a strong and successful business community, which is integral to a strong and balanced community. Loss of Wawa a big blow. Township could improve its development approval process, avoid regulatory increases.
- Township's current role is appropriate, but likely will expand. Many property owners are accustomed to "self-regulation," but increase in Township regulation has not met with great resistance. Remains the "land of long driveways," and little demand to alter the level of municipal services.
- Recent ordinance amendments re: steep slopes and net-out provisions are good examples of gradual increase in Township's presence.
- HARB is expanding its focus, including review of signage and preparation of a public information brochure. Seeks to be a help, not a hindrance, and to let applicants know the requirements before the fact. Working to improve the quality of submissions.
- Aside from need for Township beautification plan noted above, generally pleased with level of Township government action; not too extensive.
- Spring Hill Farms owns its roads and sewer system, and is frustrated that this may be the reason for a lack of public services. As an example, the public road that serves the site does not get plowed.
- Township Bldg. should be accessible to all groups, even if a fee is required for its use. CF Civic Assoc. is able to meet there, but not the SHF Condo Assoc.
- SHF is looking into starting a recycling program with its private trash hauler (Openlaker), and would like to serve as a model for such a program. Approx. 10-20% of the residents have asked for this. The Township could provide containers for high-volume recyclable materials.
- Township government could work more closely with the Unionville/Chadds Ford School District. There was no apparent support from the Township, or from state legislators, for the high school referendum. The quality of schools is among the Township's biggest assets, and should be supported.
- Township could better explain animal control regulations and who has jurisdiction.
- Township could provide annually to residents a list of Board and Commission members, essential phone numbers; this need not be left to the Civic Association.
- The Township website could be improved.
- Certain committees, e.g., the Planning Commission, could have a dedicated seat for a SHF and/or Painters Crossing resident.

- Active recreational opportunities needed, but no good sites without major site work and topo change. Leary of a Township park that would need management, bureaucracy.
- Fee-in-lieu ordinance provisions: expects challenge to nonresidential portion.
- Recycling: Township could mandate private haulers provide curbside pick-up; igloo containers at Twp. Bldg. not a good idea
- Not convinced a Twp. Mgr. is needed; do-ers and staff are needed.
- Current zoning ordinance is good; catch-all language in L/I District makes provision for any conceivable use
- Could address 55-&-over communities prior to applications; now provided in L/I District
- Also should adjust zoning ordinance in advance of wind mill, solar interest, green technology
- Could power Twp. Bldg. with solar

9. What is your sense of "community" and level of communication, interaction?

- Plenty of volunteer opportunities; many would like to get involved but are too busy; Not a lot of success with community events
- As issues arise, there has been good communication with other HOA's, and there is not a feeling of isolation. The newsletter is a good vehicle. Community Day, pig roast, and Chadds Ford Days are good community unifiers.
- Good sense of community in the Township, in part the result of limited government functions. The Conservancy and CFBA are important supporters of community activities. Chadds Ford Village serves a limited village function, but very constrained physically by Rt. 1.
- Improving sense of community, despite Republican attempts to control Township positions and civic organizations. Recent Township cleanup a community success.
- Some community-building efforts of late, including those of the Civic Association, Brandywine Baptist Church. Sense of community hampered by physical barriers (e.g., major roads), no genuine village. Continuing scarcity of volunteers to fill Township positions.
- Township government: observing a trend toward too much sophistication, creating positions and services that may exceed what is needed, e.g., health inspection, fire inspection. Do not want to become Concord Township. Idea of mandatory recycling is troubling.
- Not a strong sense of community, but that is not a negative. Main tie is the cultural institutions and historical/cultural heritage. That character is what Chadds Ford connotes and what residents like.
- Good core group of volunteers, but need more. Chadds Ford Community Day died from a lack of participation.
- Good communication mechanisms: Civic Assoc. newsletter; website; mailings on specific issues. Quarterly Township newsletter coming.
- Strong sense of shared values and what is liked about Chadds Ford. Little political difference re: local issues.
- The three CFHS events are about the only community-unifying events at present.
- CFHS sees itself trying to promote sense of community; suggest an annual May mailing to all residents, noting openings on Twp. boards..
- Township could maintain a current Township mailing list and make available. CFCA is working to fill void.
- CFHS picnic tables and dog-walking opportunities on site. Township could support these functions.
- There is no sense of community, but more a sense of haves/have nots. Participation in Township affairs seems limited to the politically connected and upper incomes.
- Could use more mass mailings to communicate with residents; Township government remains a relatively small nucleus, although expanded over last 5 years

10. Trends that should continue [if other than #1]

- Prefers limited government and pleased that current tax rate remains low. Some concern that Township is trending toward more regulation and BoS interest in expanded government role, which will inevitably bring tax increase. No new tax-funded services needed, and growth in local government role could be slowed.
- Rt. 1 should not be expanded to resemble Rt. 202, and should not be a pedestrian route.
- A wonderful and attractive community. Comp plan need not make sweeping proposals, rather tweak current policies and ordinances.
- Traffic impacts are external; no point in a 209 study/fee.
- Currently no Township-owned property for public facilities, and no immediate interest. This will change: need more trails, passive recreation, land for parks (although no park construction likely for a while). Should buy land within 5 years.

11. Changes needed: additions or eliminations

- Taxes should be kept to a minimum
- HARB sees likely need to create an Historical Commission to address historic resources outside the 167 districts; possible creation of a zoning overlay district.
- Greater local police presence is needed. SHF has good relations with the State Police, but understands they have other priorities. The Township should investigate a regional police force. That is a service residents would be willing to pay for.
- Need to continue seeking mass transit opportunities; Octoraro rail line should be restored; rail line owners are retaining rights-of-way for future use
- Bus line on 202 not very healthy; Brandolini shopping center at 1/322 may draw riders

