

COMPREHENSIVE PLAN **2009**

**EAST BRANDYWINE TOWNSHIP
CHESTER COUNTY, PA.**



This Plan was funded in part through a grant from the Vision Partnership Program sponsored by the Chester County Board of Commissioners. The Plan has been prepared in conjunction with the principles of the County's policy plan entitled *Landscapes*, as a means of achieving greater consistency between local and county planning programs.

**EAST BRANDYWINE TOWNSHIP
COMPREHENSIVE PLAN**

Table of Contents

Introduction

A Township is Born.....	1
A Call to Action.....	3
I. <u>Goals and Objectives</u>	
A. Summary of Resident Survey responses.....	7
B. Statement of Goals and Objectives	11
II. <u>1st-Priority Implementation Actions</u>	19
III. Context and Background	
A. Historical Background.....	25
B. Inter-Municipal and Regional Relationships.....	26
C. Population, Housing, and Economic Profile.....	30
D. Existing Land Use	39
IV. <u>Protecting Community Resources</u>	
A. Steep Slopes.....	43
B. Soils.....	44
C. Geology and Ground Water.....	46
D. Surface Water.....	50
E. Vegetation and Wildlife.....	54
F. Agriculture.....	57
G. Scenic Resources.....	58
H. Historic Resources.....	62
V. <u>Guiding Future Uses of Land</u>	
A. Introduction.....	67
B. Overview of Future Land Use Proposals.....	67
C. Detailed Consideration of Future Land Use Categories.....	70
Protected Lands.....	70
Agriculture.....	73
Residential.....	74
Commercial and Industrial.....	77
Mixed Commercial/Residential.....	79
Residential or Protected Open Space.....	80

VI.	<u>Providing Adequate Facilities and Services</u>	
A.	Roads and other circulation.....	81
B.	Water Supply.....	91
C.	Sewage Treatment and Disposal.....	93
D.	Stormwater Management.....	95
E.	Solid Waste Collection and Disposal.....	98
F.	Recreation Facilities and Programs.....	100
G.	Township Administrative Services; Landowner Assistance.....	103
H.	Fire Protection, Rescue, and Emergency Medical Services.....	104
I.	Police Protection.....	105
J.	Library Services.....	106
VII.	<u>Guthriesville Village Vision Plan and Development Strategy</u>	
A.	Goals and Objectives for Guthriesville Village.....	107
B.	Development Strategy for Guthriesville Village.....	109
C.	Initial Implementation Actions.....	117
VIII.	<u>Implementation</u>	
A.	Introduction.....	119
B.	Plan Implementation Actions.....	121
	<u>Appendices</u>	
A.	Resident Survey.....	153
B.	Soil Use Guide.....	167
C.	Contributing and Detracting Visual Features.....	177
D.	Historic Resources Inventory.....	179
	<u>List of Tables</u>	
Table 1	Existing Land Use, 1986 and 2008.....	42
Table 2	Design Guidelines by Functional Classification of Roads.....	86
Table 3	Supportable Retail Store Space, EB Township – 2010.....	111
Table 4	Suggested Retail Uses for Guthriesville Village – 2010.....	112
Table 5	Potential Development Program: Guthriesville Village.....	115

List of Maps

Map 1	Property and Road Map
Map 2	Existing Land Use
Map 3	Steep Slope
Map 4	Soils
Map 5	Geology and Ground Water Yield
Map 6	Surface Water
Map 7	Existing Woodlands Area
Map 8	Scenic Resources
Map 9	Historic Resources
Map 10	Protected and Undeveloped Lands
Map 11	Future Land Use
Map 12	Roads and Circulation
Map 13	Public Water Areas
Map 14	Sewer Areas
Map 15	Parks, Recreation and Trails Map
Map 16	Guthriesville Village Existing Conditions
Map 17	Guthriesville Village Concept

INTRODUCTION

A Township is Born

William Penn's original plan for his colony in the New World called for the establishment of townships, each one comprised of between 5,000 and 10,000 acres, settled in an orderly manner from east to west. Settlers established farms where nature dictated, seeking out the rivers and fertile lands. As a result, early townships were huge, taking in scattered farmsteads and much wilderness. As settlement expanded and inhabitants of those early townships became more numerous, a need arose to restructure boundaries and break up the big townships.

Large townships, burdened with these responsibilities, petitioned for more manageable boundaries. Caln Township was one of the first in modern Chester County, established in 1702 with wide and undefined boundaries. It was also one of the first to be divided. In 1739, a petition came from the inhabitants of East Caln for determination of their boundaries.

Brandywine Township was established from the northern part of East Caln in 1790, but soon became too large to manage efficiently. On February 9, 1843, inhabitants of the township petitioned for further division of Brandywine Township, pleading great "inconveniences" as a consequence of their large size. At the time, Brandywine Township comprised 15,960 acres and 2,000 people. The idea was taken under advisement on May 5, 1843. The Court of General Sessions appointed three men to set about the task of plotting the Township and proposing a dividing line. A debate over schools slowed the pace of this division, although the debate was finally resolved. On February 5, 1844, East Brandywine Township was born. A small amount of territory in the southwest corner of the Township was transferred to West Brandywine Township on February 6, 1860.

East Brandywine Township grew in its early years. Travelers became a familiar sight in the township, as increasing numbers of horse-drawn wagons journeyed from Lancaster to the markets in Downingtown by way of the Downingtown-Ephrata-Lancaster Turnpike, now known as the Horseshoe Pike, which allowed access through the heart of the Township. This allowed ease of transport from the Village of Guthriesville, and the nearby woolen mills in Bondsville and Fisherville, or to the Lancaster Turnpike (Route 30), and rail routes traveling east-west to Philadelphia and Lancaster. Its prime location along the trade route of the Harrisburg-Downingtown Pike contributed to the growth of Guthriesville.

Excerpts from "A History of East Brandywine Township" by Barbara Paul (1945-1997)

Fast forward to the year 2009. East Brandywine Township continues to grow rapidly. The 2000 decennial census showed the population was just over 5,800 residents; by July 2008, that figure was estimated to be around 6,900. Changes in the Township's land use pattern since the 1980's continue to trend toward conversion of agricultural land for

residential purposes. A modest expansion of non-residential uses has occurred since 1990, featuring professional office and retail commercial space designed primarily to serve the needs of local residents.

The Township's work to stabilize land use and manage growth through various actions is ongoing. An Agricultural Security Area was created in 1991. Acquisition and development of 62 acres along Dilworth Road has produced areas for active and passive recreation. A cross-Township pedestrian trail currently is being planned to link East Brandywine's passive and active recreation areas with existing and planned residential developments and, eventually, the Struble Trail.

To help preserve the Township's unique character, East Brandywine residents overwhelmingly supported a referendum in 2002 to increase the earned income tax base. These funds are being directed toward the acquisition of open space in the community.

The Township is committed, through its land use policies, regulatory framework, and other actions, to planning for the future needs of this community while maintaining links to its historic past. The Township's elected and appointed officials have held to these ideals through these basic policies:

1. a strong commitment to resource protection;
2. a clear sense of Township responsibility for managing those resources;
3. a strong desire to exercise and maintain the maximum degree of local decision-making and autonomy, while recognizing the need for regional relationships, and the impacts of our decisions on others in the region.

Codification of its land use regulations into one comprehensive Land Use Code has further solidified the Township's commitment to continual review and updating of its land use regulations, making the Code a "living document."

The following elected and appointed officials and consultants are recognized for their ongoing efforts to create this updated comprehensive plan. Without their commitment, this task would not have been completed.

Ordinance/Plan Task Force members

Board of Supervisors

Hudson L. Voltz Chairman	Bruce Rawlings	Steven Cushman
David A. Kirkner Vice-Chairman	Charles Giordano	Deborah Marshman
Jay G. Fischer, Supervisor	Sandra Moser	John Black
Scott T. Piersol Township Manager	David Sweet	Albert Giannantonio

A Call to Action

In preparing a comprehensive plan for 2009 that looks out over the following decade, East Brandywine's task force members are taking the next step in a 40-year sequence of Township attentiveness to land use, resource protection, and municipal services. Launched with the Township's first comprehensive plan, zoning ordinance, and subdivision/land development ordinance in 1970, members of the Board of Supervisors and Planning Commission, in concert with other volunteers and advisors, have applied a steady hand to the decision-making processes and have produced updates and adjustments as circumstances have dictated.

Since 1970, the principal milestones have been:

- * an updated subdivision/land development ordinance (1985)
- * a new comprehensive plan (1987)
- * a fully-rewritten zoning ordinance (1989)
- * an Open Space, Recreation, and Environmental Resources Plan (1993)

Since the mid-1990's, periodic but less extensive changes have been made to the Township's planning and regulatory tools. One emphasis has been to refine and strengthen measures for resource protection, both natural and cultural; examples include new zoning standards for riparian buffers and threatened historic resources. A shift from the "planned residential development" concept to a more broadly-applicable cluster development approach has influenced the design of major residential tracts and yielded substantial amounts of protected open space. Use of a transportation impact fee system should facilitate upgrading and maintenance of the road network.

While the essence of a Township's comprehensive plan is to set policies that anticipate future circumstances, these policies must continue to derive their validity from a sustained respect for the community's long-term cherished attributes and its principles of local governance. East Brandywine Township is well positioned to take account of these "factors of continuity," as its preceding comprehensive plans of 1970 and 1987 describe their importance to the Township's future with unusual articulateness. In its initial pages, the 1987 plan spells out what its authors found compelling about East Brandywine, the motivations for their work in undertaking that comprehensive plan. Better than two decades later, that narrative seems only slightly dated. It reads, in part:

"Not surprisingly, many of the Township's endearing qualities derive from the natural system that bears the same name, i.e., the East Branch of the Brandywine, its tributaries and sub-basins. These stream corridors, encompassing substantial areas of steep slope and woodland, delineate long-term targets for Township protection and contain the sites of earliest settlement.

The balance of the Township is comprised largely of the rolling terrain that, in turn, is often said to typify Chester County. These upland areas have been the setting for East Brandywine's most longstanding industry, its agriculture.

A more recent characteristic has been the transformation of pockets of this farmland into residential use....The importance of this Plan as a means of shaping the anticipated conversion of land, primarily from open/agricultural to residential, is therefore underscored.

What, then, should a 1987 Comprehensive Plan for East Brandywine aim to retain and sustain as characteristics of the Township's future? Among the prime candidates are:

- Historic resources that have persisted to date
- The Brandywine's east branch and its tributaries
- Wooded/sloped stream corridors
- Agricultural land and activities (both as economic and aesthetic resources)
- Ground water resources
- Solar energy resources
- The existing pattern and interrelationships among land uses (minimizing serious disruptions to this pattern and, where change does occur, assimilating it within the open/residential context)
- Active self-determination by the Township in shaping its future, tempered by an awareness of statutory and practical bounds.

In 2009, most of these characteristics are still identifiable and important in East Brandywine. The role of agriculture as a principal land use certainly has declined, and the emergence of solar resources remains limited. Conversely, for this comprehensive plan the above list can be supplemented with several new attributes and aspirations that should hold a place in the Township's future, including:

- A variety of active and passive recreation opportunities, including trails
- Continued maintenance of a viable transportation network
- Retention and enhancement of an atmosphere of public safety and the availability of emergency services
- Provision of Township services on a cost-effective basis
- Ongoing opportunities to pursue customized, tailored agriculture, including conversion from traditional farming to equestrian and nursery operations, enabling rural businesses and a retained open space setting
- Protection of those landscapes and structures that constitute scenic resources
- A strong sense of community

Finally, although almost four decades old, the Township's 1970 comprehensive plan contained a "call to action" whose timeliness extends at least to the present day:

"... The whole purpose of the Comprehensive Plan is to protect against gradual withering away, and loss, of these things held dear by a thoughtful people. There can be no greater objective than the protection of people, their needs and desires for the kind of life which they select. But this Comprehensive Plan has a moral obligation to both the people who live in East Brandywine today and those who will be residents of the Township in the years ahead."

CHAPTER I: SURVEY FINDINGS; GOALS AND OBJECTIVES

To initiate the updating of the Township's 1987 Comprehensive Plan, the Task Force wanted to communicate with East Brandywine's residents and gauge their feelings on current conditions, future needs and desires, and issues of importance to the comprehensive planning process. In so doing, the Township citizenry could become better informed about preparation of the updated plan, and their views and opinions would help shape the plan's goals and objectives.

The mechanism for gaining this input was a Resident Survey with 20 specific questions and the opportunity to add narrative comments. The survey was mailed to all landowners and residents in the Township; findings were thus a compilation of the responses from those who chose to participate. Of the 2,437 surveys distributed, 568 responses were received. This 23% rate of participation was well above what frequently is experienced in such outreach efforts. The most represented age group among the respondents was 46-65 years. The cumulative responses did, indeed, provide one source, among several, for crafting and testing the plan's goals and objectives.

This chapter presents a summary of the tabulated survey results, followed by the statement of goals and objectives that was partially shaped by that process.

A. Summary of Resident Survey Responses

A complete tabulation of the Resident Survey results is contained in Appendix A. Results from completed and returned surveys were compiled in early 2006 and summarized at a public information meeting in February 2006. Those summary results are presented here. Several questions called for narrative responses, and thus are not included in these tabulations.

1. Why did you choose to live in East Brandywine Township?

- * #1 choice: *Housing availability or cost [21%]; #2: Rural atmosphere [18%]; #3: Quality of schools [13%]*
- * *Least responses: Farmland availability [1%]; Low taxes [2%]*
- * *Most total responses (sum of 1st, 2nd, and 3rd choices): Rural atmosphere [50%]; Quality of schools [46%]; Housing [42%]; Scenic beauty [39%]*

2. Which of the following open space, recreation, and/or environmental resource issues do you believe are most important?

- * *#1 choices: Natural resource protection [38%]; Open space preservation [26%]*
- * *Least important: Availability of active recreation facilities [4%]*

3. The Township is using several means to achieve its open space and recreation goals – donation, purchase, regulation – and will continue to. In some cases, spending Township funds may be the most effective approach. Assuming the funds were clearly marked for the stated purpose, would you be willing to pay increased municipal taxes to support the following?

- * *Most favorable: Acquire open space [66% yes, 33% no] – this and "Purchase additional land for recreation and parks" [50% yes, 46% no] the only choices with more positives than negatives*
- * *Both "Operate community programs" and "Operate active recreation programs" had more than twice as many negatives as positives*

5. For each of the following recreational activities, please indicate those in which you and members of your household currently participate, and those in which you do not participate, or do not participate as much as you'd like, because facilities are insufficient. Please also note those activities for which you would support actions to make more facilities available.

- * *Top 3 re: currently participate: Walking/hiking [72%]; Nature enjoyment [59%]; Sight-seeing or pleasure driving [53%]; all others less than 35%*
- * *Even with currently high level of participation, walking/hiking received highest levels of support for "Would like more opportunities" [26%] and "Would support action to make available" [21%]*
- * *Bicycling also showed significant support for more opportunities [19%] and action to make available [17%]*

6. For each of the following organized recreation programs, please indicate those in which you and members of your household currently participate, and those in which you do not participate, or do not participate as much as you'd like, because opportunities are insufficient. Please also note those activities for which you would support actions to make more facilities available.

- * *Top 2 re: currently participate: Organized team sports [25%]; Special events [22%]*
- * *Most requests for more opportunities: Cultural or performing arts [20%], Outdoor/environmental education [17%]*
- * *Most support for action to make available: Cultural or performing arts [22%], Outdoor/environmental education [19%]*

7. Where do you generally participate in recreational activities?

- * *Top 5: At home [74%]; Marsh Creek [61%]; Struble Trail [59%]; East Brandywine Community Park [44%]; County parks [42%]*

8. The Township has taken some early steps toward creation of a trail system (primarily pedestrian and bicycle), and this idea will be examined further during the comprehensive plan update. Do you support creation of an interconnected trail system as a recreation and transportation alternative?

* Yes: 79%

* No: 13%

9. Please rate the degree to which you feel any of the following factors is detracting from your desired "quality of life" in East Brandywine Township.

* *Most choices for "substantially detracting": Amount of residential development [65%]; Traffic [60%]; Amount of non-residential development [23%]*

* *No other choice exceeded 17%*

10. How satisfied are you with the current level of land use regulation in East Brandywine Township?

* *Too strict: 6%*

* *Satisfied: 41%*

* *Not strict enough; 44%*

11. If the same number of houses could be built on a tract of land, which of the following development patterns would you prefer?

* *Spread evenly: 29%*

* *Clustered, with open space: 35%*

* *Doesn't matter: 17%*

12. Do you feel the Township contains enough commercial land uses to serve the current population?

* Yes: 73%

* No: 20%

Are the commercial uses in the right locations?

* Yes: 78%

* No: 12%

13. East Brandywine Township is a participating member of several joint-municipal organizations that provide service to Township residents. Please indicate your view of the performance of these groups in effectively providing the intended service to the Township.

- * *In order of positive responses: Brandywine Regional Police Dept. [68%]; Downingtown Area School District [58%]; Downingtown Area Recreation Consortium, [45%]; Downingtown Area Regional Planning Group [15%].*
- * *The Regional Planning Group received the most negatives [16%]; each of the others received 7% or less.*
- * *64% were neutral or unfamiliar with the Regional Planning Group.*

14. a. In your opinion, how well is East Brandywine Township addressing the following issues?

- * *5 choices received a solid majority of "Satisfied" responses: Volunteer fire and emergency services [83%]; Police services [82%]; Access to recreation facilities and programs [70%]; Providing recreation facilities [67%]; and Maintenance of Township-owned roads [62%].*
- * *All seven choices received more "Satisfied" responses than the combined "Insufficient Twp. action" and "Twp. overly involved"*
- * *Choices receiving the fewest "Satisfied" responses were: Environmental resource protection [33%, with 36% No Opinion] and Protection of historic sites and structures [36%, with 31% No Opinion]*

b. How satisfied are you with PennDOT's maintenance of state-owned roads? (e.g., Rt. 322/Horseshoe Pike, Rt. 282/Creek Rd., Little Washington Rd., Corner Ketch Rd., Hopewell Rd.; see Township website for complete road list)

- * *Satisfied: 60%*
- * *Dissatisfied: 36%*
- * *No opinion: 5%*

15. Please indicate how closely you agree with the following statements about solid waste issues in East Brandywine Township.

- * *Strong majorities agreed the Township should continue:*
 - ** *Uniform flat fee for trash pick-up [86%]*
 - ** *Voluntary drop-off program at the Township Bldg. for certain recyclables [89%]*
 - ** *Curbside chipping of limbs and brush [76%]*
 - ** *Curbside leaf collection [66%]*
- * *Regarding a pay-by-the-bag trash pick-up program, 10% agreed it should be instituted, while 68% disagreed*

17. Please indicate what type of dwelling you live in.

* *Single-family detached house: 92%*

* *Multi-unit building: 7%*

18. How long have you lived in the Township?

* *5 years or less: 21%*

* *10 years or longer: 63%*

21. A few consistent themes emerged from a select sample of narrative responses:

1. *Excessive traffic on Rt. 322*

2. *Stop development until #1 is solved.*

3. *Protect against elimination of open space.*

B. Statement of Goals and Objectives

The goals and objectives of this Comprehensive Plan are organized in direct relation to the content of its three major substantive chapters: protecting community resources, guiding future uses of land, and providing adequate facilities and services. A related, but separate, set of goals is presented in conjunction with the Guthriesville Village Vision Plan and Development Strategy. The goal-setting process derived initially from revisiting the goals and objectives of the 1987 Comprehensive Plan, retaining those still applicable and modifying others as appropriate. Results from the resident survey became another factor in formulating the updated language. Finally, and most significantly, the evolution of the plan's treatments of the major substantive areas – resource protection, future land use, facilities and services, and the Guthriesville plan – allowed the goal/objective statements to be brought fully up to date and fleshed out to deal with the array of current issues.

Each of the goal statements is meant to set target conditions that, in essence, extend beyond this plan's 10-year time horizon. As with the 1987 goals, they articulate circumstances that may, in actuality, not be literally attainable, but toward which the Township will be continually striving. This quality, in fact, is what keeps some of the 1987 goals alive. The objectives, however, present somewhat more explicit, even measurable, targets through which progress toward achieving a particular goal can be accomplished. These are strategies that can be undertaken during the life of the plan.

The final, and most specific, phase in the goals hierarchy sets out actions to implement the stated objectives. Those actions are recommended in Chapters IV-VII and then collected in Chapter VIII to form an overall, prioritized task agenda for plan implementation. Further, the highest priority actions are highlighted in Chapter II to reinforce the plan's emphasis on keeping these actions in front of the Township's decision-makers.

I: PROTECTING COMMUNITY RESOURCES

GOAL: To protect the variety of natural, historic, agricultural, and scenic resources characteristic of East Brandywine Township to the fullest extent deemed necessary in relation to each resource and through the most effective means available.

Over time, the desired outcome is to retain an optimal amount of these resources. This will demand various strategies – from absolute protection against development impacts, to conservation of those limited in quantity, to enhancement of those valued for their natural or scenic qualities or as opportunities for recreation.

OBJECTIVES

Steep Slopes:

1. Prohibit most development and disturbance of steeply sloped areas. Permit such activities only in accordance with standards that protect against structural instability; excessive erosion, sedimentation, and vegetation removal; and the loss of important ecological, visual, solar, and open space resources.
2. Strengthen existing standards regulating activities on steeply sloping lands.

Soils:

1. Plan and regulate land use to take full account of the advantages and constraints posed by the soils in the Township.
2. Minimize soil loss under any circumstances.
3. Maintain appropriate regulatory protection of water hazard, wetland, and agricultural soils and topsoil.

Geology and Ground Water:

1. Protect existing ground water resources, including aquifer recharge and wellhead areas, against depletion and contamination.
2. Encourage replenishment, particularly in the areas of greatest recharge capability.
3. Assure compatibility between ground water supply and land use-imposed demand.
4. Maintain the contribution of ground water to stream flows.

Surface Water:

1. Protect streams, ponds, and wetlands against pollution discharge from point sources, runoff, or ground water.
2. Assure maintenance of sufficient stream flows.
3. Protect associated flood plain and water hazard soil areas against encroachment.
4. Retain the visual, recreational, and habitat values of stream corridors.
5. Retain and enhance vegetated riparian buffer areas.

Vegetation and Wildlife:

1. Protect identified areas of significant vegetation against undue loss or disturbance.
2. In particular, retain the integrity of existing environmental corridors, riparian vegetation, and woodland on steep slopes.

Agriculture:

1. Eliminate any unnecessary obstacles to the continuation of agricultural operations that currently exist, especially on permanently protected land, and remain sensitive to the concerns of farmland owners and those who farm leased ground.
2. Consider zoning options and other voluntary opportunities for those wishing to sustain the use of agriculturally-suited soils for farm purposes in the future.
3. Where appropriate, utilize publicly-funded programs to acquire farmland or development rights from farmland.

Scenic Resources:

1. Minimize disturbance to scenic resources within the public viewshed
2. Emphasize the protection of visual character as properties undergo development or are converted to other uses.

Historic Sites and Structures:

1. Continue to identify, and maintain current mapping of, historic resources within the Township.
2. Continue and, as appropriate, expand public steps to protect historic sites and structures through sensitive planning, regulation, and other techniques.
3. Expand educational outreach to owners of identified historic resources and encourage private actions to accomplish their protection.

II: FUTURE LAND USE

GOAL: Guide the type, intensity, and location of future land uses, consistent with the Township's resource protection policies and in anticipation of future land use pressures or needs.

Principles fundamental to achieving this goal should include:

- * Generally, maintain the Township's current character: primarily residential, with a mix of dwelling types, a maximum amount of protected open space, and agricultural activity where it can be sustained.
- * Enable sufficient commercial, public, and institutional services to meet the needs of the resident population.
- * Protect the character of Guthriesville Village within a mixed-use, higher intensity land use framework that creates a "town center" location for the Township.

OBJECTIVES

Protected Lands:

1. Institutional and public uses directly serving East Brandywine residents should be encouraged, subject to appropriate locational criteria and standards of compatibility.
2. Where provided in residentially zoned areas, such uses should be subject to discretionary approval.
3. Continue to monitor the need and, as necessary, secure suitably located open space to serve the recreational needs of the residents.
4. Create additional links in the Township trail system through development approvals and, as necessary, acquisition of property interests.
5. Actively pursue a policy of retaining as much of the remaining traditional open, natural character of the Township as possible.
6. Protect sensitive natural features, scenic resources, and historic sites through permanent protection of properties on which they are located.
7. Create and maintain Township-owned open space resources to complement other facilities and assure that residents' needs are met.

Agriculture:

1. It is the Township's policy that existing agricultural activities should be sustained and supported, particularly where the property is permanently protected by conservation easement.
2. The Township, where it is able, should assist in making agricultural retention feasible for those landowners who wish to continue farming.

Residential:

1. Continue single-family detached dwellings as the major component of the housing stock, with locations and densities generally compatible with the existing pattern.
2. Maintain density limits as necessary to achieve resource protection objectives.
3. Continue to offer sufficient opportunities for other than single-family detached dwellings in response to the identifiable needs of housing consumers and, at minimum, the legal obligations of Pennsylvania municipalities.
4. Assure that future residents can be served and supported by such necessary facilities as water supply, sewage disposal, roads, open space, and recreation.
5. Offer mixed residential/commercial use opportunities in Guthriesville in accordance with the recommendations of the Village Vision and Development Strategy Plan; offer similar, but modified, opportunities in Lyndell.

Commercial and Industrial:

1. Commercial uses in East Brandywine shall continue to be oriented primarily to the needs of Township residents, with the emphasis thus on retail and service uses of a local, convenience nature.
2. Because the Township is not an appropriate location within the Downingtown region to accommodate large-scale, region-serving commercial uses, provision should not be made for such uses.
3. Commercial activities should be designed and located in a manner that avoids the negative impacts of a strip pattern.
4. Future commercial land uses should be focused principally within Guthriesville village, and Township land use policies should be consistent with that objective.
5. Office, automotive-related, and light industrial use opportunities, other than agriculture, should be limited to those similar in scale, character, and impact to uses now existing, when in compliance with performance standards.

Mixed Commercial/Residential:

1. Focus on Guthriesville Village as the commercial and mixed-use hub of the Township.
2. Maintain opportunities for commercial activity in Lyndell, in a similar mixed-use concept to Guthriesville but with lesser intensity and area.

III: FACILITIES AND SERVICES

GOAL: Assure that necessary facilities and services are provided to residents, property owners, and others at appropriately comprehensive and financially feasible levels.

The scale of facilities and level of services should be correlated with the extent of future land development anticipated; in some cases, the expected provider will be other than the Township.

OBJECTIVES

Roads and other Circulation:

1. Assure a safe and efficient highway/pedestrian network that is adequate to handle both through and internal traffic.
2. Work to assure that highway improvements are compatible with the current road pattern's characteristics and scenic qualities.
3. In cooperation with county, regional, and state agencies, pursue solutions to the current levels of congestion on Horseshoe Pike.
4. Identify and implement needed circulation improvements in support of the planned development of Guthriesville village.

Water Supply:

1. The future use of land and the design of land development shall reflect the known characteristics of East Brandywine's ground water resources and the assured capability of an adequate water supply that produces no negative impacts on neighboring properties.
2. The Township, through its own regulations and participation with other agencies, also shall seek to protect the quality (potable, chemical, etc.) of its water resources.
3. Encourage replenishment, particularly in the areas of greatest recharge capability (on-site sewage management, on-site stormwater management).
4. Maintain the contribution of ground water to stream flows.

Sewage Treatment and Disposal:

1. Individual residential onsite sewage disposal systems shall be operated and maintained by the property owner using best management practices for the system in place.
2. Future development shall be served by systems that are in compliance with the Township's Act 537 Plan and all applicable county, state, and federal regulations.
3. Individual on-lot sewage systems are preferred; where a community system is used, disposal of treated wastewater shall be by surface or subsurface land application, and shall not incorporate stream discharge.
4. Sewage facilities should use the best available technology at the time of installation and should be properly operated and maintained.
5. Treated wastewater shall be disposed of as close to its generation source as practicable.
6. Additionally, all non-residential and community sewerage systems shall be operated and maintained by a responsible management entity.

Stormwater Management:

1. The Township's stormwater management ordinance requirements will continue to be in compliance with applicable state and federal standards.
2. Performance will be monitored and enforced to assure that neighboring properties and the quality of surface waters are protected from the impacts of erosion and sedimentation.
3. Ground water recharge through stormwater infiltration will be pursued wherever appropriate.
4. Ownership, construction, operation, and continual upkeep and maintenance of required stormwater management facilities will continue to be the responsibility of the applicant or entity in ultimate control of a developed property. Sufficient evidence of adequate funding to support these responsibilities shall be required of applicants.

Solid Waste Collection and Disposal:

1. Current solid waste and recycling programs should remain in place. Such services should continue to be handled both as Township-contracted services and Township-run services.
2. The intent of the Township's current solid waste and recycling programs should continue to: (a) be self sustaining, and (b) reduce the amount of materials going into landfills.
3. Continue to monitor the services provided to ensure that trash removal and recycling efforts are conducted in a safe, fiscally responsible, and environmentally sustainable fashion.

Recreation Facilities and Programs:

1. Recreational opportunities to meet the needs of current and future residents will be planned and, where deemed the responsibility of the Township, provided.
2. Fees in lieu of recreation lands will continue to be obtained from new subdivisions and land developments.
3. Continue to enhance pedestrian and bicycle opportunities, consistent with interests expressed in the Resident Survey. The principal focus will be on adding links to the cross-Township spine trail and access to Guthriesville village and to the Struble Trail.

Township Administrative Services; Landowner Assistance:

1. The Township will continue to offer administrative services that are efficient and sufficient.
2. A sense of open communication will be maintained, and enhanced where possible, with Township residents and landowners.
3. Appropriate fee structures will be applied against certain costs for the delivery of Township services.
4. The East Brandywine Open Space Committee should continue its outreach to landowners with properties well suited for permanent open space protection.

Fire Protection:

1. The Township will continue to make appropriate financial contributions to the East Brandywine Fire Company.
2. The Township will maintain and monitor its regulations on land development and construction that address site design, access, building materials, etc. in relation to fire protection and will pursue opportunities to generate new revenues corresponding to new demand.
3. The Township will maintain an appropriate level of support for those emergency service organizations that serve East Brandywine, and will monitor the availability and sufficiency of those services.

Police Protection:

1. The Township will continue to provide a level of police protection deemed adequate by the Board or Supervisors and the police department in relation to the expressed needs of the population and budgetary factors.
2. The Township should explore regularly the potential for sharing police services with neighboring police departments.

Library Services:

1. The Township will act to assure that residents have adequate library facilities available. In the immediate future, this will be in the form of support for other county and local libraries.
2. The Board of Supervisors will continue to provide an appropriate level of financial support to the Downingtown Library as a resource for Township residents.
3. The Board of Supervisors should determine the feasibility of a community library within the Township.

CHAPTER II FIRST-PRIORITY IMPLEMENTATION ACTIONS

Two key aspects of the comprehensive planning process are the opportunities for public participation (as embodied in the survey results presented in Chapter I) and the recommended actions for plan implementation. In Chapters IV through VII that follow, policies and actions are laid out in relation to specific subject matter (e.g., land use or recreation programs). From each of those chapters, these recommended actions are then combined in Chapter VIII into an overall set of proposals for plan implementation over the next decade. Each is assigned a prioritized time frame and responsible party, and the means to achieve the action is listed.

Among the full roster of recommendations, those deemed of greatest urgency are denoted as "Immediate" priorities, to be addressed during the first two years of the plan's life. To give these actions their proper billing and keep them in the forefront of Township decision-making, they are compiled here according to subject area. The responsible party and means to implement each can be found in Chapter VIII.

Chapter IV, Protecting Community Resources

Steep Slopes

1. Examine steep slopes in relation to riparian buffer protection and the need to protect steep slopes adjacent to streams.
2. Review and, as necessary, revise ordinance criteria for including steeply-sloped areas within development-created common open space.

Soils

1. Incorporate the Soil Use Guide (Appendix B) into the Zoning Ordinance and/or Subdivision & Land Development Ordinance (S/LDO) as a tool for plan review and stormwater management.
2. Review and, if necessary, increase the minimum lot size requirements of the Zoning Ordinance to assure adequate lot area in soils of questionable suitability for buildings.

Geology and Ground Water

1. Review current land use opportunities within zoning districts in relation to water supply needs and ground water availability, and modify zoning provisions necessary to achieve optimum compatibility.
2. Evaluate impervious surface limits in the zoning ordinance and adjust, as necessary, particularly in relation to recharge potential and stream degradation.
3. Maintain the Township's current sewage treatment and disposal emphasis on land application (drip or spray irrigation) to avoid stream discharge. Review Township

policy regarding maintenance of on-lot sewage systems (septic systems) and consider additional ordinance language for maintenance.

Surface Water

1. Consider expanding the riparian buffer protection standards to protect all streamside buffers (in addition to those along first-order streams).
2. Encourage the donation of conservation easements on flood plain and wetland areas.

Vegetation and Wildlife Habitat

1. Incorporate a plant list appendix or reference appropriate local publications in the S/LDO, specifying suitable native species for planting under varying site conditions; cross-reference, as needed, in other chapters of the Township Code.
2. Evaluate the need and prospects for establishing an Environmental Advisory Council (EAC) that could advise the Planning Commission and Board of Supervisors on environmental issues.

Scenic Resources

1. Emphasize scenic resource protection during the subdivision and land development plan review process; consider adding a conservation plan objective to minimize disturbance and/or protect scenic resources.
2. Upon completion and adoption by the Board of Supervisors, use the Township's Conservation Opportunities Maps in creating and reviewing site plans.

Historic Resources

1. Add provisions to the 2007 Zoning Ordinance amendments that expand permitted use opportunities for historic properties and protect historic cartways and scenic vistas.
2. Regularly evaluate the status of properties and planning in Guthriesville village and, if deemed appropriate, resume the process of nomination to the National Register of Historic Places.
3. Apply to the Chester County historic preservation officer to certify Township properties that are potentially eligible for the National Register or that contribute significantly to local and/or County heritage under the Chester County Historic Certification Program.
4. Become a Certified Local Government (CLG).

Chapter V, Guiding Future Uses of Land

Protected Lands: Protected Open Space

1. Continue to monitor and evaluate currently vacant or underdeveloped properties where permanent open space protection is desirable and feasible (as first priorities, the properties shown on Map 11, Future Land Use, as "Residential or Protected Open Space"); engage in outreach to those landowners to present options for future action.
2. Continue to refine Township land use regulations and fiscal capabilities designed to gain permanent protection of priority open space parcels.

Residential

1. Maintain appropriate density limits to achieve resource protection objectives and avoid potentially deleterious effects from concentrated on-site water and sewage systems.
2. Provide highest density residential use, including opportunities for a mix of dwelling types, within Guthriesville village in accordance with the Vision Plan and Development Strategy (as presented in Chapter VII) and in Lyndell. Revise the boundaries and terms of the current VC Village Commercial District in both locations.
3. In support of the Vision Plan for Guthriesville, modify the Zoning Ordinance to change the MU Mixed Use Commercial District east of Guthriesville to become R-2 Residential.
4. Explore initiatives for creating affordable/workforce housing.

Commercial and Industrial

1. In support of the Vision Plan for Guthriesville, modify the Zoning Ordinance to change the MU Mixed Use Commercial District east of Guthriesville to become R-2 Residential.
2. Retain the commercially-zoned areas of the Township as shown on Map 11, i.e., the MU Mixed Use Commercial District west of Guthriesville, the properties on the north side of Horseshoe Pike within Guthriesville village, and the properties zoned CS/LI Commercial Service/Limited Industrial along Horseshoe Pike at the eastern end of the Township; review and modify existing language as necessary.
3. Review current Zoning Ordinance terms to assure office, automotive-related, and light industrial uses should continue to be permitted in the MU Mixed Use Commercial and CS/LI Commercial Service/Limited Industrial Districts, where they are similar in scale, character, and impact to uses now existing and in compliance with performance standards.

Mixed Commercial/Residential

1. Facilitate and encourage commercial and mixed-use development (including retail, office, or restaurant) in Guthriesville village; alter the VC Village Commercial_District terms in accordance with the Vision Plan and Development Strategy.
2. Modify slightly the area currently zoned VC Village Commercial at Lyndell, changing the district to mixed commercial/residential that is similar to, but less intense than, the changes to be made to the Guthriesville core area.
3. Carry out other specific implementation actions to accomplish the Guthriesville plan, as presented in Chapter VII, with the Township serving as catalyst and advocate in addition to taking the direct actions proposed for it.

Chapter VI, Providing Adequate Facilities and Services

Roads and other Circulation

1. Plan, design, and construct the Guthriesville Loop Road, a one-way, two-lane southbound road on a new alignment around the village of Guthriesville. In the short term, construct a segment as a two-way, two-lane extension of East Reeceville Road from Bondsville Road to Horseshoe Pike, coordinated with development of the Guthriesville Village Center.
2. Evaluate construction of a roundabout as an option for traffic control at the intersection of Bondsville Road and East Reeceville Road.

Water Supply

1. To achieve enhanced ground water recharge, endorse and support drip distribution or other forms of subsurface disposal in all new subdivisions that propose community sewage systems

Sewage Treatment and Disposal

1. Require that treated wastewater be disposed of as close to its generation source as practicable. Promote ground water recharge to the greatest degree possible and implement the beneficial reuse of treated wastewater where practical.
2. Require all non-residential and community sewage systems to be operated and maintained by a responsible management entity.
3. If PA DEP regulations or guidelines are developed requiring registration, certification, and/or licensure of Responsible Management Entities (RMEs), adopt requirements to register, certify, and/or license RMEs for all non-residential and community sewage systems.
4. Develop and implement a Sewage Management Program that meets the current guidelines of PA DEP and investigate state or other funding sources for its preparation.

Stormwater Management

1. Finalize and adopt new freestanding stormwater management ordinance, including increased emphasis on quality control of all runoff to be compliant with county, state, and federal regulations.
2. Establish levels of required compliance for the use of quality control Best Management Practices that will enhance the overall quality of surface water in the Township. Insure that riparian buffers are established and/or enhanced in all projects submitted for approval that involve streams.

Recreation Facilities and Programs

1. Create and adopt an Official Map as an added means to implement plans for trail connections and, if deemed necessary, additional park sites.

Chapter VII, Guthriesville Village Vision Plan and Development Strategy

1. Conduct a detailed feasibility analysis of the proposed East Reeceville Road extension, including a possible roundabout at the intersection with Bondsville Road, to address precise routing, specific land requirements, cost estimates, and funding approaches. Clarify the relationship of the Guthriesville loop road concept to this East Reeceville Road extension.
2. Create an Official Map to specify the internal street system, sidewalks, and trail connections within the Village.
3. Create a revised VC Village Commercial District and/or an overlay zoning district for the Guthriesville core area, specifying development incentives, design guidelines, improvements provisions, and correlation with the Official Map.
4. Identify precise wetlands issues and wetland mitigation areas, including potential prime candidates in the open space south of the proposed East Reeceville Road extension and west of Bondsville Road. Include options for parking in wetland areas within the village with potential use of pervious or semi-pervious surface materials
5. Reassess the potential for a Guthriesville Village National Register nomination, including close communication with the affected landowners.
6. Identify and pursue additional funding sources for further planning and implementation of the village concept, including possible "green technology" grants and availability of Vision Partnership Program funding.

CHAPTER III: CONTEXT AND BACKGROUND

A. Historical Background

East Brandywine was formed in 1844, as a result of the division of Brandywine Township into East and West Brandywine Townships. Brandywine Township had existed since 1790, when it was carved out of East Caln Township. East Brandywine underwent minor boundary changes in 1853, 1859, and 1860.

From a historical perspective, the Township is perhaps best known as the birthplace of Thomas Buchanan Read. Born in 1822 on a farm near Corner Ketch, Buchanan attended a one-room school at Lyndell and eventually became an internationally known artist, sculptor, and poet. Some would consider his birthplace, now known as the Thomas Buchanan Read House, to be East Brandywine's most significant historic site. On a lighter note, the Township also had a major connection with Buffalo Bill Cody. In the late 1800s, Buffalo Bill housed his "Wild West Show" animals on several farms in the Township during the winter months when he was not touring. One of those farms belonged to Charles Trego, who was Cody's good friend and advance agent. Trego would travel a few days ahead of the performers, making arrangements for food and lodging for touring members and their livestock.

East Brandywine abounds with scores of other historic resources. Many are linked both physically and historically with the East Branch Brandywine Creek, which forms the Township's eastern boundary. Water-powered mills (including woolen, saw, paper, iron, and grist) were established along its course on both sides of the creek. Small settlements grew up around these mill seats. Lyndell is a noteworthy example of this type of village. The James Dorlan House (1847) is associated with the Dorlan Mill and village in Upper Uwchlan Township. Stations for the East Brandywine and Waynesburg Railroad, which was constructed in the 1860s along the east bank of the creek, were located at each of these village/industrial centers.

Abundant water power prompted settlement and development in other areas of East Brandywine Township. Beaver Creek and its small tributaries supplied power for mills in the vicinity of Guthriesville, Bondsville, and Fisherville. The development of Guthriesville was influenced by its location along the Harrisburg-Downingtown Pike (Route 322), an early turnpike (1803). Among East Brandywine's other historic resources are its farm complexes, 19th-century schoolhouses, and churches.

For more information about the Township, see *A History of East Brandywine Township*, published in 1992 and written by local historian and resident, Barbara Paul (1945-97).

In 1986, the East Brandywine Historical Society recommended to the Township Planning Commission the creation of an East Brandywine Historical Commission. By resolution, the Board of Supervisors established the Historical Commission in the spring

of that year. The Board's resolution identified a broad range of duties, including survey and research, review of demolition permits affecting historic resources, publishing historical books and brochures, and maintaining official historic resource maps and archives.

In 1989, the Board of Supervisors, as part of an updated Township Zoning Ordinance, adopted a historic resource protection article. Among other things, the new article created a historic preservation overlay district, to be regulated through the Historical Commission (as an advisor to the Board of Supervisors) and a Board of Historical and Architectural Review (HARB). In the absence of a Certified Historic District, however, the latter was never established; the provisions authorizing the HARB eventually were deleted from the Zoning Ordinance. Also in 1999, the Village of Guthriesville was determined eligible for the National Register.

Since its establishment, the Historical Commission has witnessed a period of relatively intense development in the Township. Farming has waned dramatically, and in its place a number of large parcels have been developed or are in various stages of the development process.

After some years of relative inactivity, the Historical Commission has undertaken a renewed interest in protecting the Township's historic resources. First, the Commission recently completed the process of surveying and inventorying all Township resources 50 years and older. Second, it continues to represent the Township's interest in placing the Guthriesville Historic District on the National Register. That outcome remains uncertain in the face of unresolved land use issues affecting village properties, but could be an important complement to the recommendations of the Guthriesville Village Vision and Strategic Development Plan (as presented in Chapter VII).

In 2007, the Historical Commission authored a substantial strengthening of the Zoning Ordinance provisions protecting historic resources. Adoption of this revised zoning article occurred in 2008. The new language and map incorporate the Commission's inventory results, while a comprehensive review of demolition proposals (including a procedure for denial of a proposed demolition), attention to demolition by neglect, and a Historic Resource Impact Study procedure are important additions. In combination, these measures should help protect the Township's most important historic resources, as well as the surrounding historic landscape.

B: Inter-Municipal and Regional Relationships

East Brandywine Township continues to be a participant in various inter-municipal planning and service delivery programs. Results have been mixed, including collaborations that have been determined unsuccessful. On balance, however, the benefits of inter-municipal cooperation have proven considerable and the organizational structures remain in place to gain further advantage in the future. At the county and regional level, the Township receives technical and policy guidance, as well as funding assistance for its own planning projects.

1. Planning

Chester County's *Landscapes* plan element has apportioned East Brandywine into several landscape categories since its inception in the mid-1990's. In turn, the Township's planning since that time has taken full account of the *Landscapes* designations and, without exception, achieved consistency with them. These include the Rural Landscape, largely consistent with the Township's R-1 Residential zoning district; the Suburban Landscape, largely consistent with the R-2 Residential and R-3 Residential Districts; the Natural Landscape, comparable to Township regulations protecting natural features; and the Rural Center, which is applied to Guthriesville and supports the concepts in the Guthriesville Master Plan that is part of this comprehensive plan.

As a metropolitan planning agency, the Delaware Valley Regional Planning Commission supplements and complements county and municipal planning in areas such as demographic forecasting, transportation planning, and coordination and advocacy of policy issues such as "smart growth." DVRPC currently is conducting a study of the Rt. 322 corridor, including its entirety within East Brandywine. Land use and circulation recommendations are expected to result.

East Brandywine is an ongoing member of the Downingtown Area Regional Planning Group, which formed in 1999 to examine land use issues and opportunities in the 7-municipality region. In addition to East Brandywine, the region includes Downingtown Borough and the townships of East Caln, Upper Uwchlan, Uwchlan, West Bradford, and West Pikeland. The principal undertaking of the DARPG was to look at how the legal obligations for a fair share of land uses might be addressed jointly by the municipalities. Preliminary attention also was given to the concept of trails as a regional recreation asset. The DARPG remains in place as a planning entity, in the event future projects are identified.

Representatives of the Township maintain informal but regular contact with neighboring municipalities, including the six townships that are immediately adjacent to the East Brandywine boundary. This largely reciprocal relationship has, for the most part, successfully avoided any unintended land use conflicts from planning decisions on either side of the municipal boundary.

The predominant land use pattern on parcels immediately adjacent to the Township in the neighboring townships is low-to-moderate density residential, park land, or open space. There are no known policy provisions in any of the comprehensive plans of those municipalities that would produce dramatic future land use changes and resulting incompatibilities. As shown on Map 2 in this chapter and Maps 10 and 11 in Chapter V, virtually all the properties in East Brandywine that abut the Township boundary are either developed, approved for residential development but not fully built as such, permanently protected as open space, or proposed for relatively low-density residential use.

The Township's eastern boundary is the East Branch Brandywine Creek, which offers a significant buffer between land uses in East Brandywine and those in Uwchlan and Upper Uwchlan Townships. This natural buffer should mitigate any potential impacts from proposed non-residential uses in the village of Lyndell, which sits directly across the creek from Upper Uwchlan Township. As presented in Chapter V, those future uses will be of a relatively modest scale.

The only other location in East Brandywine that departs in any significant way from the more characteristic land uses adjacent to the Township boundary is the commercially-designated area at the Township's southern end, on the south side of Horseshoe Pike. As presented in Chapter V, these CS/LI-zoned parcels are expected to sustain such uses during the life of this plan. This does not constitute any departure from previous and current land use policy; rather, it is a reflection of the land uses that have existed in this location for many decades.

Only a few of the parcels abutting the Township boundary have an as-yet-to-be-determined status regarding their future uses.. These include several properties in the northeast corner that abut or are proximate to Wallace Township. As described in Chapter V and shown on Map 11, this plan calls for their future to be either as clustered residential dwellings or protected open space; either option will be compatible with existing and anticipated conditions in Wallace. One other substantial property, in the southeast corner of the Township, is currently the subject of a site planning process aimed at combining limited development with permanent open space. The plan seeks to create a number of clustered residential lots on a portion of the tract that should not impact Uwchlan Township; the balance, including the Brandywine Creek flood plain and other lands contiguous to it, will become permanently protected open space.

2. Services, Facilities, and Programs

East Brandywine's role in delivering, or seeking the assured delivery of, public services, facilities, and programs is addressed in detail in Chapter VI, below. There are numerous examples of joint municipal approaches to these functional areas. In summary, they include:

a. Recreation

The Downingtown Area Recreation Consortium (DARC) is a regional municipal recreation organization that offers recreation, adult education, and youth learning opportunities. Its members are those of the Downingtown Area School District: the townships of East Brandywine, East Caln, Upper Uwchlan, Uwchlan, Wallace, West Bradford, and West Pikeland; Downingtown Borough; and the School District.

The East Brandywine Youth Association (EBYA) provides active recreation and team sport opportunities to young people through the operation of a variety of leagues. Centered in East Brandywine, EBYA also serves West Brandywine and Wallace Townships, and draws from other municipalities for certain sports activities.

b. Education

Public education is the responsibility of the 8-municipality Downingtown Area School District. There is some sharing of school district facilities with DARC and EBYA for sports and other program activities. The School District opened the Brandywine-Wallace Elementary School in 1962, and renovated the building in 2008. Construction of a third middle school, located in East Brandywine Township, is currently being considered by the School District.

c. Fire, Rescue and Emergency Medical Services

The East Brandywine Fire Company, situated within the Township, provides these services as the primary responder in East Brandywine Township and portions of West Brandywine and Upper Uwchlan Townships, and on an on-call and reciprocal basis to broader areas of the County. Ambulance transport services are provided by the Minquas Fire Company Ambulance of Downingtown, with a small section of the Township served by the Washington Hose Ambulance of Coatesville City. Advanced life support (paramedic) services are provided by Brandywine Hospital's Medic 93, and Minquas Fire Company Medic 46.

d. Transportation

The Township is continually engaged in transportation planning, including matters within its direct control such as internal circulation in newly developing sites, selected maintenance, and access management. Where plan implementation is dependent upon state or federal funding, or is the jurisdiction of the Pennsylvania Department of Transportation, the Township participates in a planning hierarchy that can include the Chester County Planning Commission, the Delaware Valley Regional Planning Commission, and PennDOT

e. Water Supply

Over the past decade, the Township has reiterated a clear policy preference for individual on-site water supplies to service new development where that option is feasible. At the same time, higher-density residential tracts, including clustered developments, are now requiring off-site public water supply. As discussed in Chapter VI, portions of East Brandywine Township now fall within the franchise areas of Aqua PA and the Downingtown Municipal Water Authority, and both entities currently provide public water service to developed sectors of the Township.

f. Wastewater Service

Similar to the growth of public water service, the Township has experienced the need to provide wastewater collection and off-site treatment and disposal for selected

developed properties, both existing and new. The East Brandywine Township Municipal Authority was created to oversee the planning and implementation of these services. Aqua PA is the primary provider of wastewater services for certain developments in the Township. The Municipal Authority owns and operates the Keat's Glen Wastewater Treatment Facility serving the Keat's Glen development and the Chester County Campus of the Delaware County Community College. The Municipal Authority will also own and operate the Applecross Wastewater Treatment Facility, proposed to serve the Applecross development, the Village of Guthriesville and the Hopewell development, as well as future tracts where public sewage service is proposed to be provided.

g. Police

Police services in East Brandywine are provided by the Township's own municipal police force. For nine years, a joint police force served East Brandywine and Wallace Townships; this arrangement was terminated at the end of 2008. The East Brandywine Police Department was formed late in 2008 to continue provision of police protective services to the residents of East Brandywine Township.

C. Population, Housing, and Economic Profile

1. Introduction

This plan must be guided, in large measure, by a knowledge of the residents of East Brandywine, including how they are housed and employed. The 2000 U. S. Census provides a great deal of the data necessary to reach these understandings, and also enables comparisons with prior Census information; those data are the basis for much of the content of this section. Where possible, the findings from 2000 have been updated to produce a more current profile of the Township. Where relevant, the implications of these data form the underpinnings of subsequent plan recommendations.

2. Population

a. Population Growth

Since 1950, East Brandywine Township's population has exhibited steady growth but fluctuating decade-to-decade growth rates. U.S. Census figures for the Township through the year 2000 are as follows:

1950: 1,108
1960: 1,618 [46.0%]
1970: 2,741 [69.4%]
1980: 4,690 [71.1%]
1990: 5,179 [10.4%]
2000: 5,822 [12.4%]

For the period 1960-2000, the U.S. Census documents the overall rate of growth in Chester County and East Brandywine Township as follows:

Chester County: 106%
East Brandywine Township: 259%

In more recent decades, the amounts and rates of population growth in the County, East Brandywine, and its neighboring townships compare as follows:

	<u>1980-1990</u>	<u>% increase</u>	<u>1990-2000</u>	<u>% increase</u>
Chester County	59,736	18.9	57,105	15.2
East Brandywine	489	10.4	643	12.4
Caln	2,358	24.5	-81	-0.7
East Caln	432	19.8	238	9.1
Upper Uwchlan	2,591	143.5	2,454	55.8
Uwchlan	4,635	55.4	3,577	27.5
Wallace	660	35.1	699	27.5
West Brandywine	1,916	47.1	1,169	19.5

Since 2000, the U.S. Census Bureau has developed estimates of municipal population. For the period April 1, 2000 through July 1, 2006, changes in the population of East Brandywine Township and its municipal neighbors, as well as that of Chester County, were estimated to be as follows:

	<u>4/1/00</u>	<u>7/1/06</u>	<u>% Change</u>
East Brandywine	5,822	6,485	11.4
Caln	11,916	12,240	2.7
East Caln	2,857	4,324	51.3
Upper Uwchlan	6,850	9,549	39.4
Uwchlan	16,576	18,430	11.2
Wallace	3,240	3,433	6.0
West Brandywine	7,153	7,683	7.4
Chester County	433,501	482,112	11.2

Based on these estimates, East Brandywine's rate of growth during this period was essentially a continuation of that experienced in the previous two decades. Its percentage increase was equivalent to Uwchlan Township and Chester County as a whole, but well below the rates of increase in two other neighboring townships, East Caln and Upper Uwchlan.

In 2006 and 2007, the Township issued permits for 90 new residential units. During the first six months of 2008, 58 residential building permits were issued. At an average household size of 2.90 (as reported in the 2000 Census), the new dwellings represented by these permits could be expected to add an increment of 429 to the 2006 population of 6,485, producing an estimated current population of 6,914.

One other indicator of potential population growth is the extent of residential subdivision and land development applications that have received final approval but have yet to secure building permits for some or any of the approved dwelling units. Tracts that are in this situation (as of December 2008), and the number of additional dwelling units for which building permits have not yet been obtained at each location, include the following: Applecross (551 dwelling units), Hillendale (277 dwelling units), Heatherwynd East (19 dwelling units), Heatherwynd West (18 dwelling units), Hide-a-Way Farms (143 dwelling units), Cumberland Ridge (6 dwelling units), Hawk's Nest Meadows (2 dwelling units), Smokehouse Farms (6 dwelling units), and Brandywine Ponds (25 dwelling units). If all approved dwelling units are eventually built on these tracts, a total of 1,047 new residences would result. Applying the current 2.90 average household size, this would yield an additional population increment of 3,036, or approximately 44% of the currently estimated Township total.

b. Population Characteristics

Data from the 2000 U.S. Census offer a statistical depiction of a variety of aspects of the Township's residents, as well as the ability to make comparisons over time and with the population of Chester County.

2000 population, by race:

Of the Township's total population of 5,822 in 2000, 5,776 (99.2%) were reported to be of a single race, with the balance (46, or 0.8%) being of mixed race. The racial makeup for those of a single race included the following:

White:	5,625	96.6%
Black:	73	1.3%
American Indian and Alaska Native	6	0.1%
Asian:	67	1.2%
Native Hawaiian and other Pacific Islander	1	--
Other:	4	0.1%

In 1990, East Brandywine's white population was 96.2% of its total, while the figures for Chester County were 91.6% in 1990 and 89.2% in 2000.

Hispanic/Latino population:

East Brandywine's population in 2000 included a very small group of Hispanic or Latino people. Only 30 individuals were classified as such, representing 0.5% of the Township population. This marked a decline from 1990, when 38 Hispanic or Latino residents represented 0.7% of the population. The 2000 U.S. Census reported that 3.7% of Chester County's population was Hispanic or Latino; in 1990, this figure was 2.3%.

Median age:

During the period 1980-2000, East Brandywine's population aged at a more than chronological rate. The median age during that time changed as follows:

1980 – 29.1 1990 – 32.9 2000 – 38.8

As compared to Chester County as a whole, East Brandywine's population in 1990 was slightly younger (32.9 vs. the County median of 34 years); it had become older by 2000 (38.8 vs. the County median of 37 years).

Changes in the youngest and oldest population cohorts among Township residents for the period 1980-2000 bear out this trend:

	<u>% under 18 years</u>	<u>% 65 years and over</u>
1980	35.4	5.5
1990	31.4	6.2
2000	28.9	7.6

Average household size:

From 1980 to 2000, the Township's average household size exhibited a marked decline, bringing it much more in line with that of Chester County. U.S. Census data reported the average number of persons per household to be as follows:

	<u>East Brandywine Twp.</u>	<u>Chester Co.</u>
1980:	3.23	2.9
1990:	3.08	2.7
2000:	2.90	2.7

The trends in median age and average household size appear to reflect that, until the beginning of this decade, there was relatively little construction of new single-family dwellings that would attract families with young children. Since 2000, that pattern has changed markedly, and it is reasonable to anticipate that the data in 2010 will document a reduction in median age.

Population density

In 1980, the density of population in the Township was 411 persons per square mile; this was an increase from 97 persons in 1950. From 1980 to 2000, population growth produced the following increases in density:

1980	411.4
1990	454.3
2000	510.7

Based on the estimate of population for mid-2008 of 6,914, current population density is estimated to be 606.5.

c. Population Forecasts

Forecasts of municipal population are prepared periodically by the Delaware Valley Regional Planning Commission in collaboration with the Chester County Planning Commission. The most current forecasts are based on 2000 U.S. Census data, and take account of birth, death, and migration rates, as well as land use regulations and anticipated future development. The DVRPC/CCPC forecasts to the year 2035 for East Brandywine and its neighboring municipalities, and for the County as a whole, are as follows:

	<u>2000</u>	<u>2035</u>	<u>Change [#/%]</u>
East Brandywine	5,822	9,421	3,599 [61.8%]
Caln	11,916	16,939	5,023 [42.2%]
East Caln	2,857	5,384	2,527 [88.4%]
Upper Uwchlan	6,850	14,817	7,967 [116.3%]
Uwchlan	16,576	23,354	6,778 [40.9%]
Wallace	3,240	5,152	1,912 [59.0%]
West Brandywine	7,153	12,174	5,021 [70.2%]
Chester County	433,501	622,498	188,997 [43.6%]

Based on these forecasts, East Brandywine and its contiguous neighbors are expected to see a continuing and relatively high rate of growth as a region, when compared to the County as a whole. The Township is anticipated to remain somewhat ahead of the County growth rate but still well behind the forecasted rates for Upper Uwchlan, East Caln, and West Brandywine. In terms of the actual numbers of additional residents anticipated in each municipality, the forecast for East Brandywine is well below those of Upper Uwchlan, Uwchlan, Caln, and West Brandywine but in excess of East Caln and Wallace.

In light of the newly-constructed or approved dwellings in the Township, however, the forecast of 9,421 for the year 2035 appears quite conservative. As noted earlier in this section, an estimated 6,914 people reside in the Township as of July 2008, with a projected additional 3,036 increment possibly resulting from occupancy of currently approved and proposed dwelling units. This total of 9,950 would, therefore, be attained well before 2035. Population growth beyond this level should be muted somewhat by a limited supply of developable land for conventional single-family dwellings. Additional growth also is expected, however, in the form of multi-family dwellings as part of the Guthriesville Village Vision Plan and Development Strategy (as presented in Chapter VII). The Township will need to monitor these potential growth factors during the life of this plan to measure future service delivery needs and corresponding revenue generation.

3. Housing

a. Number, Growth, and Mix of Dwelling Units

Growth in housing stock

From 1990 to 2000, East Brandywine experienced a 16.4% increase in its stock of dwelling units. U.S. Census data for the Township, Downingtown area, and Chester County showed the number of dwelling units to be as follows:

	<u>1990</u>	<u>2000</u>	<u>% change</u>
East Brandywine	1,749	2,035	16.4
Downingtown area	16,955	20,454	20.6
Chester County	139,597	163,773	17.3

Since 2000, the rate of increase in the Township's housing stock has accelerated. From 2000 through 2006, East Brandywine saw the addition of 260 new dwelling units. That is an increase of 12.8% during this 6-year period.

Mix of dwelling types

Traditionally, as an agricultural community, East Brandywine's housing stock was comprised predominantly of single-family detached dwellings. Census data over the past three decades show a modest reduction in that pattern, but with no exceptional gain in multi-family dwellings (131 units, or 69% over the 20-year period).

	<u>1980</u>	<u>1990</u>	<u>2000</u>
Single-family detached	1,263 [85.2%]	1,463 [83.6%]	1,669 [82.0%]
Townhouse and 2-or-more unit structure	189 [12.8%]	220 [12.6%]	320 [15.8%]
Mobile home	30 [2.0%]	66 [3.8%]	46 [2.3%]
Total	1,482	1,749	2,035

As noted, data compiled from the Chester County Department of Assessment by the Chester County Planning Commission show that, for the period 2000-2006, 260 new dwelling units were constructed in East Brandywine; this total consisted of 252 single-family detached dwellings and 8 mobile homes. With these additions, the Township's housing mix at the end of 2006 was made up of the following:

Single-family detached	1,921 [83.7%]
Townhouse and 2-or-more unit structure	320 [13.9%]
Mobile home	54 [2.4%]
Total	2,295

b. Housing characteristics

Tenure: owner-occupied vs. rental

During the two decades from 1980 to 2000, the number of rental units grew very slightly (from 171 in 1980 to roughly 200 in 1990) and then remained at about 200 by the year 2000. As a result, rental units as a percentage of the housing stock actually declined by 2000:

	% of housing stock, by tenure	
	<u>Owner-occupied</u>	<u>Rental</u>
1980	88.5	11.5
1990	88.1	11.9
2000	91.4	8.6

For Chester County as a whole, the 2000 split was owner-occupied (76%) and rental (24%). With all reported newly-occupied dwellings in the Township since 2000 being single-family units, the current percentage of rental units in East Brandywine presumably has declined further.

Vacancy rate

According to U.S. Census data, vacancies, as a percentage of the total housing stock, also fluctuated during the 1980-2000 period, as follows:

	<u>Vacant units</u>	<u>% of total</u>
1980	56	3.8
1990	88	5.0
2000	32	1.6

Of the 32 vacant units in 2000, the split between homeowner and rental units appears essentially even. By the end of 2008, the addition of newly-constructed single-family dwellings and problems in the mortgage market should be contributing to a somewhat higher vacancy rate. A rate closer to 4% is considered "healthy," as it imposes fewer limits on population mobility by offering greater housing choice to prospective residents.

4. Economy

U.S. Census data for 2000 document various employment-related and economic attributes of East Brandywine residents. These include the means by which employed residents travel to their place of employment, their types of occupation, and income levels.

Journey to work

In 2000, a total of 3,292 workers 16 years and older reported how they commuted to work. Those figures were as follows:

Car/truck/van, drove alone	2,843	86.4%
Car/truck/van, carpoled	215	6.5%
Public transportation	51	1.5%
Walked	26	0.8%
Other means	16	0.5%
Worked at home	141	4.3%

The mean travel time to work for this group was 28.8 minutes.

Occupations of Township residents

The 2000 U.S. Census gave those employed a choice of six occupation classes in which to categorize themselves. The results are as follows:

Management, professional and related	1,574	47.7%
Service	285	8.6%
Sales and office	870	26.4%
Farming, fishing, and forestry	16	0.5%
Construction, extraction, and maintenance	258	7.8%
Production, transportation, and material moving	298	9.0%

From 1990 to 2000, the percentage of residents in management and professional positions increased from 38.5% to 47.7%, while those in sales and office occupations declined from 34.1% to 26.4%. Those working in farming-fishing-forestry dropped from 23 to 16.

Household income, 1999

In 1999, household income data showed East Brandywine's population better off than the County as a whole and not significantly different from its neighbors in the Downingtown region.

	<u><\$40,000</u>	<u>\$40,000-</u> <u>\$74,999</u>	<u>\$75,000</u> <u>and greater</u>	<u>Median</u>
Chester County	28.2%	29.2%	42.6%	\$65,295
Downingtown area	21.2%	27.4%	51.4%	Not avail.
East Brandywine	18.1%	30.4%	51.5%	\$76,217

Nearly two-thirds of Township households earned between \$50,000 and \$150,000, with nearly equal representation in the \$50-75,000, \$75-100,000, and \$100-150,000 groups. Only 10.9% of households earned in excess of \$150,000.

Also in 1999, East Brandywine's population included 16 families (1.0%) deemed to be in poverty. These families totaled 111 individuals, or 1.9% of Township population. By contrast, in Chester County 5.0% of the population was considered to be in poverty.

D. Existing Land Use

Documentation of how land is used in East Brandywine can be found in both the 1970 and 1987 comprehensive plans. This information was again mapped in the 1993 Open Space, Recreation, and Environmental Resources Plan (OSRER), and is presented here with information reflecting December 2008 conditions. The land use categories describing 1987 conditions have been largely retained as the basis for the 2008 map and data. This has enabled an explicit comparison of the land use patterns, and the changes therein, over the two-decade period.

Land use changes from 1970 to 1987 presaged those of the most recent 20 years, as the Township began its transition away from a primarily agricultural community. As summarized in the 1993 OSRER:

"The major shift during that period was away from the dominance of agriculture and woodland, and toward a low-density residential community. Farmland acreage was reduced by 34% ... while woodland dropped by 24%... Conversely, land devoted to residential use increased by 182%, totaling 2,027 acres by 1986.

Even in the face of these trends, however, lands aggregated in the categories of farmland, woodland, and vacant still totaled 4,952 acres, or 68.7% of the Township, in 1986. Of the 2,027 residential acres (28.1% of the Township), all but 38 acres were in single-family residential use."

As depicted on Map 2 and summarized in Table 1, the 2008 land use pattern evidences a continuation of this shift toward residential use but at a markedly accelerated pace. The combined acreage of agriculture and vacant has been reduced from 3,111 to 1,923, or from 43.2% of the Township to 26.8%, while land used for single-family residential purposes has increased from 1,989 to 3,440, or from 27.6% of the Township to 47.9%. Also since 1987, and largely consistent with that comprehensive plan, the amount of commercial land use has increased from 45 acres to 64 acres.

A full tabulation of how land was used in the Township in 1986 and 2008 is presented in Table 1. The categories used for these compilations are largely comparable, but not identical. The principal differences are that woodland was calculated as a discreet land use in 1986 but not in 2008 (this probably results in a comparative overstatement of vacant and agricultural acreage in 2008), while road rights-of-way are fully accounted for in 2008, but limited to the Route 322 right-of-way in 1986. The 2008 information also segregates protected open space as a land use category.

Focusing on the portrait of land use in East Brandywine as of mid-2008, Map 2 depicts clearly the continued growth in single-family residential use over the past two decades. In addition, several tracts currently in agricultural use are the subjects of residential development proposals that could lead to their near-term conversion.

As proposed in the 1987 plan, and implemented in the 1989 zoning ordinance, commercial land use in the Township remains largely within the Guthriesville village area and the MU-zoned district further west on Horseshoe Pike.

Lands in public use are scattered and reflect a variety of public purposes. They include the Township administrative complex; East Brandywine Community Park and two smaller, satellite park sites; the former Bondsville mill property; the Brandywine-Wallace elementary school; and a piece of Brandywine Creek flood plain. Institutional and quasi-public uses include the Delaware County Community College campus, the East Brandywine Fire Company property, and three churches.

Now occupying less than 20% of the land in East Brandywine, agricultural operations are most prominent on the eastern side of the Township. In the cases of the Miller and MacFarland properties, as well as a few smaller parcels elsewhere in the Township, these operations are conducted on permanently-protected land. Conversely, as noted, several currently agricultural tracts have applications pending for residential development. Thus, it is possible the trend that has seen agriculture diminish as an essential element in the Township's land use pattern has not reached conclusion.

While open land in East Brandywine (i.e., the agricultural and vacant categories in Table 1) has been reduced in absolute terms, the degree to which open space parcels have been placed under permanent protection actually has risen dramatically since 1986. No calculation of protected open space acreage was made for the 1986 plan, but nearly all the 905 acres shown in Table 1 for 2008 have achieved protected status during those intervening two decades. This is primarily a product of private conservation actions on the part of several landowners and the set-aside of open space parcels during the land development process. At the same time, most of the development-created open land owned and managed by homeowners associations is not intended for active recreation purposes. The Community Park remains the focal point for those activities.

It is worth noting that, since 1986, the Township's wooded character has emerged far more intact than its agricultural character. This is largely attributable to the nature of land conversion to development uses. Particularly in cases of residential development, the site planning/plan review processes have been reasonably successful in retaining the wooded portions of such sites, while land previously devoted to agriculture is targeted for the new development and is thus permanently converted. Application of the Township's cluster development regulatory opportunities has furthered the ability to retain significant woodland.

Within the Township's mix of residential land use, conventional single-family detached dwellings continue as the dominant form, occupying 3,440 acres (47.9% of the Township). Mobile home acreage has remained steady over the past two decades. Multi-family dwellings occupied 47 acres in 2008, an increase from 17 acres in 1986 but still only 0.7% of Township acreage.

Table 1: Existing Land Use, 1986 and 2008

<u>Use</u>	<u>Acres</u>		<u>% of Township Acreage</u>	
	<u>1986</u>	<u>2008</u>	<u>1986</u>	<u>2008</u>
Agriculture	2,433	1,285	33.8	17.9
Single-family residential	1,989	3,440	27.6	47.9
Woodland	1,841	NC [d]	25.6	----
Vacant	678	638	9.4	8.9
Semi-public (institutional, religious, educational)	73	81	1.0	1.1
Rt. 322 right-of-way	50	NC	0.7	----
Commercial (retail, service)	45	64 [a]	0.6	0.9
Industrial (manufacturing, fabricating, warehousing)	30	73	0.4	1.0
Public	29	107	0.4	1.5
Multi-family residential	17	47 [b]	0.2	0.7
Mobile home park	14	14	0.2	0.2
Utility	7	15	0.1	0.2
Two-family residential	7	NC	0.1	----
Open space	NC	905	----	12.6
Road rights-of-way [c]	NC	500	----	7.0
Total	7,213	7,169 [e]		

NC = Not calculated

[a] Includes office, mixed-use, and private campground

[b] Includes two-family

[c] Based on the following formula: total linear footage of right-of-way (both sides) in the Township; divided by 2; then multiplied by an average right-of-way width of 50 feet.

[d] In 2008 data, woodland is not calculated as a discreet land use. As shown on Map __, however, the Township's woodlands currently total 2,505 acres; this increase from 1986 can be attributed to some reforestation and changes in how this category is interpreted.

[e] Difference in total Township acreage results from the use of GIS data compilation in 2008, which is more accurate than the methodology used in 1986.

CHAPTER IV: PROTECTING COMMUNITY RESOURCES

A. Steep Slopes

Existing Conditions

1. The 1970 and 1987 East Brandywine Township Comprehensive Plans mapped areas of 0-10% slope, 10-20% slope, and greater than 20% slope. Map 3, Steep Slope, presents slopes in the categories of 0-15%, 15-25%, and greater than 25%, consistent with recent amendments to the Township Zoning Ordinance.
2. In East Brandywine Township, steep slopes are largely related to stream corridors, specifically the Brandywine Creek and Beaver Creek and their related tributaries. As such, the eastern portion of the Township, adjacent to the East Branch Brandywine Creek, and those portions of Beaver Creek in the southern portion of the Township contain the majority of steeply sloping lands.

Township Planning and Regulation Today

1. As part of the Steep Slope Conservation District, the Zoning Ordinance regulates activities on slopes in excess of 15%. The ordinance identifies those activities or uses permitted in such areas and stipulates that all lands in excess of 25% remain in an undisturbed, natural condition. Furthermore, the ordinance limits the amount of impervious surface permitted to be installed in the district.
2. The Zoning Ordinance, as part of the net lot area and net tract area concepts, requires any portion of a lot or tract within the Steep Slope Conservation District to be "netted out" prior to any density calculation.
3. The Subdivision and Land Development Ordinance (S/LDO) requires plans to show topography; furthermore, the S/LDO requires that grading and earthmoving on slopes exceeding 15% be minimized.

Need for Future Policy

1. As is clearly indicated by the findings of this plan, the Township's remaining developable land is at a premium. That said, development can be expected to move toward the Township's more topographically constrained lands as flat uplands are consumed. Soils on steeply sloping lands are highly erodible.
2. Wooded slopes contribute immensely to Township character. Furthermore, such slopes perform important natural functions, particularly in conjunction with stream corridors, by intercepting runoff, reducing erosion, shading streams, improving air quality, and providing habitat for terrestrial and aquatic species.

3. On south-facing slopes, access to solar energy can represent a resource of which builders of new dwellings may, at their option, wish to avail themselves.
4. Ordinance protection does not typically provide complete preservation of sloped areas; as such, consideration should be given to prioritization of sloped areas for public purchase.

Future Township Policy

Permit development and disturbance of steeply sloped areas only in accordance with standards that protect against structural instability, excessive erosion and sedimentation, and the loss of important ecological, visual, solar, and open space resources. Strengthen existing standards regulating activities on steeply sloping lands.

Actions to Implement

1. Examine steep slopes in relation to riparian buffer protection and the need to protect steep slopes adjacent to streams.
2. Encourage the long-term protection of steep slopes through the retention of flexible site design options (such as cluster development), further limitations on tree cutting, and such private actions as the donation of conservation easements.
3. Review and, as necessary, revise ordinance criteria for including steeply-sloped areas within development-created common open space.
4. Identify priority areas for public purchase of sloped areas to complement other protection techniques.

B. Soils

Existing Conditions

1. The Township's soils fall predominantly into eleven soil series: Brandywine, Chester, Chewacla, Congaree, Edgemont, Glenelg, Glenville, Hagerstown, Manor, Wehadkee, and Worsham. Several of these are alluvial soils (Chewacla, Congaree, Wehadkee, and Worsham). Soils are depicted on Map 4, Soils.
2. Soils generally have several properties that offer opportunities and constraints for their use. With regard to constraints, some soils have limitations for building, may be wet or flood-prone, may be indicators of wetlands and/or riparian areas, and may be subject to erodibility. Conversely, some soils are particularly suitable, and offer opportunities, for construction and agriculture

3. This plan incorporates the concept of the Soil Use Guide to describe soil properties (see Appendix B). Emphasis is placed on appropriateness for certain types of uses, infiltration characteristics, aquifer recharge, depth to seasonal high water, hydrologic soil group, erodibility, alluvial properties, and hydric properties, to name a few. The Guide offers a useful reference tool for better understanding the soils that exist in the Township.

Township Planning and Regulation Today

1. The Township's Zoning Ordinance provides protection to floodplain soils (particularly alluvial soils) in the Floodplain District. Additional standards exist to protect water hazard soils and wetland soils, agriculturally suited soils and, more generally, topsoil. Standards for individual sewage disposal systems also provide a level of protection to the Township's soils.
2. Lands within the Floodplain District, along with wetlands and water hazard soils, must be netted out in determining net lot and net tract area.
3. The Township's S/LDO provides protection to agriculturally-suited soils and regulates stormwater management within the Township. Limited erosion and sedimentation control standards exist as related to stormwater management and natural features protection.

Need for Future Policy

1. The incorporation of the Soil Use Guide into this plan partially fulfills a policy need identified in the 1987 Comprehensive Plan "to correlate development and conservation policies with soil suitability, thereby avoiding future public and private costs." Emphasis should also be placed on using the Guide as a planning tool for a "first-cut" analysis of soils. For example, the Planning Commission could use the Guide as a tool when evaluating site plans and the stormwater management ordinance could reference the Guide for soils property information (particularly with regard to infiltration characteristics, etc.).
2. Consideration should be given to increasing the minimum lot requirements where soil suitability for building is questionable.
3. Protection of aquifer recharge areas (defined both by soils and geology) should be further considered, as discussed in more detail in Section C, Geology and Ground Water.
4. The soil component of alternative "green technology" stormwater management practices intended to promote recharge and reduce rate and volume of storm flows deserves greater attention.
5. "Minimum disturbance/minimum maintenance" concepts offer opportunities for soil retention, reduced compaction, and protection of vegetation.

Future Township Policy

Plan and regulate land use to take full account of the opportunities and constraints posed by the soils in the Township. Minimize soil loss under any circumstances.

Actions to Implement

1. Incorporate the Soil Use Guide into the Zoning Ordinance and/or S/LDO as a tool for plan review and stormwater management.
2. Review and, if necessary, increase the minimum lot size requirements of the Zoning Ordinance to assure adequate lot area in soils of questionable suitability for buildings.
3. Since aquifer recharge areas are defined by a combination of soils and geology, develop standards to protect aquifer recharge areas based on those joint factors.
4. Promote the use of alternative “green technology” stormwater best management practices that promote infiltration and reduce runoff. Simple management techniques, such as disconnection (diverting downspouts to pervious surfaces so as to avoid concentrating storm flows) rely on soil preservation and protection from compaction.
5. Incorporate the concepts of “minimum disturbance/minimum maintenance” into the design standards contained in the S/LDO.

C. Geology and Ground Water

Existing Conditions

1. The majority of the Township is underlain by hybrid gneiss, a series of formations that are hard and resistant to erosion (see Map 5, Geology and Ground Water Yield). The U.S. Geological Survey estimates that between 5 and 20 wells are needed in these formations to produce one million gallons of water a day. This hard rock geology is characterized by limited ground water yields and storage capability; thus, care should be taken to maintain the existing properties of these rocks.

Also included in the northern portion of the Township (primarily north of Culbertson Run) is graphitic gneiss, a formation characterized by good surface drainage. This formation is considered particularly suitable for building foundations and the estimated number of wells needed to produce one million gallons of water a day is between 5 and 15. Finally, East Brandywine contains a small strip of the Chickies Formation, which runs through the center of the Township. This small segment is considered to have good surface drainage and is deemed good to excellent for building foundations; unfortunately, it is estimated

that between 15 and 40 wells are needed to produce a million gallons of water a day.

East Brandywine also contains two faults; one transects east/west across the middle of the Township and the other transects north/south across the eastern portion of the Township (paralleling the East Branch of the Brandywine Creek). Due to the potential for increased fractures in fault zones, the ground water yields in these areas may exceed those of the surrounding areas. Conversely, such areas are more susceptible to ground water contamination and may pose stability questions for building foundations.

As with any geologic structure, care must be taken to prevent pollution impacts to ground water. On the whole, the hard hybrid gneiss that underlies the majority of the Township is resistant to pollution risk; on the other hand, any pollution could potentially compromise the limited production capacity of the stone for water supply. As such, care should be taken when designing on-site sewage systems and stormwater management facilities. Over the years the Township's planning strategy has reflected these conditions. For example, limited ground water yield, corroborated by residents' experiences, has been a key factor in determining zoning densities for residential development.

2. In recent years, radon has become an issue of concern in Chester County. In a study titled "Radon in Ground Water in Chester County, Pennsylvania," (USGS, 1998), the median concentration of radon-222 in ground water from wells sampled throughout the county was 1,400 pCi/L (picocuries per liter). About 89 percent of the wells sampled contained radon-222 at concentrations greater than 300 pCi/L, and about 11 percent of the wells sampled contained radon-222 at concentrations greater than 5,000 pCi/L. The highest concentration measured was 53,000 pCi/L. Radon is a naturally occurring gas formed from the decay of radium, a common element in soils and geologic rock structures. Radon is a colorless and odorless gas that can be found dissolved in ground water or can seep through building foundations into homes as a gas. It should be noted that other isotopes of radium in addition to radon-222 may also be found in ground water. As of now, the U.S. Environmental Protection Agency (EPA) is recommending that individual water systems reduce radon levels in drinking water to 4,000 pCi/L or lower (public water supplies should reduce levels to 300 pCi/l or lower). Indoor airborne levels should be below 4 pCi/l; remedial action is suggested above this level. Because Chester County typically has high levels of radon, residents are encouraged to have their air and water tested.
3. In addition to ground water for individual wells, the Township has several public water supply wells that provide service to residents and businesses (see Map 13, Public Water Areas, in Chapter VI for locations of public water service). Protection of public water supply wellheads is incumbent on water purveyors; the Township could consider regulatory measures to achieve some level of protection, as well.

Township Planning and Regulation Today

1. The Township's Zoning Ordinance provides protection for water resources (both ground and surface) in several ways. Certain mixed use applications (conditional uses) are required to evaluate the impact of commercial use of water by preparing a Water Supply Impact Plan. In addition, cluster developments have specific sewer and water supply requirements for individual and community systems. Furthermore, the Zoning Ordinance contains ground water supply and protection standards that work in conjunction with the S/LDO.

The S/LDO also provides protection to ground and surface water in a variety of ways. Included therein are standards for sewage treatment and disposal, water supply (which address fire supply and test well requirements, among others), and stormwater management.

2. East Brandywine also adopted a water supply and distribution ordinance in 1978 (now being updated) and is considering a comprehensive stormwater management ordinance that addresses, among other things, erosion and sedimentation, infiltration, and operation and maintenance issues. As is clearly the case with water resources, regulation by the county (Chester County Health Department), the state (Pa. Dept. of Environmental Protection (DEP) and Pa. Public Utilities Commission (PUC)), and the federal government (EPA, Delaware River Basin Commission) provides additional protection for water resources.
3. The Township's Sewage Facilities Plan emphasizes the return of treated wastewater to the ground, rather than piping it out of the Township.

Need for Future Policy

1. In light of limited ground water resources, land use and site design practices should continue to correlate closely with known ground water parameters.
2. Consideration should be given to providing protection to significant aquifer recharge areas (based on an analysis of soils and geology/ground water yield mapping).
3. Further consideration should be given to ordinance provisions regarding maintenance of on-lot sewage systems (septics). Close coordination with the Chester County Health Department is advisable but not an imperative.
4. Ground water policies related to cluster development should be revisited to assure minimum site disturbance and compaction, maximum infiltration, and acceptable flexibility in the siting and use of wastewater facilities, water supply facilities, and stormwater management facilities.
5. Consideration should be given to additional protections for public water supply wellheads.

6. Consideration should be given to requiring the preparation of water budgets for development proposed in sensitive water resource areas (such as aquifer recharge areas).
7. A thorough review of district-wide impervious cover standards should be undertaken to minimize impacts to ground and surface waters. Recent research (Schueler, 1995) suggests that watershed imperviousness over 15% results in stream degradation.
8. Continue to monitor the requirements for Total Maximum Daily Loads (TMDLs) that are regulated by DEP in response to EPA mandates (standards have been proposed for the Christina Basin, within which the Township exists). Furthermore, consideration should be given to the requirements of the EPA's NPDES Phase II MS4 requirements (particularly regarding public outreach and stormwater management code provisions) applicable to the Township as a municipality requiring an MS4 permit.

Future Township Policy

1. Protect existing ground water resources against depletion and contamination (aquifer recharge areas, wellhead protection, water budgets).
2. Encourage replenishment, particularly in the areas of greatest recharge capability (on-site sewage management, on-site stormwater management).
3. Continue to assure compatibility between ground water supply and land use-imposed demand (monitoring of density standards, water budgets, stormwater management).
4. Maintain the contribution of ground water to stream flows.

Actions to Implement

1. Review current land use opportunities within zoning districts in relation to water supply needs and ground water availability, and modify zoning provisions necessary to achieve optimum compatibility.
2. Evaluate impervious surface limits in the zoning ordinance and adjust, as necessary, particularly in relation to recharge potential and stream degradation.
3. Based upon mapping of recharge areas, consider ordinance measures for protection.
4. Consider further protections for public water supply wellheads, including separation distances and use restrictions.

5. Develop standards for the preparation of water budgets for development proposed in sensitive water resource areas (such as aquifer recharge areas).
6. Maintain the Township's current sewage treatment and disposal emphasis on land application (drip or spray irrigation) to avoid stream discharge. Review Township policy regarding maintenance of on-lot sewage systems (septics) and consider additional ordinance language for maintenance.
7. Consider implementing measures to notify prospective homebuyers of radon issues, including Board of Realtor agreements of sale and disclosure forms, use and occupancy permit notification requirements, and Township web-site listing of source information and references.
8. Monitor the requirements for Total Maximum Daily Loads (TMDLs) that will be adopted and regulated by DEP in response to EPA mandates; where necessary, modify Township codes to recognize these requirements. Furthermore, modify Township codes to reflect the requirements of EPA's NPDES Phase II MS4 requirements (particularly regarding public outreach and stormwater management code provisions) applicable to the Township as an MS4 municipality.

D. Surface Water

Existing Conditions

1. East Brandywine Township lies entirely within the Brandywine Creek watershed, specifically within the East Branch of the Brandywine Creek (which also serves as the Township's eastern border). To be more specific, the Township's land drains to several tributaries of the Brandywine Creek, as well as to the East Branch itself. For example, the northwestern portion of the Township drains north and east to Culbertson Run or its tributaries, the southwestern portion drains into Beaver Creek or its tributaries, and the eastern section drains directly into the East Branch or its tributaries. These watershed boundaries (actually sub-watersheds of the Brandywine Creek) are shown on Map 6, Surface Water.
2. Headwater areas and first-order streams are significant to East Brandywine because a majority of the Township is comprised of these areas (see Map 6). In simple terms, first-order streams are those streams predominantly fed by springs or ephemeral streams; headwater areas are those land areas that drain directly into first-order streams.

The importance of protecting these areas cannot be overestimated. For example, degradation of first-order streams (predominantly from erosion and sedimentation) can have serious water quality implications for downstream users, while the relatively low volume flow of such streams makes them disproportionately vulnerable to water quality impacts. Furthermore, the regularity of flow in such streams is essential to the wildlife that depends on such streams. As such, land use activities in such areas have the potential to affect all

downstream users, including much of Chester County and northern Delaware. Therefore, protection of headwater areas and first-order streams is very important.

3. Floodplain areas, in particular the 100-year floodplain as mapped by the Federal Emergency Management Agency (FEMA) for the Flood Insurance Program, are areas considered by FEMA to be susceptible to flooding events (the 100-year flood is considered the base flood along streams). Alluvial soils are those soils that result from repeated deposition of flood waters throughout long periods of time; alluvial soils indicate not only past flooding events but probable future flooding events. In East Brandywine, alluvial soils are the Chewacla, Congaree, Wehadkee, and Worsham soils (see Appendix B, Soil Use Guide).
4. Riparian buffer areas have become recognized in recent years as contributing significantly to the health of watersheds and stream ecosystems. Riparian areas consist of land that forms a transition zone between aquatic and terrestrial environments. Such areas serve to filter and remove pollution-laden runoff from entering water bodies; protect against stream bank erosion and tree loss, provide shade that maintains cool water for healthy aquatic ecosystems; promote stabilized stream banks which reduce downstream transport of eroded sediment and pollutants; and provide food, cover, and thermal protection for aquatic organisms and other wildlife.
5. Wetlands have been increasingly recognized in recent years for their important ecological functions. They provide significant wildlife habitat and are important as storage areas for surface and ground water resources. Furthermore, such areas help filter and purify runoff that potentially enters streams and ground water aquifers. Wetlands also provide important nesting areas for birds and provide habitat for many other species of aquatic and terrestrial species. The U.S. Army Corps of Engineers and DEP have established criteria for the delineation of wetlands; such criteria are based on soil type, hydrologic regime, and vegetation. Soils typical to wetland areas have been classified as hydric soils, i.e., those soils that formed under saturated (or anaerobic) conditions. In East Brandywine, hydric soils are likely to be Wehadkee and Worsham soils.
6. As with past planning efforts, Marsh Creek Reservoir must be recognized for its availability to help regulate the flow and quality of water in the Brandywine Creek. Limited point source discharges also contribute flow to the stream.

Township Planning and Regulation Today

1. East Brandywine has floodplain and water hazard soils regulations that are part of the Township's Zoning Ordinance (companion regulations also exist in the Township's S/LDO). Floodplain regulations address the floodway, flood-fringe, and approximated floodplain as documented in Flood Insurance Studies prepared by FEMA.

2. In recent years, the Township has recognized the importance of riparian protection by enacting riparian buffer regulations for its 1st-order streams. These standards, contained in the Zoning Ordinance, require riparian corridor identification as part of preliminary plan submission, corridor protection, and selective planting where disturbance occurs.
3. Wetland delineation and protection standards exist within the Zoning Ordinance. Such standards specifically prohibit filling or draining of such areas and require a two-to-one replacement ratio for wetlands disturbed for road crossings.
4. Individual sewage disposal systems, a potential threat to both surface and ground waters, are addressed in the Zoning Ordinance and S/LDO.
5. Water supply, distribution, and test well requirements exist within the S.LDO.
6. The Township's sewage facilities planning, as mandated under Act 537, the Sewage Facilities Planning Act, is discussed in Chapter VI.
7. The Township has recently upgraded its stormwater management regulations, contained in the S/LDO. Among the additional items addressed in the new standards are water quality, peak rate control, volume, and infiltration issues
8. The S/LDO requires erosion and sedimentation control during site disturbance, limiting the impacts of site construction activities and the removal of trees.

Need for Future Policy

1. Recent revisions to the Township's stormwater management standards brought the Township up-to-date regarding most current state and federal requirements (NPDES Phase II requirements, MS4 requirements, etc.). It is important that the Township sustain its new policies, consider new technologies as they become available, and continue to work toward fulfilling the requirements of state and federal standards. For example, the EPA's NPDES Phase II rule identifies a specific management program for municipal separate storm sewer systems, or MS4s. Because most stormwater systems discharge directly into local streams and rivers without water quality controls, the EPA has made identified municipalities responsible for reducing pollutants and protecting water quality. East Brandywine's new stormwater management regulations go a long way toward achieving this goal; however, the Township should consider additional public education and outreach activities specified in the Phase II rule.
2. Consideration must be given to Total Maximum Daily Load (TMDL) issues identified by the EPA and DEP for impaired stream segments within the Township. Several studies are underway and phosphorous issues, among others, have been identified for future reductions and regulation.

3. The Brandywine Valley Association recently completed a Brandywine Creek Watershed Conservation Plan for the entire Brandywine watershed. In addition, the Brandywine Conservancy recently completed a Rivers Conservation Plan for the Upper East Branch of the Brandywine Creek. Both studies contributed to the Brandywine being placed on the Commonwealth's rivers registry, a program designed to recognize conservation efforts and provide grants to achieve plan implementation. Both documents indicate the need to protect the resources of the watershed at the municipal level through stormwater management, riparian buffer protection, cultural and recreational resource protection, source water protection, and integrated water resources planning. In addition, municipalities are encouraged to increase public access to streams, where feasible, and assist in the restoration of impaired stream segments. Consideration of these plans should be a priority as the Township moves forward with implementation activities pursuant to this Comprehensive Plan.
4. The National Pollutant Discharge Elimination System (NPDES) program was created initially to reduce the amount of sewage effluent going into streams and rivers. The eventual intent was to eliminate all stream discharges in an effort to better protect streams from pollution. While numerous stream discharges exist today, the policy of reducing, if not eliminating, stream discharges remains. As such, the Township should actively seek opportunities to eliminate the remaining stream discharges in East Brandywine over time and continue to encourage land application of wastewater. This philosophy should be explicitly stated in the Township's sewage facilities plan and pursued as appropriate.

Future Township Policy

1. Protect streams, ponds, and wetlands against pollution discharge from point sources, runoff, or groundwater.
2. Assure maintenance of sufficient stream flows.
3. Protect associated floodplains and water hazard soil areas against encroachment.
4. Retain the visual, recreational, and habitat values of stream corridors.
5. Retain and enhance vegetated riparian buffer areas.

Actions to Implement

1. Consider additional public education and outreach activities specified in the NPDES Phase II rule for reducing pollutants and protecting water quality. Consideration should be given to working with the Brandywine Valley Association or other organizations that have created programs to assist municipalities in meeting these requirements.

2. Continue to monitor and participate in the Total Maximum Daily Load (TMDL) process undertaken by the EPA and DEP for impaired stream segments within the Township. Eventual requirements may necessitate the Township revising its stormwater management regulations or undertaking additional steps to mitigate pollution impacts to the Brandywine Creek.
3. Utilize the Brandywine Creek Watershed Conservation Plan and the Rivers Conservation Plan for the Upper East Branch of the Brandywine Creek to further protect resources and promote a better understanding of stream resource issues.
4. Maintain the Township's current sewage treatment and disposal emphasis on land application to avoid stream discharge, consistent with the intent of the NPDES program.
5. Consider expanding the riparian buffer protection standards to protect all streamside buffers (in addition to those along 1st-order streams).
6. Continue to administer in a firm and consistent manner the existing S/LDO standards on erosion/sedimentation control, including on-site inspections during earth disturbance activities.
7. Encourage the donation of conservation easements on floodplain and wetland areas.

E. Vegetation and Wildlife

Existing Conditions

1. A comparison of woodlands mapping from the 1987 Comprehensive Plan and the aerial coverage utilized for this plan indicates that woodlands have remained relatively stable over the last two decades. In fact, while some areas have diminished slightly, significant portions of the Township that have been reforested over the last 20 to 25 years have matured to the point that additional canopy clearly is evident. Today, woodland comprises roughly 3.9 square miles (2,505 acres) of Township land. This figure actually represents an increase in woodlands of approximately 664 acres from 1986 (date of data collection for the 1987 Comprehensive Plan) or a 36% increase. Today, woodlands comprise approximately 35% of the Township, as shown on Map 7, Existing Woodlands Area.

Much of the Township's woodlands are concentrated along the East Branch Brandywine Creek and, to some extent, along Beaver Creek and its tributaries. Trees play a particularly important role in these areas in terms of stabilizing slopes, protecting floodplains, and providing riparian habitat for wildlife. Riparian areas provide an important transition zone between the aquatic and terrestrial environments; such areas provide both food and shelter for the majority of the Township's remaining aquatic species.

- Woodlands also fulfill numerous other ecological functions, including their ability to reduce the rate of surface runoff, filter nutrients and sediment that might otherwise pollute streams, reduce thermal pollution to streams, moderate wind speeds, reduce air temperatures, improve air quality, and abate glare and noise.
2. Although not depicted on Map 7, the Township contains an impact zone for a state-determined endangered species as part of the Pennsylvania Natural Diversity Inventory (PNDI). This impact zone is found along the west bank of the East Branch Brandywine Creek, at the southern end of the Township.
 3. The *Chester County, Pennsylvania Natural Areas Inventory*, published in 1994 and updated in 2000, identified sites in the County that provide habitat for species of special concern or are considered exemplary natural communities. In 1994, an aquatic plant (SP520) was identified in a riverine community on the East Branch Brandywine Creek at the southern end of the Township. At that time, there appeared to be a fair occurrence of the species in Pennsylvania and the species was deemed secure on a global basis; however, there seemed to be some evidence of decline. Information updated in 2000 indicated that this aquatic plant is no longer considered a species of special concern in Pennsylvania. Of interest, however is that this plant, a sedge, is an indicator of relatively clean water in this portion of the East Branch Brandywine Creek.
 4. The Township also contains vegetation of local significance, i.e., specimen trees and related vegetation that are integral to the characteristic landscape of the Township. These features were originally inventoried as “contributing visual features” as part of the visual resources analysis performed for the 1992 Open Space, Recreation and Environmental Resources Plan. For this updated comprehensive plan, the continued existence of these resources has been assessed (see Appendix C).

Township Planning and Regulation Today

1. The Zoning Ordinance contains forestry and logging standards intended to reduce indiscriminate clear-cutting and provide objective standards by which logging can occur under sound forest management practices. In addition, the Zoning Ordinance contains standards for the management of existing vegetation, riparian corridor protection, and landscaping and buffering.
2. The S/LDO contains woodland conservation standards intended to limit disturbance and require vegetative replacement where disturbance does occur. In addition, the ordinance provides conservation standards to protect vegetation during land development site preparation, and contains landscaping standards that complement those in the Zoning Ordinance.
3. The Township’s draft Stormwater Management Ordinance encourages Best Management Practices (BMPs) that utilize vegetation for water quantity and

quality benefits, encourage minimum disturbance to soils and vegetation, and advocate low impact development practices that protect vegetation and reduce soil compaction.

Need for Future Policy

1. Woodlands and other vegetative cover continue to provide habitat to wildlife, mitigate development impacts, and contribute to the traditional character of East Brandywine.
2. Given that the Township now has replacement standards for vegetation removed during earth disturbance activities (in addition to riparian buffer protections and landscaping standards), consideration should be given to adding a plant list to the S/LDO. Such a list could specify appropriate native species for planting under varying site conditions. The list could also be cross-referenced, as needed, in other chapters of the Township Code.
3. The Township should continue to encourage conservation easement donations that protect vegetated slopes.
4. The mapping prepared for this plan could be supplemented to identify wildlife habitat areas associated with different ecosystems and scenic areas; as well as significant habitat areas appropriate for further protection.
5. Habitat fragmentation continues to be a serious issue throughout the country as development reduces the amount of functional habitat. While the Township does not appear to have any significant interior woodland for habitat, consideration should be given to encouraging the reduction of “edge effects” (habitat areas that are disturbed or broken by roads or other habitat breaks) and “distance effects” (suitable habitat areas that are great distances from one another). The habitat mapping identified above will contribute to a better understanding of wildlife habitat. In addition, continued protection of stream corridors will be one of the best ways the Township can ensure continued viable wildlife habitat/biodiversity corridors. Furthermore, open space set-asides during development should be configured to consider wildlife habitat on neighboring properties so as to reduce fragmentation.
6. Consideration should be given to formally establishing an Environmental Advisory Council (EAC). EACs are eligible for specialized training and financial assistance and are generally seen as valuable assets in communities where they exist.

Future Township Policy

Protect identified areas of significant vegetation against undue loss or disturbance. In particular, retain the integrity of existing environmental corridors, riparian vegetation, and woodlands on steep slopes.

Actions to Implement

1. Incorporate a plant list appendix or reference appropriate local publications in the S/LDO. The list or references should specify suitable native species for planting under varying site conditions and should be cross-referenced as needed in other chapters of the Township Code.
2. Supplement the mapping contained in this plan to better identify significant habitat areas appropriate for further protection. Take steps to minimize habitat fragmentation “edge effects” and “distance effects” by protecting biodiversity corridors along streams and considering habitat issues when configuring open space set-asides during development.
3. Evaluate zoning, subdivision/land development, stormwater, and site design options that enhance the prospects for the retention of vegetation on sites undergoing development. Techniques such as “fingerprinting” (site planning techniques that limit the zones of disturbance), minimum disturbance/minimum maintenance standards (which can reduce or eliminate the effects of land disturbance, clearing, and grading), no-mow zones, vegetated filter strips, and other techniques should be considered.
4. Evaluate the need and prospects for establishing an Environmental Advisory Council (EAC) that could advise the Planning Commission and Board of Supervisors on environmental issues.

F. Agriculture

Existing Conditions

1. The suitability of agricultural soils within the Township, and thus the historically important role of agricultural land use, is well-documented. The trend since 1950, as discussed in Chapters III and V, has been a shrinkage of land used or available for farming. From 1986 to 2008, acreage devoted to agriculture was cut nearly in half, diminishing from about one-third of Township land to less than 20%.
2. Most of the farmland converted to development has been put to residential use or is subject to proposals for such conversion.
3. As is evident on Map 2, Existing Land Use, a number of substantial properties remain in agricultural use, including sizable acreage that is permanently protected against development.

Township Planning and Regulation Today

1. The Zoning Ordinance and S/LDO encourage, where feasible, the protection of agriculturally-suited soils within the design of sites proposed for cluster development.
2. The Township Open Space Committee maintains dialog with owners of agricultural properties that do not have a permanently protected status, where conservation easement donations and/or agricultural easement purchases are feasible options.

Future Township Policy and Actions to Implement

See discussion of agriculture's future land use status in Chapter V, Section C-2.

G. Scenic Resources

Existing Conditions

1. Map 8, Scenic Resources, quantifies and graphically depicts the visual landscape of the Township as seen from public roads. From a holistic perspective, the resources that comprise this landscape contribute significantly to the visual character of present-day East Brandywine and represent a significant component of the Township's heritage and sense of community. Further, the survival of such resources is a partial indication of Township and landowner commitment to preservation in the midst of continued suburbanization.
2. The visual landscape is highlighted by the natural, scenic, and historic resources of the Township within the context of public roads and vista points; contributing vegetation, topographic features, and man-made structures all influence the visibility of the landscape. Furthermore, the interrelatedness of these resources and their importance to the local community underscores the critical nature of continued protection efforts.
3. Scenic Roads
 - a. As indicated on Map 8, various segments of the Township's road network have been identified for their visual quality. In each case, the road corridor is portrayed with a uniform width; so as to recognize the immediate frontage of each road, its importance as a scenic resource, and the value of sensitive treatment and protection. In reality, the scenic perimeters of these roads are a function of the Township's rolling topography, vegetative features, and built environment. As such, undisturbed scenic vistas or outlooks of significant depth are also identified. The primary scenic road corridors of the Township are Creek Road, Hadfield Road, and the loops containing Reeds Road, Hopewell Road, Crawford Road, Rock Raymond Road, Dowlin Forge Road, and

Creek Road. Other significant road segments include Buck and North Buck Roads (adjacent to a significant portion of Rt. 322, Horseshoe Pike) and Dilworth Road.

- b. For the purposes of identifying scenic roads, the Township utilized the methodology contained in its 1992 Open Space, Recreation and Environmental Resources Plan. This approach continues to provide a useful tool for evaluating scenic roads and resources; of equal significance, perhaps, such an approach makes possible a clear evaluation of change over time. As was done in 1992, the Township's road system was field-surveyed and candidate segments were differentiated according to the following characteristics:

Woodland, steep hillsides and along stream valleys

- Steeply sloping woodlands along streams and valley walls.
- Canopy is broken by streams, roads, bridges, and occasional houses and barns or other outbuildings.
- Viewshed can be very narrow, particularly on the uphill side of the road; treetops often are the only things visible from the roads.

Woodland, level and rolling

- Relatively level to gently rolling upland; mature woodlands.
- Houses and drives punctuate woodlands.
- Canopy relatively unbroken.

Open and wooded lands, gently rolling to steep

- Small open areas bordered by woodlands and intersected by hedgerows
- Open areas have feeling of being enclosed
- Wooded areas have numerous openings in canopy
- Houses, garages, barns, and landscape plantings are visible and sometimes numerous.
- Density of residential development is approximately one dwelling unit per two or more acres.
- Buildings are not repetitive in form, style, and arrangement when visible in multiples.

Open and agricultural lands

- Relatively level to rolling open land.
- Cultivated fields and pasture are the predominant land use, punctuated by hedgerows, wooded swales, and small wood lots.
- Landscape is characterized by panoramic views of fields, with woodland and residential development in the background.

Village, cluster of historic sites

➤ Resources found within view of public roads.

- c. Road segments fronted predominantly by developed land, other than clusters of historic structures, were discounted for this effort. Furthermore, potential scenic road segments were also evaluated pursuant to the Township's functional road classification; for example, as discussed in 1992, scenic road protection for several (but not all) stretches of Horseshoe Pike, the Township's only arterial road, is given relatively lower priority.
- d. Unlike the 1992 Plan, an effort was made here to designate roads on a more continuous basis, rather than designating shorter road segments that meet the selection criteria. The basis for this new policy is that any scenic roadway will contain portions of "un-scenic" qualities; to discount these portions takes away from the overall continuity of the road network and implies that corrective actions will not bridge the gaps currently existing.

4. Contributing Visual Features and Scenic Vistas

- a. In the course of inventorying the Township's roads for scenic qualities, consideration also was given to those individual features that serve to accent (or conversely, detract from) visual quality. Where these are contributing visual features, they can be thought of as characteristic landscape elements, in prominent view from the road. Such features help focus the viewer's attention on the immediate and surrounding landscape and contribute to the overall scenic quality of the roadway. As shown on Map 8, 48 contributing visual features were identified through field inventory. Examples include prominent barns, stone fences, ruins, specimen trees, and woodland clusters. A complete listing of features is included in Appendix C, Contributing and Detracting Visual Features (symbols included on Map 8 correlate with this listing).
- b. Map 8 also depicts scenic vista points within the Township's road network. Arrows leading from the vista points show the direction of the viewing opportunity. These points were selected on the basis of the depth and undisturbed quality of landscapes representative of East Brandywine's character. Since they extend well beyond the scenic road corridors determined for the Township, protection strategies for such vistas will need to encompass land in the broader landscape. A prime example is the view from Horseshoe Pike, just west of Corner Ketch Road, and looking southwest across the McCausland property. This vista is important in its capture of the traditional East Brandywine landscape character and as the visual gateway to Guthriesville.

Issues and Implications for the Future

1. Since the inventory of scenic resources in 1992, suburban development has reduced the amount of farmland and informal, unprotected open space in the Township. This has resulted in the loss of scenic road quality in several portions of the Township -- perhaps the two areas most significantly affected are in the northeastern part of the Township bordering Wallace and West Brandywine Townships and the area in the Township's southwest corner being developed as Applecross. Developments recently completed or underway in these areas have significantly changed the characteristics of the roadways and landscape. During the period within which the field survey was undertaken, several residential land developments had approvals pending. Unless earth disturbance activities had started (as with the Applecross site), these areas deemed scenic under existing conditions continue to be designated scenic for purposes of this plan. Further updates will be needed as approved developments come on line.
2. It is important to note that, since 1992, East Brandywine has lost 16 contributing visual features and one detracting feature. Losses are due primarily to increased development within the Township over the intervening years. Given the wealth of resources in the Township and the development pressure experienced throughout the region, this reduction should not be viewed as excessive. Nevertheless, it is important to keep in mind that the identified resources are essential to retaining the traditional landscape character of the Township, and that the trade-offs between protection and development need to be recognized in the land use approval process.
3. Without due consideration, the Township will continue to see losses to its identified scenic landscape. While not all losses are bad, they are permanent alterations to community character. In order to provide some level of protection in future years, the following policy and actions should be considered.

Future Township Policy

To protect community character, disturbance to scenic resources within the public viewshed should be minimized as properties undergo change or are converted to other uses.

Actions to Consider and Implement

1. Emphasize scenic resource protection during the subdivision and land development plan review process; consider adding a conservation plan objective to minimize disturbance and/or protect scenic resources.
2. Upon completion and adoption by the Board of Supervisors, use the Township's Conservation Opportunities Maps in creating and reviewing site plans.

3. Consider a scenic easement acquisition program and continue to encourage the donation of conservation easements.
4. Consider adopting a scenic roads overlay district which would address site planning and design within a scenic road corridor, primarily through the siting of common open space, landscaping/buffering measures, and sensitive treatment of visual accents.
5. Consider formal scenic road designation, either through local efforts or the state scenic byway program; consider appropriate signage and education.
6. Consider preparation of a brochure intended to outline the scenic qualities of identified scenic roads, including possible Historic Commission research regarding the history and use of each road.
7. Consider landscaping policies or regulations designed to protect or enhance existing viewsheds and scenic roads.

H. Historic Resources / Historic Sites And Structures

Existing Conditions

1. Guthriesville has been determined eligible for the National Register of Historic Places as a historic district locally significant for architecture and commerce. The village continues to be threatened with the possible removal of one of its most architecturally significant resources, the General Store Building; however, nomination of the district to the National Register remains a possibility. Unfortunately, Dorlan Mills, which is primarily in Upper Uwchlan Township but includes the James Dorlan House in East Brandywine, was declared ineligible for the National Register in 2005.
2. Between 1979 and 1982, 170 historic resources in East Brandywine were identified in a county-wide historic sites survey sponsored by the Chester County Commissioners, Chester County Historical Society, and Pennsylvania Historical and Museum Commission. Using local volunteers as collectors of basic data such as building location, period, style, and historic use, extant historic resources in the Township were mapped (see Map 9, Historic Resources) and, to some degree, evaluated.
3. In 1989, the Board of Supervisors adopted a historic resource protection article in the Zoning Ordinance that codified the Historical Commission's role in historic resource protection in the Township.

4. The 1989 article also included the establishment of a Historical Architectural Review Board (HARB) through Pennsylvania’s historic resource protection enabling law, Act 167. This section of the article was never utilized because the Township did not establish any Certified Historic Districts under the terms of the statute. Recent revisions to the Zoning Ordinance have deleted this section; it is expected to be adopted as a stand-alone ordinance when Guthriesville is proposed as an Act 167 Certified Historic District.
5. In 2005, the Township’s Historical Commission began updating and expanding the 1982 survey. This was done as part of the Chester County Atlas project to survey, inventory, photograph, and digitally map (GIS) all properties containing resources over 50 years of age. The field work for this effort led to the completion of additional Pennsylvania Historic Resource Survey Forms and an increase in both Class I and Class II historic resources as defined in the Zoning Ordinance. The resulting comprehensive Historic Resources Inventory fulfills a major goal of the Historical Commission and offers a definitive list of resources worthy of preservation.
6. The Historical Commission continues to work toward reuse and protection of the former General Store Building (1869) in Guthriesville. The owner possesses an approved demolition permit but has not acted on it. The loss of this building could seriously harm prospects for National Register listing of Guthriesville Village.
7. In 2007, the Township completed construction of an expanded municipal services and police complex. This facility was designed to serve the community well into the future. McCausland Hall, the former Guthriesville School and long-time site of municipal meetings, was retained and incorporated into the overall design of the municipal building. It continues in use on a more limited basis for meetings of various community groups.

Township Planning and Regulation Today

1. The authority for East Brandywine to plan and regulate for historic preservation derives from:
 - a. The National Historic Preservation Act of 1966, as amended, which established the National Register of Historic Places as the nation’s “official list” of historic resources worthy of protection. Eligible resources shall be of national, state, or local significance.
 - b. Section 605(2)(vi) of the *Pa. Municipalities Planning Code* of 1968, as amended, recognizes, as a legitimate classification for zoning, “places having unique historical or patriotic interest or value.” Also in Article VI of the MPC, Sections 603(b)(5), 603(c)(7), 603(g)(2), and 604(1) provide specific authority for zoning regulations that seek to protect, promote, and preserve historic resources, values, and areas of historic significance.

- c. Pa. Act 167 of 1961, 53 P.S. 8001 et seq., authorizes municipalities to delineate historic districts and appoint a Board of Historical Architectural Review (HARB) to advise the governing body on the issuance of “certificates of appropriateness” for physical changes to buildings within the district.
2. The 1987 Comprehensive Plan and 1992 Open Space, Recreation, and Environmental Resources Plan set a planning framework for historic resource protection. Those recommendations have stimulated recent Historic Commission actions to update the historic resources survey and strengthen regulatory terms.
3. The Board of Supervisors in 2007 adopted a revised Zoning Ordinance article that makes the demolition process more deliberative and allows the Board, in some cases, to deny a demolition permit request. The new zoning language also addresses demolition by neglect and adds requirements for Historic Resource Impact Study submittals.

Future Objectives and Actions

[Note: The recommendations below are divided into four categories: Regulatory, Historic Resource Survey, the National Register, and Education. Objectives and action items have been developed under each category.]

Regulatory

1. Add provisions to the 2007 Zoning Ordinance amendments that expand permitted use opportunities for historic properties and protect historic cartways and scenic vistas.
2. Monitor properties designated in the Zoning Ordinance as Class II for possible upgrade to Class I, and those not currently designated for possible addition to the Class II resources.
3. Consider seeking Certified Historic District status for Guthriesville Village and enacting a separate, stand-alone ordinance consistent with Act 167. Under its terms, a Historical Architectural Review Board (HARB) would then be created.
4. Consider seeking Certified Historic District status for Dorlan Mills, Lyndell, Corner Ketch, and Bondsville, thereby placing them within the jurisdiction of the HARB.

Historic Resources Survey

1. Based on the recently completed survey, develop a comprehensive list of “properties at risk.” Prioritize properties on the basis of historical and architectural significance and risk, and develop a strategy to research these properties (which could take several years) to complete the survey documentation.
2. Survey and inventory historic cartways and historic trees.
3. Upgrade resource survey forms to the current Pennsylvania Historic Resource Survey form (or modified version). Provide a brief description of architectural components, including photography and site plan.

National Register of Historic Places

A listing on the National Register is honorary, yet the listing, as well as the process, is often a catalyst for historic preservation in the form of education, appreciation, planning, and regulatory actions. Having a resource listed or with a determination of eligibility (DOE) also offers a certain level of protection from federally sponsored projects.

The 1982 historic resources survey determined that 19 individual properties and five historic districts in the Township were potentially eligible for the National Register. The five districts are: Guthriesville, Corner Ketch, Lyndell, Bondsville (the Collins and Aikman Mill complex), and Fisherville. To date, the following resources are listed on the National Register:

- Bridge Mill Farm, Marshall & Little Washington Roads (3/9/1983)
- Marshall’s Bridge, Marshall Road (6/22/1988)

The following resources have been determined eligible (DOE) for the National Register:

- Watters Property, 1279 Horseshoe Pike (5/10/1995)
- Guthriesville Historic District (6/7/1999)
- William Davis Farm, 2060 Bondsville Road (7/30/2003)
- Charles Trego Farm, Zynn & East Reeceville Roads (7/30/2003)
- Weaver Farm, 1234 Horseshoe Pike (3/16/2006)

Recommended actions include:

1. Regularly evaluate the status of properties and planning in Guthriesville Village and, if deemed appropriate, resume the process of nomination to the National Register.

2. Based on the results of the recently completed historic resources survey, consider working with owners of properties identified as potentially eligible for the National Register. Complete the Pennsylvania Historic Resource Survey Forms for those properties and submit to the Pennsylvania Historical and Museum Commission for determination of eligibility for the National Register.
3. Submit Pennsylvania Historic Resource Survey Forms for Lyndell, Corner Ketch, and Bondsville to determine if these potential districts are eligible for the National Register.
4. Apply to the Chester County historic preservation officer to certify Township properties that are potentially eligible for the National Register or that contribute significantly to local and/or County heritage under the Chester County Historic Certification Program.

Education, Advocacy, and Community Outreach

1. Encourage and support East Brandywine Historical Commission members in availing themselves of continuing education opportunities, e.g., conferences and workshops.
2. Develop an ongoing educational program for Township residents, property owners, and applicants to encourage historic resource protection. E.g., develop design guidelines to assist owners in historic district(s) or with other Class I and Class II properties.
3. Become a Certified Local Government (CLG). Among other things, CLG status requires HARB and Historical Commission members to participate annually in historic preservation education, is required for eligibility for CLG grants, and enables the Township to be eligible for federal historic preservation grants.
4. Develop a funding mechanism for property owners to protect, preserve, or adaptively reuse historic resources. This could include informing property owners about existing programs, such as the federal investment tax credit program, and developing a revolving fund or other such funding mechanism.
5. Consider, where necessary, the purchase of historic resources and/or properties where their protection and preservation are a recognized public benefit. Develop a Township "ready fund."
6. Encourage private approaches to preservation, such as preservation easements, rehabilitation of historic structures, and adaptive reuse.

CHAPTER V: GUIDING FUTURE USES OF LAND

A. Introduction

The Township's goals for the future use of land, and thus for an optimal future land use pattern, have remained reasonably consistent since the 1987 Comprehensive Plan. Based on the inventory of resources in the previous chapter and the goal-setting activities that inaugurated this plan update process, the following general set of future land use goals can serve the Township as a decision-making framework.

1. Land use policies on type and intensity of development must reflect the Township's natural environment and be consistent with natural resource protection policies.
2. Generally, maintain the Township's current character: primarily residential, with a mix of dwelling types, a maximum amount of protected open space, and agricultural activity where it can be sustained.
3. Enable sufficient commercial, public, and institutional services to meet the needs of the resident population.
4. Protect the character of Guthriesville Village within a mixed-use, higher intensity land use framework that creates a "town center" location for the Township.
5. Anticipate future pressures or needs that could otherwise impose unplanned changes on East Brandywine.

B. Overview Of Future Land Use Proposals

Protected and Undeveloped Lands Map

The Protected and Undeveloped Lands Map (Map 10) offers a clear testament to the fact that the overwhelming majority of properties in East Brandywine Township are:

1. occupied by a developed use, primarily residential but supplemented by commercial, institutional, public, quasi-industrial, recreational, and agricultural uses (as shown in greater detail on Map 2, Existing Land Use);
2. protected against development activity through public or homeowner association ownership and/or conservation easement; or
3. proposed or approved for a development use but not yet fully developed as such at this time.

Map 10 is dramatic evidence that, once these three categories are accounted for, a relative few parcels remain in an undeveloped, future-use-to-be-determined status. In terms of future land use policy, therefore, this plan focuses on:

1. making the continued protection of the Township's sensitive natural features the consistent framework for any land use decisions and land development activities;
2. maintaining compatibility with already developed tracts and neighborhoods;
3. guiding appropriate infill, redevelopment, and changes of use;
4. assuring that necessary supporting services and facilities are properly located; and
5. seeking the optimal solution for those properties that, if altered from current conditions, are most likely to be developed residentially or afforded permanent open space status.

As a practical matter, the maturation of the Township since the 1987 Comprehensive Plan makes the Protected and Undeveloped Lands Map (Map 10) a very good transition to this plan's Future Land Use Map (Map 11). The combination of lands already developed and those in a permanently protected status comprises 65% of the Township. Tracts that are the subject of development proposals but on which that development has not yet occurred or is only partially complete account for another 9% of the Township. (The road network occupies another 6%.) Although it is not inevitable that each of the properties in the latter group will become fully developed under their currently proposed terms, neither can departures from those plans be counted upon. The Township should remain alert to such case-by-case deviations and work cooperatively with the applicant or landowner to gain a mutually satisfactory outcome.

The final category on Map 10 is the limited number of parcels that are essentially "vacant" (including several now in agricultural use), unprotected, and susceptible to land use change. These total 20% of the Township. Most are zoned for residential use, and a number of those represent attractive potential additions to the fabric of protected open space.

Future Land Use Map

Map 11, Future Land Use, depicts a prospective land use pattern that could largely be reality by the end of the 10-year horizon of this plan. As documented above, the fate of about 70% of the Township's land is now committed to developed, permanently protected, or road surface status. On Map 11, therefore, the key policy positions are represented by the mixed commercial/residential category shown for Guthriesville and Lyndell, the locations of other commercially-designated land, and treatment of currently undeveloped and unprotected parcels. A brief summary of the land use categories on Map 11 is presented here, followed by a more detailed consideration of current conditions/policies and future objectives/actions for each.

Protected Lands

Because of the relative permanence of the current circumstance on each of these parcels, it is instructive to aggregate them into a future land use category, even though their varied specific uses embrace agriculture, park, institutional, homeowner association open space, and land under conservation easement (which, in some cases, applies to the preceding uses). To reflect this range of situations, the map further divides the Protected Lands into Public/Institutional (e.g., Township-owned and the Delaware County Community College campus, among others) and Protected Open Space (homeowner association lands and parcels protected by conservation easement). From a Township policy position, it is anticipated, and preferred, that these properties will not deviate from their existing condition.

Agriculture

As described in Chapter III, East Brandywine's traditionally strong agricultural economy has diminished markedly over the past four decades. Map 2, Existing Land Use, shows the relatively few properties (about 18% of Township acreage) that are used for agricultural purposes. However, a principal concentration exists in the southeast corner of the Township, with most of this current agricultural activity taking place on permanently protected land. With these properties subject to the terms of perpetual conservation easements, it is reasonable to project agriculture as their continuing use, at least through the life of this plan. Because these properties fall into two land use categories, the agricultural use is shown in a striped pattern that allows both categories to be recognized. On several other properties or groups of properties scattered around the Township, current agricultural use is projected as the land use for the foreseeable future. In most of these cases, a permanent open space commitment will be sought from the owners

Residential

By December 2008, residential land use comprised 49% of the Township, with the great majority of dwelling units being single-family detached on individual lots. As shown on Map 10 and documented in Chapter III, a substantial number of additional dwelling units, including a considerable amount of townhouses and two-family dwellings, have been approved and are in various stages of the construction process. The residential designation on Map 11 includes this combination of properties, along with those not currently developed or protected but on which residential use appears both probable and compatible with surrounding uses. Where these properties contain sufficient acreage, the result of any future residential development most likely will include areas of permanently protected common open space or (in the case of limited development plans) areas of permanent open space that are eased to a local land trust. Additional residential use is anticipated within the Mixed Commercial/Residential areas and on certain parcels shown as Residential or Protected Open Space, as shown on Map 11 and described below.

Commercial

Map 11 portrays some refinements in the Township's policy toward commercial and mixed-use development. With the principal focus for future commercial and office use now placed on Guthriesville, the areas designated more strictly for commercial use become important complements. In one key change aimed at supporting future development in Guthriesville, the area currently zoned MU Mixed Use-Commercial to the east of Guthriesville is proposed for future residential use. However, lands immediately adjacent to the Guthriesville core area, on the north side of Horseshoe Pike, as well as the MU-zoned land to the west of the village, should remain available for non-residential use, such as the retail and service commercial uses now located in those areas. The area currently zoned CS/LI Commercial Service/Limited Industrial, permitting a mix of commercial and light industrial uses in the southeastern corner of the Township, is proposed for continuation of this pattern.

Mixed Commercial/Residential

Chapter VII presents the Guthriesville Village Vision Plan and Development Strategy, which recommends an increased intensity of commercial and residential development in and adjacent to the current village area. This "master plan" offers the concept of the Township's most extensive concentration of commercial and office use, intertwined with the highest densities of residential use, located on the south side of Horseshoe Pike on either side of Bondsville Road. The plan also suggests circulation improvements to serve what could become the Township's central core area, including the extension of E. Reeceville Road and, as one option, a roundabout at Bondsville and E. Reeceville Roads.

A conceptually similar, but much less intense, course of future land use is proposed for the village of Lyndell. This reflects, in part, some existing and recent non-residential land uses in the village and the Township's receptivity toward continued and even expanded commercial use. Under this mixed-use future, however, it is expected that residential land use will continue as the predominant choice.

Residential or Protected Open Space

Among the parcels shown on Map 10 as undeveloped and unprotected, most have been evaluated by the Township Open Space Committee for possible stewardship action to achieve permanent open space status. In cases where such a step has been found to have little promise, these parcels are shown on Map 11 in the future residential category. Where the prospect for some form of permanent open space protection remains viable, however, Map 11 presents the two options – residential or protected open space. If permanent open space protection cannot be achieved, this plan envisions any change from current conditions to result in residential development. Again, a site plan for such use can, in most instances, be expected to include areas of common open space.

C. Detailed Consideration Of Future Land Use Categories

Protected Lands

a. Public and Institutional

Current Status and Township Policy

1. In 2008, a total of 188 acres (2.6% of the Township) was occupied by uses owned and/or operated by public or institutional entities, including East Brandywine Township, the Downingtown Area School District, Chester County, Delaware County, the Commonwealth of Pennsylvania, the East Brandywine Fire Company, and several churches. This represented an increase from the 102 acres in this category in 1986, with the growth largely attributable to the establishment of the Community Park, expansion of the Township administration complex, and Township acquisition of the Bondsville Mill property.
2. With the exception of the Delaware County Community College campus, these uses primarily are serving the residents of East Brandywine and its immediate environs.
3. Township residents continue to be served by hospitals and libraries in other locations in Chester County. Any change in this situation is unlikely in the near term.
4. The Zoning Ordinance accommodates and provides standards for larger-scale institutional uses that might appropriately occupy tracts in the R-1 or R-2 Residential Districts with minimal land coverage and disturbance. With few such tracts remaining, however, there is not a great likelihood of seeing such a use locating in the Township.
5. Aside from further expansion of the Community Park, there are no identified needs at this time for additional Township property that might lead to further acquisitions.
6. The Downingtown Area School District's current negotiations for purchase of the Weaver tract are expected to result in upwards of 60 acres, fronting the east side of Bollinger Road and/or the north side of E. Reeceville Rd., put to future use as a middle school, and thus permanently protected as such.

Future Land Use Recommendations

1. Where future needs are identified, institutional and public uses directly serving the growing East Brandywine population should continue to be permitted; locational criteria and standards of compatibility should be reviewed periodically for appropriateness.

2. Where provided in residentially zoned areas, such uses should only be permitted through conditional use approval by the Board of Supervisors.
3. Actions to expand the Community Park should be pursued in concert with the needs and wishes of the current landowners.
4. Additional links in the Township trail system should be established, primarily through stipulated locations within common open space on developing tracts. As necessary, additional critical trail links should be sought through easement donation or acquisition or, as a last resort, purchase of a trail corridor segment in fee.
 - b. Protected Open Space

Current Status and Township Policy

1. Only 107 acres (1.5%) of the Township is in public ownership, and very little of that is classified as non-recreational open space. Protected open space has been accomplished quite successfully, however, through the use of conservation easements and the required set-aside of common open space on clustered development tracts.
2. The East Branch Brandywine Creek floodplain remains a largely undisturbed open space corridor. There is scant public access to this land, although the emerging Township trail system should include links to this area.
3. East Brandywine has consistently protected its sensitive natural features from disturbance through Township regulatory measures. As a result, lands containing floodplains, riparian corridors, water hazard soils, and steep slopes have retained their open character even as adjacent portions of a tract or neighboring properties undergo fundamental land use changes.
4. Permanent open space continues to be created through the residential development process. The shift from a somewhat limited planned residential development option to the more broadly applicable cluster development regulations has augmented the amount of common open space (permanently protected by the imposition of a conservation easement at the time of approval) resulting from such development activity. With some exceptions, most of this open space land has not been devoted to active recreation but retained for passive recreation, trail use, or in an undisturbed state. (Perhaps the prime exception is the private golf course that will be part of the Applecross residential development.) The same policy is being applied in the use of the subdivision ordinance's open space/fee in lieu provision, with the recreation needs being met off-site. By late 2008, a total of 905 acres (12.6% of the Township) had been secured as open space through these mechanisms.

5. In 2002, East Brandywine voters approved a referendum authorizing a real estate tax increase of 1/8th mill (.000125%) dedicated specifically to the acquisition of open space interests. Subsequently, the Board of Supervisors appointed an Open Space Committee to identify candidate properties for open space protection and to initiate contact with landowners. To date, the committee has helped secure conservation easements protecting two properties and a total of approximately 51 acres. There are perhaps a dozen additional properties in the Township that the committee considers to have open space potential; it is in various stages of dialog with several of those owners.
6. Respondents to the Resident Survey, when asked about the importance of various open space, recreation, and environmental resource issues, ranked natural resource protection first and open space preservation second. When asked what open space and recreation purposes might warrant a Township tax increase, only "acquire open space" received more than 50% support (66% yes, 33% no).

Future Land Use Recommendations

1. Actively pursue a policy of retaining as much of the remaining traditional open, natural character of the Township as possible.
2. Through the work of the Open Space Committee, continue to monitor and evaluate currently vacant or underdeveloped properties where permanent open space protection is desirable and feasible; engage in outreach to those landowners to present options for future action. In this regard, the principal focus of the committee's work will be on the properties shown on Map 11 as "Residential or Protected Open Space."
3. Protect sensitive natural features, scenic resources, and historic sites through permanent protection of the properties on which they are located.
4. Continue to create permanently protected open space within new developments, and seek connections between adjacent tracts through contiguity of open space parcels and the trail system.
5. Continue to refine Township land use regulations and fiscal capabilities designed to gain permanent protection of priority open space parcels.

Agriculture

Current Status and Township Policy

1. Acreage in the Township devoted to agriculture has maintained a steady decline, as documented in the three comprehensive plans prepared since 1970:

	<u>Acres</u>	<u>% of Township</u>
1970	3,685	51.1
1986	2,433	33.8
2008	1,283	17.9

2. Most of the current agricultural activity in the southeastern part of the Township is conducted on lands under permanent conservation easement.
3. The owners of several additional parcels used for agriculture are currently considering stewardship actions.

Future Land Use Recommendations

1. During the life of this plan, it is the Township's expectation and policy preference that agricultural activity of some sort will be sustained where the property is permanently protected by conservation easement.
2. As it is able, the Township will assist in making agricultural retention feasible for those landowners who wish to continue farming, including nursery and equine operations. It will solicit and support landowner interest in the Chester County Agricultural Lands Preservation Board's easement purchase program, and will seek to minimize regulatory hindrances to agricultural operations where they are identified and found to be unreasonable.

Residential

Current Status and Township Policy

1. As agricultural and vacant lands in East Brandywine have steadily diminished over the past four decades, residential land use has commensurately increased. Since 1970, this upward trend in residential acreage as a percentage of the Township as a whole is as follows:

1970	10%
1980	18%
1986	28%
2008	49%

2. As documented in Chapter III and shown on Map 10, the potential for a substantial near-term increment in residential land use exists in the form of numerous tracts with approved residential developments on which the construction of dwelling units has not occurred or is only partially complete. If fully built as approved, these tracts would yield an additional 1,047 new dwelling units.
3. Minimum lot sizes for single-family detached dwellings in the three principally residential zoning districts remain appropriate in relation to servicing by individual water and sewage systems and compatibility with surrounding patterns of use. With increased net densities on tracts using cluster development, public or community water and sewer service are being provided as necessary. The availability of this infrastructure will be a factor in the creation of mixed-use and multi-family development, such as in Guthriesville and, possibly, Lyndell.
4. The Township's residential land use policies essentially have followed recommendations made in the 1987 Comprehensive Plan. Development continues to be primarily in the form of single-family detached dwellings, but the Zoning Ordinance offers reasonable opportunity for multi-family development. The change from a planned residential development zoning option to cluster development has allowed broader use of flexible site design concepts. Appropriate adjustments were made to the Zoning Ordinance to enable expansion of the existing mobile home park.
5. As demonstrated on Map 10, Protected and Undeveloped Lands, there remain relatively few agricultural/undeveloped and unprotected tracts on which some form of land development proposal has not been made. Map 11, Future Land Use, projects continued agricultural use for several of these properties. Otherwise, their future is expected to be as residentially developed or as permanently protected open space, with agriculture still feasible under the latter option in some cases.
6. The Township has taken complementary actions to support the living environment of its residents. These include establishment of a Traffic Impact Fee under which new development contributes to needed road and intersection improvements, and the use of cluster development and the open space/fee in lieu requirements to assure a sufficient reservoir of open land and recreation opportunities, including trails.
7. East Brandywine continues to meet its obligation to allow a mix of dwelling types, and the policies of this plan will sustain compliance with fair share requirements.
 - a. As documented in Chapter III, the relative share of multi-family dwellings within the existing housing mix increased slightly from 1980 (12.8%) to 2000 (15.8%). Additions to the housing stock during the current decade

have been exclusively single-family detached and mobile homes, resulting in a reduction in the multi-family share to 13.9%. The currently approved but un-built residential development plans propose 1,047 additional dwelling units. Within this total, 458 are to be townhouse dwellings and 38 are two-family dwellings. If added to the current housing stock, this mix of dwelling types will add greater diversity and increase significantly the percentage of multi-family dwellings

- b. Terms of the existing Zoning Ordinance provide opportunities for multi-family dwellings in the VC Village Commercial District (including as part of a mixed-use structure) and the R-3 Residential District, where a gross density of up to five dwelling units per acre is permissible. The future status of several undeveloped tracts in the R-3 Residential District is undetermined at present, but opportunities exist for the development of approximately 125 multi-family dwelling units. In the past decade, major portions of the R-3 Residential District, with the ability to create multi-family dwellings, were proposed for, and in some instances already developed in, single-family detached dwellings.
 - c. The Guthriesville Village Vision Plan and Development Strategy (Chapter VII) proposes a significant increase in the density and number of dwellings in much of the area currently zoned VC Village Commercial. A total of 335 units is proposed, comprised of 150 townhouses and 185 apartment units above first-floor commercial uses.
 - d. Application of the mixed commercial/residential use concept in Lyndell will provide additional opportunities for multi-family dwellings, although at a more modest density.
 - e. Opportunities for expanded mobile home park use were added to the Zoning Ordinance in 1999, but have yet to be utilized.
8. Home occupation regulations in the Zoning Ordinance have been revised recently to incorporate standards added to the Municipalities Planning Code and facilitate such uses where they pose no impacts on residential neighborhoods.

Future Land Use Recommendations

- 1. Maintain zoning for single-family detached dwellings, primarily through cluster development design, as a principal component of the housing stock, with locations and densities generally compatible with the existing pattern. Monitor the effectiveness of the zoning provisions and adjust as appropriate.
- 2. Maintain appropriate density limits to achieve resource protection objectives and avoid potentially deleterious effects from on-site water and sewage systems.

3. Provide highest density residential use within Guthriesville Village in accordance with the Vision Plan and Development Strategy (as presented in Chapter VII) and in Lyndell. Revise the boundaries and terms of the current VC Village Commercial District in both locations.
4. Continue to offer sufficient opportunities for a mix of dwelling types, both in the R-3 Residential District and the mixed-use terms proposed for Guthriesville and Lyndell.
5. In support of the Vision Plan for Guthriesville, the Zoning Ordinance should be modified to change the MU Mixed Use-Commercial District east of Guthriesville to become R-2 Residential.
6. Explore initiatives for creating affordable/workforce housing.
7. Assure that future residents can be served and supported, where necessary, by infrastructure such as public or community water supply and sewage facilities, roads, open space, and recreation.

Commercial and Industrial

Current Status and Township Policy

1. Currently, 137 acres, or 1.9% of the Township, are identified as in commercial or industrial use. These are largely situated in commercially zoned areas – Brandywine East Towne Center, Guthriesville, Lyndell, the CS/LI Commercial Service/Limited Industrial District at the southeastern end of the Township – or as a few scattered nonconforming uses.
2. Most of the commercial uses are of a retail or service nature, and presumably enjoy a more local than regional customer base. Township residents continue to have relatively extensive regional-scale commercial choices beyond the Township but within reasonably close proximity.
3. Respondents to the Resident Survey felt that the Township contains a sufficient amount of commercial land (73% yes, 20% no) and that it is in the proper locations (78% yes, 12% no).
4. The Township continues to receive few expressions of interest for new commercial or industrial uses from potential providers.
5. Zoning opportunities for convenience commercial uses recently were removed from the VC Village Commercial and MU Mixed Use-Commercial Districts and relocated to the CS/LI Commercial Service/Limited Industrial District.

6. Increasingly in recent years, East Brandywine residents are operating home-based businesses. With few exceptions, these practices have remained consistent with the Zoning Ordinance terms for home occupations. The amount of such activity is anticipated to increase as an important element of the economy. The Board of Supervisors has recognized this trend through recent regulatory amendments, which also are intended to protect the character of neighborhoods in which permitted home occupations are located.

Future Land Use Recommendations

1. Commercial uses in East Brandywine should continue to be oriented primarily to the needs of Township residents, with the emphasis thus on retail and service uses of a local, convenience nature.
2. The Township should not plan to accommodate large-scale, region-serving commercial uses.
3. Commercial activities should be designed and located in a manner that avoids the negative impacts of a strip pattern.
4. In support of the Vision Plan for Guthriesville, the Zoning Ordinance should be modified to change the MU Mixed Use-Commercial District east of Guthriesville to become R-2 Residential.
5. Retain the commercially-zoned areas of the Township as shown on Map 11, i.e., the MU Mixed Use-Commercial District west of Guthriesville, the properties on the north side of Horseshoe Pike within Guthriesville Village, and the properties zoned CS/LI Commercial Service/Limited Industrial along Horseshoe Pike at the eastern end of the Township.
6. With few remaining parcels available and appropriate for industrial use, the Township anticipates very little growth in such uses. Consistent with current Zoning Ordinance terms, light industrial uses should continue to be made available in the MU Mixed Use-Commercial and CS/LI Commercial Service/Limited Industrial Districts.
7. Office, automotive-related, and light industrial use opportunities, other than agriculture, should be limited to those similar in scale, character, and impact to uses now existing, when in compliance with performance standards.

Mixed Commercial/Residential

Current Status and Township Policy

1. Commercial activity in Lyndell has waned in recent years, despite its VC Village Commercial zoning; the village is assuming an essentially residential character. The Board of Supervisors has maintained opportunities for commercial activity through the VC District terms, however, and does not seek to preclude viable commercial uses within the existing village.
2. East Brandywine has virtually no planned mixed-use development, but the Guthriesville Village Vision Plan and Development Strategy (as presented in Chapter VII) presents a feasible concept for concentrating a mix of retail and service commercial uses with what could become the Township's highest density residential uses. Factors such as the Determination of Eligibility for the National Register of Historic Places and the relative concentration of property ownership give this conceptual development plan encouraging prospects for realization.
3. The conclusions of the Guthriesville Village Vision Plan and Development Strategy are to focus on the village as the commercial and mixed-use hub of the Township, with a corresponding reduction in zoning for such uses elsewhere, other than Lyndell.

Future Land Use Recommendations

1. Commercial, including mixed-use, development (including retail, office, and restaurant) should be facilitated and encouraged in Guthriesville Village in accordance with the Vision Plan and Development Strategy.
2. The Zoning Ordinance should be modified to:
 - a. alter the terms of the VC Village Commercial District at Guthriesville to implement the recommendations of the Vision Plan; and
 - b. modify slightly the area currently zoned VC Village Commercial at Lyndell, changing the district to mixed commercial/residential that is similar to, but less intense than, the changes to be made to the Guthriesville core area.
3. Specific implementation actions to accomplish the Guthriesville plan, as presented in Chapter VII, should be carried out by the appropriate parties, with the Township serving as catalyst and advocate in addition to the taking the direct actions proposed for it.

Residential or Protected Open Space

Current Status and Township Policy

1. Of the parcels shown in white on Map 10 as being undeveloped and unprotected, those shown in the Residential or Protected Open Space category on Map 11 are of sufficient size and appropriate location to offer legitimate residential cluster development opportunities. At the same time, each has desirable attributes that make it attractive as a protected open space parcel within the Township's land use fabric.
2. Each of these parcels is zoned for residential use, but virtually all have been evaluated favorably as protected open space candidates by the Open Space Committee. In some cases, dialog about the variety of permanent open space protection measures is in progress.

Future Land Use Recommendations

1. On those properties where agriculture is the current use, the Township's interest in achieving permanent open space protection is coupled with a desire to facilitate continuing viability of the agricultural use.
2. Where any of these properties is to be developed residentially, the Township should pay particular attention to the location and characteristics of proposed common open space in order to maximize benefits from contiguity with adjacent open space and the ability to achieve trail connections.
3. Where a landowner expresses interest, the Open Space Committee can seek assistance from Chester County's Agricultural Lands Preservation Board to gain permanent protection of an agricultural property.
4. The Township should maintain its working relationships with the Natural Lands Trust and the Brandywine Conservancy and solicit their participation in landowner conversations.
5. The Zoning Ordinance, as it affects these properties, should be examined periodically to be sure its provisions are equitable to the landowners and supportive of the Township's land use and design objectives.

CHAPTER VI: PROVIDING ADEQUATE FACILITIES AND SERVICES

Preceding chapters have examined East Brandywine's expected future population and desired land use pattern, in the context of protecting its natural, scenic, cultural, and historic resources. An added ingredient in the successful realization of this projected future is the continuing availability of public facilities and services to support the population and land uses. This chapter looks at the current status and anticipated future demand for those facilities and services, including those that are the direct responsibility of the Township and those provided by other entities with support from the Township. Particularly with respect to Township-provided services, the objective is to identify levels of service sufficient to meet anticipated needs while also reflecting the Township's fiscal capabilities and prudent management of its resources.

A. Roads and other Circulation

Current Status and Township Policy

1. Introduction

This section of the Comprehensive Plan addresses the elements of the existing circulation system of East Brandywine Township. The existing road network guides both circulation and land use patterns in the community.

Traffic circulation throughout East Brandywine is becoming an issue of increasing concern. Conditions along the main highway corridor that traverses the Township – Horseshoe Pike (U.S. Route 322) -- are well known. Horseshoe Pike exhibits the highest traffic volumes and the highest traffic accident frequencies in the Township. Several other roads in the Township, such as Creek Road (PA Route 282), Hopewell Road, and Corner Ketch Road, have problems with poor road surface, limited sight distance, or awkward alignments.

Significant portions of the local road network are especially scenic, as described in Chapter IV and shown on Map 8. The preservation of these scenic resources needs to be balanced against the correction of safety problems. It is desirable to discourage the use of local roads for the movement of through traffic, both by supporting the type of improvement projects aimed at maximizing capacity along the major highway corridors in the Township and discouraging improvements that increase capacity and attract through traffic to the local roads. This section documents both road function and conditions as a basis for making such decisions using a logical planning process.

2. Current Functional Classification of Roads

East Brandywine has a total of 56.33 miles within its boundaries. These roads are owned and maintained both by the Township and by the State. The State owns 22.25 miles, which consists primarily of the highway network of the community. The Township owns 34.08 miles of the network, which is comprised of a combination of rural, scenic, and farm roads and streets within residential neighborhoods. There are four traffic signals within, or on the boundaries of, the Township.

Roadways have been classified according to the function they serve in the overall network. Function is based on volumes of traffic, travel speed, accessibility, relationship to places, and relationship to other roadways. Some carry through traffic at higher speeds, some carry local traffic between neighborhoods, and some provide access from individual residential driveways. Road function helps to define the character of the road and, ultimately, the design and access treatment.

The different classifications are as follows:

Expressways service the highest volumes for the highest average trip lengths. Expressways are designed to provide access only at interchanges while providing linkages on an interstate or inter-regional basis. Expressways allow the highest level of mobility for trucks and are intended to allow the highest levels of speed for all vehicles.

East Brandywine does not contain any expressways. U.S. Route 30 is located to the south of the Township with several interchanges accessible from Horseshoe Pike, Bondsville Road, and East Reeceville Road. The Pennsylvania Turnpike (I-76) is located to the north of the Township with an interchange accessible from Pottstown Pike (PA Route 100).

Principal Arterials have as their major function the movement of large volumes of traffic at relatively high rates of speed, often at 55 miles per hour. They provide higher types of service and facilitate traffic over longer distances on an inter-county or interstate basis. Access points are frequently limited and controlled.

Horseshoe Pike is considered a principal arterial. Access points along Horseshoe Pike are not as limited as some principal arterials with reduced speed limits, but this pattern has been established over a long period of time that has seen significant changes in land uses abutting the highway. Horseshoe Pike is an important interstate and inter-county connection that provides a connection to Harrisburg and State College, Pa, through central Chester County to the City of Chester, and eventually Atlantic City, N.J.

Minor Arterials interconnect with and augment the principal arterial system. These roads provide services for trips of moderate length and have controlled access points. Minor arterials provide greater access to adjacent land than principal arterials.

Currently there are no roads in East Brandywine that fall into this category.

Major Collectors connect municipalities and population centers. These roads are the major contributors to arterial traffic and frequently carry fairly heavy traffic volumes at moderate rates of speed. Access points are somewhat controlled on collector roads. It is not uncommon for major collector roads to span the entire length of a community.

Creek Road (PA Route 282) is considered to be a major collector road in East Brandywine. Creek Road provides an important connection from northern Chester County to Downingtown. Other major collectors in East Brandywine include Bondsville Road (S.R. 4015), Corner Ketch-Lyndell Road (S.R. 4037), Hopewell Road (S.R. 4015), Little Washington-Lyndell Road (S.R. 4006), and North Bailey Road.

Minor Collectors facilitate relatively low volumes of traffic at lower speeds. They gather traffic from local roads and direct it to the arterials and major collector road networks. Minor collectors often provide traffic circulation between and within residential neighborhoods.

The minor collectors in East Brandywine include Dilworth Road, East Reeceville Road (S.R. 4002), Marshall Road, North Guthriesville Road, Reeds Road (S.R. 4015), Rock Raymond Road (S.R. 4017), Caln Meetinghouse Road, Dowlin Forge Road (S.R. 4004), Osborne Road, and Highspire Road.

Local Roads provide the greatest access to adjacent land. Local roads provide for short distance, low speed travel, and make up the majority of Township-owned roads. The number of access points is greatest on local roads.

The remainder of the roads in the Township may be identified as local roads. They are mainly to handle local traffic and are primarily used by individuals in the community. Map 12, Roads and Circulation, identifies the functional classification assigned to each road segment in East Brandywine.

3. Roadway Conditions

With the exception of the Horseshoe Pike corridor, and the intersection of Horseshoe Pike and Hopewell Road/Bondsville Road in particular, the roadway network is generally sufficient for the current traffic and population of the area. Along the Horseshoe Pike corridor, there is a need for additional capacity to adequately accommodate the growing volume of through traffic moving within the Township. Otherwise, areas of concern are those that pose a threat to safety of anyone using the roadways. Roadway conditions include:

- Unimproved surfaces;
- Roadway alignment problems;
- Sight distance problems;
- Dangerous curves; and
- Bridge limitations.

There are numerous alignment concerns, mostly horizontal alignment in the form of dangerous curves, located primarily in the northern and southwestern portions of the Township. Horizontal alignment refers to the curves in the road, while vertical alignment refers to the hills in the road. These roadways evolved as linkages along property lines. As development occurs and traffic increases on these roads, alignment correction will become increasingly important.

Sight distance problems are not uncommon throughout East Brandywine. Country roads were designed to handle low volumes of traffic, or simply followed the tracks of farm lanes. With increasing volumes comes the need to maintain safe sight distances. It is necessary to be aware of and control vegetative growth adjacent to intersections. In some instances, it may also be necessary to properly grade adjacent land. Grading requirements can be identified during the development review process. The inability to see oncoming traffic at an intersection can be the cause of many accidents.

It is worth noting that the current levels, and resulting impacts, of traffic on roads within the Township constitute a considerable negative for a substantial number of Township residents. When asked to name factors that detract from a desired "quality of life," 60% named traffic.

4. Accident Reports

A summary of accident data from the East Brandywine Township Police Department was used to identify potential problem areas within the Township. Map 12 shows the location of highest accident rates (defined as locations with five or more reportable accidents during a 5-year period) that occurred between 2003 and 2007. The majority of the reported accidents occurred along the Creek Road, Horseshoe Pike, Hopewell Road, and Bondsville Road corridors. The single location with the greatest frequency of reported accidents was the intersection of Creek Road and Dowlin Forge Road. The accidents occurring along these routes are expected because of the amount of traffic that uses them, coupled with the amount of development that is established along the corridors.

The Horseshoe Pike corridor has been an area of many traffic accidents in East Brandywine. It is likely that many accidents have occurred along this highway because of the number of intersecting side streets and access driveways along this highway segment, and the inadequate facilities for exclusive/protected turning lanes along the main highway. This is also the case for Creek Road, Hopewell Road, and Bondsville Road, although horizontal and vertical alignment along these roads, which are located in somewhat more rural settings, factors into many of the accidents.

5. Average Daily Traffic

Average Daily Traffic (ADT) is the total 24-hour traffic volume, in both directions, on a road segment for a typical weekday. Traffic volumes fluctuate throughout the year, with heavier volumes in the fall, winter, and spring, and lighter volumes in the summer. Daily traffic counts, dating back to 1998, were obtained from the files of the Delaware Valley Regional Planning Commission (DVRPC).

Map 12 shows the ADT volumes that were compiled for this plan. As expected, the traffic counts reveal that Horseshoe Pike carries the highest traffic volumes within the Township, ranging from about 15,000 to 19,000 vehicles per day during the period 2003-2007. The only other road segments that carry in excess of 5,000 vehicles per day are Creek Road between Hopewell Road and Dorlan Mill Road, and also Creek Road south of Dowlin Forge Road.

6. Level of Service

Level of service analysis is used to establish the level of efficiency that is being obtained on a roadway segment, intersection, or roadway interchange. Level of service (LOS) is a comparison between the volumes of traffic that use a road or intersection and the maximum capacity that the same road or intersection is able to handle. The capacity of an intersection or roadway is based on a number of factors:

- the number of lanes;
- the width of the lanes;
- the presence or absence of any turning lanes;
- the percentage of trucks present; and
- the type of traffic control device.

LOS is expressed using the letters A through F. A is considered the best possible driving situation, in which a driver may move totally independently and without the influence of other motor vehicles. With an LOS of A, a driver feels the least amount of anxiety because of the ability to drive at any desired speed without pressure from outside influences. As the LOS moves closer toward F, driving becomes more difficult. It is necessary to move at the same speed as other vehicles, and it is difficult to maneuver from one lane to another. Driving at LOS B is more difficult than A, C is more difficult than B, and so on until an LOS F is reached. LOS F, considered unacceptable to most drivers, often occurs under oversaturated conditions when the volume of traffic can become too large for the capacity of the road or intersection, and heavy traffic backups may result.

Roadways and intersections are generally designed to handle volumes at an LOS C in rural conditions and LOS D in built-up areas. With the exception of intersections along Horseshoe Pike, LOS on the roads and intersections in the Township is generally acceptable due to the limited number of signalized intersections and the rural character along many of the roadways in the Township.

Future Objectives and Actions

The Township's main circulation goal is to continue and enhance the efficiency and safety of the current circulation system while preserving the rural character of the community. A principal means for achieving this will be to encourage through traffic to use highways functionally designed to accommodate through traffic.

1. Future Functional Classification

The future functional classification of the road network is a useful guide for the placement of future land use. Although East Brandywine wishes to preserve the rural character of the local road network, there are some roads that may not merit the same level of preservation because of the current or future function they serve. Those roads that serve a higher function than the local road network are Horseshoe Pike and, perhaps, Creek Road, Hopewell Road, and Bondsville Road. The future functional classifications of roads in the Township are presented on Map 12, Roads and Circulation.

The future functional classification of the road network is an important issue because it ties directly to the future land use of a community. Development needs to be guided to areas with collector road access to the arterial network in order to maintain efficient, managed access and safety control while preserving the rural character of the local roads. Table 2 lists the design guidelines for roads with different classifications, as recommended by the Chester County Planning Commission.

Table 2: Design Guidelines by Functional Classification of Roads

	Expressway	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local Access
Number of lanes	min. 2 per direction	2-8 lanes	2-4 lanes	2-3 lanes	2-3 lanes	1-2 lanes
Median width	10-100 ft	4-60 ft	4-60 ft	2-40 ft	none	none
Travel lane width	12 ft	12 ft	12 ft	10-12 ft	10-12 ft	9-12 ft
Left turn lane width	NA	10-12 ft	10-12 ft	10-12 ft	10-12 ft	10 ft
Right turn lane width	12-14+ ft	12-14 ft	12-14 ft	10-12 ft	10-12 ft	9-12 ft
Shoulder width	10-12 ft	8-10 ft	8-10 ft	2-8 ft	4-8 ft	4-8 ft
Parking lane width	NA	8-12 ft	8-12 ft	8-11 ft	7-11 ft	7-10 ft
Buffer width	25-50 ft	15-20 ft	15-20 ft	10-15 ft	10-15 ft	10-15 ft
Sidewalk width	NA	4-8 ft	4-8 ft	4-8 ft	4-8 ft	4-8 ft
Right-of-way width	150-300 ft	100-150 ft	80-120 ft	60-80 ft	60-80 ft	33-50 ft
Design speed	50-70 mph	30-70 mph	30-70 mph	20-60 mph	20-60 mph	20-30 mph
Percent grade (max)	3-5%	3-9%	3-9%	5-12%	5-12%	5-12%

Design guidelines recommended by the Chester County Planning Commission, 2004
 NA: Not Applicable

2. Preservation of Local Road Character

The rural character of East Brandywine is, in part, defined by the local road network. Several reasons support the need for preservation. First, the local road network helps define the settlement history of the area. The roads follow original property lines and trails. Second, the local roads provide a direct link to many of the scenic views of the Township (see discussion of scenic resources and Map 8 in Chapter IV, Section G). These roads are themselves often a part of the scenic quality of the community. Expansion of the cartways and allowing increased traffic volumes can only reduce the current aesthetic appeal of these rural roads. The physical limitations of the local roads are a factor in keeping large volume and high speed traffic off these roads. This is a concern from a safety standpoint. If the local roads are widened, the speed and volume of traffic will likely increase.

As East Brandywine and surrounding communities experience development, it may be necessary for safety reasons to widen the more heavily traveled roads. This is one reason why such development should be directed to areas that are the most suitable for increased traffic. Suitable areas include lands along collector roads, with managed access to Horseshoe Pike from the collector roads. This would allow traffic easy access to the major routes, enabling the local road network to remain less traveled. If development is limited along local roads, and safety and mobility do not become a problem, the local roads can remain essentially as they are. Keeping the cartways narrow, with characteristic bends and grades, will hinder increased volumes and speeds while helping preserve this cultural resource in the future.

To maintain and enhance the qualities of the roads running through the Township, they must be kept as attractive as possible. East Brandywine should consider establishing a program similar to the PennDOT "Adopt-A-Highway" program to increase the aesthetic quality of local roads in the Township. This will help insure that the scenic quality of the roadways and adjacent scenic views remain intact. It will also help build public support for preservation by including individuals and groups directly.

3. Circulation Funding Opportunities

To implement roadway improvements, it is necessary to have appropriate funding. The funding source for circulation-related projects depends on such factors as: ownership of the road (state or municipally owned); the type of project, whether it is a road or bridge project; and the magnitude of the project, whether it is a resurfacing, widening, or a road relocation project.

Municipalities receive funds directly from the state under the Liquid Fuels Fund program. These funds are acquired by the state through taxes received through the purchase of fuel. The funds are allocated according to a legislative formula that takes into consideration mileage of municipal roads and municipal population. Liquid Fuel funds are used by municipalities to maintain roads and to make minor improvements.

Improvements to state-owned roads, if federal or state funds are used, are accomplished through the PennDOT 12-Year Program and the DVRPC Transportation Improvement Program (TIP). Although financial responsibility for maintaining or improving state-owned roads is placed on PennDOT and the state, local municipalities are responsible for alerting the proper authorities about safety conditions and needed improvements. For projects that require PennDOT attention, East Brandywine should submit documentation of concerns and possible improvements to PennDOT. In turn, PennDOT will identify the timing and proper funding program for the project.

All federal funds become available through the PennDOT 12-year program and the DVRPC TIP. The availability of federal or state funds depends on the necessity of improvements. It is imperative that traffic conditions be documented in the Township so that the need for improvements can be exhibited to PennDOT and the County.

4. Township Initiatives

It is now primarily the responsibility of East Brandywine Township and Chester County, not PennDOT, to study, recommend and often design needed improvements to state roads. The process of deciding which state roads should be improved has changed substantially over the last decade. PennDOT no longer has the traffic planning staff to regularly study roads and propose improvements. Consequently, the initiative of local and county governments is an important factor in the state's decisions supporting road improvement requests.

Accordingly, East Brandywine has enacted an ordinance to collect Traffic Impact Fees, developed through completion of a Roadway Sufficiency Analysis, to be applied to the approved Transportation Capital Improvements Plan. The most significant element of the Transportation Capital Improvements Plan is the proposal to design and construct the Guthriesville Loop Road, a one-way, two-lane southbound road on a new alignment around the village of Guthriesville that will supplement a one-way, two-lane northbound re-designation of Horseshoe Pike

In the short term, a segment of this road could be constructed as a two-way, two-lane extension of East Reeceville Road from Bondsville Road to Horseshoe Pike, as described in the Guthriesville Village Vision Plan. An option for traffic control at the intersection of Bondsville Road and East Reeceville Road may include construction of a roundabout. The construction of this segment of the Loop Road would be coordinated with development of the Guthriesville Village Center. Right-of-way and funding for construction of the extension of East Reeceville Road would be provided by property owners that will benefit from increased development capacity on adjacent parcels, together with financing from development traffic impact fees or from in-kind construction as part of adjacent property development.

5. Development Review And Regulation Initiatives

Major subdivision and land development applications must include a Traffic Impact Study, in accordance with Section 350-37 of the East Brandywine Township Subdivision and Land Development Ordinance. A Traffic Impact Study identifies the amount of traffic expected to be generated by a development and how the traffic will be distributed over time to the surrounding roads. A Traffic Impact Study will provide guidance on short- and long-range planning of site access and off-site improvements necessary to permit the affected transportation system, including both on-site circulation facilities and off-site roads and intersections, to satisfactorily accommodate site and total traffic. A Traffic Impact Study will generally consist of collection of existing traffic data and inventory of the road/intersection physical conditions, forecast of future traffic volumes for the roads/intersections in the study area, and comparison of future pre- and post-development conditions. The results of these analyses will 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.

6. Access Management

Although East Brandywine has absorbed a considerable amount of land development over the past decade, there remain several large tracts of land that could be subject to future development pressures. Combined with the existing development, the potential for future development of these tracts makes it essential for the Township to control residential and commercial access along the main highway corridors. Too many access points along a busy corridor, as already exist on segments of Horseshoe Pike, will create congestion and safety problems.

The development of commercial property is of greatest concern. Commercial land use depends on large traffic volumes for healthy business and can generate large traffic volumes entering and exiting the highway. The interaction of traffic entering and exiting needs to be regulated in such a manner that will enable a safe and efficient vehicular flow.

Residential development does not create the same problems as commercial because of the extensive difference in trip generation. Nevertheless, when the frontage of a major arterial is stripped out with residential developments, each with a separate drive, safety and traffic flow become concerns.

Many existing uses do not utilize proper channelizing techniques, i.e., the grouping of vehicles in specific patterns for similar movements. If uses do not currently comply with proper channelizing techniques, it may be difficult to make them comply. In most cases, a change in ownership or use of the property will be necessary to gain compliance.

Measures need to be developed to limit direct access to major roads and guide development access toward interior circulation roads. Doing this will help insure that multiple access points do not become a problem in the future and roads will not be stripped out with development.

There are many ways to achieve an efficient and safe network. The most appropriate way is to channelize the traffic. Proper access management for potential future development is critical to avoid multiple, closely-spaced intersecting side streets and driveways resulting in a clutter of conflicting turning movements to, from, and across the highway.

There are many ways to channelize traffic, ranging from simple methods involving a single parcel or lot to creating a plan for future development of an area. Some of the simpler ways to channelize traffic include:

- Relocate access;
- Realign access points;
- Eliminate access points;
- One-way patterns;
- Side access;
- Acceleration and deceleration lanes;
- Combine access points;
- Reverse frontage.

The Township should pursue the creation of an Access Management Plan. This plan should be created for the Horseshoe Pike corridor. In the Access Management Plan, the Township can designate areas that are most suitable for access points and locations where access should be limited or avoided. The plan also can identify more extensive ways to achieve controlled access along highways.

One significant contribution to an Access Management Plan, expected before the end of 2009, is a study being conducted by DVRPC. Titled "US Route 322 Corridor: Land Use and Transportation Integration," it is intended to: (1) assess land use and access management policies of the corridor municipalities (the study area runs from Honey Brook Township to Downingtown Borough), and (2) evaluate area growth potential and transportation improvement and policy implications. Recommendations will be designed, among other things, to "encourage municipal actions (comprehensive plan, zoning and subdivision and land development ordinance amendments) ... to achieve a corridor land use pattern that is more reflective of Smart Growth and Transportation principles."

B. Water Supply

Current Status and Township Policy

1. The geology underlying the Township, as described in Chapter IV, is not a highly productive source of groundwater. With few exceptions, the developments that have been approved recently are served by public water facilities under Aqua Pennsylvania, Inc.
2. Aqua PA has the largest service area in the Township, as shown on Map 13, Public Water Areas. It incorporates all the land south of Rt. 322 and those lands north of Rt. 322 but south of Hopewell Road and east of North Buck Road; south of Little Washington Road and east of the properties and developments that are adjacent to the west side of Dilworth Road. Aqua has recently installed a 12-inch main along Rt. 322. It extends from Corner Ketch Road through Guthriesville to the Timbers development at the eastern end of Hawthorne Drive, where it connects with the Timbers distribution system.
3. The Downingtown Municipal Water Authority serves the Tunbridge and Cumberland Ridge developments in the southeastern corner of the Township, as shown on Map 13.
4. A majority of properties in the Township are currently served by individual on-site wells. That statistic may change in the near future, however, based on recent approvals of large residential developments utilizing public water systems.
5. The Township's Subdivision and Land Development Ordinance (S/LDO) establishes that the Pa. Department of Environmental Protection (DEP) requirements are the minimum standards that must be met for potable water supply for all development in the Township. Emphasis is placed on the requirement for adequate fire protection where public water systems are proposed.
6. Where individual on-site water supply systems are proposed, the S/LDO requires that the applicant install such facilities or guarantee that the purchaser can install the facilities as a condition of sale of the lot. Well permits must be obtained from the Chester County Health Department prior to installation of any well.
7. The S/LDO contains specific testing procedures for both central water supply systems and communities proposed to be served by individual wells. The testing requirements must show that there is sufficient ground water to serve the proposed development without any negative impacts on the existing wells of surrounding properties. Geologic studies are required to support the field test analysis and a Public Water Supply Study is required for any proposed subdivision of 15 or more dwellings.

8. Provisions for adequate maintenance of the system must be demonstrated prior to an applicant's receipt of approval for a community water supply system. All such systems must be municipally owned or be under the regulations of the Pennsylvania Public Utilities Commission.
9. Underground water storage reservoirs for fire protection are required for any subdivision of more than five lots. The storage tanks must have appropriate connection standpipes that meet the specifications of the Township Fire Marshall.
10. Chester County's *Landscapes* policy plan element emphasizes land development that also achieves the preservation of open space. The Township has adopted cluster development provisions that are consistent with the intent of *Landscapes*. The approved and proposed residential developments under those ordinance provisions contain smaller lot sizes clustered in areas suitable for development. The dwellings being constructed are large in relation to the lot sizes and are in relatively close proximity to each other. The result is increased potential for fire damage to more than one dwelling in the event of a serious house fire.
11. With increased withdrawal from the aquifer and an increased amount of impervious surface being constructed, recharge of as much surface water as possible is required to supplement the aquifer.
12. There are no known water quality issues in the Township that require special study or monitoring.
13. The Township's 1978 Water Supply and Distribution Ordinance has been updated in draft form by the Municipal Authority Engineer, incorporating revised and updated standards for both public and private potable water supplies. Minimum standards for fire protection have been incorporated and the Authority retains the right of first refusal to accept dedication of a system when it is completed.

Future Objectives and Actions

[**Note:** Complementary objectives for ground water protection are contained in Chapter IV.]

1. Prevent future development from negatively impacting the performance of existing wells where ground water testing has shown that ground water supplies are limited.
2. Participate with surrounding communities to promote enhancement of ground water resources by regulating the quality of stormwater runoff.
3. Review and enact supplemental regulations for the proper disposal of potential pollutants and establish monitoring programs to insure that the goals of ground water protection are being met.

4. Establish minimum targets for ground water quality testing in a network of existing wells distributed evenly around the Township.
5. Distribute educational information to all residents regarding the proper disposal of unused medications and potential pollutants to the ground water.
6. Encourage the use of public water supply where the public wells are outside the Township, with the goal of ground water recharge within the Township.
7. Encourage drip distribution or other forms of subsurface disposal in all new subdivisions that propose community sewage systems.

C. Sewage Treatment and Disposal

Current Status and Policy

1. Map 14, Sewer Areas, shows tracts and groupings of properties in the Township that are presently served, or are approved to be served, by sewage treatment and disposal facilities other than individual on-lot systems. Disposal methods include surface application, subsurface disposal and several stream discharges.
2. The Township's current Official Sewage Facilities Plan (Act 537 Plan) was approved by the Pa. Department of Environmental Protection (DEP) on March 14, 2002. This plan updated the original Act 537 Plan, approved in 1977. Prior to DEP approval of the current plan, a Special Study of the Guthriesville area was completed, submitted to DEP, and approved on June 16, 2001. The 2002 Act 537 Plan provides for implementation of the recommendations in the approved Special Study for Guthriesville and also implementation of a Sewage Management Program for individual on-lot sewage disposal systems.
3. The Act 537 Plan continues to promote sewage facilities that ultimately dispose treated effluent to groundwater as recharge into the local sub-basin from which it was withdrawn, and not to surface waters. It also promotes the "Decentralized Wastewater Treatment Systems" approach for all new land development. The U. S. Environmental Protection Agency (EPA) defines "Decentralized Wastewater Treatment Systems" as "*managed individual onsite or clustered wastewater systems (commonly referred to as septic systems, private sewage systems, individual sewage treatment systems, onsite sewage disposal systems, or "package" plants) used to collect, treat, and disperse or reclaim wastewater from individual dwellings, businesses, or small communities or service areas.*"

4. In a report to the U.S. Congress dated April 1997, the EPA indicated that “Adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals.” Decentralized systems serve approximately 25 % of the U.S. population, and approximately 37 % of new development. This report emphasized the need for properly managed wastewater systems.
5. Chester County’s *Landscapes* policy plan element lists Objectives and Policies for attaining the goals set forth in the Plan. Under Section 6.0 Utilities Goal, Policy Statement 6.1.5 “Encourage(s) innovative wastewater treatment and disposal systems with preference given to land application of treated wastewater.” Policy Statement 6.1.9 of the same document “Discourage(s) wastewater disposal methods which transport water out of local watersheds.”
6. Pa Code Title 25 §71.71 statutorily mandates that the local municipality is responsible to assure the proper operation and maintenance of sewage facilities within its borders. The overall development and management of sewage treatment facilities in East Brandywine is in compliance with these goals and policies.
7. The Pa Code does not presently provide for the registration, certification, or licensure of service and maintenance providers of individual and community on-lot sewage systems that are permitted by the “Local Agency” [in this case, the Chester County Health Department (CCHD)]. However, the CCHD does license liquid waste haulers and requires reporting of pumping and disposal of liquid waste from treatment tanks and grease traps to an electronic database maintained by the CCHD.

Future Objectives and Actions

1. Sewage facilities should use the best available technology at the time of installation and should be properly operated and maintained. The Township recognizes that innovative technology is constantly being developed in the field of wastewater treatment and will consider incorporating newly developed types of treatment facilities when there is sufficient evidence presented to the satisfaction of the Township to support the use of such new technology.
2. Treated wastewater shall be disposed of as close to its generation source as practicable. Ground water recharge shall be promoted to the greatest degree possible and the beneficial reuse of treated wastewater shall be investigated and implemented where practical.
3. Individual residential on-site sewage disposal systems shall be operated and maintained by the property owner using best management practices for the system in place.

4. All non-residential and community sewage systems shall be operated and maintained by a responsible management entity.
5. Continue periodic review and update of the existing Act 537 Plan, to be consistent with other provisions of this Comprehensive Plan, the Subdivision and Land Development Ordinance and the Zoning Ordinance. Additionally, as DEP requirements change, the Township will enact such changes as it deems appropriate.
6. If DEP regulations or guidelines are developed requiring registration, certification, and/or licensure of Responsible Management Entities (RME's), the Township should adopt an ordinance requiring registration, certification, and/or licensure of RME's for all non-residential and community sewage systems.
7. Develop and implement a Sewage Management Program that meets the current guidelines of DEP; investigate state or other funding sources for its preparation.

D. Stormwater Management

Current Status and Policy

1. The Township's Subdivision and Land Development Ordinance currently governs the control of stormwater runoff and the minimization of soil erosion where land disturbance is undertaken in the Township. Increased land development throughout the Township results in changes to the runoff characteristics of the existing natural ground cover. Those changes often increase the amount of runoff created that must be controlled to protect the downstream environment, whether it is developed or has remained in its natural state. A major cause of property damage experienced throughout Chester County over the past several decades is the excessive movement of stormwater runoff in areas not equipped to control it properly.
2. Recent legislation and guidelines directed at controlling stormwater have been developed by the Pa. Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency (EPA), the Pa. Department of Conservation and Natural Resources, and local Conservation Districts. The emphasis of the regulatory agencies is to manage stormwater runoff at its source and infiltrate it into the ground before it has a chance to damage property remote from the land disturbance that created it.

The Township's regulations established to date have been consistent with that intent and have concentrated on controlling property damage by controlling the increase in rate of runoff from a disturbed site. Particular attention has been given to areas of steeply sloping land where even minor disturbance has the potential to create major erosive results because of the increased velocity of runoff emanating from the greater than average slopes.

3. As a general rule, all subdivision and land development plans submitted to the Township in the last 15 to 20 years that proposed land disturbance have contained stormwater runoff control facilities that substantially followed the intent of the Township's ordinances and other established legislation.
4. The focus on stormwater management since the adoption of the Stormwater Management Act of 1977 has been on quantity control to reduce damage from excessive amounts of water inundating sensitive properties around streams and in susceptible areas of the upstream watersheds. While controlling the quantity of runoff being generated by storm events is extremely important in minimizing property damage, an equally important aspect of managing runoff is quality control to minimize damage to the environment. The documented pollutants that are carried by stormwater runoff from parking areas, streets, industrial complexes, and cultivated farm fields have degraded stream environments throughout the region.
5. As documented in Chapter III, a substantial number of new housing units has been approved in the Township during this decade, many of which are now under construction. Some of this development is converting tracts cultivated as agricultural land 10 years ago. The increase in development and population generates a parallel increase in traffic using the Township's road network that was designed for service levels of 30 years ago. New and expanded roads will create further land disturbance and greater amounts of stormwater runoff to local streams.
6. The MS4 Stormwater Program

Untreated or uncontrolled stormwater runoff is the primary cause of pollution in local waterways. Stormwater runoff, polluted or otherwise, is often transported through municipal stormwater collection systems where it is eventually discharged into streams or rivers without any treatment. As a result of the increasing amounts of pollution in our waterways, the EPA has established a municipal stormwater management program known as the **MS4 Program** (Municipal Separate Storm Sewer System). It is intended to improve the nation's waters by reducing the quantities of pollutants that stormwater picks up and carries into the storm sewer systems during and after storm events.

As part of the MS4 Program, every municipality designated as an MS4 entity holds a permit to discharge its stormwater into local waterways. This permit requires the municipality to design and implement a stormwater management program that manages and reduces the discharge of pollutants to the maximum extent possible, protects water quality, and satisfies the water quality requirements of the Clean Water Act. In Pennsylvania, the MS4 program is administered by DEP. East Brandywine Township is designated as an MS4 municipality.

Future Objectives and Actions

1. Although the Township's ordinances contain regulations for control of stormwater within East Brandywine, the responsibility for construction, operation, and continual maintenance of the facilities is not borne by the Township, but is that of the applicant or entity in ultimate control of the developed facility. The Township will continue to require sufficient evidence of adequate funding to support the construction and maintenance of detention basins and other such facilities as a prerequisite to granting project approvals. All such facilities will be owned by the developer or an entity acceptable to the Township that is established for ultimate care of the developed property.
2. Review all Township stormwater management ordinance requirements and modify as appropriate to be compliant with county, state, and federal regulations regarding quality control.
3. Formulate a new freestanding stormwater management ordinance, including increased emphasis on quality control of all runoff.
4. Establish levels of required compliance for the use of quality control Best Management Practices that will enhance the overall quality of surface water in the Township. Insure that riparian buffers are established and/or enhanced in all projects submitted for approval that involve streams.
5. Continue to administer all stormwater ordinance requirements through an aggressive site inspection process during construction of projects involving earth disturbance.
6. The MS4 Stormwater Management Program has six elements termed “minimum control measures” which, when implemented, are intended to result in significant reduction in pollutants discharged into local streams. The Township is currently implementing these measures and will continue to do so in the future:
 - a. Public Education and Outreach

Distribute educational materials and conduct outreach to inform citizens about the impacts that stormwater runoff has on water quality.
 - b. Public Participation/Involvement

Provide opportunities for citizens to participate in the stormwater management program or other programs that improve water quality.

c. Illicit Discharge Detection and Elimination

Develop and implement a plan to detect and eliminate non-stormwater discharges into the stormwater system.

d. Construction Site Runoff Control

Develop, implement, and enforce an erosion and sedimentation control program for construction site activities that disturb one acre or greater of land area.

e. Post-Construction Runoff Control

Develop, implement, and enforce a program to address discharges of post-construction stormwater runoff from new development or redevelopment areas.

f. Pollution Prevention/Good Housekeeping

Develop and implement a program that reduces or prevents pollutant runoff from municipal operations. East Brandywine is committed to improving water quality in its watersheds through better management of stormwater runoff.

All residents and business owners are encouraged to participate in the municipal stormwater program by reducing or preventing polluted runoff from their own property and by reporting any non-stormwater discharges into their local waterways.

E. Solid Waste Collection and Disposal

Current Status and Township Policy

1. Solid waste collection and disposal is regulated in Pennsylvania by the Municipal Waste Planning, Recycling, and Waste Reduction Act (Act 101), which largely vests regulatory control to the counties. Chester County's flow control ordinance dictates where trash collected within the County must be taken.
2. In East Brandywine, curbside trash and recycling collection is handled by a private hauler under contract to the Township; this contract covers a majority of residential properties and select commercial establishments that typically generate residential-grade municipal waste (the homeowners' associations for two townhouse communities contract separately for refuse collection only).

3. The Township adopted a solid waste ordinance in 1989 and a recycling ordinance in 1991 to address Township-wide solid waste management. A flyer describing the Township's programs is circulated to Township residents periodically.
4. The Township's curbside recycling program provides collection for the following items: mixed paper, cardboard (size limitations), clear and colored glass, #1 and #2 plastics, and all types of beverage and food cans (aluminum, steel, and bi-metal). In addition, the Township maintains a drop-off facility at the Township Building for the same items (including larger cardboard items). In 1996, when record keeping began, the Township collected approximately 880 tons of recyclables; in 2007, the Township collected 1,221 tons of recyclables.
5. In addition to trash and recycling collection, the Township has a leaf collection program and a chipping program (tree limbs), both of which are operated by Township staff. With a state grant, East Brandywine and West Brandywine Townships jointly purchased a leaf vacuum trailer. East Brandywine collects leaves twice yearly (spring and fall). The leaves are composted, made into fertilizer, and delivered to residents for use in their gardens. Some of this fertilizer is used at Springton Manor Farm. In 2007, the Township diverted 505 tons of yard waste from the landfill.

East Brandywine's chipping program was facilitated by yet another state grant. The Township's chipper is available on an on-call basis; residents simply make an appointment for curbside chipping. Chips are either hauled away or left for residents' use. Chips also go to Springton Manor Farm for use on the farm's trails. While this service is free, the Township does charge a fee for chipping which extends beyond the first half hour of service.
6. The Township has long been a participant in Chester County's household hazardous waste collection program, having held the County's first drop-off event in 1998. Although the Township no longer hosts such events, it continues to participate in the regional drop-offs hosted by the County.

Future Objectives and Actions

1. There is no intent to change the solid waste and recycling programs currently in place. It is anticipated that such services will continue to be handled both as Township-contracted services and Township-run services.
2. The Township's current solid waste and recycling programs are flat fee-based, and this financing strategy will be continued in the future. The objectives of the Township's program are to: (1) be self-sustaining (fees for service to cover costs), and (2) reduce the amount of materials going into landfills. As a flat fee service, the more material people recycle, the better; the disposal of tonnage beyond that contracted for must be paid through the general tax base.

3. Continue to monitor the services provided to ensure that trash removal and recycling efforts are conducted in a safe, fiscally responsible, and environmentally sustainable fashion.
4. Update, as needed, the Township's solid waste and recycling ordinances in a timely manner to reflect state and county solid waste disposal regulations and Township program revisions.
5. Continue to negotiate and contract with a hauler capable of adequately providing the recycling and trash hauling services necessary for the Township in a cost-effective manner.
6. Revise and update, as needed, the Township's recycling and trash program flyer for circulation to Township residents.
7. Continue to provide information on these collection programs on the Township's website.

F. Recreation Facilities and Programs

Current Status and Township Policy

1. As shown on Map 15, Parks, Recreation, and Trails, East Brandywine owns four park sites: the Community Park on Dilworth Road; Spatola Park on Raleigh Drive, Hopewell Field on Township Road in the eastern end of the Township; and the recently-acquired Bondsville Mill site on Bondsville Road. Various active recreation programs and pursuits, both organized and informal, take place at the first three sites. The Bondsville Mill site is anticipated to be used primarily for passive recreation, including trails, a focus on the park's historic and natural areas, and opportunities for birding.
2. East Brandywine is one of the eight municipal members that, along with the Downingtown Area School District, comprise the Downingtown Area Recreation Consortium (DARC). DARC is a regional municipal recreation organization that offers recreation, adult education, and youth learning opportunities. The Township contributes financially to the administrative and program costs; user fees also are charged to cover operating costs of DARC's various programs.
3. Opportunities for active recreation, mainly in the form of youth leagues for team sports, are created and managed by the East Brandywine Youth Association (EBYA). At the Township's Community Park, EBYA operates a girls' softball program.

4. Recreation facilities exist at some of the public and institutional properties in the Township, e.g., courts at Hopewell Methodist and East Brandywine Baptist churches that are utilized for members' basketball and volleyball programs. However, the indoor basketball court at the Delaware County Community College campus is being converted to non-recreational use.
5. The Struble Trail, located across the Brandywine Creek, currently is the principal trail opportunity within or proximate to the Township for passive recreation pursuits. It offers access to Marsh Creek State Park and Downingtown Borough. As shown on Map 15, the Township has conceptualized a main "spine" trail running essentially east/west, and has established several links in that trail route through land development approvals, the crossing of public lands, and conservation easement terms. In addition, more localized trail access, e.g., from residential developments adjacent to Guthriesville village, have been approved and are being installed. Trail connection to the Brandywine Creek also is being created in the Township's southern end, including a segment that crosses the Cumberland Ridge tract; added links in that area are now in negotiation.
6. Township residents were given the opportunity to comment about recreation programs and facilities as part of the Resident Survey (see Chapter I and Appendix A). Noteworthy responses (the 568 completed surveys represented approximately 23% of those distributed) included the following:
 - a. In ranking the importance of open space, recreation, and environmental resource issues, the highest-ranked were natural resource protection (38%) and open space preservation (26%); availability of active recreation facilities scored lowest (4%).
 - b. Respondents were asked the purposes for which they would be willing to accept an increase in Township taxes. Acquisition of open space (66% yes, 33% no) and the purchase of additional land for recreation and parks (50% yes, 46% no) were the most favored. Both "operate community programs" and "operate active recreation programs" had more than twice as many negative responses as positive. However, a high degree of satisfaction was expressed with how the Township currently provides access to recreation facilities and programs (70%).
 - c. The three most popular current recreation activities were walking/hiking (72%), nature enjoyment (59%), and sight-seeing or pleasure driving (53%). No other choice received as much as 35%. Activities garnering the most support for "would like more opportunities" and "would support action to make available" were walking/hiking and bicycling.
 - d. Regarding recreation programs, the highest levels of support for creating increased opportunities were for cultural/performing arts and outdoor/environmental education.

- e. While 44% of respondents use the Township's Community Park for recreation, the most popular sites were at home (74%), Marsh Creek State Park (61%), and the Struble Trail (59%).
 - f. Reactions to creation of an interconnected trail system within the Township were 79% favorable and 13% negative.
7. Through provisions in the Subdivision and Land Development Ordinance, the Township continues to require recreational ground or a fee in lieu thereof from any land developer. Collected fees have largely been applied to development of the Community Park.

Future Objectives and Actions

1. The Township will continue to emphasize pedestrian and bicycle opportunities in the review of proposed development plans. The principal focus will be on adding links to the cross-Township spine trail and access to Guthriesville Village and to the Struble Trail. Easements, both donated and purchased, can be an important complementary mechanism to enhance the effectiveness of the development review process.
2. A final expansion of the Community Park will be explored with the current owners of the parcel adjacent to the existing park. The Township would seek county and/or state funding, with the local match coming from Township tax revenues.
3. The Township expects to create and adopt an Official Map as another means of implementing plans for trail connections and, if deemed necessary, additional park sites.
4. The Board will continue its support of DARC and EBVA, and will continue to monitor how satisfactorily existing recreation programs are meeting the needs of residents.

G. Township Administrative Services; Landowner Assistance

Current Status and Township Policy

1. East Brandywine is governed by a 3-person elected Board of Supervisors, with a variety of volunteer advisory committees and boards (e.g., Planning Commission, Parks and Recreation Board, Open Space Committee, Historical Commission) contributing to the decision-making process. The Zoning Hearing Board and Municipal Authority are semi-autonomous bodies with decision-making authority in the areas of zoning appeals and water/sewer facilities, respectively. The Township Manager and his staff conduct day-to-day business with counsel and assistance from various professional consultants, most notably the Township Engineer and Township Solicitor.
2. Since April of 2007, Township administrative services, as well as the Police Department, have been housed in the expanded Township Building. In addition to putting all these personnel under one roof, the new building has numerous meeting spaces that allow it to function somewhat as a community center.
3. Contact between Township government and the residents of East Brandywine is enhanced through publication of the Township's award-winning quarterly newsletter, The Mile Marker.
4. The Board of Supervisors monitors and, as appropriate, adjusts the types and levels of service offered to residents. As noted, the recycling program was expanded to include chipping of tree limbs and curbside leaf pick-up, while the inter-municipal police agreement has been terminated in favor of an East Brandywine Township Police Department.
5. The Township continues to administer two "impact fee" programs to mitigate some of the impacts of land development. The fee in lieu of open space, when collected as an alternative to creating recreation facilities within a development tract, has contributed to expansion of facilities at the Community Park. The transportation impact fee, authorized under Pa. Act 209, provides funding for road and intersection improvements.
6. The East Brandywine Open Space Committee, formed following referendum approval of a dedicated millage increase to support open space protection, is the principal source of outreach to landowners with properties well-suited for permanent open space protection. Upon inventorying the undeveloped and unprotected properties in the Township (as shown on Map 10), the Committee set priorities and began talking with owners of the most promising properties about various protection measures. Several of the parcels shown on Maps 10 and 11 as permanently protected are the results of this work; several others remain under discussion.

Future Objectives and Actions

1. The Board and staff will continue to administer the Township's functions and provide services in the most efficient and cost-effective fashion possible. Grants and other supplemental funding sources will be tapped wherever feasible.
2. As deemed appropriate and of potential benefit, the Open Space Committee should be able to approach additional owners of prospective open space lands. These parcels will be among those shown as Residential/Protected Open Space on Map 11.
3. The Township will continue to make use of additional open space funding programs where they can benefit landowners, and will work with local land trusts to gain their expertise in open space protection projects.

H. Fire Protection, Rescue, and Emergency Medical Services

Current Status and Township Policy

1. The East Brandywine Fire Company provides these services as the primary responder in East Brandywine Township. The Board of Supervisors has authorized appropriate financial support on a regular basis to the Fire Company, which continues to operate on an all-volunteer basis.
2. Ambulance transport services are provided by the Minquas Fire Company Ambulance of Downingtown, with a small section of the Township served by the Washington Hose Ambulance of Coatesville City.
3. Advanced life support (paramedic) services are provided by Brandywine Hospital's Medic 93, and Minquas Fire Company Medic 46.
4. East Brandywine Fire Company responded to 792 emergency dispatches in 2007; this was twice the number of calls in 1987. Medical assistance calls represented 60% of the service demand.
5. Resident Survey respondents gave high marks (83% satisfied) to the current volunteer fire and emergency services.

Future Objectives and Actions

1. The Township expects to continue its financial support of the East Brandywine Fire Company at an appropriate level.
2. Over the next decade, East Brandywine Fire Company will seek to create one professional emergency medical technician/fire-fighting position. The Fire Company also will solicit expanded volunteer participation, particularly in the areas of administration and the pursuit of grant funds.
3. If land development occurs in accordance with the recommendations of the Guthriesville Village plan, the Township will pay close attention to the access and mobility needs of the Fire Company
4. The Township will monitor the availability and sufficiency of emergency medical services from providers outside the Township and, in concert with the East Brandywine Fire Company, pursue whatever adjustments may be needed to maintain an acceptable level of service for Township residents.

I. Police Protection

Current Status and Township Policy

1. East Brandywine first established a Police Department in the early 1950's, initially relying on part-time officers. The first full-time officer was hired in 1975. The Department's current complement is ten full-time and three part-time officers.
2. The East Brandywine Police Department was reestablished late in 2008 to continue provision of police protective services within the Township. This followed dissolution of the joint police force that served East Brandywine and Wallace Townships for nine years.
3. The police budget increases commensurate with population growth in the Township, increases in through traffic, and the Department's resulting manpower needs.
4. Inter-municipal agreements for police services exist with several neighboring communities. A County-wide mutual aid agreement has been established to provide reciprocal assistance, as needed.
5. Here again, police services received a very positive response from those participating in the Resident Survey (82% satisfied).

Future Objectives and Actions

1. The Township will continue to provide a level of police protection deemed appropriate by the Board of Supervisors and the Police Department in relation to the expressed needs of the population and budgetary realities.
2. Optimal levels of coordination should be maintained with police support personnel at the County level and with other supplemental police services.
3. The Township intends to explore regularly the potential for sharing police services with neighboring police departments. At present, existing inter-municipal agreements, pooled services, and similar mutual aid arrangements with neighboring communities are advantageous and should be continued.

J. Library Services

Current Status and Township Policy

1. The Township currently is served by the municipal libraries in Downingtown and Coatesville, and by the Chester County Library in Exton.
2. The demand for library service among Township residents can be expected to increase as a function of increasing population. Suggestions have been made to establish a community library in the Township. The Guthriesville Village plan includes this concept as a compatible future use.

Future Objectives and Actions

1. The Township will act to assure that residents have adequate library facilities available. In the immediate future, this will be in the form of support for other libraries that serve the Township.
2. The Board of Supervisors will continue to provide an appropriate level of financial support to the Downingtown Library as a resource for Township residents.
3. As needs and opportunities dictate, the Board of Supervisors will determine if sufficient interest exists, and financial support is feasible, for creation of a community library within the Township.

CHAPTER VII GUTHRIESVILLE VILLAGE VISION PLAN AND DEVELOPMENT STRATEGY

This Vision Plan is intended to provide a guide for the preservation and further development of the Guthriesville Village portion of East Brandywine Township. Guthriesville was established by James Guthrie in the mid-1820s with the opening of his store and post office. Several historic properties remain in Guthriesville, generally located on Horseshoe Pike (Route 322) just east of the intersection with Bondsville/Hopewell Roads.

Guthriesville Village is generally defined to include the properties extending along Horseshoe Pike from just west of North Guthriesville Road to approximately one-third of a mile east of the Hopewell Road/Bondsville Road intersection on the east (see Map 16, Guthriesville Village Existing Conditions). Also included are properties extending down Bondsville Road to the south to and just beyond East Reeceville Road.

Coming west from Downingtown on Horseshoe Pike, vehicles enter the village by traveling down into a “bowl” that bottoms at the Bondsville/Hopewell intersection. Guthriesville Village includes the East Brandywine Township Building as well as the East Brandywine Fire Company on Bondsville Road.

This Vision Plan has been developed as an element of the updated Comprehensive Plan by the East Brandywine Township Ordinance/Planning Task Force and has secured specific input from various property owners, businesses, residents, and other interested parties in the Guthriesville Village. Meetings have been held with the Township Historical Commission and with the Chester County Planning Commission.

A. Goals and Objectives for Guthriesville Village

The Vision for Guthriesville Village is intended to achieve specific goals and objectives for the preservation and further development of the Village, including:

Goal 1.

Strengthen the overall Guthriesville Village area as the commercial and civic hub of East Brandywine Township. To the maximum extent possible, locate all civic uses in the village. The village and the area zoned MU Mixed Use - Commercial immediately adjacent to it on the west, beyond North Guthriesville Road will be among the few locations for commercial uses in the Township. Otherwise, commercial development will be limited to the village of Lyndell and the CS/LI Commercial Service/Limited Industrial District at the east end of the Township on Horseshoe Pike.

Objective 1.1.

Encourage development patterns that emphasize the location of larger-scale retail and commercial uses, supermarkets, and fast food restaurants in the MU Mixed Use - Commercial zoning district adjacent to the village near North Guthriesville Road, and convenience store and other automobile-oriented uses in the CS/LI Commercial Service/Limited Industrial District.

Objective 1.2.

In parallel, encourage development patterns that emphasize small-scale uses at the center of the village near the intersection of Horseshoe Pike and Bondsville Road/ Hopewell Road.

Objective 1.3.

Emphasize Guthriesville Village as the symbolic center of the Township and encourage civic, commercial, and community uses there that attract residents to it daily. Guthriesville Village should be the place where community services are concentrated including the Township government buildings, the firehouse, possibly a post office, etc.

Goal 2.

Preserve and enhance the historic properties in Guthriesville Village and the history of the Township that is centered here.

Objective 2.1.

Assure that historic properties and sites within the village are preserved and utilized in economically sustainable ways.

Objective 2.2.

Assure that the design of new buildings in the center of the village is sympathetic to the character of the historic properties already there.

Objective 2.3.

Maintain and grow the center of Guthriesville Village as a mixed-use, traditional village-scale district with residential and commercial uses and a scale of development that encourages pedestrian activity. Orient this new development so that it provides pedestrian connections and parking support for the existing historic properties at their rears and away from the traffic of Horseshoe Pike.

Goal 3.

Maximize pedestrian access and connections into and within Guthriesville Village.

Objective 3.1.

Utilize Guthriesville Village as a pedestrian-friendly community “center” that ties together the Township’s trail system and provides safe access and circulation for pedestrians.

Objective 3.2.

Highlight the intersection of Horseshoe Pike and Bondsville Road/Hopewell Road as the visual “center” of the Township with some key feature and/or plaza.

Objective 3.3.

Provide sidewalks along all roadways within Guthriesville Village. Orient new development towards the street and promote site and building designs that activate street frontages for pedestrians.

Objective 3.4.

To the maximum extent feasible, calm traffic along Horseshoe Pike in the block east of Bondsville/Hopewell Roads. Provide on-street parking on the south side of Horseshoe Pike in this area.

Objective 3.5.

Reroute a significant portion of east-west traffic to a new East Reeceville Road extension connecting Bondsville Road with Horseshoe Pike east of the village. This traffic improvement would support pedestrian and shopper activity in the center of Guthriesville Village.

B. Development Strategy for Guthriesville Village

The Vision for Guthriesville Village will be implemented through a series of infrastructure, zoning, and private development activities. This Development Strategy details a series of eleven specific strategy elements for accomplishing these objectives. In elaborating this strategy, care must be taken to recognize that the village abuts a distinctly different area--the MU zoned areas near North Guthriesville Road and Corner Ketch Road. Of these, the western MU-zoned area is the appropriate location for larger-scale and auto-oriented commercial uses; the Village itself-- especially the Village core of historic, small-scale properties near the intersection of Horseshoe Pike and Bondsville/Hopewell Roads—provides a more traditional, pedestrian-oriented environment. As described in Chapter V and shown on Map 11, the area currently zoned MU Mixed Use – Commercial to the east of the village is proposed for rezoning to a residential district.

Strategy Element 1: The Commercial Hub of East Brandywine

Maintain zoning that encourages commercial uses in East Brandywine Township to be located within Guthriesville Village or in the adjacent MU-zoned area. Other than the village of Lyndell, the CS/LI Commercial Service/Limited Industrial zoning district, and as supplemental uses associated with certain R-3 residential developments, these will be the only areas in the Township allowing commercial uses. As shown on Table 3, the 9,700 people anticipated to reside in East Brandywine in 2010 will support over 400,000 square feet of retail services in store types that could be feasibly accommodated within East Brandywine. This demand will be further supplemented by traffic passing through the Township and by residents of more remote municipalities to the west.

In addition to retail services, East Brandywine will also support other business activities, including banks and other financial institutions; professional services such as real estate firms, insurance agencies, lawyers, accountants, architects, engineers, and computer services; medical offices; auto service and repair; construction-related businesses; business support activities such as printing and shipping; and other repair services.

If zoning is maintained that encourages location of most of these businesses within Guthriesville Village and the adjacent MU-zoned area, they will collectively contribute to a concentrated commercial node for East Brandywine.

Strategy Element 2: Large-Scale Retailing in the Adjacent MU-Zoned Areas

The MU-zoned area adjacent to Guthriesville Village, situated west of North Guthriesville Road, should be the location for businesses requiring larger floorplates and auto-oriented uses.

In parallel, fast food restaurants with drive-throughs should be limited to this adjacent area west of the Village. Given the existing Sunoco station at the intersection of Hopewell Rd. and Horseshoe Pike and a possible second such operation diagonally across the intersection, no additional convenience store/gas stations should be allowed in the Village or adjacent MU-zoned area. This strategy is consistent with recent Zoning Ordinance modifications.

**Table 1
Supportable Retail Store Space
East Brandywine Township--2010**

	Total Area
ESTIMATED POPULATION	9,700
TOTAL INCOME (\$000; 2007 Dollars)	\$386,000
TOTAL RETAIL PURCHASES (\$000)	\$168,000
TOTAL RETAIL STORESPACE	407,000 SF
COMMUNITY-SERVING GOODS & SERVICES	153,000 SF
Supermarkets, Grocery Stores	30,000 SF
Convenience Stores	5,000 SF
Liquor & Beer Distributors	2,000 SF
Drug Stores/Pharmacies	24,000 SF
Cosmetics, Beauty Supplies, & Perfume	3,000 SF
Health Food Supplements	2,000 SF
Limited-Service Restaurants	28,000 SF
Bars and Lounges	6,000 SF
Dollar Stores & Other General Merchandise Stores	10,000 SF
Jewelry Stores	10,000 SF
Optical Stores	4,000 SF
Gift, Novelty, Souvenir Stores	9,000 SF
Hardware Stores	10,000 SF
Florists	4,000 SF
Hair Salons	4,000 SF
Laundries; Dry Cleaning	2,000 SF
FULL-SERVICE RESTAURANTS	29,000 SF
APPAREL	71,000 SF
Men's Clothing	6,000 SF
Women's Clothing	17,000 SF
Children's Clothing	3,000 SF
Family Clothing	27,000 SF
Clothing Accesories	1,000 SF
Other Clothing	4,000 SF
Shoe Stores	13,000 SF
HOME FURNISHINGS & IMPROVEMENT	86,000 SF
Furniture	20,000 SF
Floor Coverings	5,000 SF
Other Home Furnishings	4,000 SF
Radio/TV/Electronics	7,000 SF
Paint & Wallpaper Stores	4,000 SF
Retail Lumber Yards	40,000 SF
Nursery & Garden Centers	4,000 SF
Antique Stores	2,000 SF
OTHER SPECIALTY GOODS	68,000 SF
Computer & Software Stores	5,000 SF
Specialty Sporting Goods	7,000 SF
Toys & Hobbies	4,000 SF
Sewing, Needlework	3,000 SF
Music Stores	3,000 SF
Art Dealers	3,000 SF
Collectors' Items & Supplies	1,000 SF
Auto Parts & Accessories Stores	20,000 SF
Pet Supply Stores	4,000 SF
Tobacco Stores	2,000 SF
Other Health & Personal Care	3,000 SF
Other Used Merchandise	8,000 SF
Other Miscellaneous Retail Stores	5,000 SF

Strategy Element 3: Small-Scale Commercial Concentration at the Village Core

Encourage smaller retail and professional uses to cluster in the village core near the corner of Bondsville Road/Hopewell Road. The village core should be a location for a variety of commercial uses including professional offices, full-service restaurants, boutiques and specialty retailing, and freestanding community-serving retailers.

As shown on Table 4, more than 130,000 square feet of additional retail could feasibly be developed in the village core in building types compatible with a pedestrian village environment. This would include 37,000 sq. ft. of eating and drinking establishments, 26,000 sq. ft. of other community-serving retail, and 73,000 sq. ft. of apparel and other specialty goods.

Table 2
Suggested Retail Uses for Guthriesville Village
East Brandywine Township--2010

	New For Guthriesville Village
TOTAL RETAIL STORESPACE	136,000 SF
COMMUNITY-SERVING GOODS & SERVICES	39,000 SF
Cosmetics, Beauty Supplies, & Perfume	3,000 SF
Health Food Supplements	2,000 SF
Limited-Service Restaurants	9,000 SF
Bars and Lounges	4,000 SF
Dollar Stores & Other General Merchandise Stores	5,000 SF
Jewelry Stores	5,000 SF
Optical Stores	2,000 SF
Gift, Novelty, Souvenir Stores	6,000 SF
Hair Salons	2,000 SF
Laundries; Dry Cleaning	1,000 SF
FULL-SERVICE RESTAURANTS	24,000 SF
APPAREL	24,000 SF
Men's Clothing	3,000 SF
Women's Clothing	6,000 SF
Children's Clothing	3,000 SF
Clothing Accesories	1,000 SF
Other Clothing	4,000 SF
Shoe Stores	7,000 SF
HOME FURNISHINGS & IMPROVEMENT	28,000 SF
Furniture	10,000 SF
Floor Coverings	5,000 SF
Other Home Furnishings	4,000 SF
Radio/TV/Electronics	3,000 SF
Paint & Wallpaper Stores	4,000 SF
Antique Stores	2,000 SF
OTHER SPECIALTY GOODS	21,000 SF
Computer & Software Stores	3,000 SF
Specialty Sporting Goods	5,000 SF
Toys & Hobbies	1,000 SF
Sewing, Needlework	3,000 SF
Music Stores	3,000 SF
Art Dealers	3,000 SF
Collectors' Items & Supplies	1,000 SF
Tobacco Stores	2,000 SF

These retail businesses should be supplemented by banks, professional and health care offices, and other small-scale business activity. These supplementary non-retail uses could comprise 20% to 25% of non-residential floor area.

Initial commercial development should focus on a large full-service restaurant in the 5,000 to 8,000 sq. ft. range. If the Township continues with its current limitations on alcohol, BYOB restaurants should be encouraged. One key support for these BYOBs in Guthriesville Village would be the location of a state wine and spirits store or other retail wine shop in the village.

Strategy Element 4: Civic Functions Clustered in Guthriesville Village

Guthriesville Village is currently home to the Township administrative offices and Police Dept., as well as the East Brandywine Fire Company. These civic functions should be retained within the village and any new civic functions which are compatible with the pedestrian oriented character of the village should also be located here.

Improvements to the fire company property should be considered which will adapt it more to the village concept. If possible, a retail post office should be added to the mix of uses in the village. Other civic functions, such as churches, fraternal organizations, arts and cultural activities, and other non-profit service organizations should be encouraged to locate within the village.

Strategy Element 5: Pedestrian-Friendly Village

Guthriesville Village should be pedestrian-friendly, both internally and through connections to the rest of the Township. Continuous sidewalks should be constructed throughout the village, with priority being given to the creation of a continuous sidewalk along both sides of Horseshoe Pike and Bondsville and Hopewell Roads for approximately 1000 feet from the intersection of Horseshoe Pike and Bondsville/Hopewell Rd. These improvements should be coordinated with the roadway and traffic calming efforts in Strategy 8.

This sidewalk core should be connected to all trails in the Township. New developments in the Township should be required to construct trail segments that provide these connections. New developments within Guthriesville Village should be required to provide full sidewalks along all roadways as well as other pedestrian walkways that create a more effectively pedestrian pattern within the village. This new village development should be oriented toward the street; site and building designs should encourage active street frontages for pedestrians.

Strategy Element 6: Historic Property Preservation

The further development of the village — both private property and public infrastructure—should strive to preserve the key historic properties in the village core. New development should be of a scale (height and total building mass) that is compatible with the village character. This generally means development in multiple small buildings of no more than four stories in height.

Economically-sustainable uses should be identified for all historic properties within the village, including the Guthriesville General Store. As noted in Strategy Element 7 (below), the vacant properties to the rear of the historic buildings south of Horseshoe Pike and east of Bondsville Road should be developed to create parking and vehicle and pedestrian circulation patterns that support the use of the current properties facing Horseshoe Pike.

Strategy Element 7: Expanded Mixed-Use Development at the Village Core

The village core is currently a complex mixed-use district. There are 49 occupied residences within the village (41 rental; 8 owner-occupied). A few commercial uses are housed in some of the historic properties along Horseshoe Pike, while many newer commercial buildings and small shopping centers house a variety of retail, repair, construction and office activities. The “human-hostile” traffic along Horseshoe Pike causes current activities—both residential and commercial--to be oriented toward the rear of properties or encourages new buildings to be constructed with substantial setbacks from Horseshoe Pike.

To expand this mixed-use pattern, vacant land within the village core should be developed more intensively with a major focus on creating a several-block complex of mixed-use buildings. A potential development approach for this village core is illustrated on Map 17, Guthriesville Village Concept, to provide guidance on the types of development, uses, pedestrian and vehicle circulation, and other development characteristics anticipated by this strategy. This scheme should be viewed only as illustrative of the Village Vision and not as a definitive development model. Much more detailed planning analysis will be necessary to determine specific development guidelines, allowable densities, parking standards, and lot sizes to produce the anticipated village character in this new development. The Chester County Planning Commission’s Village Planning Handbook can provide support in the development of these guidelines.

The vacant land to the south of Horseshoe Pike and east of Bondsville Road should be developed to create parking and vehicle and pedestrian circulation patterns that support the economically-sustainable use of the current older and historic properties facing Horseshoe Pike. Outbuildings behind current Horseshoe Pike-fronting properties could be used for small retail/commercial activities if access and visibility can be achieved. Current residences along Horseshoe Pike should be integrated into these new development patterns. Internal roadway, parking, and pedestrian circulation systems in this new area of development would contribute to the overall village feel. Internal on-street parking should be maximized.

The potential development program for this scheme is shown on Table 5.

Table 3
Potential Development Program
Guthriesville Village

1-Story Retail/Restaurant/Commercial		
Horseshoe Pike Corner	10,000	SF
West of Bondsville	25,000	SF
East of Bondsville	15,000	SF
Townhomes @ 12 du/Gross Acre		
West of Bondsville	115	Units
Eastside of Bondsville	20	Units
East-End	15	Units
Mixed-Use		
First Floor Retail/Commercial	110,000	SF
Upper Floors (40% 4-Story; 30% 3-Story; 30% 2-Story; 1 Unit/1,200 Gross SF)	185	Units
Total		
Retail/Commercial/Restaurants	160,000	SF
Residential	335	Units

Strategy Element 8: Roadway Network Connections and Traffic Calming

The construction of an East Reeceville Road extension from Bondsville Road to Horseshoe Pike would divert some traffic from Horseshoe Pike and mitigate some of the negative conditions impacting historic properties in the village. This new extension could include a roundabout at its intersection with Bondsville Road; more detailed analysis is needed to determine the most appropriate solution.

The construction of this road would be coordinated with the development of the more intensive village core to smooth the relationship of through traffic to village destination traffic. It is anticipated that land for this East Reeceville Road extension will be made available by property owners benefiting from increased development capacity on adjacent parcels. Other financing for these road improvements would come from development fees or from in-kind road construction as part of adjacent property development.

The intersection of Horseshoe Pike and Bondsville Road/Hopewell Road should be reconfigured in conjunction with the open spaces in Strategy Element 10 (below) to provide pedestrian-friendly crosswalks, while the other pedestrian enhancements in Strategy Element 5 will further strengthen the pedestrian character of the village.

Strategy Element 9: Protect Historic Properties from Horseshoe Pike Traffic

When an Official Map is adopted for East Brandywine Township, it should include the principle that any road widening of Horseshoe Pike east of Bondsville Road through the concentration of historic properties in the village should be on the north side of the road. Concurrence in this policy should be secured from PennDOT. These policies are needed to provide assurance to investors in historic properties along Horseshoe Pike that they will not be taken for road widening. This is essential to encourage private investment, especially for professional offices.

The proposed East Reeceville Road extension detailed in Strategy Element 8 (above) will have the added benefit of reducing some congestion on Horseshoe Pike and somewhat protecting historic and other older properties located very close to the current roadway.

Strategy Element 10: Great Open Space in the Village Core

Well-designed and situated civic open space should be included in the development of the village core—a center square is proposed in the illustrative scheme. Sitting areas and other passive open space can be a focal point for the village and for the overall Township trail system. One of these great open spaces should be some key feature and/or plaza to highlight the intersection of Horseshoe Pike and Bondsville Road/Hopewell Road.

Strategy Element 11: Village Gateways

The gateways to Guthriesville Village should be highlighted with visual and/or landscaping elements that both denote the entrance to the village and begin the process of traffic calming through the village. A potential southern gateway could be a roundabout at the intersection of Bondsville and East Reeceville Roads and incorporated into the design of the East Reeceville Road extension (Strategy Element 8, above). These gateways will also reinforce the desired pedestrian-friendly character of the village (Strategy Element 5).

C. Initial Implementation Actions

The Development Strategy for Guthriesville Village will be implemented through a series of infrastructure, zoning, and private development activities. Initial Township actions to begin this implementation process would include:

1. Developing a more extensive feasibility analysis of the proposed East Reeceville Road extension and intersection treatment at Bondsville Road to include precise routing, specific land requirements, cost estimates, and funding approaches. This analysis would also clarify the relationship of the more general “loop road route” to this East Reeceville Road extension and to potential development planning for the Weaver tract.
2. Creating an Official Map to specify the internal street system, sidewalks, and trail connections within the village.
3. Creating an overlay zoning district for Guthriesville that specifies development incentives, design guidelines, improvements provisions, and correlation with the Official Map and, perhaps, the Traditional Neighborhood Development terms of the Municipalities Planning Code.
4. Identifying precise wetland issues and wetland mitigation areas, including potential prime candidates in the open space south of the proposed East Reeceville Road extension and west of Bondsville Road. This review would include options for parking in wetland areas within the village with potential use of pervious or semi-pervious surface materials.
5. Reviewing any implications of this Village Plan on the Township’s Act 537 Plan, including review of available capacity at Applecross.
6. Reassessing the potential for a Guthriesville Village National Register nomination, including the status and prospects for the Wawa/General Store site. As part of this reassessment, the Township Historical Commission should play a role in communicating with the affected landowners.
7. Reviewing the history of the Township's alcohol sales status with the Township Solicitor and determining whether modifications should be pursued to offer greater incentive for restaurant use.
8. Examining additional funding sources for further planning and implementation of the Village Vision concept, including a possible "green technology" and possible availability of Vision Partnership funding for the plan implementation phase.

CHAPTER VIII IMPLEMENTATION

A. Introduction

Chapter I of this plan sets out an array of planning goals and objectives. These serve as a framework for the examination of issues and the articulation of future policies and actions in Chapters IV (Protecting Community Resources), V (Guiding Future Uses of Land), VI (Providing Adequate Facilities and Services), and VII (Guthriesville Village Vision Plan and Development Strategy). Each of these chapters concludes with recommendations for future Township action, to be taken either directly or in association with other responsible parties.

In this final chapter, the recommended actions are consolidated to produce an integrated "working agenda" for the Township over the upcoming 10-year life of the plan. These actions are presented in a format that should offer a clear task list for those charged with the important work of implementing the plan. The emphasis is on priorities, responsibilities, and measurable results.

Toward that end, each recommended action is assigned a "time frame for completion" that also serves as a measure of its priority. Those of highest priority are noted as "Immediate," to be completed within 1-2 years. Those considered "Short Term" fall within a 2-5 year time frame, while the "Long Term" actions anticipate a 5-10 year period for completion. The exceptions are those designated as "Ongoing"; these tend to be practices already established, the continuation of which will be important to the Township, and/or repetitive procedures that do not conclude with the completion of a task.

Each action also is assigned to one or more responsible parties for execution. The identified parties may not have exclusive responsibility for the implementation action, but should play a significant, if not lead, role. Where multiple parties are listed, they generally are shown in the chronological order of the roles to be played.

The Board of Supervisors will, of course, exercise final decision-making authority on most of the steps tagged for Township action. On that premise, the Board's authority for final enactment is not cited in every case. Rather, the Board is identified here in a more selective sense to suggest those tasks requiring an earlier, more consistent involvement and/or the development of policy positions. Finally, those given responsibility may end up working in conjunction with, or assisted by, additional parties, including collaborations with other agencies or technical assistance provided by consultants.

The following is a key to the listed responsible parties:

BoS – East Brandywine Township Board of Supervisors
PC – East Brandywine Township Planning Commission
Staff – East Brandywine Township administrative staff
Eng. – East Brandywine Township consulting engineer
Solic. – East Brandywine Township solicitor
OS Comm. – East Brandywine Township Open Space Committee
Pks./Rec. Bd. – East Brandywine Township Parks and Recreation Board
Hist. Comm. – East Brandywine Township Historical Commission
EBTMA – East Brandywine Township Municipal Authority
PennDOT – Pa. Dept. of Transportation
Conserv. Dist. – Chester County Conservation District

The "Method of Implementation" names the specific document, regulation, procedure, or outreach action that should be the result or product of the strategy. Some are fairly obvious and prone to measurement, such as various zoning ordinance amendments. Others are less tangible and may be subject to adjustment over time; these include landowner contact and inter-agency coordination.

As a prioritized work program for the decade to follow, these Implementation Actions can guide the Township's planning and regulatory activities during that period. If consulted on a regular basis, they can function as a modified checklist against which progress can be gauged and, where necessary, the need for course corrections can be demonstrated. One potential application is incorporation into the annual report from the Planning Commission to the Board of Supervisors, as prescribed in Section 207 of the Pa. Municipalities Planning Code.

Finally, those actions given an "Immediate" priority have been excerpted and restated in Chapter II. These represent recommendations with the greatest sense of urgency, and are sited near the beginning of the plan document as a measure of their importance.

B. Plan Implementation Actions

Chapter IV, Protecting Community Resources

Steep Slopes

1. Examine steep slopes in relation to riparian buffer protection and the need to protect steep slopes adjacent to streams.

Timing/Priority: Immediate

Responsible Party: PC, Eng.

Means to Implement: Zon. Ord.

2. Encourage the long-term protection of steep slopes through the retention of flexible site design options (such as cluster development), further limitations on tree cutting, and such private actions as the donation of conservation easements.

Timing/Priority: Ongoing/Short-Term

Responsible Party: PC, Eng., OS Comm.

Means to Implement: Zon. Ord., conservation easements

3. Review and, as necessary, revise ordinance criteria for including steeply-sloped areas within development-created common open space.

Timing/Priority: Immediate

Responsible Party: PC

Means to Implement: Zon. Ord.

4. Identify priority areas for public purchase of sloped areas to complement other protection techniques.

Timing/Priority: Short-Term

Responsible Party: Staff, PC, OS Comm.

Means to Implement: Acquisition in fee or easement

Soils

1. Incorporate the Soil Use Guide into the Zoning Ordinance and/or S/LDO as a tool for plan review and stormwater management.

Timing/Priority: Immediate
Responsible Party: PC, Eng.
Means to Implement: Zon. Ord., S/LDO

2. Review and, if necessary, increase the minimum lot size requirements of the Zoning Ordinance to assure adequate lot area in soils of questionable suitability for buildings.

Timing/Priority: Immediate
Responsible Party: PC, Eng.
Means to Implement: Zon. Ord.

3. Since aquifer recharge areas are defined by a combination of soils and geology, develop standards to protect aquifer recharge areas based on those joint factors.

Timing/Priority: Long-Term
Responsible Party: PC, Eng.
Means to Implement: Zon. Ord., S/LDO

4. Promote the use of alternative “green technology” stormwater best management practices that promote infiltration and reduce runoff.

Timing/Priority: Short-Term
Responsible Party: PC, Eng.
Means to Implement: S/LDO and/or Stormwater Mgmt. Ord.

5. Incorporate the concepts of “minimum disturbance/minimum maintenance” into the design standards contained in the S/LDO.

Timing/Priority: Short-Term
Responsible Party: PC, Eng.
Means to Implement: S/LDO

Geology and Ground Water

1. Review current land use opportunities within zoning districts in relation to water supply needs and ground water availability, and modify zoning provisions necessary to achieve optimum compatibility.

Timing/Priority: Immediate
Responsible Party: PC, EBTMA
Means to Implement: Zon. Ord.

2. Evaluate impervious surface limits in the zoning ordinance and adjust, as necessary, particularly in relation to recharge potential and stream degradation.

Timing/Priority: Immediate
Responsible Party: PC, Eng.
Means to Implement: Zon. Ord.

3. Based upon mapping of recharge areas, consider ordinance measures for protection.

Timing/Priority: Short-Term
Responsible Party: PC
Means to Implement: Zon. Ord., Stormwater Mgmt. Ord.

4. Consider further protections for public water supply wellheads, including separation distances and use restrictions.

Timing/Priority: Short-Term
Responsible Party: PC, EBTMA
Means to Implement: Zon. Ord.

5. Develop standards for the preparation of water budgets for development proposed in sensitive water resource areas (such as aquifer recharge areas).

Timing/Priority: Long-Term
Responsible Party: PC, Eng.
Means to Implement: S/LDO

6. Maintain the Township's current sewage treatment and disposal emphasis on land application (drip or spray irrigation) to avoid stream discharge. Review Township policy regarding maintenance of on-lot sewage systems (septics) and consider additional ordinance language for maintenance.

Timing/Priority: Ongoing and Immediate
Responsible Party: PC, Eng., EBTMA
Means to Implement: S/LDO, Act 537 Plan

7. Consider implementing measures to notify prospective homebuyers of radon issues, including Board of Realtor agreements of sale and disclosure forms, use and occupancy permit notification requirements, and Township web-site listing of source information and references.

Timing/Priority: Long-Term
Responsible Party: Staff, Solic.
Means to Implement: Various notification vehicles

8. Monitor the requirements for Total Maximum Daily Loads (TMDLs) that will be adopted and regulated by DEP in response to EPA mandates; where necessary, modify Township codes to recognize these requirements. Furthermore, modify Township codes to reflect the requirements of EPA's NPDES Phase II MS4 requirements (particularly regarding public outreach and stormwater management code provisions) applicable to the Township as an MS4 municipality.

Timing/Priority: Ongoing and (if necessary) Short-Term
Responsible Party: Eng., EBTMA
Means to Implement: S/LDO, Stormwater Mgmt. Ord.

Surface Water

1. Consider additional public education and outreach activities specified in the NPDES Phase II rule for reducing pollutants and protecting water quality. Consideration should be given to working with the Brandywine Valley Association or other organizations that have created programs to assist municipalities in meeting these requirements.

Timing/Priority: Short-Term
Responsible Party: Staff
Means to Implement: Newsletter, website

2. Continue to monitor and participate in the Total Maximum Daily Load (TMDL) process undertaken by the EPA and DEP for impaired stream segments within the Township. Eventual requirements may necessitate the Township revising its stormwater management regulations or undertaking additional steps to mitigate pollution impacts to the Brandywine.

[See Geology and Ground Water, #8, above.]

- Utilize the Brandywine Creek Watershed Conservation Plan and the Rivers Conservation Plan for the Upper East Branch of the Brandywine Creek to further protect resources and promote a better understanding of stream resource issues.

Timing/Priority: Long-Term
Responsible Party: PC
Means to Implement: Comp. Plan, public outreach mechanisms

- Maintain the Township's current sewage treatment and disposal emphasis on land application to avoid stream discharge, consistent with the intent of the NPDES program.

[See Geology and Ground Water, #6, above.]

- Consider expanding the riparian buffer protection standards to protect all streamside buffers (in addition to those along 1st-order streams).

Timing/Priority: Immediate
Responsible Party: PC
Means to Implement: Zon. Ord., S/LDO

- Continue to administer in a firm and consistent manner the existing S/LDO standards on erosion/sedimentation control, including on-site inspections during earth disturbance activities.

Timing/Priority: Ongoing
Responsible Party: PC, BoS, Eng.
Means to Implement: S/LDO, Stormwater Mgmt. Ord.

- Encourage the donation of conservation easements on floodplain and wetland areas.

Timing/Priority: Ongoing and Immediate
Responsible Party: Staff, OS Comm.
Means to Implement: Landowner contact leading to easement donation

Agriculture

[See discussion of agriculture in Chapter V, Section C-2.]

Vegetation and Wildlife Habitat

1. Incorporate a plant list appendix or reference appropriate local publications in the S/LDO, specifying suitable native species for planting under varying site conditions; cross-reference, as needed, in other chapters of the Township Code.

Timing/Priority: Immediate
Responsible Party: PC
Means to Implement: S/LDO

2. Supplement the mapping contained in this plan to better identify significant habitat areas appropriate for further protection. Minimize habitat fragmentation by protecting biodiversity corridors along streams and considering habitat issues when configuring open space set-asides during development.

Timing/Priority: Short-Term
Responsible Party: PC, Eng., OS Comm.
Means to Implement: Comp Plan, S/LDO, conservation easements

3. Evaluate zoning, subdivision/land development, stormwater, and site design options that enhance the prospects for the retention of vegetation on sites undergoing development.

Timing/Priority: Short-Term
Responsible Party: PC
Means to Implement: S/LDO, Stormwater Mgmt. Ord.

4. Evaluate the need and prospects for establishing an Environmental Advisory Council (EAC) that could advise the Planning Commission and Board of Supervisors on environmental issues.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Ordinance creating EAC

Scenic Resources

1. Emphasize scenic resource protection during the subdivision and land development plan review process; consider adding a conservation plan objective to minimize disturbance and/or protect scenic resources.

Timing/Priority: Immediate
Responsible Party: PC
Means to Implement: S/LDO

2. Upon completion and adoption by the Board of Supervisors, use the Township's Conservation Opportunities Maps in creating and reviewing site plans.

Timing/Priority: Immediate
Responsible Party: PC, BoS, Eng.
Means to Implement: S/LDO

3. Consider a scenic easement acquisition program and continue to encourage the donation of conservation easements.

Timing/Priority: Ongoing and Short-Term
Responsible Party: Staff, BoS, OS Comm.
Means to Implement: Easement acquisitions and donations

4. Consider formal scenic road designation, either through local efforts or the state scenic byway program; consider appropriate signage and education. Consider adopting a scenic roads overlay district which would address site planning and design within a scenic road corridor, including landscaping policies or regulations designed to protect or enhance existing viewsheds and scenic roads.

Timing/Priority: Short-Term
Responsible Party: Staff, PC
Means to Implement: Comp Plan, S/LDO, Zon. Ord., PennDOT

5. Consider preparation of a brochure intended to outline the scenic qualities of identified scenic roads, including possible Historical Commission research regarding the history and use of each road.

Timing/Priority: Long-Term
Responsible Party: Staff, PC, Hist. Comm.
Means to Implement: Published brochure

Historic Resources

Regulatory

1. Add provisions to the 2007 Zoning Ordinance amendments that expand permitted use opportunities for historic properties and protect historic cartways and scenic vistas.

Timing/Priority: Immediate
Responsible Party: Hist. Comm., PC
Means to Implement: Zon. Ord.

2. Monitor properties designated in the Zoning Ordinance as Class II for possible upgrade to Class I, and those not currently designated for possible addition to the Class II resources.

Timing/Priority: Ongoing
Responsible Party: Hist. Comm.
Means to Implement: Zon. Ord.

3. Consider seeking Certified Historic District status for Guthriesville Village and enacting a separate, stand-alone ordinance consistent with Act 167. Under its terms, a Board of Historical Architectural Review (HARB) would then be created.

Timing/Priority: Ongoing/Short-Term
Responsible Party: Hist. Comm., BoS
Means to Implement: Freestanding historic district ordinance

4. Consider seeking Certified Historic District status for Dorlan Mills, Lyndell, Corner Ketch, and Bondsville.

Timing/Priority: Long-Term
Responsible Party: Hist. Comm., BoS
Means to Implement: Freestanding historic district ordinance

Historic Resources Survey

1. Based on the recently completed survey, develop a comprehensive list of “properties at risk.” Prioritize properties on the basis of historical and architectural significance and risk, and develop a strategy to research these properties (which could take several years) to complete the survey documentation.

Timing/Priority: Short-Term
Responsible Party: Hist. Comm.
Means to Implement: Research documents; property owner contact

2. Survey and inventory historic cartways and historic trees.

Timing/Priority: Short-Term
Responsible Party: Hist. Comm.
Means to Implement: Survey and documentation

3. Upgrade resource survey cards to the current Pennsylvania Historic Resource Survey form (or modified version). Provide a brief description of architectural components, including photography and site plan.

Timing/Priority: Long-Term
Responsible Party: Hist. Comm.
Means to Implement: Pa. HRSFs

National Register of Historic Places

1. Regularly evaluate the status of properties and planning in Guthriesville Village and, if deemed appropriate, resume the process of nomination to the National Register.

Timing/Priority: Immediate/Ongoing
Responsible Party: Hist. Comm., BoS
Means to Implement: Property owner contact; Nat. Reg. nomination

2. Based on the results of the recently completed historic resources survey, work with owners of properties identified as potentially eligible for the National Register and pursue nomination as appropriate.

Timing/Priority: Short-Term/Ongoing
Responsible Party: Hist. Comm.
Means to Implement: Property owner contact; Nat. Reg. nomination

3. In conjunction with affected property owners, submit Pennsylvania Historic Resource Survey Forms for Lyndell, Dorlan Mills, Corner Ketch, and Bondsville to determine if these potential districts are eligible for the National Register.

Timing/Priority: Short-Term
Responsible Party: Hist. Comm., BoS
Means to Implement: Property owner contact; Pa. HRSFs

4. Apply to the Chester County historic preservation officer to certify Township properties that are potentially eligible for the National Register or that contribute significantly to local and/or County heritage under the Chester County Historic Certification Program.

Timing/Priority: Immediate
Responsible Party: Hist. Comm., staff
Means to Implement: Certification application

Education, Advocacy, and Community Outreach

1. Encourage and support East Brandywine Historical Commission members in availing themselves of continuing education opportunities, e.g., conferences and workshops.

Timing/Priority: Ongoing
Responsible Party: Hist. Comm.
Means to Implement: Various educational opportunities

2. Develop an ongoing educational program for Township residents, property owners, and applicants to encourage historic resource protection. E.g., develop design guidelines to assist owners in historic district(s) or with other Class I and Class II properties.

Timing/Priority: Long-Term
Responsible Party: Hist. Comm.
Means to Implement: Design guidelines, distributable materials

3. Become a Certified Local Government (CLG).

Timing/Priority: Immediate
Responsible Party: Staff, Hist. Comm.
Means to Implement: Prepare and submit application

4. Develop and/or help leverage funding mechanisms (e.g., Township revolving fund, federal investment tax credit program) for property owners to protect, preserve, or adaptively reuse historic resources.

Timing/Priority: Short-Term
Responsible Party: Hist. Comm., BoS, Solic.
Means to Implement: Creation of fund; property owner assistance

5. Consider, where necessary, the purchase of historic resources and/or properties where their protection and preservation are a recognized public benefit.

Timing/Priority: Short-Term
Responsible Party: Hist. Comm., BoS, Solic.
Means to Implement: Develop a Township "ready fund"

6. Encourage private approaches to preservation, such as preservation easements, rehabilitation of historic structures, and adaptive reuse.

Timing/Priority: Ongoing
Responsible Party: Hist. Comm.
Means to Implement: Consultation with property owners

Chapter V, Guiding Future Uses of Land

Protected Lands: Public and Institutional

1. Continue to permit institutional and public uses directly serving the growing East Brandywine population; locational criteria and standards of compatibility should be reviewed periodically for appropriateness. Where provided in residentially zoned areas, such uses should only be permitted through conditional use approval by the Board of Supervisors.

Timing/Priority: Ongoing
Responsible Party: PC
Means to Implement: Zon. Ord.

2. Pursue actions to expand the Community Park in concert with the needs and wishes of the current landowners.

Timing/Priority: Short-Term
Responsible Party: Pks./Rec. Bd., staff, BoS
Means to Implement: Acquisition of park site; grant application

3. Establish additional links in the Township trail system, primarily through stipulated locations within common open space on developing tracts. As necessary, seek additional critical trail links through easement donation or acquisition or, as a last resort, purchase of a trail corridor segment in fee.

Timing/Priority: Ongoing/Short-Term
Responsible Party: Pks./Rec. Bd., PC, OS Comm., staff, BoS
Means to Implement: S/LDO; easements and land acquisitions

Protected Lands: Protected Open Space

1. Continue to monitor and evaluate currently vacant or underdeveloped properties where permanent open space protection is desirable and feasible (as first priorities, the properties shown on Map 11 as "Residential or Protected Open Space"); engage in outreach to those landowners to present options for future action.

Timing/Priority: Ongoing/Immediate
Responsible Party: OS Comm., PC
Means to Implement: Parcel evaluations; landowner contact

2. Protect sensitive natural features, scenic resources, and historic sites through permanent protection of properties on which they are located.

Timing/Priority: Ongoing/Short-Term
Responsible Party: PC, Hist. Comm., OS Comm.
Means to Implement: S/LDO; conservation/preservation easements

3. Continue to create permanently protected open space within new developments, and seek connections between adjacent tracts through contiguity of open space parcels and the trail system.

Timing/Priority: Ongoing
Responsible Party: PC
Means to Implement: S/LDO

4. Continue to refine Township land use regulations and fiscal capabilities designed to gain permanent protection of priority open space parcels.

Timing/Priority: Immediate
Responsible Party: PC, staff, BoS
Means to Implement: Zon. Ord., S/LDO, grant funding, Twp. acquisition

Agriculture

1. Support the continuation of agricultural activities on properties that achieve permanently protected status.

Timing/Priority: Ongoing
Responsible Party: OS Comm., staff; BoS
Means to Implement: Conservation easement donation/purchase

2. Minimize regulatory hindrances to agricultural operations where they are identified and found to be unreasonable.

Timing/Priority: Ongoing
Responsible Party: Staff, PC
Means to Implement: Various Township Code chapters

Residential

1. Maintain zoning for single-family detached dwellings, primarily through cluster development design, with locations and densities generally compatible with the existing pattern; monitor the effectiveness of the zoning provisions and adjust as appropriate.

Timing/Priority: Ongoing
Responsible Party: PC
Means to Implement: Zon. Ord.

2. Maintain appropriate density limits to achieve resource protection objectives and avoid potentially deleterious effects from on-site water and sewage systems.

Timing/Priority: Immediate
Responsible Party: PC, Eng., staff
Means to Implement: Zon. Ord., Act 537 Plan

3. Provide highest density residential use, including opportunities for a mix of dwelling types, within Guthriesville Village in accordance with the Vision Plan and Development Strategy (as presented in Chapter VII) and in Lyndell. Revise the boundaries and terms of the current VC Village Commercial District in both locations.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord.

4. In support of the Vision Plan for Guthriesville, modify the Zoning Ordinance to change the MU District east of Guthriesville to become R-2.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord.

5. Explore initiatives for creating affordable/workforce housing.

Timing/Priority: Immediate
Responsible Party: PC, staff, BoS
Means to Implement: Landowner outreach/ regulatory incentives

6. Assure that future residents can be served and supported, where necessary, by infrastructure such as public or community water supply and sewage facilities, roads, open space, and recreation.

Timing/Priority: Ongoing
Responsible Party: PC, EBTMA, staff, BoS
Means to Implement: Zon. Ord., S/LDO

Commercial and Industrial

1. Continue to orient commercial uses in East Brandywine primarily to the needs of Township residents, with the emphasis thus on retail and service uses of a local, convenience nature. The Township should not plan to accommodate large-scale, region-serving commercial uses.

Timing/Priority: Ongoing
Responsible Party: PC
Means to Implement: Zon. Ord.

2. Regulate the design and location of commercial activities in a manner that avoids the negative impacts of a strip pattern.

Timing/Priority: Ongoing
Responsible Party: PC
Means to Implement: Zon. Ord., S/LDO

3. In support of the Vision Plan for Guthriesville, modify the Zoning Ordinance to change the MU Mixed Use - Commercial District east of Guthriesville to become R-2 Residential.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord.

4. Retain the commercially-zoned areas of the Township as shown on Map 11, i.e., the MU Mixed Use - Commercial District west of Guthriesville, the properties on the north side of Horseshoe Pike within Guthriesville Village, and the properties zoned CS/LI Commercial Service/Limited Industrial along Horseshoe Pike at the eastern end of the Township; review and modify existing language as necessary.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord.

5. Review current Zoning Ordinance terms to assure office, automotive-related, and light industrial uses should continue to be permitted in the MU Mixed Use – Commercial and CS/LI Commercial Service/Limited Industrial Districts, where they are similar in scale, character, and impact to uses now existing and in compliance with performance standards.

Timing/Priority: Immediate
Responsible Party: PC
Means to Implement: Zon. Ord. review and revision, as needed

Mixed Commercial/Residential

1. Facilitate and encourage commercial and mixed-use development (including retail, office, and restaurant) in Guthriesville Village; alter the VC Village Commercial District terms in accordance with the Vision Plan and Development Strategy.

Timing/Priority: Immediate
Responsible Party: PC, staff, BoS
Means to Implement: Zon. Ord.; disseminate Village Plan

2. Modify slightly the area currently zoned VC Village Commercial at Lyndell, changing the district to mixed commercial/residential that is similar to, but less intense than, the changes to be made to the Guthriesville core area.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord.

3. Carry out other specific implementation actions to accomplish the Guthriesville plan, as presented in Chapter VII, with the Township serving as catalyst and advocate in addition to taking the direct actions proposed for it.

Timing/Priority: Immediate and Short-Term
Responsible Party: PC, staff, BoS
Means to Implement: See Chapter VII actions, below

Residential or Protected Open Space

1. Where agriculture is the current use of a property, pursue permanent open space protection and the continuing viability of the agricultural use in conjunction with the Chester County Agricultural Lands Preservation Board

Timing/Priority: Ongoing/Short-Term
Responsible Party: OS Comm., PC, staff
Means to Implement: Conservation easement donation/purchase

2. Where any of these properties is to be developed residentially, pay particular attention to the location and characteristics of proposed common open space in order to maximize benefits from contiguity with adjacent open space and the ability to achieve trail connections.

Timing/Priority: Ongoing/Short-Term
Responsible Party: PC, Pks./Rec. Bd.
Means to Implement: Zon. Ord., S/LDO

3. Maintain working relationships with Natural Lands Trust and the Brandywine Conservancy and solicit their participation in landowner conversations.

Timing/Priority: Ongoing
Responsible Party: OS Comm., staff
Means to Implement: Landowner contact

4. Periodically examine the Zoning Ordinance, as it affects these properties, to be sure its provisions are equitable to the landowners and supportive of the Township's land use and design objectives.

Timing/Priority: Short-Term
Responsible Party: PC
Means to Implement: Zon. Ord. revisions, as needed

Chapter VI, Providing Adequate Facilities and Services

Roads and other Circulation

1. Guide development to areas with collector road access to the arterial network in order to maintain efficient managed access and safety control while preserving the rural character of the local roads.

Timing/Priority: Short-Term
Responsible Party: PC
Means to Implement: Zon. Ord.

2. Consider establishing a program similar to the PennDOT "Adopt-A-Highway" program to protect and enhance the attractiveness and aesthetic quality of local roads in the Township.

Timing/Priority: Short-Term
Responsible Party: Staff, BoS
Means to Implement: Recruit and appoint responsible committee

3. For projects that require PennDOT attention, submit documentation of concerns and possible improvements to PennDOT for proposed inclusion on the 12 Year Program and the DVRPC Transportation Improvement Program.

Timing/Priority: Ongoing
Responsible Party: Staff, Eng., BoS
Means to Implement: Submission of proposed projects

4. Plan, design, and construct the Guthriesville Loop Road, a one-way, two-lane southbound road on a new alignment around the village of Guthriesville. In the short term, construct a segment as a two-way, two-lane extension of East Reeceville Road from Bondsville Road to Horseshoe Pike, coordinated with development of the Guthriesville Village core area.

Timing/Priority: Immediate/ongoing
Responsible Party: Staff, Eng., PC, BoS
Means to Implement: Landowner and PennDOT contact; official map

5. Evaluate construction of a roundabout as an option for traffic control at the intersection of Bondsville Road and East Reeceville Road.

Timing/Priority: Immediate
Responsible Party: Staff, Eng., BoS
Means to Implement: Engineer analysis; landowner contact

6. Continue to require a Traffic Impact Study for selected land use proposals that identifies the amount of traffic expected to be generated by a development and how the traffic will be distributed over time to the surrounding roads.

Timing/Priority: Ongoing
Responsible Party: PC, Eng.
Means to Implement: S/DDO

7. Create an Access Management Plan for the Horseshoe Pike corridor that designates areas most suitable for access points and those locations where access should be limited or avoided. The plan also can identify more extensive ways to achieve controlled access along highways.

Timing/Priority: Short-Term
Responsible Party: Staff, PC, Eng., BoS
Means to Implement: Comprehensive Plan amendment

Water Supply

1. Prevent future development from negatively impacting the performance of existing wells where groundwater testing has shown that ground water supplies are limited.

Timing/Priority: Ongoing
Responsible Party: PC, Eng.
Means to Implement: Zon. Ord., S/LDO

2. Participate with surrounding communities to promote enhancement of ground water resources by regulating the quality of stormwater runoff.

Timing/Priority: Short-Term
Responsible Party: Staff, PC, Eng.
Means to Implement: Stormwater Management Ordinance

3. Review and enact supplemental regulations for the proper disposal of potential pollutants and establish monitoring programs to insure that the goals of ground water protection are being met.

Timing/Priority: Long-Term
Responsible Party: Staff, PC, Eng.
Means to Implement: Stormwater Mgmt. Ord., monitoring program

4. Establish minimum targets for ground water quality testing in a network of existing wells distributed evenly around the Township.

Timing/Priority: Long-Term
 Responsible Party: Staff, Eng.
 Means to Implement: Create well network and quality targets
5. Distribute educational information to all residents regarding the proper disposal of unused medications and potential pollutants to the ground water.

Timing/Priority: Short-Term
 Responsible Party: Staff
 Means to Implement: Obtain/create material; distribute
6. Encourage the use of public water supply where the public wells are outside the Township, with the goal of ground water recharge within the Township.

Timing/Priority: Ongoing
 Responsible Party: Staff, Eng., BoS
 Means to Implement: S/LDO
7. Encourage drip distribution or other forms of subsurface disposal in all new subdivisions that propose community sewage systems.

Timing/Priority: Immediate
 Responsible Party: PC, Eng., EBTMA
 Means to Implement: S/LDO; Act 537 Plan

Sewage Treatment and Disposal

1. Given the continual development of innovative technology in the field of wastewater treatment, consider incorporating newly developed types of treatment facilities when sufficient evidence is presented to support the use of such new technology.

Timing/Priority: Ongoing
 Responsible Party: PC, Eng., EBTMA
 Means to Implement: S/LDO; Act 537 Plan
2. Require that treated wastewater be disposed of as close to its generation source as practicable. Promote ground water recharge to the greatest degree possible and implement the beneficial reuse of treated wastewater where practical.

Timing/Priority: Immediate
 Responsible Party: PC, Eng., EBTMA
 Means to Implement: S/LDO; Act 537 Plan

3. Individual residential on-site sewage disposal systems shall be operated and maintained by the property owner using best management practices for the system in place.

Timing/Priority: Ongoing
Responsible Party: Staff, Eng.
Means to Implement: Monitoring; property owner education program

4. All non-residential and community sewage systems shall be operated and maintained by a responsible management entity.

Timing/Priority: Immediate
Responsible Party: EBTMA, BoS
Means to Implement: S/LDO; Act 537 Plan

5. Periodically review and update the Act 537 Plan for consistency with other provisions of this Comprehensive Plan, the S/LDO, and the Zoning Ordinance. Additionally, as DEP requirements change, enact such changes as appropriate.

Timing/Priority: Ongoing
Responsible Party: Staff, Eng., EBTMA, BoS
Means to Implement: Act 537 Plan revisions, as necessary

6. If DEP regulations or guidelines are developed requiring registration, certification, and/or licensure of Responsible Management Entities (RME's), adopt requirements to register, certify, and/or license RME's for all non-residential and community sewage systems.

Timing/Priority: Immediate or when required
Responsible Party: Staff, Eng., EBTMA, BoS
Means to Implement: Freestanding ordinance

7. Develop and implement a Sewage Management Program that meets the current guidelines of DEP and investigate state or other funding sources for its preparation.

Timing/Priority: Immediate
Responsible Party: Staff, Eng., BoS
Means to Implement: Create, adopt, and administer program

Stormwater Management

1. Finalize and adopt new freestanding stormwater management ordinance, including increased emphasis on quality control of all runoff to be compliant with county, state, and federal regulations.

Timing/Priority: Immediate
Responsible Party: PC, Eng., BoS
Means to Implement: Adoption of Stormwater Management Ordinance

2. Continue to require sufficient evidence of adequate funding to support the construction and maintenance of detention basins and other such facilities, and require that all such facilities be owned by the developer or an entity acceptable to the Township that is established for ultimate care of the developed property.

Timing/Priority: Ongoing
Responsible Party: PC, Eng.
Means to Implement: S/LDO, Stormwater Management Ordinance

3. Establish levels of required compliance for the use of quality control Best Management Practices that will enhance the overall quality of surface water in the Township. Insure that riparian buffers are established and/or enhanced in all projects submitted for approval that involve streams.

Timing/Priority: Immediate
Responsible Party: PC, staff, Eng.
Means to Implement: Zon. Ord., S/LDO, Stormwater Mgmt. Ord.

4. Continue to administer all stormwater ordinance requirements through an aggressive site inspection process during construction of projects involving earth disturbance.

Timing/Priority: Ongoing
Responsible Party: Staff, Eng.
Means to Implement: Administration of Stormwater Mgmt. Ord.

5. Continue to implement the MS4 Stormwater Management Program's six "minimum control measures" intended to significantly reduce pollutants discharged into local streams.

See details in Chap. VI-D, Stormwater Management

Solid Waste Collection and Disposal

1. Continue the solid waste and recycling programs currently in place, both as Township-contracted services and Township-run services. Continue the flat fee-based financing strategy for these programs.

Timing/Priority: Ongoing
Responsible Party: Staff, BoS
Means to Implement: Program administration

2. Continue to monitor the services provided to ensure that trash removal and recycling efforts are conducted in a safe, fiscally responsible, and environmentally sustainable fashion.

Timing/Priority: Ongoing
Responsible Party: Staff
Means to Implement: Program monitoring

3. Update, as needed, the Township's solid waste and recycling ordinances in a timely manner to reflect state and county solid waste disposal regulations and Township program revisions.

Timing/Priority: Ongoing
Responsible Party: Staff, BoS
Means to Implement: Ordinance amendments

4. Revise and update, as needed, the Township's recycling and trash program flyer for circulation to Township residents, and continue to provide information on these collection programs on the Township's website.

Timing/Priority: Ongoing
Responsible Party: Staff
Means to Implement: Updated program flyer; website content

Recreation Facilities and Programs

1. Continue to emphasize pedestrian and bicycle opportunities in the review of proposed development plans, with trail easements employed as an important complementary mechanism.

Timing/Priority: Ongoing
Responsible Party: PC, Eng., Pks./Rec. Bd.
Means to Implement: S/LDO; landowner contact

2. Explore a final expansion of the Community Park and seek county and/or state funding support.

Timing/Priority: Short-Term
Responsible Party: Pks./Rec. Bd., staff, BoS
Means to Implement: Acquisition of park site; grant application

3. Create and adopt an Official Map as an added means to implement plans for trail connections and, if deemed necessary, additional park sites.

Timing/Priority: Immediate
Responsible Party: Staff, Pks./Rec. Bd., Eng., Solic., BoS
Means to Implement: Official Map

4. The Township will continue its support of DARC and EBVA, and will continue to monitor how satisfactorily existing recreation programs are meeting the needs of residents.

Timing/Priority: Ongoing
Responsible Party: Staff, Pks./Rec. Bd., BoS
Means to Implement: Financial contributions; program monitoring

Township Administrative Services; Landowner Assistance

1. Continue to administer the Township's functions and provide services in the most efficient and cost-effective fashion possible. Grants and other supplemental funding sources will be tapped wherever feasible.

Timing/Priority: Ongoing
Responsible Party: Staff, BoS
Means to Implement: Program administration

2. As deemed appropriate and of potential benefit, the Open Space Committee should be able to approach additional owners of prospective open space lands. These parcels will be among those shown as Residential/Protected Open Space on Map 11.

Timing/Priority: Short-Term
Responsible Party: OS Comm.
Means to Implement: Landowner contact

3. Continue to make use of additional open space funding programs where they can benefit landowners, and work with local land trusts to gain their expertise in open space protection projects.

Timing/Priority: Ongoing
Responsible Party: Staff, OS Comm.
Means to Implement: Grant applications, coordination with land trusts

Fire Protection, Rescue, and Emergency Medical Services

1. Continue financial support of the East Brandywine Fire Company at an appropriate level.

Timing/Priority: Ongoing
Responsible Party: Staff, BoS
Means to Implement: Annual financial contribution

2. East Brandywine Fire Company will create one professional emergency medical technician/fire-fighting position, and will solicit expanded volunteer participation, particularly in the areas of administration and the pursuit of grant funds.

Timing/Priority: Short-Term
Responsible Party: Staff, East Brandywine Fire Co.
Means to Implement: Fund solicitation and volunteer recruitment

3. The Township will monitor the availability and sufficiency of emergency medical services from providers outside the Township and, in concert with the East Brandywine Fire Company, pursue whatever adjustments may be needed to maintain an acceptable level of service for Township residents.

Timing/Priority: Ongoing
Responsible Party: Staff, BoS, East Brandywine Fire Co.
Means to Implement: Program monitoring and adjustments

Police Protection

1. Continue to provide a level of police protection deemed appropriate by the Board of Supervisors and the Police Department in relation to the expressed needs of the population and budgetary realities.

Timing/Priority: Ongoing
Responsible Party: Police Dept., BoS
Means to Implement: Maintain/enhance quality of police services

2. Maintain optimal levels of coordination with police support personnel at the County level and with other supplemental police services.

Timing/Priority: Ongoing
Responsible Party: Police Dept.
Means to Implement: Sustain inter-agency relationships

3. Continue existing inter-municipal agreements, pooled services, and similar mutual aid arrangements with neighboring communities and explore regularly the potential for sharing additional police services.

Timing/Priority: Ongoing/Short-Term
Responsible Party: Police Dept., BoS
Means to Implement: Sustain and, as appropriate, expand agreements

Library Services

1. Assure that residents have adequate library facilities available; in the immediate future, this will be in the form of a continued appropriate level of financial support to the Downtontown Library.

Timing/Priority: Ongoing/Short-Term
Responsible Party: Staff, BoS
Means to Implement: Financial support for Downtontown Library

2. As needs and opportunities dictate, determine if sufficient interest exists, and financial support is feasible, for creation of a community library within the Township.

Timing/Priority: Long-Term
Responsible Party: BoS
Means to Implement: Feasibility study

Chapter VII, Guthriesville Village Vision Plan and Development Strategy

1. Conduct a detailed feasibility analysis of the proposed East Reeceville Rd. extension, including a possible roundabout at the intersection with Bondsville Rd., to address precise routing, specific land requirements, cost estimates, and funding approaches. Clarify the relationship of the Guthriesville loop road concept to this East Reeceville Rd. extension.

Timing/Priority: Immediate
Responsible Party: Staff, Eng., PC, BoS
Means to Implement: Feasibility analysis; landowner contact

2. Create an Official Map to specify the internal street system, sidewalks, and trail connections within the Village.

Timing/Priority: Immediate
Responsible Party: PC, Eng., Solic., BoS
Means to Implement: Adoption of Official Map

3. Create a revised VC Village Commercial District and/or an overlay zoning district for the Guthriesville core area, specifying development incentives, design guidelines, improvements provisions, and correlation with the Official Map.

Timing/Priority: Immediate
Responsible Party: PC, BoS
Means to Implement: Zon. Ord. amendments

4. Identify precise wetlands issues and wetland mitigation areas, including potential prime candidates in the open space south of the proposed East Reeceville Rd. extension and west of Bondsville Rd. Include options for parking in wetland areas within the Village with potential use of pervious or semi-pervious surface materials

Timing/Priority: Immediate
Responsible Party: Eng., PC
Means to Implement: Wetlands analysis; village conceptual design

5. Review implications of the Guthriesville Vision Plan for the Township's Act 537 Plan and the options for meeting its wastewater treatment and disposal needs.

Timing/Priority: Short-Term
Responsible Party: EBTMA, PC, BoS
Means to Implement: Review of and, as needed, amendment to 537 Plan

6. Reassess the potential for a Guthriesville Village National Register nomination, including close communication with the affected landowners.

Timing/Priority: Immediate/Ongoing
Responsible Party: Hist. Comm., BoS
Means to Implement: Property owner contact; Nat. Reg. nomination

7. Review the history of the Township's alcohol sales status and determine whether modifications should be pursued to offer greater incentive for restaurant use.

Timing/Priority: Short-Term
Responsible Party: Solic., BoS
Means to Implement: Evaluation and possible referendum question

8. Identify and pursue additional funding sources for further planning and implementation of the Village concept, including possible "green technology" grants and availability of Vision Partnership Program funding.

Timing/Priority: Immediate
Responsible Party: Staff, PC
Means to Implement: Grant applications

**East Brandywine Township
Comprehensive Plan
2009**

APPENDIX A

RESIDENT SURVEY: TABULATED RESULTS

*East Brandywine Township
Resident Survey Results*

Question #1

Why did you choose to live in East Brandywine Township?

	1	2	3
Lived here all my live	52	7	17
Close to work	48	43	39
Scenic beauty	47	41	45
Farmland availability or cost	44	80	95
Family and friends nearby	43	52	39
Rural atmosphere	102	92	91
Low taxes	11	18	22
Housing availability or cost	118	64	55
Quality of schools	75	102	86
Other:	12		1

Question #2

Which of the following open space, recreation, and / or environmental resource issues do you believe are most important?

	1	2	3	
Agricultural Preservation	68	57	81	206
Protection of historic buildings and sites	32	64	83	179
Opportunities for passive recreation	78	99	118	295
Open space conservation	146	143	74	363
Natural resource protection	214	128	102	444
Availability of active recreation facilities	25	47	49	121
Other:	2			2

*East Brandywine Township
Resident Survey Results*

Question #3

The Township is using several means to achieve its open space and recreation goals – donation, purchase, regulation – and will continue to. In some cases, spending Township funds may be the most effective approach. Assuming the funds were clearly marked for the stated purpose, would you be willing to pay increased municipal taxes to support the following?

	Yes	No
Acquire open space	374	190
Operate community programs	132	405
Purchase additional land	286	260
Operate active recreation programs	173	376
Other:	4	

Question #4

The Township remains blessed with many scenic, historic, and natural resources. Regardless of their current level of protection, what existing features (general types and/or specific locations) should be the Township’s highest priority for long-term protection? (Please identify or describe such features)

*East Brandywine Township
Resident Survey Results*

Question #5

Family member participation in recreational activities:

Recreational Activity	Currently participate	Would like more opportunities to participate	Would support action to make available
Sight-seeing or pleasure	300	59	48
Walking/hiking	409	148	118
Nature enjoyment / contemplation	335	103	90
Fishing	141	56	62
Swimming	103	68	78
Boating	123	59	59
Field sports ...	132	29	51
Tennis	73	40	37
Basketball	61	16	35
Volleyball	20	20	32
Bicycling	195	107	97
Winter sports	68	91	70
Camping	88	41	38
Picnicking	149	57	38
Golf	115	41	25
Horseback Riding	52	52	61
Community recreation programs	82	54	56
Roller Blading	48	27	38
Other:	5	6	5

*East Brandywine Township
Resident Survey Results*

Question #6

For each of the following organized recreation programs, please indicate those in which you and members of your household currently participate, and those in which you do not participate, or do not participate as much as you'd like, because opportunities are insufficient. Please also note those activities for which you would support actions to make more facilities available. (Place a check in each box that applies.)

Recreational Activity	Currently participate	Would like more opportunities to participate	Would support action to make available
Organized team sports	141	32	63
Outdoor/environmental education	66	99	106
Arts/crafts/hobbies	79	57	1
Social recreation (e.g. games)	32	55	72
Cultural or performing arts	88	112	126
Special events (e.g. parades)	126	64	66
Other:			

*East Brandywine Township
Resident Survey Results*

Question #7

Where do you generally participate in recreational activities?

At home	420
At Brandywine/Wallace Elementary School	66
At East Brandywine Township Parks:	84
Community Park	252
Hopewell Field	65
Spatola Park	72
At the Struble Trail	334
At Marsh Creek State Park	344
At private or outdoor recreational sites (e.g. YMCA, spas) please specify the sites	187
At other schools; please specify the sites	64
At other local parks; please specify sites	67
At county parks (e.g. Hibernia Park, Struble Lake, Springton Manor Farm)	238
At other state parks; please specify the sites	53

Question #8

Do you support the creation of an interconnected trail system as a recreation and transportation alternative?

Yes	No
447	76

**East Brandywine Township
Resident Survey Results**

Question #9

Please rate the degree to which you feel any of the following factors detracts from your desired "quality of life" in East Brandywine Township.

	Neutral / no opinion	Somewhat detracting	Substantially detracting
Traffic	48	158	340
Noise levels	213	132	98
Outdoor lighting	278	98	60
Signage	283	98	41
Stormwater runoff	252	115	75
Amount of residential development	53	127	367
Amount of non-residential development	197	113	130
Other:			4

Question #10

How satisfied are you with the current level of land use regulation in East Brandywine Township?	
Current regulations too strict	32
Satisfied with current regulation level	232
Current regulations not strict enough	249

Question #11

If the same number of houses could be built on a tract of land, which of the following development patterns would you prefer?

Houses spread fairly evenly over the tract area	162
Houses built closer together, leaving open space, wooded areas, or farmland	197
Doesn't really matter	95

***East Brandywine Township
Resident Survey Results***

Question #12

Commercial Land Uses

	Yes	No
Do you feel the Township contains enough commercial land uses to serve the current population?	413	115

Are the commercial uses in the right locations?	441	68
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Question #13

East Brandywine Township is a participating member of several joint-municipal organizations that provide service to Township residents. Please indicate your view of the performance of these groups in effectively providing the intended service to the Township.

	Positive	Neutral	Negative	No opinion / unfamiliar
Downingtown Area School District	329	99	42	81
Downingtown Area Recreation Consortium	256	131	16	133
Downingtown Area Regional Planning Group (land use planning)	83	164	93	196
Brandywine Regional Police Dept.	386	99	25	40

*East Brandywine Township
Resident Survey Results*

Question 14 a.

In your opinion, how well is East Brandywine Township addressing the following issues?

	Satisfied	Insufficient Twp. Action / regulation	Twp. Is overly involved	No opinion inadequate information
Environmental resource protection	187	133	11	202
Protection of historic sites & structures	207	100	38	175
Providing recreation facilities	378	51	21	81
Police services	468	15	15	37
Volunteer fire and emergency services	470	5	5	54
Access to recreation facilities and programs	400	38	11	92
Maintenance of Township-owned roads (e.g., Marshall Rd., Zynn Rd., Holly Rd., Highspire Rd., Timber Pass, and N. Buck Rd.	354	99	1	102

Question 14 b.

How satisfied are you with PennDOT's maintenance of state-owned roads?

Satisfied	342
Dissatisfied	202
No opinion	27

*East Brandywine Township
Resident Survey Results*

Question #15

Please indicate how closely you agree with the following statements about solid waste issues in East Brandywine Township.

	Mostly Agree	No Opinion	Mostly disagree	Insufficient Information
The Township should continue its current uniform flat fee for trash pick-up.	490	9	35	19
The Township should institute a pay-by-the bag trash pick-up program. (Residents pay fixed price for each bag collected)	56	29	387	59
The Township should retain its voluntary drop-off program for certain recyclables not collected at curbside, with drop-off at the Township Building.	503	28	18	14
The Township should continue the curbside leaf collection program.	376	125	37	18
The Township should continue the curbside chipping of limbs and brush.	432	84	26	17

Question #16

As you form you own desired vision for the Township's future, what are the most significant impediments or obstacles you see to achieving that vision?

***East Brandywine Township
Resident Survey Results***

Question #17

Please indicate the type of dwelling you live in.

Single-family detached house	523
Twin, duplex, or double	2
Multi-unit building (e.g. apartment, townhouse)	37
Mobile home	5
Mixed (e.g. apartment over store)	1
Other:	1

Question #18

How long have you lived in the Township?

Less than 1 year	24
1-5 years	99
5-10 years	87
10-25 years	204
More than 25 years	153

Question #19

Please tally the number of persons in your household in each of the age groups below.

0 - 5 years	136
6 - 11 years	143
12 - 18 years	202
19 - 45 years	506
46 - 65 years	565
Over 65 years	143

*East Brandywine Township
Resident Survey Results*

Question #20

For those members of your household currently working, where is/are their place(s) of employment?

Work at home/farm	80
West Chester area	111
Downingtown / Thorndale / Coatesville	143
Reading/Berks County	9
Delaware (state)	28
Work in East Brandywine Township	34
Exton/Lionville area	108
Great Valley/King of Prussia	117
Lancaster County	8
Other:	188

Question #21

Please use the space below to offer other comments on issues you believe should be addressed by the Township's Comprehensive Plan, either now or in the future.

**East Brandywine Township
Comprehensive Plan
2009**

APPENDIX B

SOIL USE GUIDE

EAST BRANDYWINE TOWNSHIP - SOIL USE GUIDE - Part 1

Soil Type	Infiltration Potential (see note 1)	Depth to Seasonally High Water Table	Depth to Bedrock	Hydrologic Soil Group (see note 2)	Retention / Detention Basin Location	Soil Erodibility Class (see note 3)	Unified Soil Classification (see note 9)	Hydic Soil Yes/No? (see note 4)	Alluvial Soil Yes/No? (see note 5)
Brandywine	High	10+ ft.	3 - 4 ft.	C	Not Recommended When High Pollution Risk Exists. (See note 7)	Medium to Low	SC,SM	No	No
Chester	High	5+ ft.	5 - 6 ft/	B	Recommended	Medium at grade. High when stripped of topsoil	SM,SC,ML-CL	No	No
Chewacla	Low (Subject to Flooding)	0 - 1 ft.	3 - 6 ft.	C	Recommended Except as described in Footnote 8	High	CL	No (see note 6)	Alluvial
Congaree	Medium (Subject to Flooding)	3+ ft.	3 - 6 ft.	B	Recommended except as described in Footnote 8	Low to Medium	CL	No (see note 6)	Alluvial
Edgemont	High	5+ ft.	2 - 6 ft.	B	Not Recommended When High Pollution Risk Exists. (See note 7)	Medium at grade. Low when stripped of topsoil	SM	No	No

Soil Type	Infiltration Potential (see note 1)	Depth to Seasonally High Water Table	Depth to Bedrock	Hydrologic Soil Group (see note 2)	Retention / Detention Basin Location	Soil Erodibility Class (see note 3)	Unified Soil Classification (see note 9)	Hydric Soil Yes/No? (see note 4)	Alluvial Soil Yes/No? (see note 5)
Glenelg	High	5+ ft.	3 - 5 ft.	B	Not Recommended When High Pollution Risk Exists. (See note 7)	Medium	SM,GM,ML	No	No
Glenville	Low (SHWT)	1 -1.5 ft.	3 - 6 ft.	C	Recommended	High at grade. Medium at 4 feet depth	ML,ML-CL,MH	No (see note 6)	No
Hagerstown	High (Subject to Limestone Consideration)	5+ ft.	4 - 6 ft.	C	Recommended	Medium	CL,ML	No	No
Manor	High	5+ ft.	2 - 7 ft.	B	Recommended	High	GM,SM,GP-GM	No	No
Wehadkee	Low	0 - 1 ft.	5 - 8 ft.	D	Recommended except as noted in Footnote 8	High. Medium when stripped of topsoil	ML	Yes	Alluvial
Worsham	Low	0 - 1 ft.	3 - 5 ft.	D	Recommended except as noted in Footnote 8	High. Medium when stripped of topsoil	ML, MH	Yes	Alluvial

EAST BRANDYWINE TOWNSHIP - SOIL USE GUIDE - Part 2

Soil Type	Septic Tank Waste Infiltration Potential	Suitability for Building Sites	Suitability as Source of Topsoil	Suitability as Subgrade or Fill for Roads
Brandywine	No limitations.	No limitations.	Fair	Good
Chester	No limitations.	No limitations.	Good	Fair
Chewacla	Flooding implications; not recommended.	Flooding implications; not recommended.	Good	Poor to Fair
Congaree	Flooding implications; not recommended.	Flooding implications; not recommended.	Good	Fair
Edgemont	Shallow soil may affect infiltration potential.	No limitations.	Fair	Fair to Good as subgrade material; Poor as fill material

Soil Type	Septic Tank Waste Infiltration Potential	Suitability for Building Sites	Suitability as Source of Topsoil	Suitability as Subgrade or Fill for Roads
Glenelg	Shallow soil may affect infiltration potential.	No limitations.	Good (Note: severely eroded soil is very poor source of topsoil)	Fair to Good
Glenville	Claypan and seasonal high water table may affect infiltration potential.	Seasonal High Water Table	Good	Poor
Hagerstown	No limitations.	No limitations.	Good	Fair to Good
Manor	No limitations.	No limitations.	Fair	Good
Wehadkee	High water table; not recommended.	Flooding implications; not recommended.	Fair	Poor to Fair
Worsham	Slow permeability.	Wetness will affect suitability	Fair	Poor

East Brandywine Township **SOIL USE GUIDE**

Footnotes to the Soil Use Guide table:

1. Potential for infiltration is divided into three broad categories; Low, Medium and High. Actual infiltration will vary. A soils investigation should be performed to determine if infiltration practices are appropriate for a given site. SHWT stands for Seasonal High Water Table.
2. Hydrologic Soil Group designation is per U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS) (formerly USDA-SCS). A complete listing is available in Technical Release No. 55, Urban Hydrology For Small watersheds, June 1986.
3. The term "soil erodibility" is distinctly different from that of the term "soil erosion". Soil erosion on a given area generally depends more on the length and steepness of slope, rainstorm characteristics, surface cover and management than on soil properties. Some soils, however, erode more rapidly than others even when slope, rainstorm characteristics, surface cover and management are the same. This is due to soil properties alone and is the basis for predicting soil erodibility. Information on soil erodibility is available in the U.S. Department of Agriculture Natural Resources Conservation Service (USDA-SCS) publication titled, Pennsylvania Soil Interpretations Chester and Delaware Counties, 1975. Associated erodibility values are as follows: Low; Medium; High; Very High.
4. Hydric Soil classification is per United States Department of Agriculture, Hydric Soils List For Pennsylvania, 1995.
5. Alluvial soils classification is per Natural Resources Conservation Service.
6. These soil series may contain hydric soil inclusions within individual map units. It is recommended that an on-site investigation by a professional soil scientist take place to determine the suitability of the site for infiltration practices or stormwater management facilities.
7. If soils otherwise recommended for Retention/Detention basins are available on site, these soils are not recommended where the runoff to those facilities are from areas identified as having the potential for high levels of pollutants (commonly referred to as "hotspots").
8. This soil is an alluvial or colluvial soil frequently found in floodplains and high water areas. Since the Township's floodplain regulations restrict structures in many of these soil areas, reference must be made to the floodplain map and the ordinance to determine whether a basin may be built at a particular location. High water tables in soils may require basins above ground level, since an excavated area would frequently fill with water.
9. The Unified Soil Classification System (USCS) is a widely used system for identifying soils according to their textural and plasticity qualities and on their grouping with respect to behavior. Additional information on the USCS is available in the United States Department of the Army, Field Manual 5-472, October, 1999.

**East Brandywine Township
Comprehensive Plan
2009**

APPENDIX C

CONTRIBUTING AND DETRACTING VISUAL FEATURES

Contributing and Detracting Visual Features

(The following features correspond to the locations shown on Map 8: Visual Resources)

Contributing Visual Features

- 1) Rock outcrop
- 2) Rock outcrop
- 3) Stone barn
- 4) Stone retaining wall
- 5) Stone double arch building (on National Register)
- 6) Stone bridge
- 7) Stone barn
- 8) Large (42") silver maple
- 9) Stone spring house and farm complex
- 10) Large (36") oak
- 11) Stone barn and stone barnyard wall
- 12) Barn with stone wall and pond
- 13) Barn
- 14) Large (36") sycamore
- 15) Large (36") sycamore
- 16) Rock outcrop
- 17) Rocky land; open, mature woodland
- 18) Stone bridge
- 19) Barn with stone wall
- 20) Barn with stone barnyard wall
- 21) Church
- 22) One-room schoolhouse
- 23) Stone barn
- 24) Open, white pine woodland
- 25) Stone building ruin and stone farm house
- 26) Stone house ruin
- 27) Rapids in creek
- 28) Rock outcrop
- 29) Stone ruins, rock outcrop and mature, open woodland
- 30) Large (36") oak
- 31) Large (36") oak
- 32) Twin large (30") maples at end of farm lane
- 33) Single large (30") oak in field
- 34) Stone fence row with old trees
- 35) Stone, one-room school; large (36") oak
- 36) Stone house and barn complex
- 37) Open, mature woodland
- 38) Stone barn, farm complex
- 39) Dam and waterfall
- 40) Stone bridge

- 41) Large (30") oak
- 42) Stone barn and barnyard wall
- 43) Farm complex, stone retaining walls
- 44) Large (72") sycamore
- 45) Grove of large (24") locust trees
- 46) Ruins of small stone house
- 47) Stone bridge
- 48) Grove of mature tulip poplars

Detracting Features

- A) Radio transmission tower
- B) Factory/industrial site
- C) Commercial/industrial site
- D) Commercial/industrial site
- E) Abandoned mill complex

**East Brandywine Township
Comprehensive Plan
2009**

APPENDIX D

HISTORIC RESOURCES INVENTORY

**Historical Resources Inventory
East Brandywine Township
2006**

File	Age	Num.	Street	Tax Reference	Owner Address	GIS Map Address*	Class	Comments	Photo #s
1	1770	311	Little Washington Rd.	30-02-0005	same	301 Little Washington Rd.	2**		6985-6990
2	1820	300	Little Washington Rd.	30-02-0045	same		2		6984
3	1890	420	Little Washington Rd.	30-02-0052.4	same		2**		6991-6994
4	1795	430	Little Washington Rd.	30-02-0052.5	same		2**		
5	1779	521	Little Washington Rd.	30-02-0003	same		2		6995
6	1806	570	Dilworth Rd.	30-02-0054	same		2**		7051-7056
7	~1750	325	Jeffries Rd.	30-02-0063	same		2		7049
8	1784	590	Dilworth Rd.	30-02-0053	same		2		7050
8.1	1850	100	Special School Rd.	30-02-0002	55 Country Club Dr., Suite 200, Downingtown, PA 19335		2	Being Developed	6996-6997
9	1850	301	Marshall Rd.	30-02-0009	same		1	Bridge Mill Farm	6998-7001
10	1800	371	Marshall Rd.	30-02-0008.5	same		2		7004-7006
11	1902	755	Little Washington Rd.	30-02-0018	same		2		7073
12	1830	750	Little Washington Rd	30-02-0028.1	same		2		7074-7075
13	1790	301	Jeffries Rd.	30-02-0065	291 Jefferis Road, Downingtown, PA 19335		2		7048
14	1759	225	Jeffries Rd.	30-02-0066.2	same		2		7045-7047
15	1830	210	Jeffries Rd.	30-02-0030.11	same		2		7042-7044
16	1840	30	Highspire Rd.	30-02-0014.5	680 Wetherby Lane, Devon PA 19333		2**	2.7 acres + barn	7009-7016
17	1790	1096	Creek Rd.	30-02-0024	PO Box 346, Lyndell PA 19354		2		7020-7024
18	~1750	11	Highspire Rd.	30-02-0023.2	PO Box 361, Lyndell PA 19354		2**		7017-7019+7026
19	1800	1081	Lyndell Rd.	30-02-0026	P.O. Box 444	2 Lyndell Rd.	2		7025
20	1830	1071	Creek Rd.	30-02-0033	PO Box 335, Lyndell, PA 19354-0335		2		7028
21	1860	1061	Creek Rd.	30-02-0034	PO Box 274, Lyndell 19354		2	exempt	7031-7032
22	1729	1051	Creek Rd.	30-02-0035	PO Box 133, Lyndell PA 19354		2		7035-7036
23	1810	880	Little Washington Rd.	30-02-0032	P.O. Box 112, Lyndell, PA 19354-0112		2**	?additions to old house	7033-7034
24	1771	1050	Creek Rd.	30-02-0092.1	PO Box 133, Lyndell PA 19354		2**		7037-7038
25	1810	610	Corner Ketch Rd.	30-02-0067	same			Demolished	
26	1840	580	Corner Ketch Rd.	30-02-0069	same		2		7080-7081
27	1854	530	Corner Ketch Rd.	30-02-0073	same		2		7082-7083
28	1940	970	Creek Rd.	30-02-0093.1	P.O. Box 218, Lyndell, PA 19354		2		7321
29	1957	531	Corner Ketch Rd.	30-02-0094.4	PO Box 456, Lyndell PA 19354			Demolished	
30	1800	901	Creek Rd.	30-03-0001	same		2		7276-7278
31	1802	450	Reeds Rd.	30-02-0099.1	same		2**		7265-7269
32	1835	851	Creek Rd.	30-03-0003	same		2		7279
33	1820	785	Creek Rd.	30-03-0004	795 Creek Rd., Downingtown PA 19335	795 Creek Rd.	2		7280
35.1	1930	750	Creek Rd.	30-03-0031	same		2		7285
36	1800	720	Creek Rd.	30-03-0032.1	same		2		7290-7292
37	1763	171	Crawford Rd.	30-03-0028	same		2		7296-7299
37.1		170	Crawford Rd.	30-03-0021	171 Crawford Road, Downingtown, PA 19335		2		7300
38	1775	140	Crawford Rd.	30-03-0022.1	same		2		7301
39	1752	130	Crawford Rd.	30-03-0023.1	same		2		
40	1800	580	Reeds Rd.	30-02-0096	same		2		7274-7275
41	1913	852	Hopewell Rd.	30-03-0024E	same		2**		7160-7161
42	1860	901	Hopewell Rd.	30-03-0050	same		2		7162-7163
43	1830	690	Rock Raymond Rd.	30-06-0006	same		2**		7208-7216
44	1800	1051	Hopewell Rd.	30-03-0074.5	same		2**		7174-7177
45	1800	205	Township Rd.	30-03-0067	55 Country Club Dr., Suite 200, Downingtown, PA 19335		2		7169-7171
48	1845	1199	Hopewell Rd.	30-03-0076	same		2	10 acres 30-03-0081	7183-7184
49	1890	414	Creek Rd.	30-03-0078	same		2		7186-7187
50	1920	404	Creek Rd.	30-06-0021	Pine Hill Associates, Inc, P.O. Box 608, Regent Center, Lionville, PA 19353		2		7188-7191
51	1850	407	Creek Rd.	30-03-0083	same		2		7192-7193
52	1798	350	Creek Rd.	30-06-0070	414 Newcomer Rd., Exton PA 19341		2**		7198-7200
53	1796	130	Dowlin Forge Rd.	30-06-0020	1223 West Chester Pike, West Chester, PA 19382		2		7194-7197
54	1800	171	Dowlin Forge Rd.	30-06-0029	same		2		7217-7218
55	1800	621	Rock Raymond Rd.	30-06-0019	same		2		7202-7203
56	1900	590	Rock Raymond Rd.	30-06-0007.1	same		2**		7205-7206
57	1817	555	Rock Raymond Rd.	30-06-0034.2	same		2		7207
58	~1790	425	Rock Raymond Rd.	30-06-0064	same		2		7222-7226
59	1800	380	Rock Raymond Rd.	30-06-0051	same		2		7228

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**Historical Resources Inventory
East Brandywine Township
2006**

File	Age	Num.	Street	Tax Reference	Owner Address	GIS Map Address*	Class	Comments	Photo #s
59.1	1900	580	Buck Rd.	30-06-0017	same		2		7234-7236
60	1828	110	Buck Rd.	30-06-0008	PO Box 141, Chadds Ford PA 19317		2		7237-7241
61	1740	300	N. Buck Rd.	30-06-0002	same		2	recheck deed	7254-7256
62	1805	354	N. Buck Rd.	30-05-0108	same		2		7257-7259
63	1805	350	N. Buck Rd.	30-05-0107	same		2		7260
64	1800	55	N. Buck Rd.	30-06-0004	10 Buck Rd., Downingtown PA 19335	10 Buck Rd.	2**		7247-7253
65	1800	561	Old Horseshoe Pike	30-06-0045	PO Box 75, Thorndale, PA 19372		2		7438, 7439, 7441
66	1800	541	Old Horseshoe Pike	30-06-0044.3	same	551 Old Horseshoe Pike	2		7435, 7437
69	1750	867	Horseshoe Pike	30-06-0048	60 West Ave., Ocean City NJ 08226		2**	Local Landmark (Buck Inn)	7425-7426
70	1800	882	Horseshoe Pike	30-05-0223	same	882 Horseshoe Pike	2		7422-7424
72	1850	33	Buck Rd.	30-06-0049.1	same	35 Buck Rd.	2	Old Buck School	7242-7243
73	1800	10	Buck Rd.	30-06-0003	same		2		7244-7246
74	1830	908	Horseshoe Pike	30-05-0218	798 Brandywine Road, Downingtown, PA 19335-3903		2		7417
75	1842	918	Horseshoe Pike	30-05-0216	459 South Saddlebrook Circle, Chester Springs PA 19425-2330		2**		7411-7412
76	1853	930	Horseshoe Pike	30-05-0214	same		2		7408-7410
77	1800	1158	Osborne Rd.	30-05-0211.4	same	1162 Osborne Rd.	2		7395, 7398
77.1	~1780	1153	Osborne Rd.	30-05-0208.3	39 Griffith Avenue, Malvern, PA 19355-2614		2**		7394, 7397, 7399
78	1811	1000	Horseshoe Pike	30-05-0212.1	same	1002 Horseshoe Pike	2**	Locust Knoll Farm / Green Tree Ta	7402-7407
79	1925	1050	Horseshoe Pike	30-05-0213	same	1054 Horseshoe Pike	2		7401
80	1860	3750	E. Fisherville Rd.	30-05-0207.1	same		2**	recheck deed - Class 1	7386
81	1850	3709B	E. Fisherville Rd.	30-05-0150.1	same	3735 E. Fisherville Rd.	2		7382-7384
82	1810	3709	E. Fisherville Rd.	30-05-0150	same		2		7380
83	1840	3707	E. Fisherville Rd.	39-01-0022	424 Hill Rd., Honeybrook, PA 19344		2	House assigned to Caln Twp	
84	1800	1634	Bondsville Rd.	30-05-0200.1	same		2		7375-7377
85.1	1840	1654	Bondsville Rd.	30-05-0191	same		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.2	1840	1650	Bondsville Rd.	30-05-0192	810 Taylor Road, Downingtown, PA 19335		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.3	1840	1648	Bondsville Rd.	30-05-0193	same		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.4	1840	1646	Bondsville Rd.	30-05-0194	same		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.5	1840	1644	Bondsville Rd.	30-05-0195	1646 Bondsville Rd., Downingtown PA 19335		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.6	1840	1642	Bondsville Rd.	30-05-0196	same		2**	Class 1 - Worker's Housing	7366, 7367, 7369
85.7		1636	Bondsville Rd.	30-05-0198	same		2		7374
86	1850	1656	Bondsville Rd.	30-05-0190	1447 Horse Shoe Pk., Glenmoore PA 19343		2		
87	1740	1651	Bondsville Rd.	30-05-0126	1055 W. Strasburg Rd., West Chester PA 19382	1657 Bondsville Rd.	2**		7347-7362, 7364
87.1		1641	Bondsville Rd.	30-05-0151E	East Brandywine Township		2	Old Mill	7370-7373
88	1797	2060	Bondsville Rd.	Lot 570, Applecross Fm TP# 30-05-0120	4812 Drexelbrook Dr., Drexel Hill PA 19026		1	The William Davis Farm	7341-7343
89	1730	2022	Bondsville Rd.	30-05-0121.1	same		2**		7344-7346
90	1895	100	Hadfield Rd.	30-05-0182	same		2		7487-7489
91	1920	1541	N. Bailey Rd.	30-05-0183	same		2		7511-7514
92	~1820	1540	N. Bailey Rd.	30-05K-0004	same		2		7515-7519
94	~1820	1431	N. Bailey Rd.	30-05-0186.1	same		2		7520-7522
95	1875	2975	Fisherville Rd.	30-05-0187	c/o Law Office of Det. H. Joks PA, 10689 N. Kendall Dr., Penthouse #310 Miami, FL 33176	1300 N. Bailey Rd.	2		7523
96	1895	220	Hadfield Rd.	30-05-0180.1	same		2**		7490, 7492
97	1800	201	Newlin Dr.	30-05-0166	same		2		7528-7530
98	1782	1621	Caln Meetinghouse Rd.	30-05-0162	same		2		
99	1741	1541	Fisherville Rd.	30-05-0152	P.O. Box 511154 Key Colony Beach, FL 33051	1529 Fisherville Rd.	2		7552-7553
100	1834	581	Hadfield Rd.	30-05-0110	same	593 Hadfield Rd.	2**	Barn	7496-7500
101	1790	400	Hadfield Rd.	30-05-0159.1	same		2		7494
102	1790	230	Zynn Rd.	30-05-0113	same		2**		7501-7502
103	1796	231	Zynn Rd.	30-05-0116	same		2	30-5-0115	7503-7506
104	~1810	151	Zynn Rd.	Lot 595, Applecross Fm TP# 30-05-0118	1100 Northbrook Drive, Suite 200, Trevoise, PA 19053	160 Zynn Rd.	1	The Charles Trego Farmhouse	7546-7548
104.1			Zynn Rd.	PENDING	1100 Northbrook Drive, Suite 200, Trevoise, PA 19053		2	Barns Associated with Trego Prop. (HR-104)	7548
105	1809	250	Bollinger Rd.	30-05-0001	1100 Northbrook Drive, Suite 200, Trevoise, PA 19053	501 E. Reeceville Rd.	2**	The William Moore Farmhouse (demolished)	7322-7326
106	1900	1306	Horseshoe Pike	30-02-0042.1	same		2**		6969

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East Brandywine Township
2006**

File	Age	Num.	Street	Tax Reference	Owner Address	GIS Map Address*	Class	Comments	Photo #s
108	1850	1378	Horseshoe Pike	30-01-0003	same		2		6973
109	1920	1387	Horseshoe Pike	30-01-0001	115 Culbertson Run Road, Downingtown, PA 19335	1389 Horseshoe Pike	2	The Castigan Farm	6979-6983
110	1800	14	Patterdale Place	30-02-0043	same		2		6974-6978
111	1813	432	Timber Pass Dr.	30-02P-0008	same		2		7316-7319
113	1813	310	N. Guthriesville Rd.	30-02-0048	1279 Horseshoe Pike, Downingtown, PA 19335		1		7335-7340
114	1740	281	N. Guthriesville Rd.	30-02-0109	same		2**	4.2 acres	7306-7309
115	~1800	15	Quail Hill Lane	30-02P-0277	same		2	copied 30-02-0051	7313-7314
116	1813	458	Dilworth Rd.	30-02-0056	same		2**		7064-7068
117	1850	455	Dilworth Rd.	30-02-0057.22	same		2		7062-7063
118	1750	477	Dilworth Rd.	30-02-0058	same	479 Dilworth Rd.	2**		7057-7061
120	1850	471	Corner Ketch Rd.	30-02-0086.2	469 Corner Ketch Rd., Downingtown, PA 19335		2	10.7 acres	7085-7088
121	1785	459	Corner Ketch Rd.	30-02-0085	same		2**	Thomas B. Read Birthplace	7089
122	1895	407	Echo Dell Rd	30-02-0101.6	same		2	7.3 acres + barn	7156
123	1780	690	Hopewell Rd.	30-02-0101.2	same		2**	5.7 acres	7157-7158
124	1804	380	N. Buck Rd.	30-05-0106.3	same		2	30-05-106.5D?	7261-7263
125	1830	311	Corner Ketch Rd.	30-05-0092	same	315 Corner Ketch Rd.	2		7138-7141
126	1850	555	Hopewell Rd.	30-05-105.2	same			Demolished	
127	~1800	547	Hopewell Rd.	30-05-0104	same		2		7105-7106
128	1820	550	Hopewell Rd.	30-05-0059	same		2		7104
129	1820	502	Hopewell Rd.	30-05-0054	530 Hopewell Rd., Downingtown, PA 19335	510 Hopewell Rd.	2		7099
130	1831	410	Corner Ketch Rd.	30-05-0052	103 Buckley Court, Chester Springs, PA 19425		2		7095-7096
131	1821	498	Hopewell Rd.	30-05-0051	same		2		7098
132	1800	525	Hopewell Rd.	30-05-0103	same		2		7108
133	1820	398	Corner Ketch Rd.	30-05-0073	same		2		7117-7118
134	1820	390	Corner Ketch Rd.	30-05-0074	same		2		7116
135	1930	349	Corner Ketch Rd.	30-05-0097	same		2		7136-7137
137	1802	420	Hopewell Rd.	30-05-0043.17	same		2**	Buffalo Bill's Wrangler's House	7129-7135
139	1928	49	Corner Ketch Rd.	30-05-0089.1	same		2		7151-7152
140		999	Horseshoe Pike	30-05-0088E	same		2		7451
141	1875	1100	Horseshoe Pike	30-05-0146	same		2		7469
142	1845	1116	Horseshoe Pike	30-05-0144	same		2**		7466-7467
146	1920	1142	Horseshoe Pike	30-05-0143	1511 N. Bailey, Downingtown PA 19335		2		7465
148	1820	1145	Horseshoe Pike	30-05-0065	same		2		7482-7483
149	1925	1147	Horseshoe Pike	30-05-0066	287 Vincent Drive, Honey Brook, PA 19344		2		7484-7485
150	~1875	1150	Horseshoe Pike	30-05-0142	PO box 288, Downingtown PA 19335		2		7464, 7486
151	1920	1162	Horseshoe Pike	30-05-0139	PO box 288, Downingtown PA 19335		1	Guthrieville Historic District	
152	1920	1164	Horseshoe Pike	30-05-0138	PO box 288, Downingtown PA 19335		1	Guthrieville Historic District	
152.1		1166	Horseshoe Pike	30-05-0137	same		1	Guthrieville Historic District	
153	1920	1168	Horseshoe Pike	30-05-0136	373 Brookwood Road, Downingtown, PA 19335		1	Guthrieville Historic District	
154	1920	1170	Horseshoe Pike	30-05-0135	same		1	Guthrieville Historic District	
154.1		1176	Horseshoe Pike	30-05-0134	same		1	Guthrieville Historic District	
155	1920	1178	Horseshoe Pike	30-05-0133	PO box 288, Downingtown PA 19335		1	Guthrieville Historic District	
156	1806	1180	Horseshoe Pike	30-05-0132	same	1182 Horseshoe Pike	1	Guthrieville Historic District	
157	1820	1184	Horseshoe Pike	30-05-0131	407 Creek Rd., Downingtown PA 19335		1	Guthrieville Historic District	
158	1920	1182	Horseshoe Pike	30-05-0130	407 Creek Rd., Downingtown PA 19335	1186 Horseshoe Pike	1	Guthrieville Historic District	
160	1800 ?	1192	Horseshoe Pike	30-05-0129.3	210 West Whitetail Ridge, Glen Moore PA 19343-1817	1198 Horseshoe Pike	1	Guthrieville Historic District	
161	1820	1175	Horseshoe Pike	30-05-0070	399 Rock Raymond Rd., Downingtown, PA 19335		1	Guthrieville Historic District	
162	1870	1193	Horseshoe Pike	30-05-0067	3304 Norma Dr., Thorndale, PA 19372		1	Guthrieville Historic District	
164		1199	Horseshoe Pike	30-05-0068	1528 Horseshoe Pike, Glenmoore, PA 19343		2		
166	1790	1200	Horseshoe Pike	30-05-0012	300 Caitlyn Court, Honey Brook, PA 19344-1769	1202 Horseshoe Pike	2	Demolished	7461
166.1	~1830	1204	Horseshoe Pike	30-05-0013.4	same		2	Guthrieville Historic District	7460
167		1214	Horseshoe Pike	30-05-0008.1E	same		2	Guthrieville School	7459
169	~1860	1220	Horseshoe Pike	30-05-0008	325 Jefferis Road, Downingtown, PA 19335-1036		2		7457-7458
170	1800	1234	Horseshoe Pike	Lot 296, Weaver SD Fm TP# 30-05-0003	same		1		
203	1900	3746	E. Fisherville Rd.	30-05-0206	same		2		7387-7390
204	1921	100	Hopewell Rd.	30-05-0069	same		2		
205	1900	580	N. Guthriesville Road	30-02-0052.8	same	551 N. Guthriesville Road	2	12.3 acres	

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East Brandywine Township
2006**

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207	1900	880	Horseshoe Pike	30-06-0036	same		2		
213	1850	590	Buck Rd.	30-06-0016	same		2		7233
214		855	Horseshoe Pike	30-06-0043.1		859 Horseshoe Pike	2	House in Caln	7428-7429
216	1903		Little Washington Rd Brid.					Bridge between	7002-7003
217	1820	514	Hopewell Rd.	30-05-0055	same		2	30-2-9 & 30-2-28.2	7100
231		221	E. Reeceville Rd.	30-05-0002	same		2		7328
232		450	N. Guthriesville Rd.	30-02-0046.8	same	452 N. Guthriesville Road	2		7320
233	1920	280	N. Guthriesville Rd.	30-02-0047	1030 W. Germantown Pk, Fairview Village, PA 19409		2		7310-7312
240		770	Creek Rd.	30-03-0030	same		2		7283-7284
241		560	Reeds Rd.	30-02-0097	same		2		7271-7273
246	1920	399	Rock Raymond Rd.	30-06-0063	291 Corner Ketch Rd., Downingtown, PA 19335	397 Rock Raymond Rd.	2		7227
250	?	312	Creek Rd.	30-06-0072	PO Box 202, Downingtown, PA 19335-0202	314 Creek Rd.	2		7201
251	?	412	Creek Rd.	30-03-0079	same	330 Corner Ketch Rd.	2		7185
259	1820	790	Hopewell Rd.	30-02-0100.2	same		2	Barn	7159, 7264
260	1920	666	Hopewell Rd.	30-02-0102.1	same		2		7154-7155
263	1940	200	Corner Ketch Rd.	30-05-0081	same		2		7147-7148
270	1940	460	Hopewell Rd.	30-05-0046	same		2		7122, 7124
271	1940	480	Hopewell Rd.	30-05-0048	same		2		7121, 7123
289	?	500	Corner Ketch Rd.	30-02-0076	same		2		7084
301	?	1658	Bondsville Rd.	30-05-0189.1	134 E. Lancaster Avenue, Downingtown, PA 19335-2958		2**		7363, 7365
302	~1860	1630	Bondsville Rd.	30-05-0199	same		2**	School House	7378-7379
306	~1940	1163	Osborne Rd.	30-05-0208.1C	same		2		7393, 7396
313		571	Old Horseshoe Pike	30-06-0046	same		2		7442-7443
316		72	Margil Farm Drive	30-06-0050.53	1171 Lancaster Ave., Suite 201, Berwyn, PA 19312-1290	70 Margil Farm Drive	2	Farmstead	7444-7449
317	1920	1226	Horseshoe Pike	30-05-0005	same		2		7453, 7455
321	1925	1154	Horseshoe Pike	30-05-0141	same		2**		7463
322	1925	1102	Horseshoe Pike	30-05-0145	same		2		7468
324	1932	10	Corner Ketch Rd.	30-05-0086	same		2		7471-7472
325	~1900	1101	Horseshoe Pike	30-05-0085	same		2		7473-7474
328			Bridge on Hatfield Rd.		2 North High Street, West Chester, PA 19382		2		7491
335	1941	385	Zynn Rd.	30-05-0168	same		2	Catalog House?	7531
34	1900	775	Creek Rd.	30-03-0005	same		3		7282
35	1850	798	Creek Rd.	30-03-0029	81 Margil Farm Drive, Downingtown, PA 19335		3		7281
46	1800	1111	Hopewell Rd.	30-03-0075	same		3		7179-7182
47	1920	530	Creek Rd.	30-03-0036	same		3		7294
68	~1950	599	Old Horseshoe Pike	30-06-0048.1	same		3		7427
71	1928	894	Horseshoe Pike	30-05-0221.1	Commonwealth of PA, Department of Transportation 7000 Geerdes Boulevard, King of Prussia, PA 19460		3	Home demolished by PennDOT	7418
107	1931	1322	Horseshoe Pike	30-02-0041	same		3		6970
136	~1820	475	Hopewell Rd.	30-05-0079.3	same		3		7126-7127
138	1870	75	Corner Ketch Rd.	30-05-0091	P.O. Box 287, 1030 West Germantown Pike		3	Developer Should Document before Demolition	7149
143	1923	1121	Horseshoe Pike	30-05-0062.1	same		3		7477
144	1921	1123	Horseshoe Pike	30-05-0063	same		3		7478
145	1920	1131	Horseshoe Pike	30-05-0064	797 E Lancaster Pk., Downingtown PA 19335		3		7479-7481
168		100	N. Guthriesville Rd.	30-05-0019	same	1219 Horseshoe Pike	3		7507-7510
206	~1820	131	Highspire Rd.	30-02-0022	same		3		7007
208	1915	591	Old Horseshoe Pike	30-06-0047	same		3		7430, 7434
209	1930	745	Creek Rd.	30-03-0008	same		3		7289
210	1930	755	Creek Rd.	30-03-0007	same		3		7287-7288
215	1900	520	Old Horseshoe Pike	30-06-0041	same		3		7436
225	1940	2089	Bondsville Rd.	30-05-0129.2	434 Freedom Village, Coatesville, PA 19320		3	Machine Shop	7334
226	1940	2086	Bondsville Rd.	30-05-0014	same		3		7333
227	1940	2080	Bondsville Rd.	30-05-0015	same		3		7332
228	1940	2070	Bondsville Rd.	30-05-0016	same		3		7331
229		2065	Bondsville Rd.	30-05-0128	530 Grant Avenue, Downingtown, PA 19335	2059 Bondsville Rd.	3	Machine Shop	7330
230	1950	121	E. Reeceville Rd.	30-05-0018	139 W 19th Street, #6E, New York, NY 10011-4108		3		7329

* GIS Map Address = SITUS (where different from Street Address)

** Class II Resource with the potential for Class I designation

Class Designations: 1 = Class I; 2 = Class II; 3 = Other (> 50 yrs. NOT Class I or Class II)

**Historical Resources Inventory
East Brandywine Township
2006**

File	Age	Num.	Street	Tax Reference	Owner Address	GIS Map Address*	Class	Comments	Photo #s
234		161	Hopewell Rd.	30-05C-0005	same		3		7305
235		171	Hopewell Rd.	30-05C-0006	same		3		7304
236		181	Hopewell Rd.	30-05C-0007	same		3		7303
237		190	Crawford Rd.	30-03-0020	same		3		7295
238		601	Creek Rd.	30-03-0010	same		3	Large Stone Ruin (chimney)	7293
239	1940	740	Creek Rd.	30-03-0031.1	same	760 Creek Rd.	3		7286
242	1940	505	Reeds Rd.	30-03-0015	same		3		7270
243		92	Hill Top Rd.	30-06-0061	same		3		7231
244		90	Hill Top Rd.	30-06-0060	same		3		7232
245	1950	371	Rock Raymond Rd.	30-06-0062	same		3		7229
247	1950	502	Rock Raymond Rd.	30-06-0015	same		3		7221
248	1950	500	Rock Raymond Rd.	30-06-0015.1	same		3		7220
249	1950	599	Rock Raymond Rd.	30-06-0025	same		3		7204
249.1	1940	191	Dowlin Forge Rd.	30-06-0027	same		3		7219
252	1940	1108	Hopewell Rd.	30-03-0039	same		3		7178
253	1940	1031	Hopewell Rd.	30-03-0073	same		3		7173
254	1950	260	Township Rd.	30-03-0054	same		3		7168
255	1950	270	Township Rd.	30-03-0053.1	same		3		7167
256	1940	241	Township Rd.	30-03-0071	same		3		7166
257	1940	280	Township Rd.	30-03-0052	same		3		7165
258	1950	261	Township Rd.	30-03-0072	same		3		7164, 7172
261	1950	568	Hopewell Rd.	30-05-0060	same		3		7153
262	?	50	Corner Ketch Rd.	30-05-0083	same		3		7150
264	1940	205	Corner Ketch Rd.	30-05-0094	same		3		7146
265	1940	281	Corner Ketch Rd.	30-05-0095	same		3		7144-7145
266	1920	260	Corner Ketch Rd.	30-05-0080	same		3		7142
267	1940	291	Corner Ketch Rd.	30-05-0096	same		3		7143
268	1940	421	Hopewell Rd.	30-05-0071	same	425 Hopewell Rd.	3		7128
269	1920	470	Hopewell Rd.	30-05-0047	same		3		7125
272	1940	485	Hopewell Rd.	30-05-0072	same		3		7120
273	1920	490	Hopewell Rd.	30-05-0050	same		3		7119
274	1895	378	Corner Ketch Rd.	30-05-0076	same		3		7115
275	1950	370	Corner Ketch Rd.	30-05-0077	same		3		7114
276	1926	361	Corner Ketch Rd.	30-05-0098	same		3		7113
277	1920	369	Corner Ketch Rd.	30-05-0099	same		3		7112
278	1940	375	Corner Ketch Rd.	30-05-0100	same		3		7111
279	1950	381	Corner Ketch Rd.	30-05-0101	same		3		7110
280	1950	391	Corner Ketch Rd.	30-05-0102	same		3		7109
281	1950	544	Hopewell Rd.	30-05-0058	same		3		7103
282	1950	540	Hopewell Rd.	30-05-0057	same		3		7102
283	~1945	530	Hopewell Rd.	30-05-0056	same		3		7101
284	1940	405	Corner Ketch Rd.	30-05-0053	same		3		7097
285	1950	445	Corner Ketch Rd.	30-02-0081	same		3		7094
286	1940	449	Corner Ketch Rd.	30-02-0082	same		3		7093
287	1920	455	Corner Ketch Rd.	30-02-0083	same		3		7092
288	1950	457	Corner Ketch Rd.	30-02-0084	same		3		7091
290	1951	591	Corner Ketch Rd.	30-02-0088	P.O. Box 38, Lyndell, PA 19354-0038		3		7079
291	1950	605	Corner Ketch Rd.	30-02-0089	same		3		7078
292	1950	830	Little Washington Rd.	30-02-0030.7	same		3		7077
293	?	825	Little Washington Rd.	30-02-0016	P.O. Box 71, Lyndell, PA 19354-0071		3		7076
294	1940	725	Little Washington Rd.	30-02-0020	1007 Appleville Road, West Chester, PA 19380		3		7072
295	1950	408	Dillworth Rd.	30-05C-0012	same		3		7070
296	1950	423	Dillworth Rd.	30-05-0031	same		3		7069
297	1950	613	Corner Ketch Rd.	30-02-0090	same		3		7041
298	1940	709	Corner Ketch	30-02-0091	P.O. Box 422, Lyndell, PA 19354-0253		3		7039-7040
299	1940	1070	Creek Rd.	30-02-0015	P.O. Box 171, Lyndell, PA 19354-0171	1074 Creek Rd.	3	Greenhouse	7027, 7029-7030
300	1940	1350	Horseshoe Pike	30-02-0040	same		3		6971 - 6972
303		3738	E. Fisherville Rd.	30-05-0150.2	same	3741 E. Fisherville Rd.	3	New Hs on Old Foundation Wall	7385

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** Class II Resource with the potential for Class I designation

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**Historical Resources Inventory
East Brandywine Township
2006**

File	Age	Num.	Street	Tax Reference	Owner Address	GIS Map Address*	Class	Comments	Photo #s
305	~1950	3745	E. Fisherville Rd.	30-05-0205	same	3744 E. Fisherville Rd.	3		7391-7392
307		1156	Osborne Rd.	30-05-0210	same		3		7400
307.1	1930	912	Horseshoe Pike	30-05-0219	same		3		7413-7414
308	~1940	914	Horseshoe Pike	30-05-0224.1	same		3		7415
308.1		876	Horseshoe Pike	30-06-0035	880 Horseshoe Pike, Downingtown, PA 19335	886 Horseshoe Pike	3		7419
309		916	Horseshoe Pike	30-05-0219.1	same		3		7416
309.1		886	Horseshoe Pike	30-05-0221	880 Horseshoe Pike, Downingtown, PA 19335	890 Horseshoe Pike	3		7420-7421
310	1920	857	Horseshoe Pike	30-06-0043	same		3		7431
311	1930	851	Horseshoe Pike	30-06-0042	same		3		7432
312		850	Horseshoe Pike	30-06-0038	same		3		7433
315	1930	140	Bond Drive	30-05-0109.5			3	School Building	7450
316.1	1950	1228	Horseshoe Pike	30-05-0004	same		3		7452
318		1224	Horseshoe Pike	30-05-0006	same		3		7454
319		1222	Horseshoe Pike	30-05-0007	same		3		7456
320	1955	1158	Horseshoe Pike	30-05-0140	same		3		7462
323	1920	1098	Horseshoe Pike	30-05-0147	same		3		7470
326	1950	1117	Horseshoe Pike	30-05-0061	same		3		7475
327		1119	Horseshoe Pike	30-05-0062	same		3		7476
329		320	Hadfield Rd.	30-05-0179	same		3		7493
330	1940	541	Hadfield Rd.	30-05-0111.1	same		3		7495
332	1920	501	Zynn Rd.	30-05-0165	same		3		7525-7526
333	1950	551	Zynn Rd.	30-05-0164	same		3		7527
334	1946	391	Zynn Rd.	30-05-0167	same		3		7532-7533
336	1941	381	Zynn Rd.	30-05-0169	same		3		7534-7535
337	1946	375	Zynn Rd.	30-05-0170	same		3		7536
338	1950	371	Zynn Rd.	30-05-0171	same		3		7537
339		361	Zynn Rd.	30-05-0173	same		3		7538-7539
340	1920	355	Zynn Rd.	30-05-0174	same		3		7540
341		351	Zynn Rd.	30-05-0175	same		3		7541
342	~1955	341	Zynn Rd.	30-05-0177	same		3		7542
343	~1950	350	Zynn Rd.	30-05-0161	same		3		7543
344	1950	340	Zynn Rd.	30-05-0160	same		3		7544
345	1950	201	Zynn Rd.	30-05-0117	same		3		7545
346	~1955	501	E. Reeceville Rd.	30-05-0001	1100 Northbrook Drive, Suite 200, Trevoese, PA 19053		3		7549-7551

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** Class II Resource with the potential for Class I designation

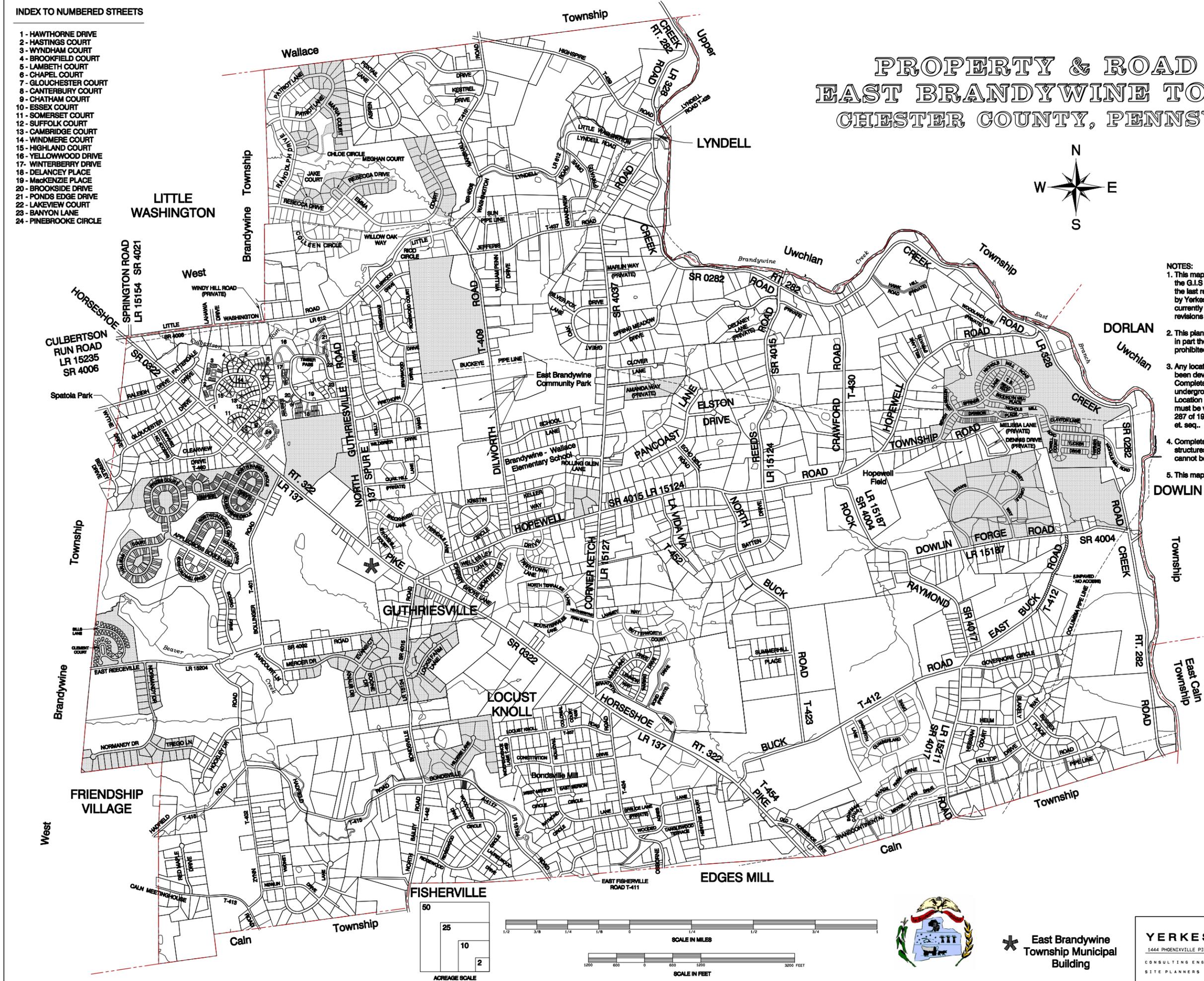
INDEX TO NUMBERED STREETS

- 1 - HAWTHORNE DRIVE
- 2 - HASTINGS COURT
- 3 - WYNDHAM COURT
- 4 - BROOKFIELD COURT
- 5 - LAMBETH COURT
- 6 - CHAPEL COURT
- 7 - GLOUCESTER COURT
- 8 - CANTERBURY COURT
- 9 - CHATHAM COURT
- 10 - ESSEX COURT
- 11 - SOMERSET COURT
- 12 - SUFFOLK COURT
- 13 - CAMBRIDGE COURT
- 14 - WINDMERE COURT
- 15 - HIGHLAND COURT
- 16 - YELLOWWOOD DRIVE
- 17 - WINTERBERRY DRIVE
- 18 - DELANCEY PLACE
- 19 - MacKENZIE PLACE
- 20 - BROOKSIDE DRIVE
- 21 - PONDS EDGE DRIVE
- 22 - LAKEVIEW COURT
- 23 - BANYON LANE
- 24 - PINEBROOKE CIRCLE

PROPERTY & ROAD MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



- NOTES:**
1. This map prepared from CAD information provided from the G.I.S Dept. of the Chester County Courthouse; from the last revised East Brandywine Township Map prepared by Yerkes Associates Inc. dated June 1997; from the most currently approved site development plans and authorized revisions by East Brandywine Township and other sources.
 2. This plan is copyrighted and any reproduction in whole or in part thereof without written permission is expressly prohibited.
 3. Any locations of existing utilities shown on this map have been developed from existing plans and/or records. Completeness or accuracy of locations and sizes of underground utilities or structures cannot be guaranteed. Location and depth of all underground utilities and facilities must be verified before start of work per Pennsylvania Act 287 of 1974 as amended by Act 181 of 2006, 73 P.S. 176 et. seq..
 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. This map is as up to date as possible at the time of printing.

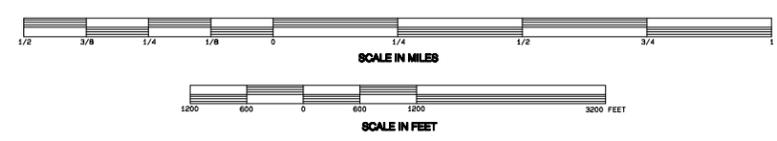
LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	GAS OR OIL PIPELINE
	PROPOSED / APPROVED FOR DEVELOPMENT OVERLAY

EAST BRANDYWINE TOWNSHIP
TOTAL AREA = 11.2 SQUARE MILES

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254
CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS
PRINT DATE: 6/29/2009



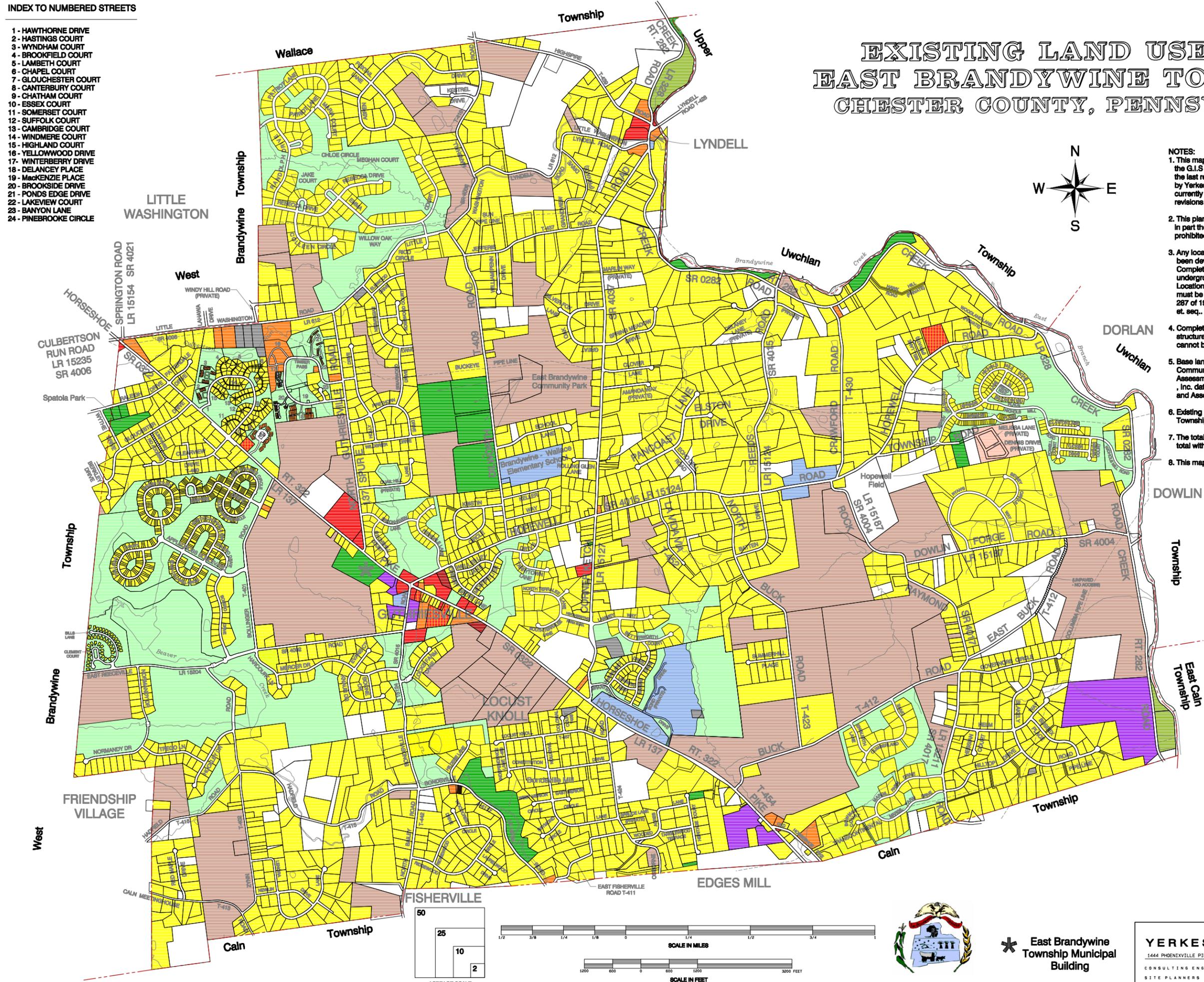
East Brandywine Township Municipal Building



EXISTING LAND USE MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA

INDEX TO NUMBERED STREETS

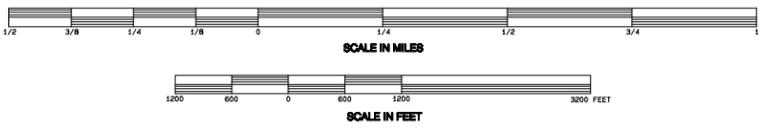
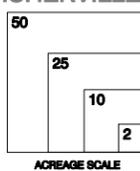
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- 2 - HASTINGS COURT
- 3 - WYNDHAM COURT
- 4 - BROOKFIELD COURT
- 5 - LAMBETH COURT
- 6 - CHAPEL COURT
- 7 - GLOUCESTER COURT
- 8 - CANTERBURY COURT
- 9 - CHATHAM COURT
- 10 - ESSEX COURT
- 11 - SOMERSET COURT
- 12 - SUFFOLK COURT
- 13 - CAMBRIDGE COURT
- 14 - WINDMERE COURT
- 15 - HIGHLAND COURT
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- 17 - WINTERBERRY DRIVE
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- 19 - MacKENZIE PLACE
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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. Base land use information provided by Downingtown Area Community Planning Group: Regional Land Use Regulatory Assessment, Existing Land Use - by David Miller/Associates, Inc. dated June 19, 2003 and data provided by Gilmore and Associates, Inc., June 2003.
 6. Existing Land use information updated per East Brandywine Township Task Force, January 2009.
 7. The total East Brandywine Township area of 11.2 acres is the total within the municipal boundary.
 8. This map is as up to date as possible at the time of printing.

LEGEND

	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	AGRICULTURE
	COMMERCIAL
	INDUSTRIAL
	INSTITUTIONAL
	MIXED-USE
	MOBILE HOME
	MULTI-FAMILY RESIDENTIAL
	OFFICE-COMMERCIAL
	OPEN SPACE
	PUBLIC
	PRIVATE CAMPGROUND
	SINGLE-FAMILY RESIDENTIAL
	UTILITY
	VACANT



East Brandywine Township Municipal Building

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254
CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS
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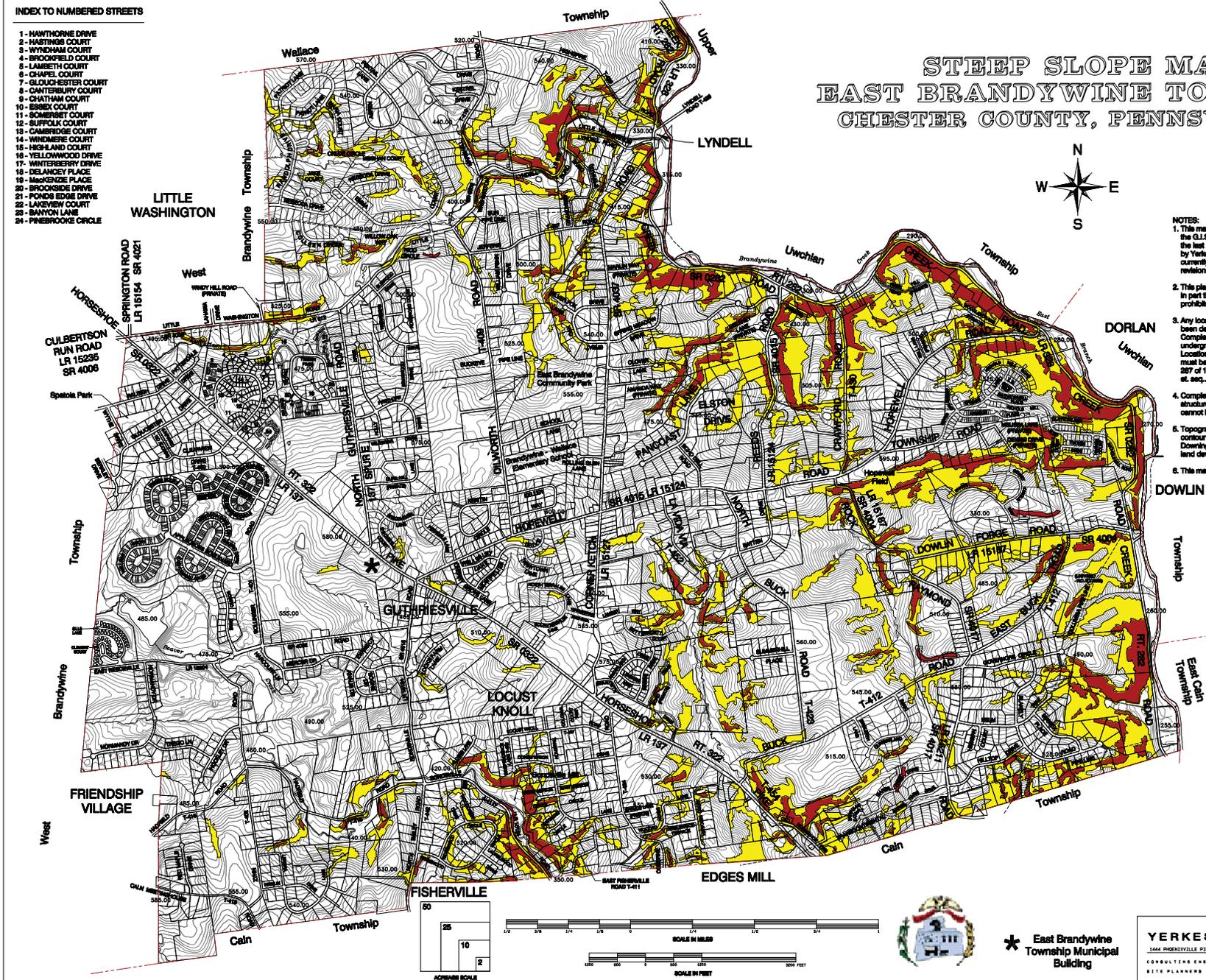
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- 8 - CANTERBURY COURT
- 9 - CHATHAM COURT
- 10 - ESSEX COURT
- 11 - BOMBEY COURT
- 12 - SUFFOLK COURT
- 13 - CAMBRIDGE COURT
- 14 - WINDSOR DRIVE
- 15 - HIGHLAND COURT
- 16 - YELLOWWOOD DRIVE
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- 19 - MacKENZIE PLACE
- 20 - BROOKSIDE DRIVE
- 21 - PONDS EDGE DRIVE
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STEEP SLOPE MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA



- NOTES:**
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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. Topographic contours shown are based on U.S.G.S. contour data per 7.5 Minute Series Wagontown and Downingtown Quadrangles and modified per current land development plans. Contours are at 5 foot interval.
 6. This map is as up to date as possible at the time of printing.



LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE OVERSTREAM
- SMALL OVERSTREAM
- SLOPED 15-25%
- SLOPED 25% OR GREATER
- TOPOGRAPHY AND ELEVATION (5 FOOT CONTOUR INTERVAL)

West

FRIENDSHIP VILLAGE

Brandywine Township

Township

Township

Brandywine Township

West

Wallace

LITTLE WASHINGTON

Brandywine Township

Wallace

Upper

LYNELLE

Brandywine Township

Wallace

Upper

HORSESHOE

Brandywine Township

Wallace

SPRINGTON ROAD

Brandywine Township

Wallace

WINDY HILL ROAD

Brandywine Township

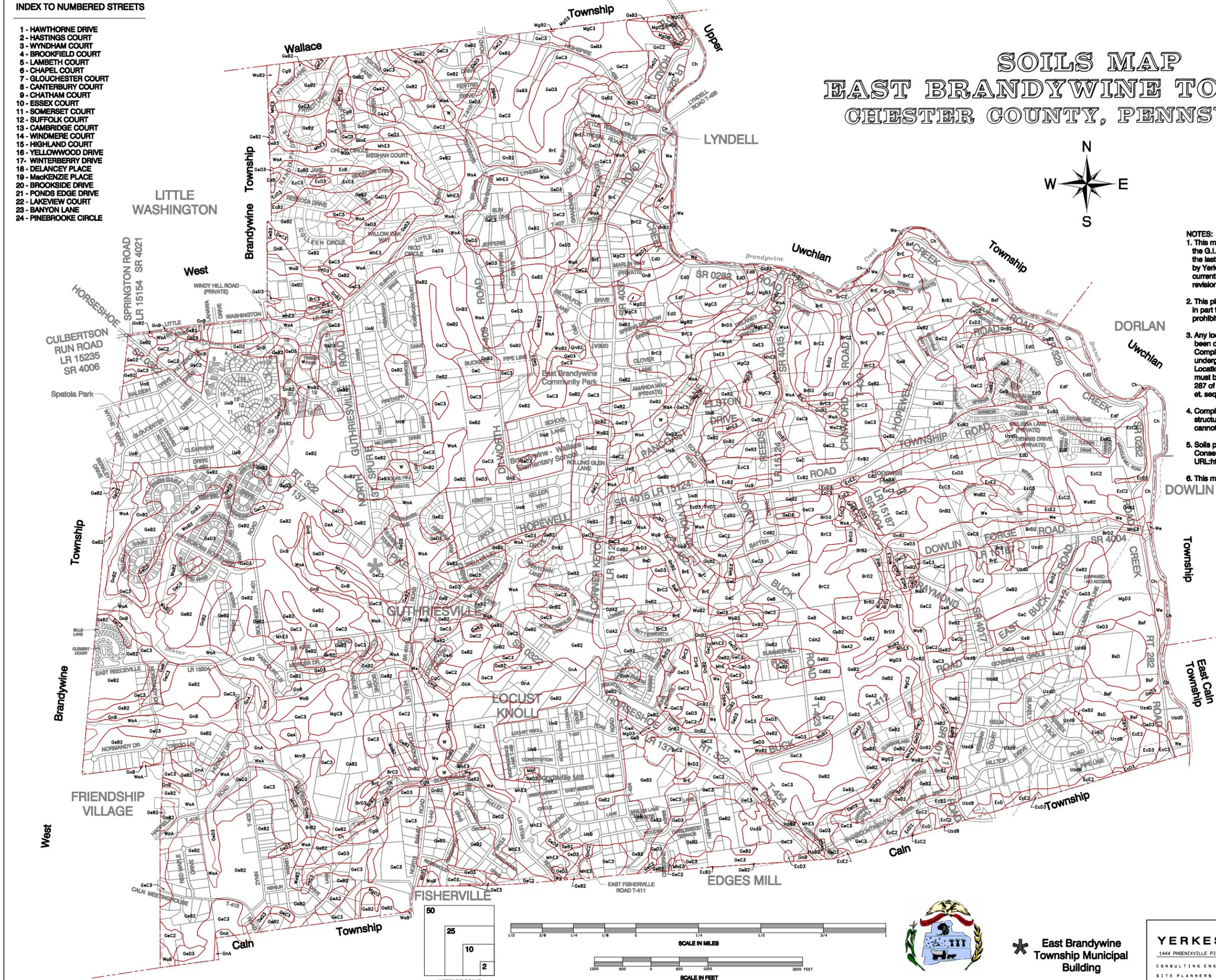
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SOILS MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

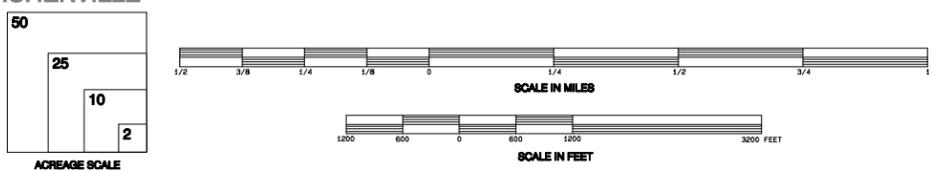


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 5. Soils per U.S. Department of Agriculture, Natural Resources Conservation Service dated 12-08-04, see online at URL:<http://SoilDataMart.nrcs.usda.gov/>.
 6. This map is as up to date as possible at the time of printing.

LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- SOILS BOUNDARY AND SYMBOL

REFER ALSO TO APPENDIX B: SOIL USE GUIDE



East Brandywine Township Municipal Building

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
 1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254
CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
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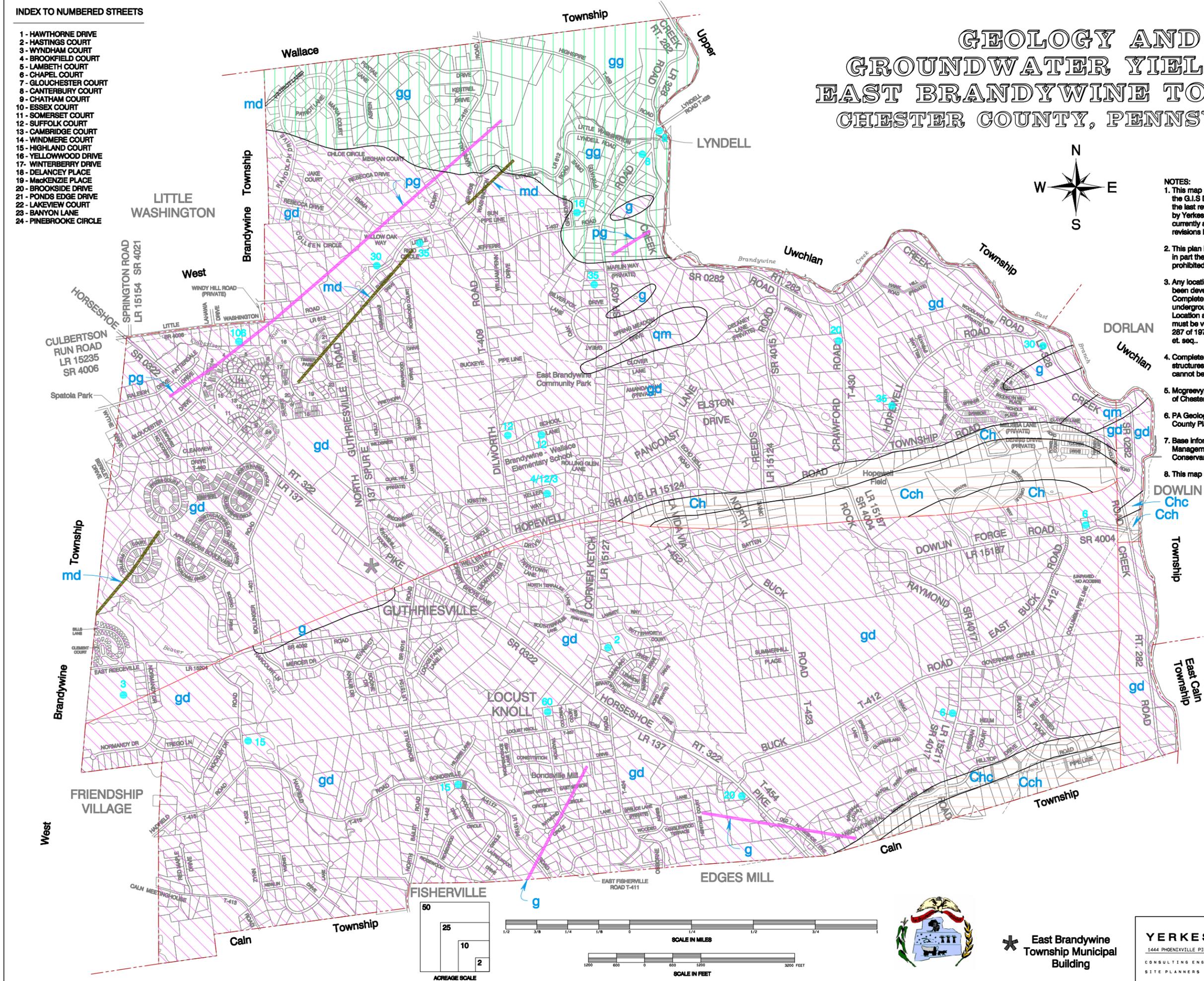
GEOLOGY AND GROUNDWATER YIELD MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA

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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. McGreevy, L.J. and Soto, R.A., Groundwater Resources of Chester County, PA, U.S. Geological Survey, 1976.
 6. PA Geologic Survey, 1960, compiled by the Chester County Planning Commission, 1970.
 7. Base information from a plan by the Environmental Management Center of the Brandywine Conservancy, revised April 1980.
 8. This map is as up to date as possible at the time of printing.



LEGEND

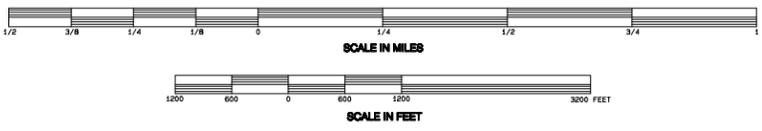
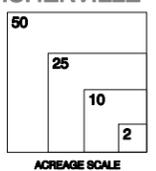
- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM

GEOLOGIC FORMATION

- 5-15+ gg GRAPHIC GNEISS
- 5-20+ g GABBROIC GNEISS
gd GRANODIORITE
qm QUARTZ MONZONITE
pg PEGMATITE
- 15-40+ Cch CHICKIES FORMATION QUARTZITE
Chc CHICKIES FORMATION HELLAM MEMBER
Ch HARPER FORMATION
- >30+ md METADIABASE

- FAULT
- 8 WELLS & WELL YIELD (GALLONS PER MINUTE)

FOOTNOTE
* ESTIMATED NUMBER OF WELLS TO PRODUCE 1 MILLION GALLONS/DAY



East Brandywine Township Municipal Building

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
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CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS
PRINT DATE: 6/29/2009

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- 24 - PINEBROOKE CIRCLE

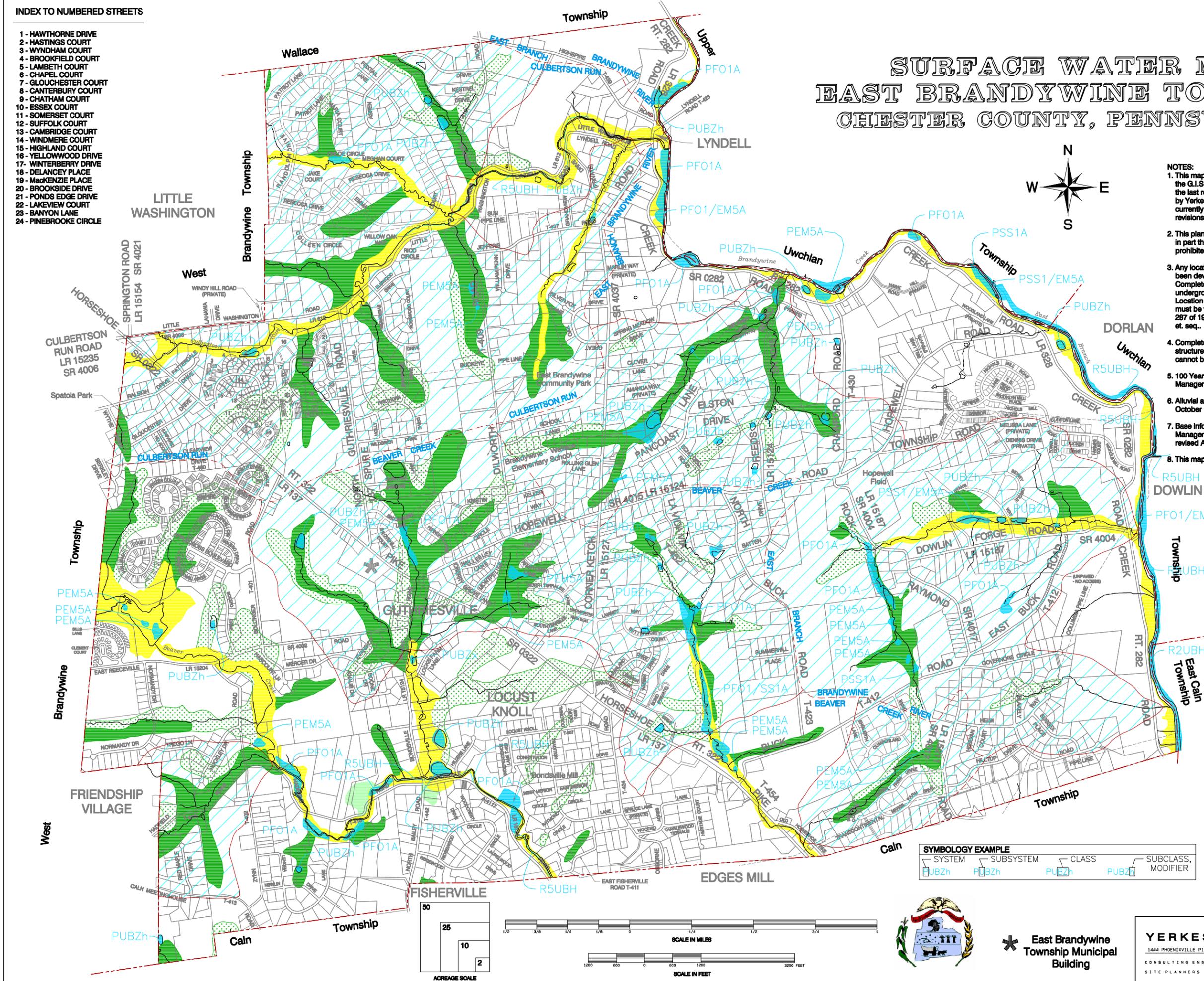
SURFACE WATER MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. 100 Year floodplain from Federal Emergency Management Agency maps, Sept 29, 2008.
 6. Alluvial and high water table soils from A.W. Martin, Assoc., October 1974, rev. July, 1976.
 7. Base information from a plan by the Environmental Management Center of the Brandywine Conservancy, revised April 1980.
 8. This map is as up to date as possible at the time of printing.

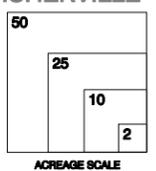


LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- 100 YEAR FLOOD PLAIN
- ALLUVIAL SOILS
- HYDRIC SOILS SEASONAL HIGH WATER TABLE 0 TO 1FT FROM SURFACE
- HYDRIC INCLUSIONS SEASONAL HIGH WATER TABLE 1 TO 1.5FT FROM SURFACE
- WATERSHED BOUNDARY
- WATERSHED OF FIRST ORDER STREAMS (HEADWATERS)
- WETLANDS BOUNDARY AND SYMBOL

SYMBOLGY EXAMPLE

SYSTEM	SUBSYSTEM	CLASS	SUBCLASS, MODIFIER
PUBZh	FUBZh	PEUZh	PUBZ



East Brandywine Township Municipal Building

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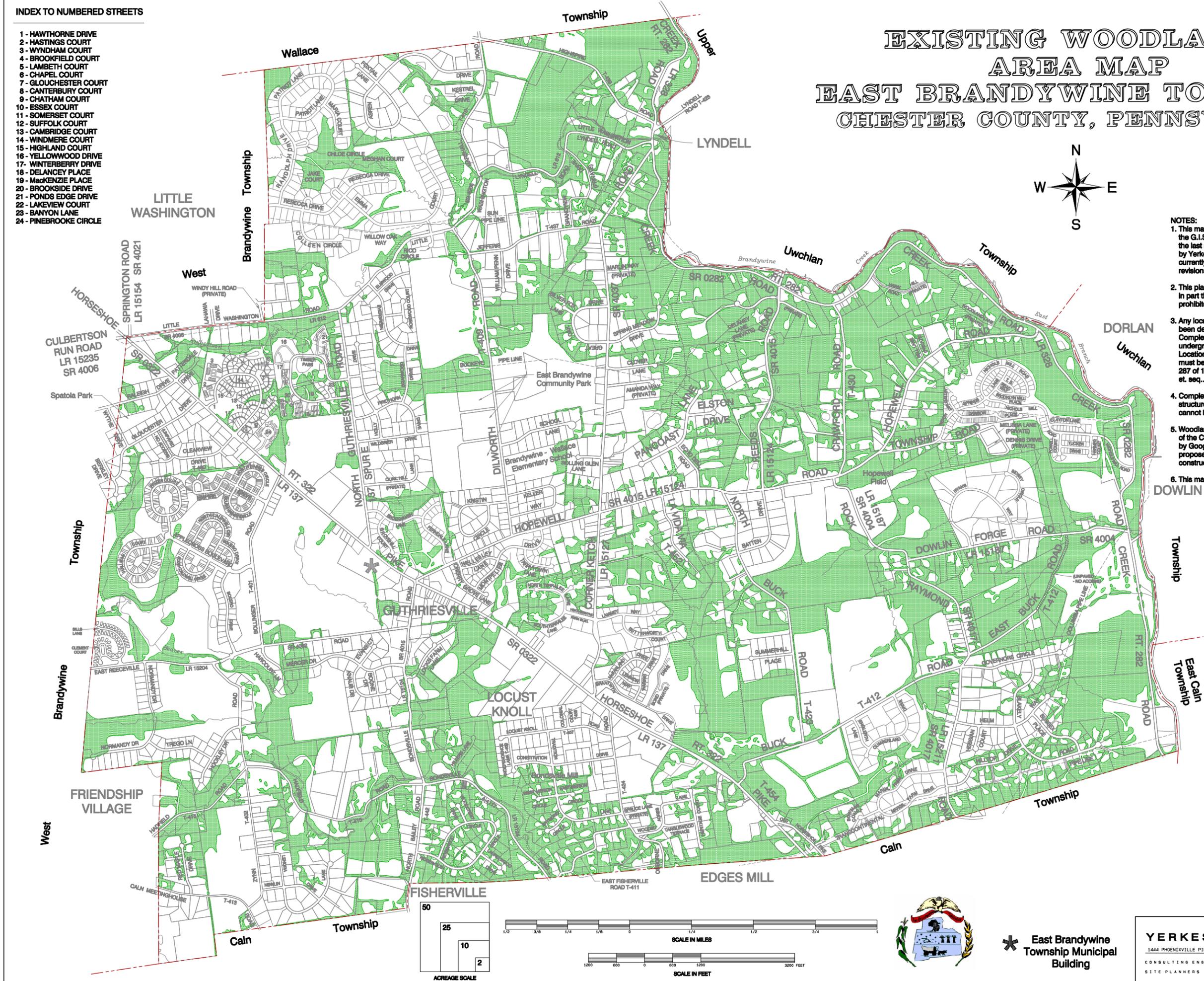
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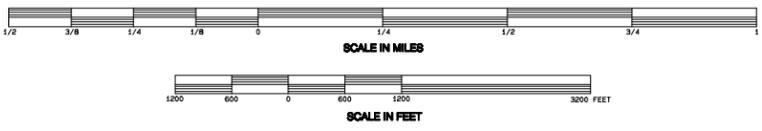
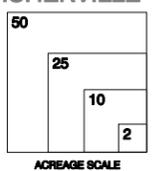
EXISTING WOODLANDS AREA MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA



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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. Woodlands taken from aerial photography by G.I.S Dept. of the Chester County Courthouse as of 2003; supplemented by Google Earth at <http://earth.google.com/> 2003 and proposed tree lines on currently approved, but not yet constructed land development plans.
 6. This map is as up to date as possible at the time of printing.



LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	WOODLAND AREA



**East Brandywine
Township Municipal
Building**

MAP PREPARED BY:
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CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
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SCENIC RESOURCES MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

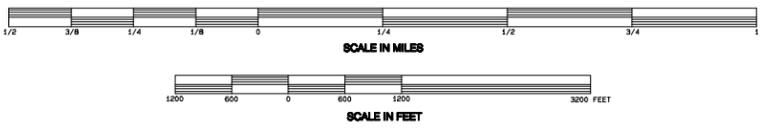
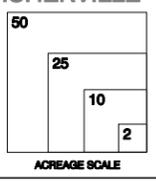


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 - Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 - Scenic roads, contributing and detracting features from field survey by Brandywine Conservancy, March 1992. Updated by Open Space Task Force, October 1992. Updated by the East Brandywine Township Task Force Field Investigation September 2007.
 - This map is as up to date as possible at the time of printing.



LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	SCENIC ROAD
	CONTRIBUTING FEATURES
	DETRACTING FEATURES
	VISTA POINT
	PROPOSED / APPROVED FOR DEVELOPMENT OVERLAY

REFER ALSO TO APPENDIX C:
CONTRIBUTING AND
DETRACTING
VISUAL FEATURES



East Brandywine Township Municipal Building

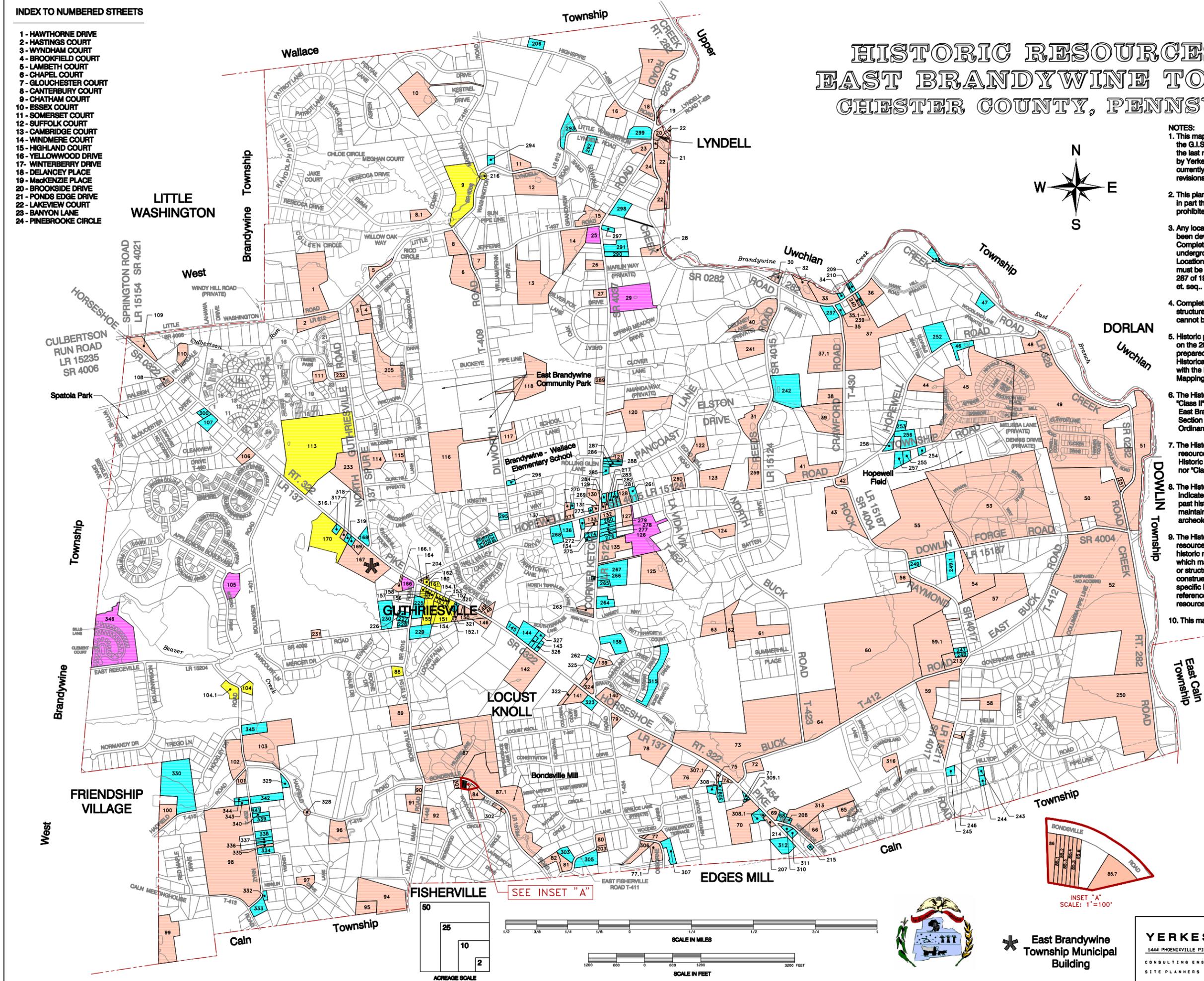
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HISTORIC RESOURCES MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA



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 5. Historic property information shown on this exhibit is based on the 2006 Historical Resource Survey which has been prepared and provided by the East Brandywine Township Historical Commission as of April 2008 and in coordination with the Historical Resource Map prepared by Next Level Mapping a subsidiary of Yerkes Associates, Inc.
 6. The Historic Resources classified as a "Class I" and "Class II" resource are those resources as defined in the East Brandywine Township Zoning Ordinance under Section 399-62; Historic Resource Map as Amended by Ordinance 11 of 2007 on December 19, 2007.
 7. The Historic Resources classified as "Other" are resources included in the East Brandywine Township Historic Resources Inventory that are neither a "Class I" nor "Class II" resource.
 8. The Historic Resources classified as "Lost" resource indicate properties that had been and/or contained a past historical resource, now removed. The intent is to maintain reference to these locations for future archeological and historical research.
 9. The Historic Resource Numbers shown represent a resource with an historical classification as shown. The historic resource numbers reference only the property which may be a historic resource and/or contain a feature or structural Historic Resource. This map should not be construed as indicating an actual physical location of any specific historical feature or structure that may be referenced on a property. Historic features or structural resources on any property should be field verified.
 10. This map is as up to date as possible at the time of printing.



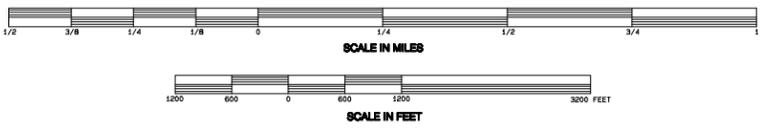
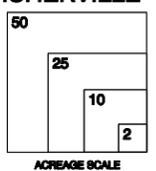
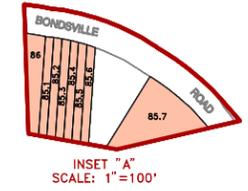
LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- HISTORIC RESOURCE NUMBER
- CLASS I HISTORIC RESOURCE *
- CLASS II HISTORIC RESOURCE *
- OTHER HISTORIC RESOURCE **
- LOST HISTORIC RESOURCE ***

FOOTNOTES

- * SEE NOTE NO. 5
- ** SEE NOTE NO. 6
- *** SEE NOTE NO. 7

REFER ALSO TO APPENDIX B:
HISTORIC RESOURCES INVENTORY



**East Brandywine
Township Municipal
Building**

MAP PREPARED BY:
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CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
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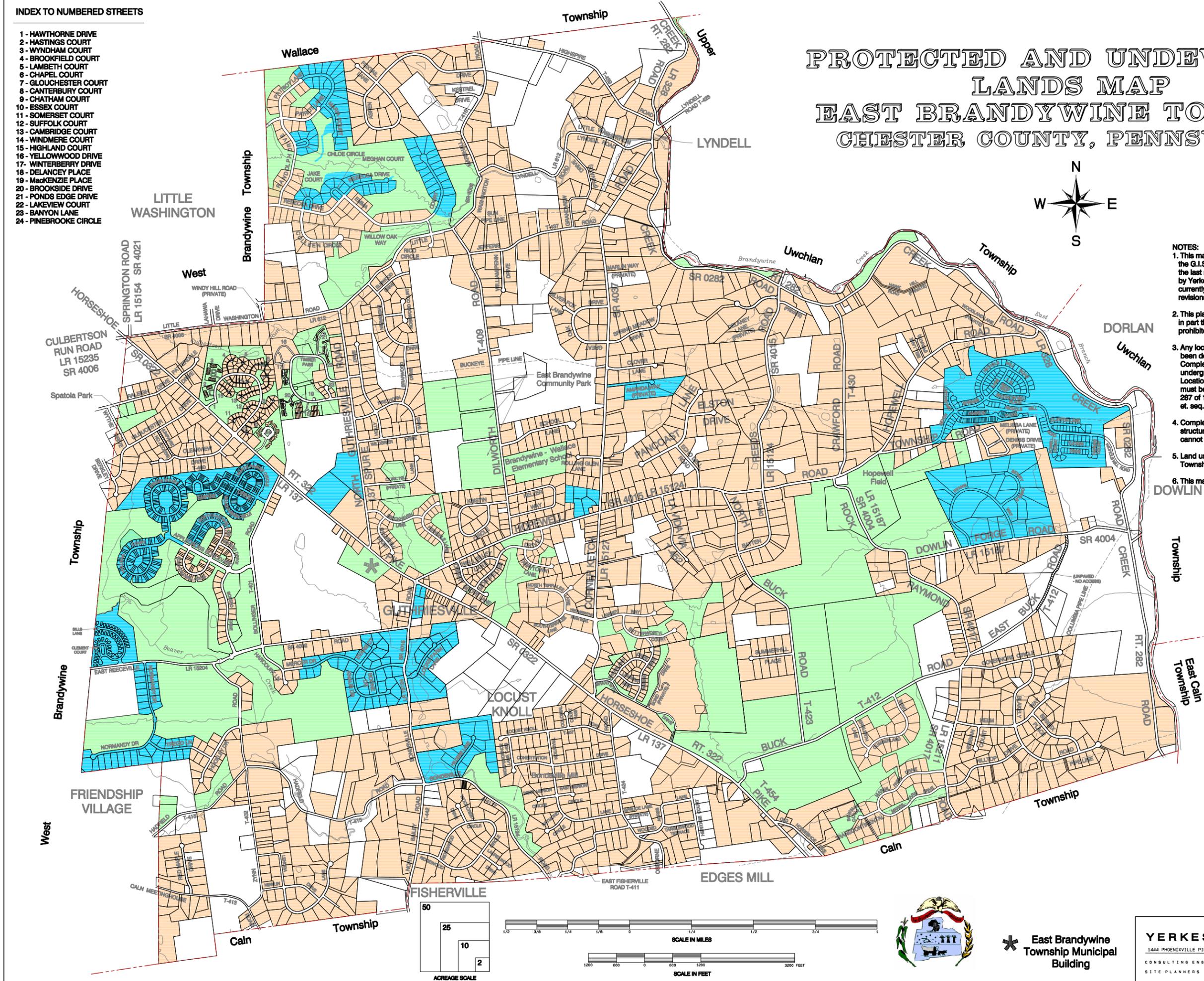
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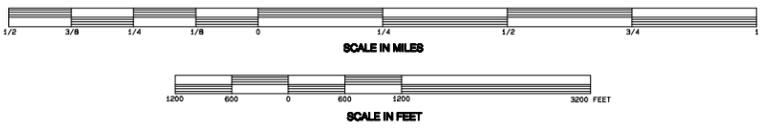
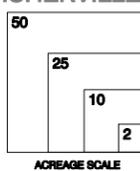
PROTECTED AND UNDEVELOPED LANDS MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA



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 5. Land use information updated per East Brandywine Township Task Force, January 2009.
 6. This map is as up to date as possible at the time of printing.



LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	UNDEVELOPED
	DEVELOPED
	PERMANENTLY PROTECTED
	PROPOSED / APPROVED FOR DEVELOPMENT



East Brandywine Township Municipal Building

MAP PREPARED BY:
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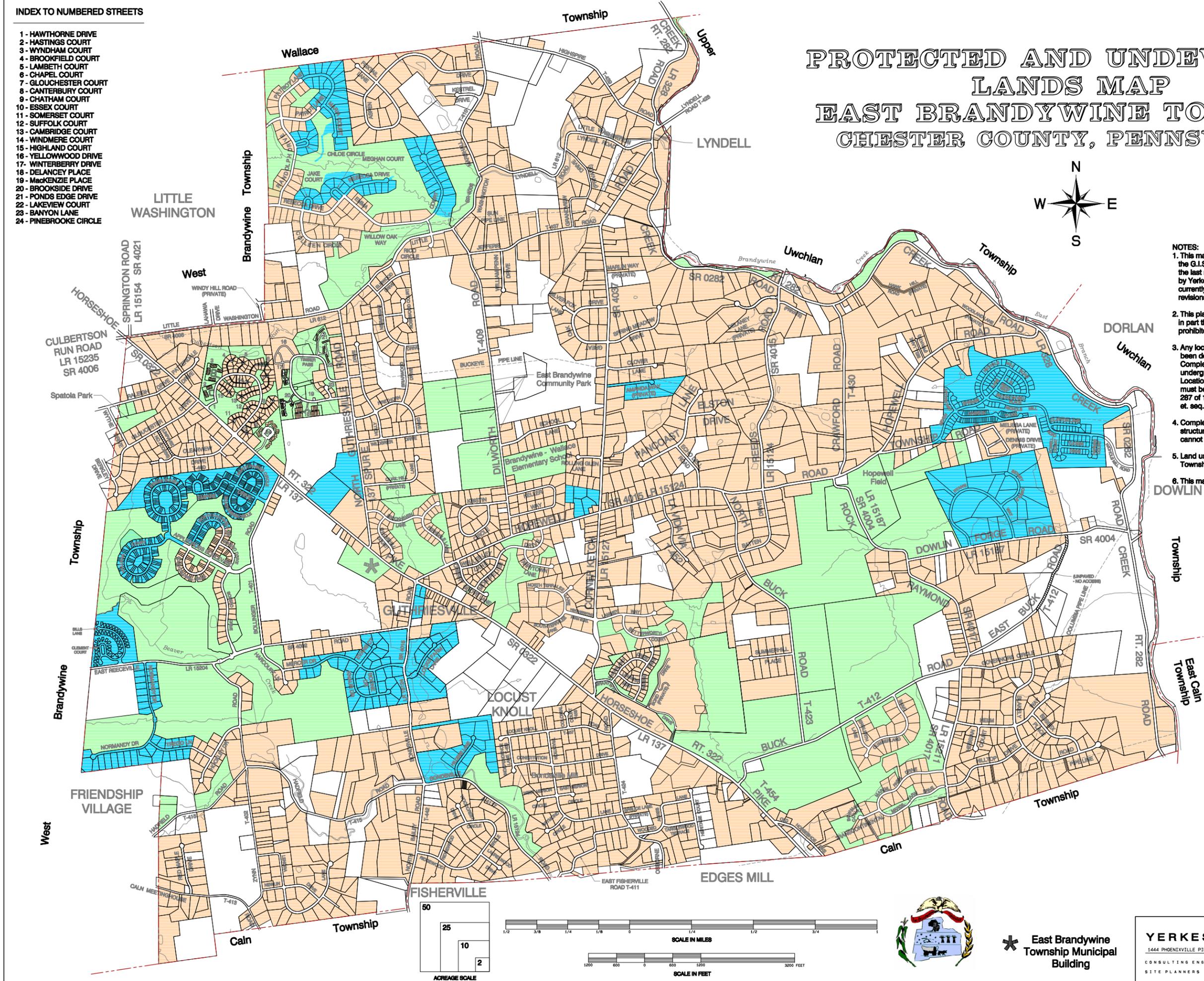
PROTECTED AND UNDEVELOPED LANDS MAP

EAST BRANDYWINE TOWNSHIP

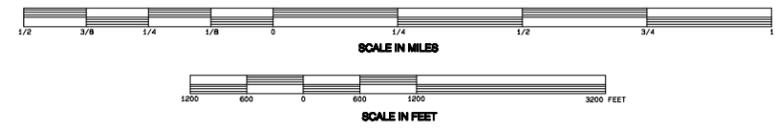
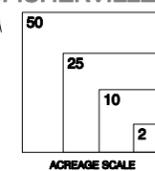
CHESTER COUNTY, PENNSYLVANIA



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 5. Land use information updated per East Brandywine Township Task Force, January 2009.
 6. This map is as up to date as possible at the time of printing.



LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	UNDEVELOPED
	DEVELOPED
	PERMANENTLY PROTECTED
	PROPOSED / APPROVED FOR DEVELOPMENT



East Brandywine Township Municipal Building

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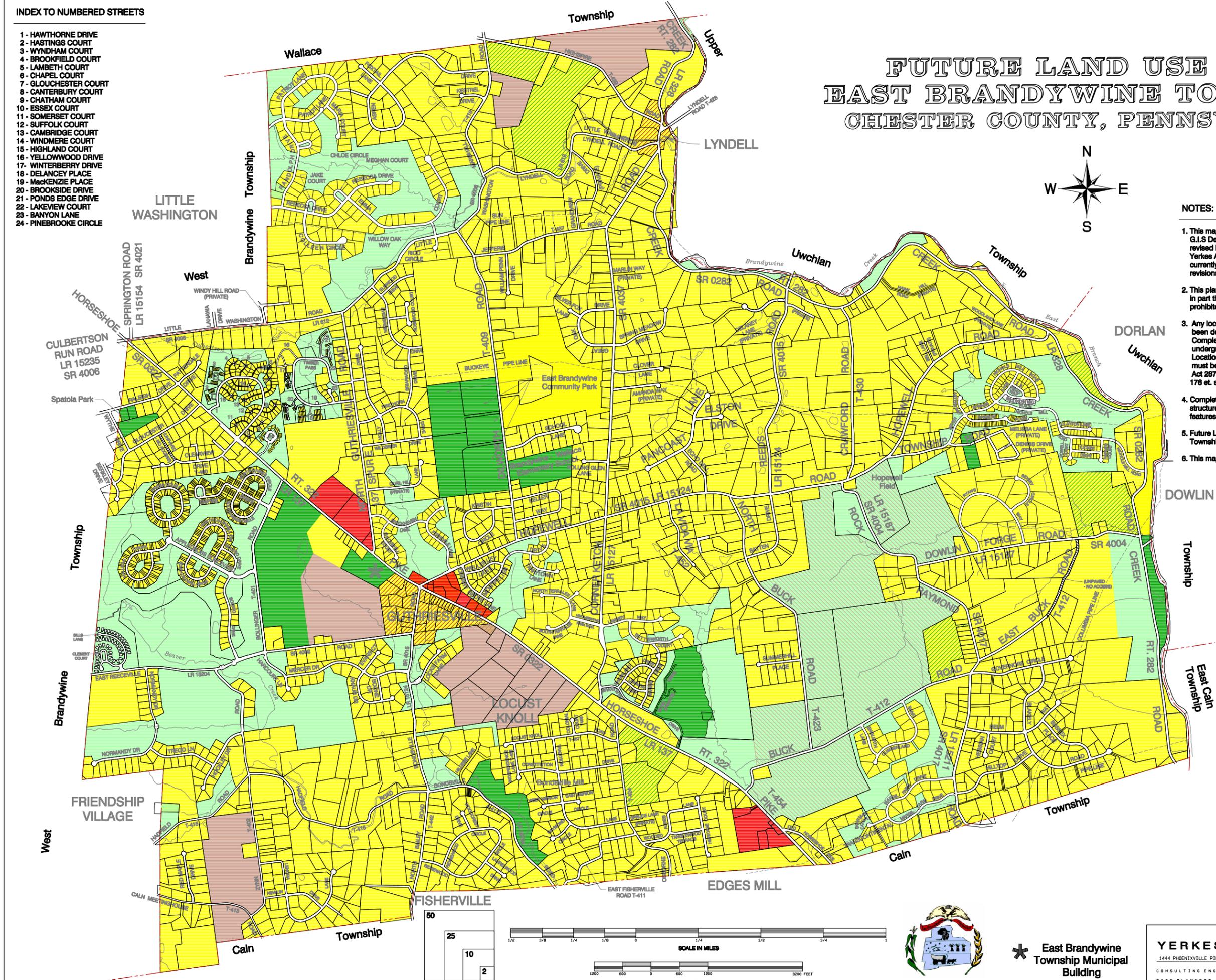
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FUTURE LAND USE MAP EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA



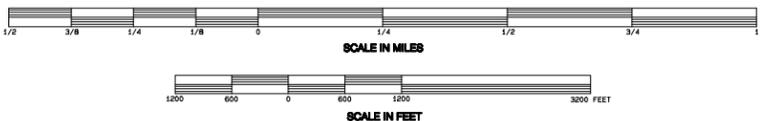
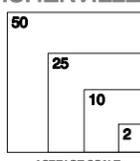
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6. This map is as up to date as possible at the time of printing.



LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- RESIDENTIAL
- COMMERCIAL
- MIXED RESIDENTIAL / COMMERCIAL
- PROTECTED PUBLIC AND INSTITUTIONAL
- PROTECTED OPEN SPACE
- RESIDENTIAL OR PROTECTED OPEN SPACE
- AGRICULTURAL
- AGRICULTURAL / PROTECTED OPEN SPACE



East Brandywine Township Municipal Building

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CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS
PRINT DATE: 6/29/2008

ROADS AND CIRCULATION MAP

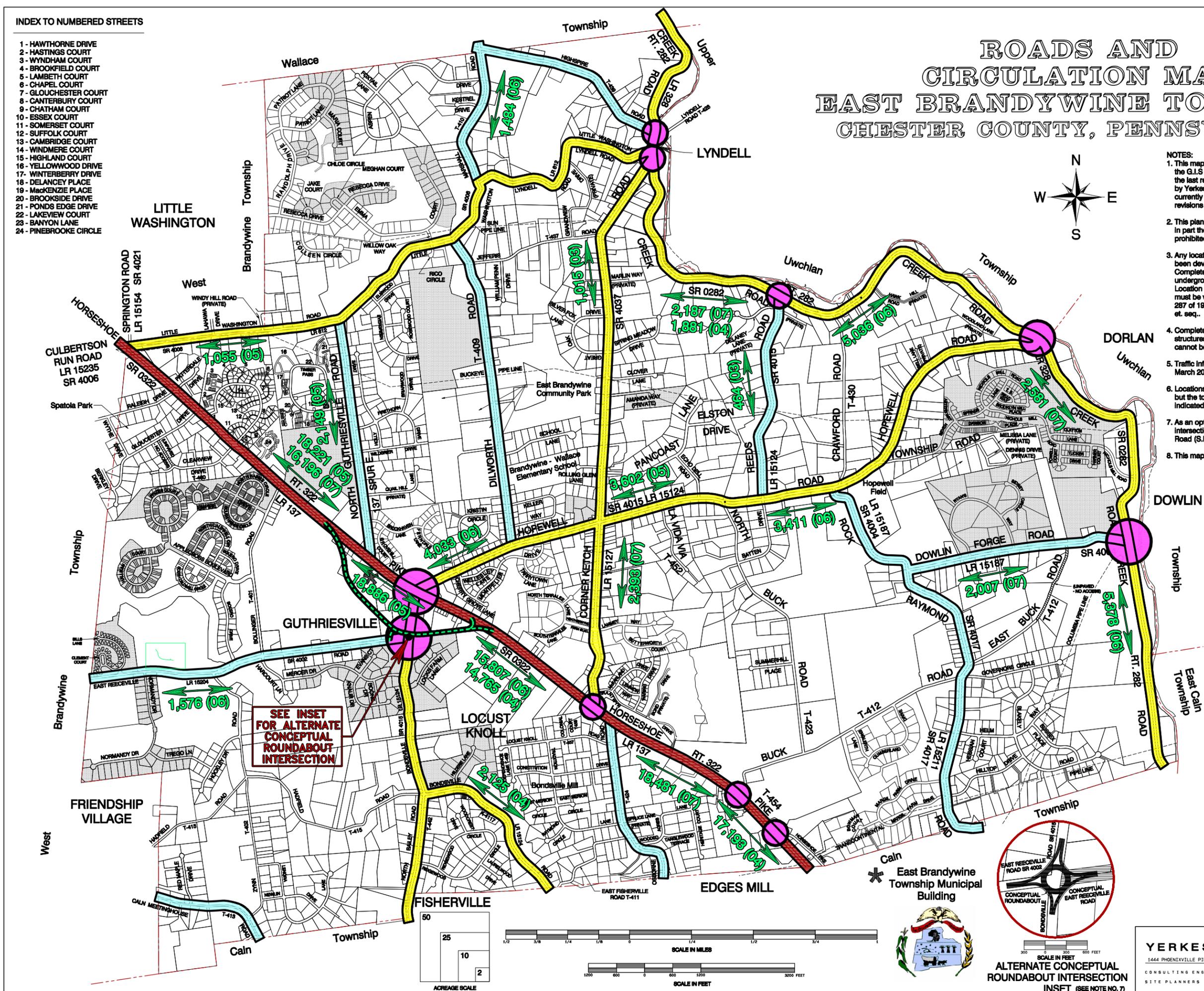
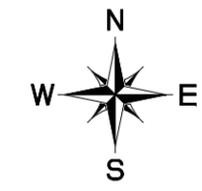
EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

INDEX TO NUMBERED STREETS

- 1 - HAWTHORNE DRIVE
- 2 - HASTINGS COURT
- 3 - WYNDHAM COURT
- 4 - BROOKFIELD COURT
- 5 - LAMBETH COURT
- 6 - CHAPEL COURT
- 7 - GLOUCESTER COURT
- 8 - CANTERBURY COURT
- 9 - CHATHAM COURT
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- 11 - SOMERSET COURT
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- 14 - WINDMERE COURT
- 15 - HIGHLAND COURT
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- 17 - WINTERBERRY DRIVE
- 18 - DELANCEY PLACE
- 19 - MacKENZIE PLACE
- 20 - BROOKSIDE DRIVE
- 21 - PONDS EDGE DRIVE
- 22 - LAKEVIEW COURT
- 23 - BANYON LANE
- 24 - PINEBROOKE CIRCLE

- NOTES:
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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. Traffic Information by Heinrich & Klein Associates, Inc., March 2009.
 6. Locations with five or more reportable crashes are shown, but the total of reportable and non-reportable crashes are indicated.
 7. As an option, a roundabout may be considered at the intersection of Reeseville Road (S.R. 4002) and Bondsville Road (S.R. 4015).
 8. This map is as up to date as possible at the time of printing.



SEE INSET FOR ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION

LEGEND

- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- GAS OR OIL PIPELINE
- PROPOSED / APPROVED FOR DEVELOPMENT OVERLAY

FUTURE FUNCTIONAL CLASSIFICATION

- PRINCIPAL ARTERIALS
- MAJOR COLLECTORS
- MINOR COLLECTORS
- LOCAL ROADS

AVERAGE DAILY TRAFFIC

AVERAGE DAILY TRAFFIC
 AVERAGE DAILY TRAFFIC COUNT (YEAR OF COUNT)
1,576 (06)

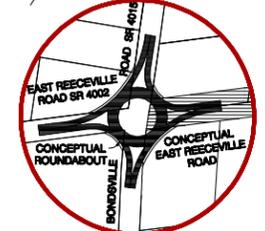
CRASH HISTORY (2003-2007)*

- MORE THAN 50
- 25 TO 50
- 10 TO 24

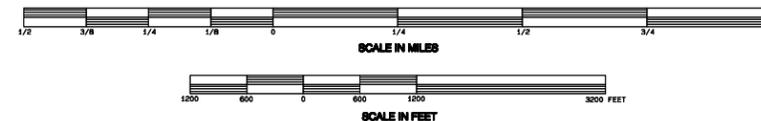
*SEE NOTE NO. 6

CONCEPTUAL ROADWAY

- GUTHRIESVILLE LOOP ROAD



ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION INSET (SEE NOTE NO. 7)



MAP PREPARED BY:
YERKES ASSOCIATES, INC.
 1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254
 CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
 SITE PLANNERS SURVEYORS
 PRINT DATE: 6/29/2009

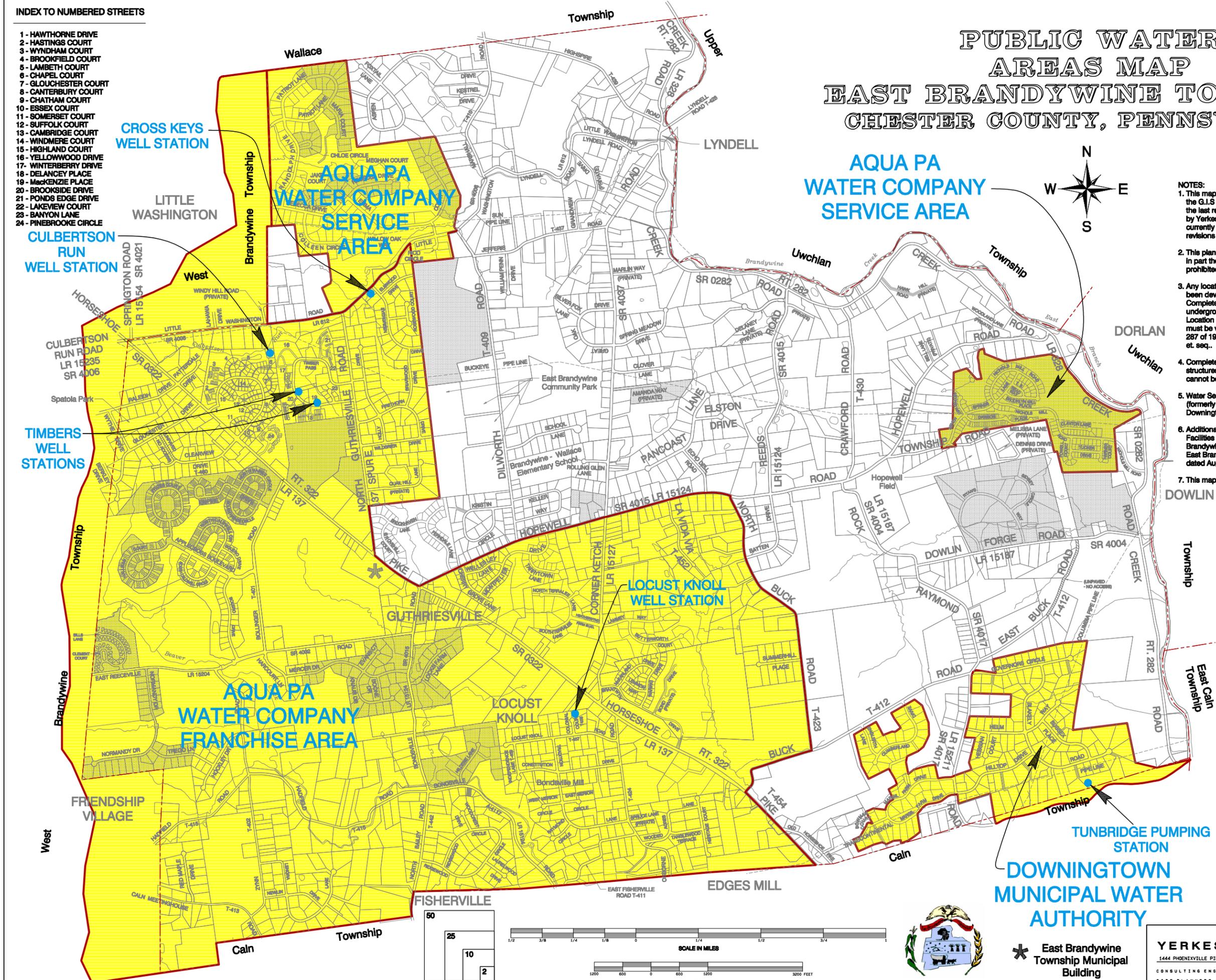
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PUBLIC WATER AREAS MAP

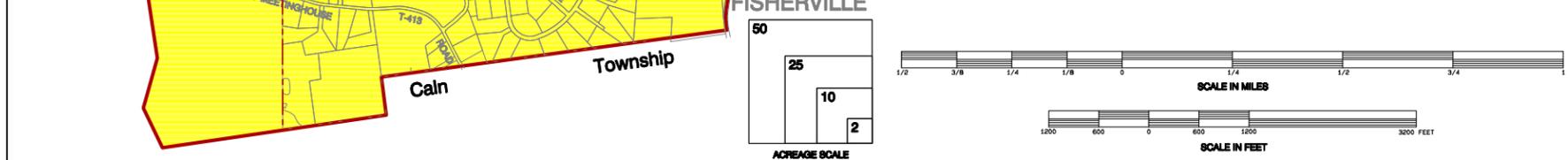
EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA



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 4. Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 5. Water Service / Franchise areas as provided by AQUA PA (formerly Philadelphia Suburban Water) and the Downingtown Municipal Water Authority.
 6. Additional information from Yerkes Associates, Inc. Sewage Facilities Map Exhibit "F" as prepared for the East Brandywine Act-209 Impact Fee Advisory Committee for the East Brandywine Township Land Use Assumptions Report, dated August 22, 2003, 2nd Ed. December 4, 2004.
 7. This map is as up to date as possible at the time of printing.

LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	SERVICE / FRANCHISE AREA
	PUMP / WELL STATION
	PROPOSED / APPROVED FOR DEVELOPMENT OVERLAY



East Brandywine Township Municipal Building

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
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 CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
 SITE PLANNERS SURVEYORS
 PRINT DATE: 6/29/2009

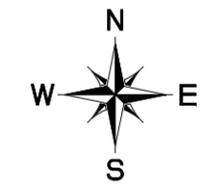
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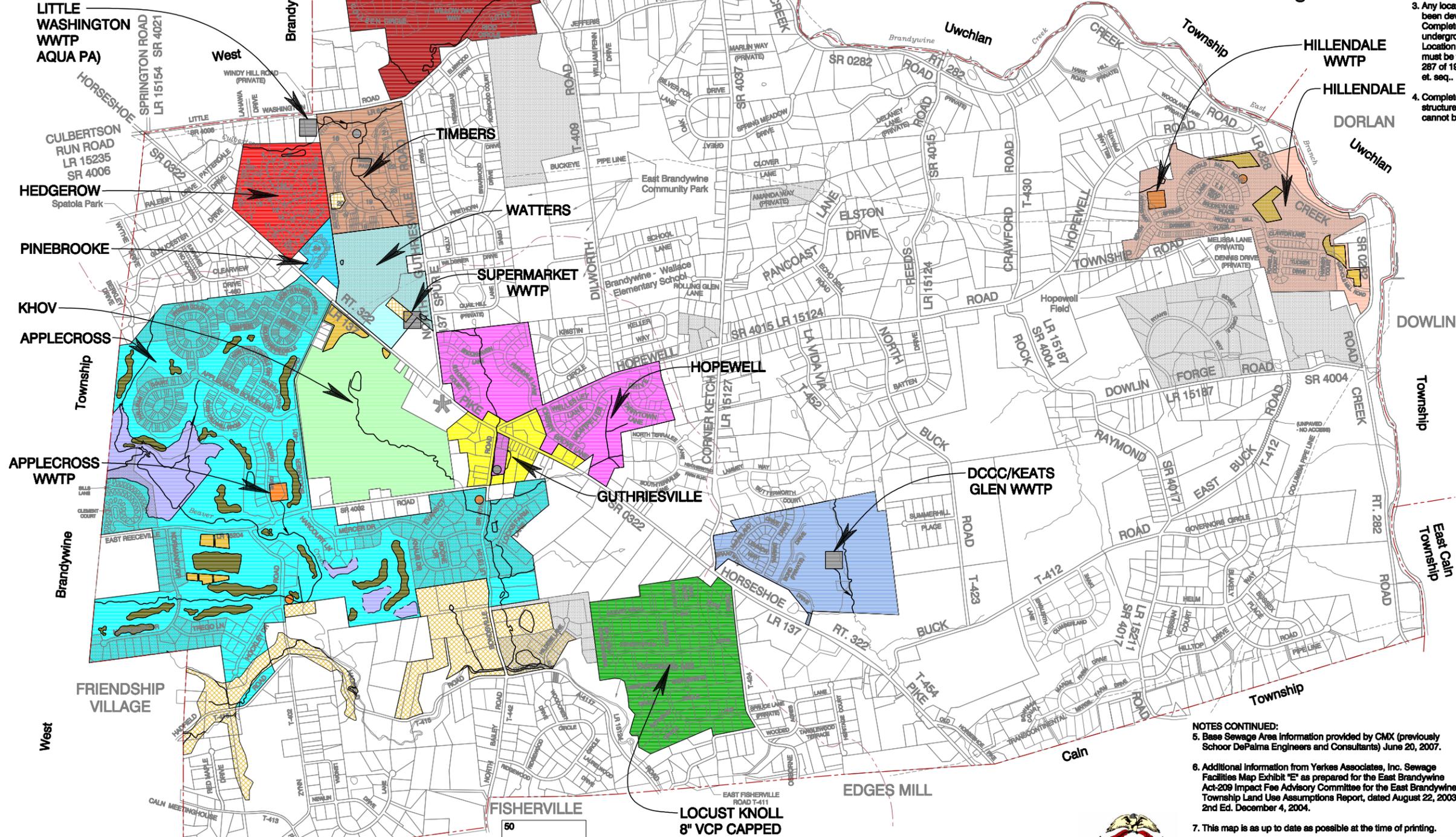
SEWER AREAS MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

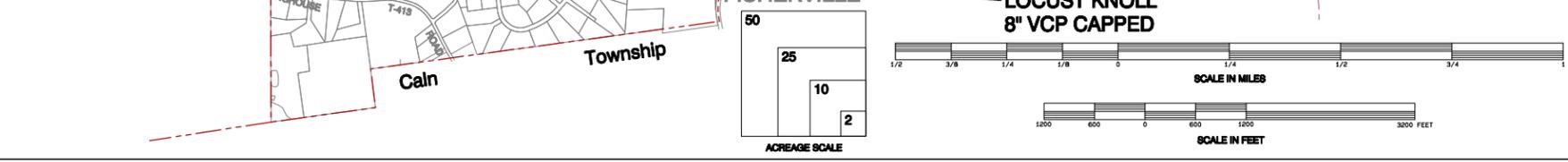


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 - Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified. (Continued)



LEGEND	
	PUBLIC ROAD
	TOWNSHIP BOUNDARY LINE
	LARGE CREEK/STREAM
	SMALL CREEK/STREAM
	APPLECROSS
	GUTHRIESVILLE
	HEDGEROW
	HIDE-A-WAY FARMS
	HILLENDALE
	HOPWELL
	KEATS GLYN
	KHOV (K. HOVNIAN)
	LOCUST KNOLL
	PINEBROOKE
	TIMBERS
	WATERS
	EXISTING SUBSURFACE DISPOSAL
	PROPOSED SUBSURFACE DISPOSAL
	PROPOSED SURFACE DISPOSAL
	UNSUITABLE SOIL AREA
	EXISTING WASTE WATER TREATMENT PLANT(WWTP)
	PROPOSED WASTE WATER TREATMENT PLANT(WWTP)
	EXISTING PUMP STATION
	PROPOSED PUMP STATION
	STREAM DISCHARGE
	DRAINAGE BASIN BOUNDARY
	WATER STORAGE AREAS
	PROPOSED / APPROVED FOR DEVELOPMENT OVERLAY

- NOTES CONTINUED:**
- Base Sewage Area Information provided by CMX (previously Schoor DePalma Engineers and Consultants) June 20, 2007.
 - Additional information from Yerkes Associates, Inc. Sewage Facilities Map Exhibit "E" as prepared for the East Brandywine Act-209 Impact Fee Advisory Committee for the East Brandywine Township Land Use Assumptions Report, dated August 22, 2003, 2nd Ed. December 4, 2004.
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East Brandywine Township Municipal Building

MAP PREPARED BY:
YERKES ASSOCIATES, INC.
 1444 PHOENIXVILLE PIKE * P.O. BOX 1568 * WEST CHESTER, PA 19380 * (610) 644-4254
 CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
 SITE PLANNERS SURVEYORS
 PRINT DATE: 6/29/2009

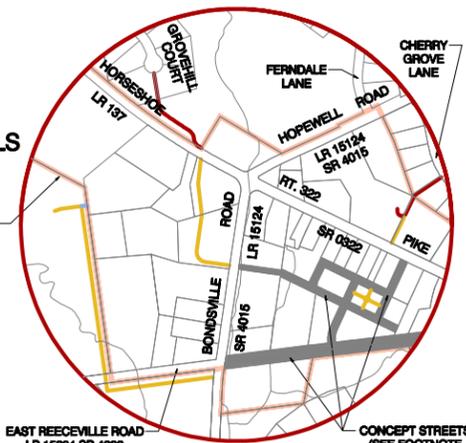
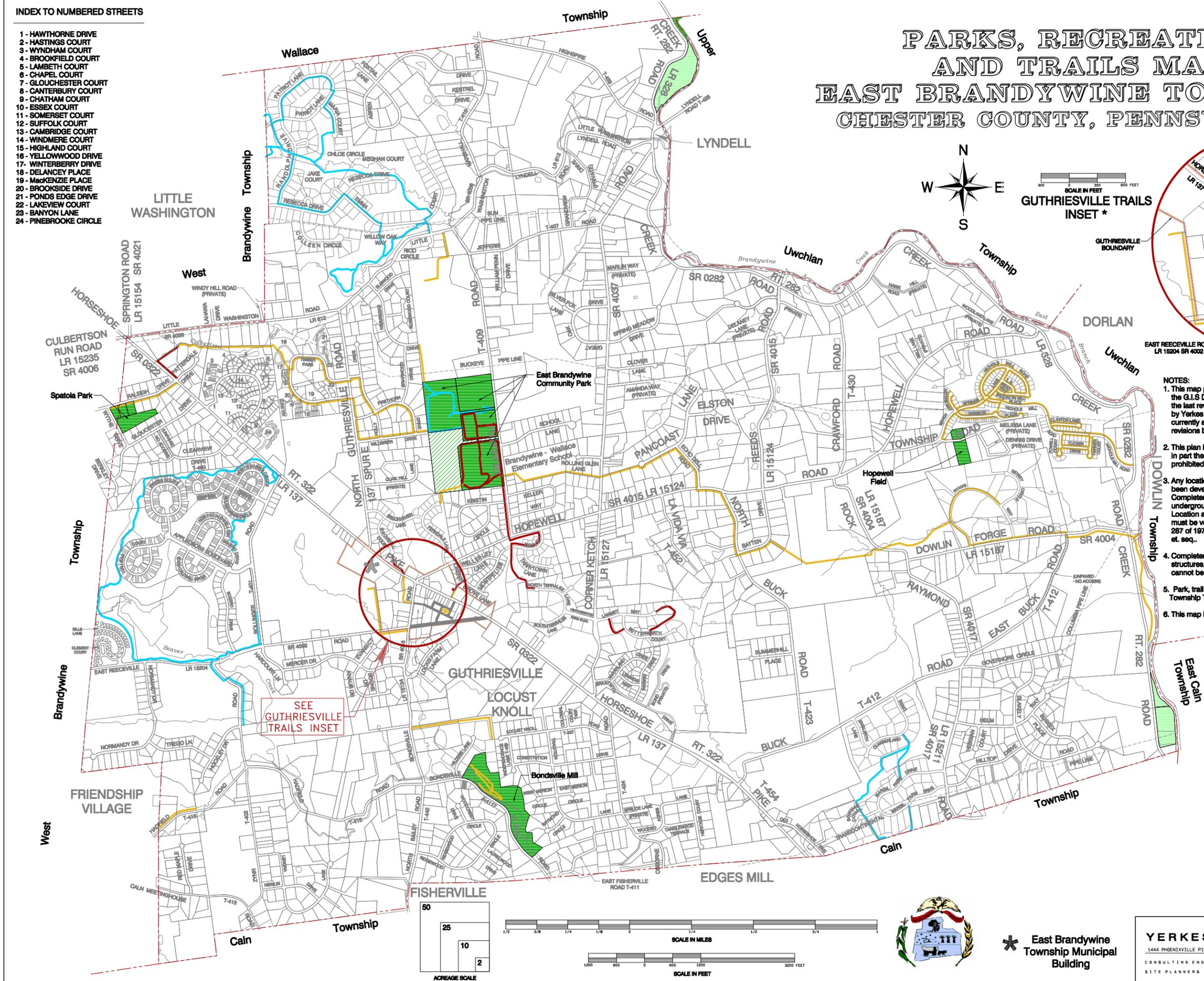
PARKS, RECREATION AND TRAILS MAP

EAST BRANDYWINE TOWNSHIP

CHESTER COUNTY, PENNSYLVANIA

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SCALE IN FEET
0 300 600

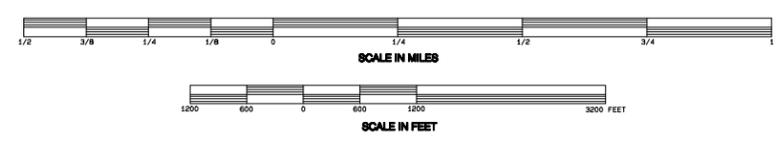
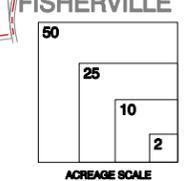
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 5. Park, trail and recreational information per East Brandywine Township Task Force.
 6. This map is as up to date as possible at the time of printing.

SEE GUTHRIESVILLE TRAILS INSET

LEGEND

- PUBLIC ROAD
- TOWNSHIP BOUNDARY LINE
- LARGE CREEK/STREAM
- SMALL CREEK/STREAM
- EXISTING TRAIL SYSTEM
- APPROVED / UNBUILT TRAIL SYSTEM
- FUTURE TRAIL SYSTEM*
- PARK SITES
- PRIVATE RECREATIONAL
- PROPOSED PUBLIC PARK

FOOTNOTE
*SEE ALSO GUTHRIESVILLE VILLAGE MASTER PLAN EXHIBIT

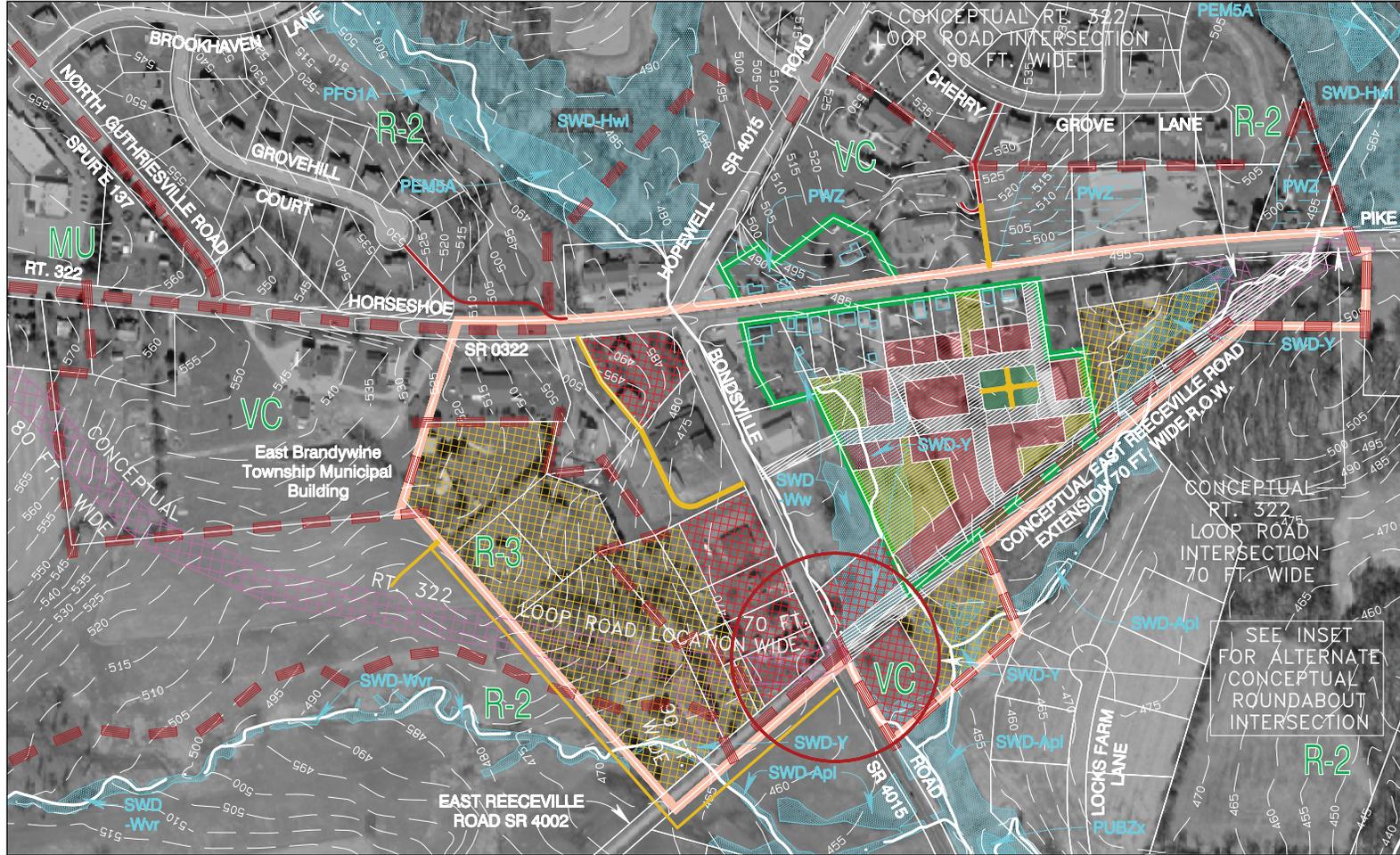


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CONSULTING ENGINEERS LANDSCAPE ARCHITECTS
SITE PLANNERS SURVEYORS
PRINT DATE: 6/29/2009

GUTHRIESVILLE MASTER PLAN GUTHRIESVILLE VILLAGE CONCEPT EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA

FERNDALE LANE WELLESLEY LANE MONTEPELIER DRIVE



SEE INSET FOR ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION



SCALE IN FEET
ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION
INSET (SEE NOTE NO. 7)

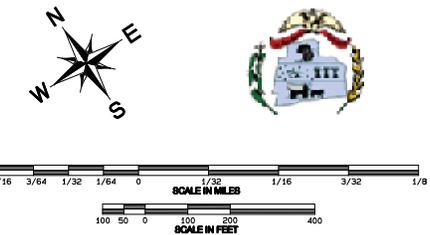
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 - Wetlands:
 - Wetlands per U.S. Fish & Wildlife Service, National Wetlands Inventory Dated: Oct. 1981 to present, information obtained from Pennsylvania Spatial Data Access at <http://www.pasda.psu.edu/>
 - SWD-Wvr: Site Wetlands Delineation as shown on the WAWA Food Markets Land Development Plan dated 01-17-03, last revised 05-09-03.
 - SWD-Y: Site Wetlands Delineation Investigation by Yerkes Associates, Inc. dated 01-08 and 02-08. Outline shown has not been field surveyed.
 - SWD-Apl: Site Wetlands Delineation as shown on the Applcross Subdivision Plan dated 01-31-08, last revised 12-14-08.
 - SWD-Hw: Site Wetlands Delineation as shown on the Hopewell Subdivision Plan dated 02-13-07, last revised 09-12-07.
 - SWD-Hm: Site Wetlands Delineation as shown on the Hopewell Subdivision Plan dated 04-18-00, last revised 10-23-01.
 - Aerial Photography per G.L.S Dept. of the Chester County Courthouse as of 2005. (Note: Black & white conversion of original color image.)
 - As an option, a roundabout may be considered at the intersection of Reeceiveville Road (S.R. 4002) and Bondsville Road (S.R. 4016).
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ZONING LEGEND

R-2	RESIDENTIAL
R-3	RESIDENTIAL
VC	VILLAGE COMMERCIAL
MU	MIXED-USE COMMERCIAL
(Red dashed line)	ZONING BOUNDARY

WETLANDS LEGEND

PEMSA	PALMERIE - UNCONSOLIDATED BOTTOM - TEMPORARILY FLOODED (SEE NOTE #4A)
PFO1A	PALMERIE - FOREVERED - BROADLEAFED - TEMPORARILY FLOODED (SEE NOTE #4A)
PUBZx	PALMERIE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - DRYED / IMPOUNDED (SEE NOTE #4A)
PUBZy	PALMERIE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - BROADLEAFED (SEE NOTE #4A)
SWD-Wvr	SITE WETLANDS DELINEATION - AG-APPLICABLE SUBDIVISION (SEE NOTES #4B THRU #4F)
SWD-Ww	PER HORSHAM AND GLENNVILLE POTENTIAL WETLANDS ZONE (SWH) PER HORSHAM AND GLENNVILLE NRCS SOILS (SEE NOTE #5)
PWZ	POTENTIAL WETLANDS ZONE



LEGEND

(Black line)	PUBLIC ROAD	(Red outline)	GUTHRIESVILLE VILLAGE AREA
(Blue wavy line)	POND AREA	(Red hatched)	CONCEPTUAL VILLAGE ROADWAY 40 FT. WIDE
(Blue line)	SMALL CREEK/STREAM	(Red grid)	MIXED USE BUILDINGS
(Green outline)	HISTORICALLY SIGNIFICANT PROPERTIES AREA	(Red diagonal lines)	1-STORY RETAIL COMMERCIAL RESTAURANT
(Green outline)	HISTORICALLY SIGNIFICANT BUILDINGS	(Green grid)	PLAZA
(Red dashed line)	EXIST TRAIL SYSTEM	(Green diagonal lines)	TOWNHOMES (AT 12 DWELLING UNITS/GROSS ACRES)
(Yellow dashed line)	FUTURE TRAIL SYSTEM	(Green diagonal lines)	OFF-STREET PARKING FOR MIXED USE
		(Green diagonal lines)	U.S.G.S TOPOGRAPHY @ 6 FT. INTERVAL

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SITE PLANNERS SURVEYORS
PRINT DATE: 4/8/2008

GUTHRIESVILLE MASTER PLAN GUTHRIESVILLE VILLAGE CONCEPT EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA

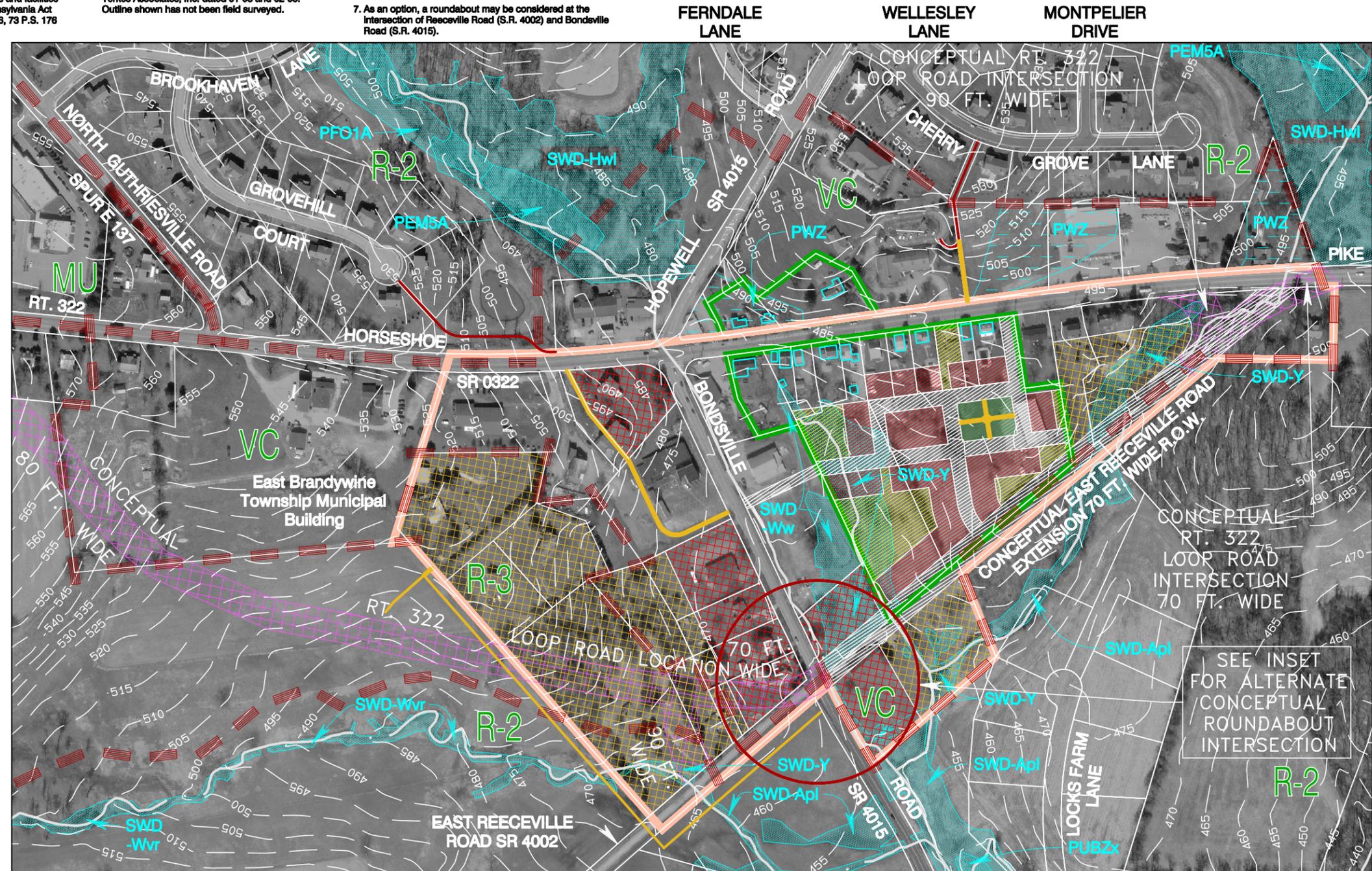
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- SWD-Apl: Site Wetlands Delineation as shown on the Applecross Subdivision Plan dated 01-31-06, last revised 12-14-06.
- SWD-Wvr: Site Wetlands Delineation as shown on the Weaver Tract Subdivision Plan dated 02-13-07, last revised 09-12-07.
- SWD-Hwl: Site Wetlands Delineation as shown on the Hopewell Subdivision Plan dated 04-18-00, last revised 10-23-01.
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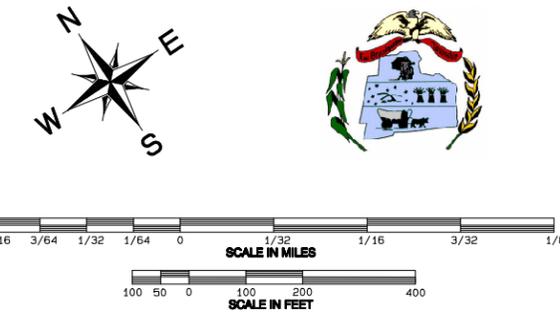
SEE INSET FOR ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION
SCALE IN FEET
ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION INSET (SEE NOTE NO. 7)

ZONING LEGEND

R-2	RESIDENTIAL
R-3	RESIDENTIAL
VC	VILLAGE COMMERCIAL
MU	MIXED-USE COMMERCIAL
(Red dashed line)	ZONING BOUNDARY

WETLANDS LEGEND

PEM5A	PAULSTRINE - EMERGENT - FRAGMITES - TEMPORARILY FLOODED (SEE NOTE #4A)
PFO1A	PAULSTRINE - FORESTED - BROAD LEAVED - TEMPORARILY FLOODED (SEE NOTE #4A)
PUBZb	PAULSTRINE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - Diked / Impounded (SEE NOTE #4A)
PUBZx	PAULSTRINE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - EXCAVATED (SEE NOTE #4A)
SWD-Apl	SITE WETLANDS DELINEATION - Apl - APPLECROSS SUBDIVISION (SEE NOTES)
SWD-Hwl	SITE WETLANDS DELINEATION - Hwl - HOPWELL SUBDIVISION - WAWA LAND DEVELOPMENT (SEE NOTES)
SWD-Wvr	SITE WETLANDS DELINEATION - Wvr - WEAVER TRACT SUBDIVISION - YERKES ASSOCIATES, INC.
PWZ	POTENTIAL WETLANDS ZONE (WITHIN THE GUTHRIESVILLE VILLAGE AREA) (PER WORSHAM AND GLENVILLE NRCS SOILS SEE NOTE #5)



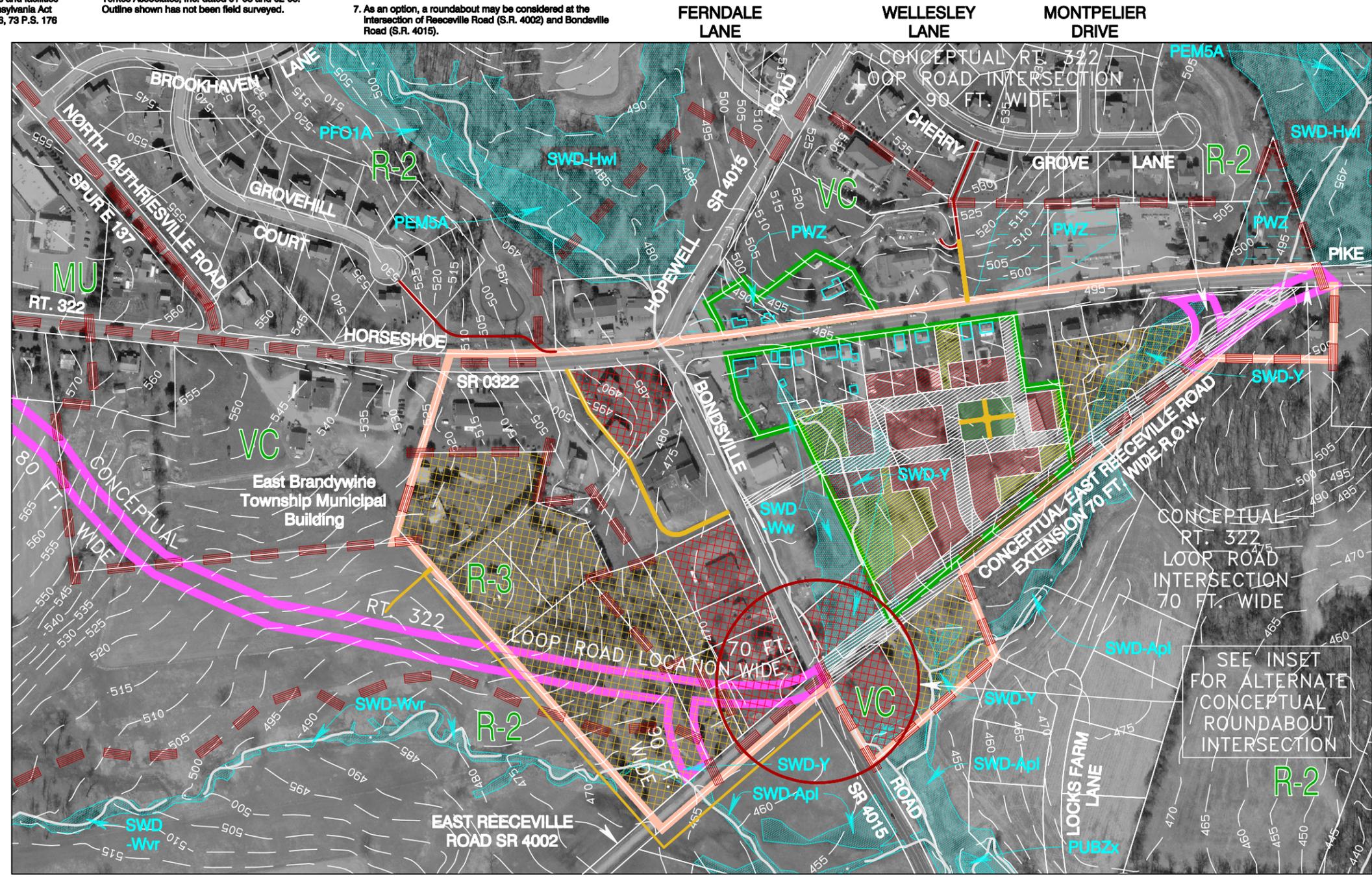
LEGEND

(Black line)	PUBLIC ROAD	(Red outline)	GUTHRIESVILLE VILLAGE AREA
(Blue wavy line)	POND AREA	(Hatched pattern)	CONCEPTUAL VILLAGE ROADWAY 40 FT. WIDE
(Blue line)	SMALL CREEK/STREAM	(Red hatched pattern)	MIXED USE BUILDINGS
(Green outline)	HISTORICALLY SIGNIFICANT PROPERTIES AREA	(Green hatched pattern)	1-STORY RETAIL COMMERCIAL RESTAURANT
(Blue outline)	HISTORICALLY SIGNIFICANT BUILDINGS	(Green hatched pattern)	PLAZA
(Red dashed line)	EXIST TRAIL SYSTEM	(Yellow hatched pattern)	TOWNHOMES (AT 12 DWELLING UNITS/GROSS ACRE)
(Yellow dashed line)	FUTURE TRAIL SYSTEM	(Green hatched pattern)	OFF-STREET PARKING FOR MIXED USE
(Brown shading)	U.S.G.S TOPOGRAPHY 5 FT. INTERVAL		

MAP PREPARED BY:
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PRINT DATE: 9/29/2009

GUTHRIESVILLE MASTER PLAN GUTHRIESVILLE VILLAGE CONCEPT EAST BRANDYWINE TOWNSHIP CHESTER COUNTY, PENNSYLVANIA

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- This map prepared from CAD information provided from the County of Chester, from the last revised East Brandywine Township Map prepared by Yerkes Associates Inc. dated June 1997; from the most currently approved site development plans and authorized revisions by East Brandywine Township and other sources.
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 - Any locations of existing utilities shown on this map have been developed from existing plans and/or records. Completeness or accuracy of locations and sizes of underground utilities or structures cannot be guaranteed. Location and depth of all underground utilities and facilities must be verified before start of work per Pennsylvania Act 287 of 1974 as amended by Act 181 of 2006, 73 P.S. 178 et. seq.
 - Completeness or accuracy of locations and sizes of structures, roadway, property lines and any other features cannot be guaranteed and must be verified.
 - Wetlands per U.S. Fish & Wildlife Service, National Wetlands Inventory Dated: Oct. 1981 to present, information obtained from Pennsylvania Spatial Data Access at <http://www.pasda.psu.edu/>
 - SWD-Ww: Site Wetlands Delineation as shown on the WAWA Food Markets Land Development Plan dated 01-17-03, last revised 05-09-03.
 - SWD-Y: Site Wetlands Delineation investigation by Yerkes Associates, Inc. dated 01-08 and 02-08. Outline shown has not been field surveyed.
 - SWD-Apl: Site Wetlands Delineation as shown on the Applecross Subdivision Plan dated 01-31-06, last revised 12-14-06.
 - SWD-Wvr: Site Wetlands Delineation as shown on the Weaver Tract Subdivision Plan dated 02-13-07, last revised 09-12-07.
 - SWD-Hwl: Site Wetlands Delineation as shown on the Hopewell Subdivision Plan dated 04-18-00, last revised 10-23-01.
 - Aerial Photography per G.I.S Dept. of the County of Chester as of 2005. (Note: Black & white conversion of original color image.)
 - As an option, a roundabout may be considered at the intersection of Reeceville Road (S.R. 4002) and Bondsville Road (S.R. 4015).
 - This map is as up to date as possible at the time of printing.



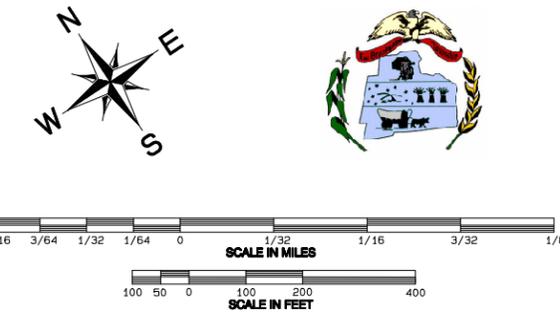
SEE INSET FOR ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION
SCALE IN FEET
ALTERNATE CONCEPTUAL ROUNDABOUT INTERSECTION INSET (SEE NOTE NO. 7)

ZONING LEGEND

R-2	RESIDENTIAL
R-3	RESIDENTIAL
VC	VILLAGE COMMERCIAL
MU	MIXED-USE COMMERCIAL
(Red dashed line)	ZONING BOUNDARY

WETLANDS LEGEND

PEM5A	PAULSTRINE - EMERGENT - FRAGMITES - TEMPORARILY FLOODED (SEE NOTE #4A)
PFO1A	PAULSTRINE - FORESTED - BROAD LEAVED - TEMPORARILY FLOODED (SEE NOTE #4A)
PUBZb	PAULSTRINE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - Diked / IMPOUNDED (SEE NOTE #4A)
PUBZx	PAULSTRINE - UNCONSOLIDATED BOTTOM - INTERMITTENTLY EXPOSED / PERMANENT - EXCAVATED (SEE NOTE #4A)
SWD-Apl	SITE WETLANDS DELINEATION - Apl-APPLECROSS SUBDIVISION (SEE NOTE #4B)
SWD-Hwl	SITE WETLANDS DELINEATION - Hwl-HOPWELL SUBDIVISION (SEE NOTE #4B)
SWD-Wvr	SITE WETLANDS DELINEATION - Wvr-WAWA LAND DEVELOPMENT (SEE NOTE #4B)
SWD-Y	SITE WETLANDS DELINEATION - Y-WEAVER TRACT SUBDIVISION (SEE NOTE #4B)
PWZ	POTENTIAL WETLANDS ZONE (WITHIN THE GUTHRIESVILLE VILLAGE AREA) (PER WORSHAM AND GLENVILLE NRCS SOILS SEE NOTE #5)



LEGEND

(Black line)	PUBLIC ROAD	(Red outline)	GUTHRIESVILLE VILLAGE AREA
(Blue wavy line)	POND AREA	(Hatched pattern)	CONCEPTUAL VILLAGE ROADWAY 40 FT. WIDE
(Blue line)	SMALL CREEK/STREAM	(Red hatched pattern)	MIXED USE BUILDINGS
(Green outline)	HISTORICALLY SIGNIFICANT PROPERTIES AREA	(Red grid pattern)	1-STORY RETAIL COMMERCIAL RESTAURANT
(Blue outline)	HISTORICALLY SIGNIFICANT BUILDINGS	(Green grid pattern)	PLAZA
(Red dashed line)	EXIST TRAIL SYSTEM	(Yellow grid pattern)	TOWNHOMES (AT 12 DWELLING UNITS/GROSS ACRE)
(Yellow dashed line)	FUTURE TRAIL SYSTEM	(Green hatched pattern)	OFF-STREET PARKING FOR MIXED USE
(Brown shading)	U.S.G.S TOPOGRAPHY 5 FT. INTERVAL		

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PRINT DATE: 8/20/2009