UPPER ALLEN TOWNSHIP

CUMBERLAND COUNTY, PENNSYLVANIA

COMPREHENSIVE PLAN

DECEMBER 2013

Upper Allen Township
Comprehensive Plan

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Township Residents and Business Leaders

Cumberland County Planning Department

Trans Associates

December 18, 2013

UPPER ALLEN TOWNSHIP

RESOLUTION 912

A RESOLUTION OF THE BOARD OF COMMISSIONERS OF UPPER ALLEN TOWNSHIP, CUMBERLAND COUNTY, PENNSYLVANIA, ADOPTING A REVISED, UPDATED AND REPLACEMENT COMPREHENSIVE PLAN, DATED DECEMBER 2013

WHEREAS, the Board of Commissioners of Upper Allen Township (the "Township"), due to significant population growth and development in the Township, authorized the preparation of a revised Comprehensive Plan to amend and replace the currently effective Comprehensive Plan adopted in 1999; and

WHEREAS, the Township's Board of Commissioners directed the Planning Commission of the Township, together with the assistance of a Township Steering Committee, Trans Associates, Cumberland County Planning Department, and officials of the Township, to develop and coordinate the update of said Comprehensive Plan; and

WHEREAS, the Steering Committee held a number of community meetings open to the public on the review and revision to the Comprehensive Plan; and

WHEREAS, a draft proposed Comprehensive Plan was developed; and

WHEREAS, said proposed revised and updated Comprehensive Plan contains therein the required elements as specified in Section 301 of the Pennsylvania Municipalities Planning Code, the Act of 31 July 1968, P.L. 805, No. 247, as amended and reenacted, 53 P.S. §10101, et seq. (the MPC); and

WHEREAS, in accordance with the requirements of the MPC, the Comprehensive Plan was forwarded to the Cumberland County Planning Commission and to contiguous municipalities and school districts, and the PA State Department of Community & Economic Development (DCED) for their review and comments; and

WHEREAS, Township staff held meetings with various home owner associates, civic clubs, and local organizations to discuss the draft Comprehensive Plan; and

WHEREAS, the draft Comprehensive Plan was revised to incorporate comments made by various entities; and

WHEREAS, the Planning Commission of the Township held a public meeting on 21 November 2011 to receive comments on the draft Comprehensive Plan and to discuss the draft Comprehensive Plan and all testimony received. The Planning Commission at its 21 November

2011 meeting, voted unanimously to recommend approval of the draft Comprehensive Plan to the Board of Commissioners with specific revisions; and

WHEREAS, the Board of Commissioners reviewed the proposed, revised and updated Comprehensive Plan, incorporated certain of its revisions and conducted public hearings on 23 September 2013, 25 September 2013 and 4 December 2013, pursuant to public notice as required in Section 302 of the MPC; and

WHEREAS, the Board of Commissioners now wishes to adopt the revised, updated and replacement Comprehensive Plan, dated December 2013, as the Comprehensive Plan for the Township in accordance with the provisions and requirements of the MPC.

NOW, THEREFORE, be it,

RESOLVED, by the Board of Commissioners of the Township that the Township hereby adopts as its Comprehensive Plan the Plan entitled "Upper Allen Township, Cumberland County, Pennsylvania Comprehensive Plan December 2013", in accordance with Article III of the MPC; and

FURTHER RESOLVED, that the Comprehensive Plan shall include the chapters entitled Introduction, Population and Housing, Environmental and Cultural Resources, Land Use, Community Facilities and Services, Public Utilities, Transportation, Adjacent and Regional Planning, 12-Year Improvements Program, Funding Sources, Interrelationship of the Comprehensive Plan Components, Plan Review, Approval and Maintenance, References, and Definitions, and all charts, tables, maps, diagrams, and textural matter contained therein, all of which are intended to form the whole of the official Comprehensive Plan of the Township; and

FURTHER RESOLVED, that the Township Manager cause the 2013 Comprehensive Plan to be printed in multiple copies and made available to the general public for a fee reasonably related to the cost thereof as determined by Resolution of the Board of Commissioners, with the copies of said 2013 Comprehensive Plan to contain therein a copy of the herein Resolution adopting said Plan as the official Comprehensive Plan of the Township; and

FURTHER RESOLVED, that this Resolution shall become effective and be in force immediately.

APPROVED by action of the Board of Commissioners of Upper Allen Township at its duly convened meeting held this 18th day of December, 2013.

ATTEST:

Secretary

UPPER ALLEN TOWNSHIP

President, Board of Commissioners

I, Lou Fazekas, Secretary of the Upper Allen Township Board of Commissioners, hereby certify that the foregoing is a true copy of the Township's Resolution No. 912, which was duly adopted 18 December 2013.

Lou Fazekas, Secretary

(Municipal Seal)

ADA: Americans with Disabilities Act of 1990, Public Law 101-336

ADT: Average daily traffic volumes

BMPs: Best management practices

DCED: Pennsylvania Department of Community and Economic Development

DCNR: Pennsylvania Department of Conservation and Natural Resources

DEP: Pennsylvania Department of Environmental Protection

FEMA: Federal Emergency Management Agency

FBI: Federal Bureau of Investigation

FIA: Federal Insurance Administration

GPM: Gallons per minute

HARB: Historical Architectural Review Board

LOS: Level of service

NFIP: National Flood Insurance Program

NPDES: National Pollutant Discharge Elimination System

NRCS: Natural Resources Conservation Service

NWI: National Wetlands Inventory

PAWC: Pennsylvania American Water Company

PC: Planning Commission

PNDI: Pennsylvania Natural Diversity Inventory

PennDOT: Pennsylvania Department of Transportation

PP&L: Pennsylvania Power and Light

SEO: Sewage Enforcement Officer

WWTP: Wastewater treatment plant

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CHAPTER 1. INTRODUCTION

Comprehensive Planning is a continuing process that needs evaluation every few years to ensure a community's plans and policies reflect current events and its citizens' thinking. This is especially true of Upper Allen Township, which has experienced an 18 percent population increase from 2000 to 2010, one of the largest in Cumberland County, and is projected to grow another 15 percent over the next 10 years. This Comprehensive Plan represents a complete update to the previous plan that was prepared in 1998.

This Comprehensive Plan is the official statement of public policy by the Board of Commissioners pertaining to growth and development in Upper Allen Township. It is meant for use by the Township Board of Commissioners, other Township boards and commissions, Township departments, other government agencies, private citizens, and the business community. The Plan is intended as a guide for the legislative decisions and as a reference for needed policy changes. It should serve as the basis for planning improvements and rendering services where the Township is responsible. The Comprehensive Plan also provides necessary information to other local, state, and county agencies to further the coordination of various planning and development programs. Finally, the Plan gives citizens and members of the business community information to facilitate planning, protect existing development, conserve the environment, and identify opportunities for private action.

This Comprehensive Plan represents an 18-month intensive effort by the 12-member Comprehensive Plan Steering Committee that was appointed by the Township Board of Commissioners. The Steering Committee was composed of representatives from the Board of Commissioners, Planning Commission, Sewer Advisory Board, Park & Recreation Board, Historical Architecture Review Board, and farming and business communities. Valuable guidance was also given by the Township Engineer, Township Zoning and Codes Enforcement Officers, and the Community Development Director, who attended nearly every workshop meeting during the update of the Plan.

As guidance for development of the Comprehensive Plan, the Steering Committee drew from a number of sources throughout the planning process, including:

- A direct mail community survey, which was sent to all the residences and businesses in the Township; more than 15 percent responded. A copy of the survey results is available at the Township building.

- Input from key individuals in the Township including the Commissioners, Planning Commission, Sewer Advisory Board, Park & Recreation Board, Township Manager and Assistant Township Manager, Township Engineer, Zoning Officers, Community Development Director, Public Works Director, Fire Chief, Police Chief, West Shore Emergency Medical Services Director, and Mechanicsburg Area School District Business Manager.

- The general public through public hearings.

- Cumberland County Planning Department.

The Upper Allen Township Comprehensive Plan was prepared according to the Pennsylvania Municipalities Planning Code (Act of 31 July 1968, P.L. 805, No. 247). The Code empowers Townships and other municipalities "to plan their development and to govern the same by zoning, subdivision and land development ordinances, planned residential development and other ordinances, by official maps, by the reservation of certain land for future public purposes and by the acquisition of such land," among other provisions. Article III of the Code provides criteria for preparation and adoption of a comprehensive plan. To comply, this Plan includes statements of goals and objectives, a Population and Housing Policy Plan, a Land Use/Growth Management Policy Plan, a Community Facilities and Services Policy Plan, a Public Utilities Policy Plan, a Transportation Policy Plan, and implementation strategies with an assignment of the responsible party for each. A 12-Year Improvements Program follows these elements as does a directory of funding sources for improvements. In addition, this Plan considers the relationship of development in the Township to development and plans in contiguous municipalities and to plans for development in the County, as well as the interrelationship of the Comprehensive Plan components.

CHAPTER 2. POPULATION AND HOUSING

GOALS

- Provide decent, safe and sanitary housing for current and future residents of the Township.
- Create a residential structure and housing pattern that strengthens the sense of community identity, fosters residential stability and character, and enhances the overall quality of life.

OBJECTIVES

- To preserve, and where necessary, upgrade existing housing and neighborhoods.
- To provide adequate public facilities and services concurrent with residential development such as recreation facilities, transportation network, and adequate sewer and water facilities.
- To create new residential development and neighborhoods that are harmonious with the landscape and preserve tree cover and other important natural amenities found within the Township.
- To discourage uses that would be detrimental to nearby single family residential development and to separate and buffer single family residential areas from commercial and industrial districts.
- To assure that housing and neighborhoods are designed and located to provide protection from floods, stormwater damage, erosion, unstable soil conditions, noise, vibration, and other incompatible uses.
- To support public and private efforts to ensure high standards of construction in all forms of housing, for all residential development.

BACKGROUND

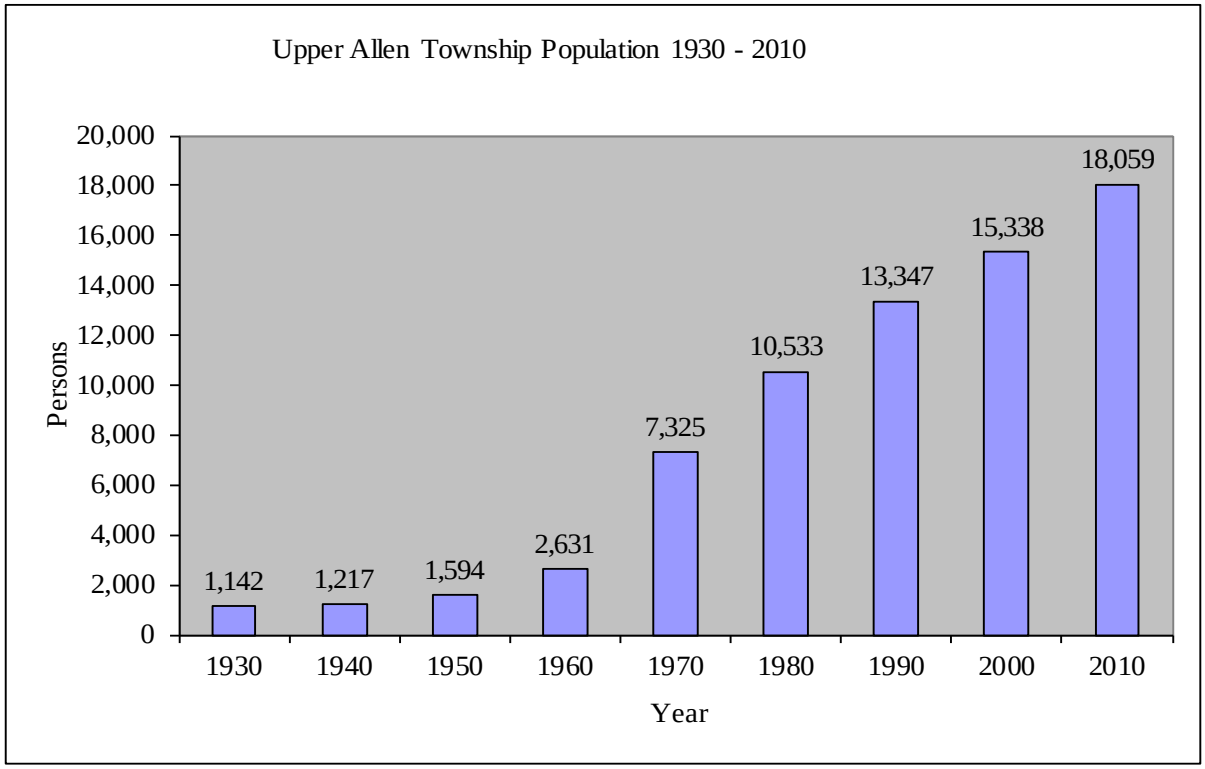
POPULATION AND DEMOGRAPHICS

In order to make sound planning decisions and develop appropriate planning policies involving the physical, social and economic development of the Township, and the allocation of municipal resources, it is important to review and analyze the Township's population. A quantitative analysis of population trends and a qualitative analysis of population characteristics are needed to make reasonable projections for future population growth and needs. Land area requirements for future residential, recreation, commercial, industrial and other needs are directly related to the requirements of the population to be served. Projected population demands for service will also determine the number and scope of future schools, transportation facilities, and other public infrastructure.

HISTORIC AND EXISTING POPULATION

Upper Allen Township has experienced a steady increase in population since 1950, as shown on Figure 2-1, Upper Allen Township Population 1930-2010. The Township's largest increase in population occurred from 1960 to 1970. During this period the population increased by 4,694 or 178.4 percent. From 1970 to 2000 population growth continued, but the rate of growth slowed. The population grew by 3,208 (43.9 percent) from 1970 to 1980, 2,814 (26.7 percent) from 1980 to 1990 and 1,991 (14.9 percent) from 1990 to 2000. From 2000 to 2010, the Township grew by 2,721 persons (17.74 percent), a slight increase in growth rate over the previous decade.

FIGURE 2-1



Source: 2010 US Census

A comparison of the population growth in Upper Allen Township with surrounding municipalities, Cumberland County and the Commonwealth of Pennsylvania, is presented in Table 2-1, Comparative Population and Population Growth Trends 1960 – 2010, and can provide some perspective on the growth experienced by the Township and the Region. In 1960, Upper Allen Township accounted for 2.1 percent of Cumberland County's population and by 2010; Upper Allen Township comprised 7.7 percent of Cumberland County's population. For every decade since 1960, Upper Allen Township has achieved a higher rate of growth than both Cumberland County and the Commonwealth of Pennsylvania. From a statewide perspective, population growth in Cumberland County has far outpaced growth in Pennsylvania. Between 1960 and 2010, the County grew by 88 percent while Pennsylvania grew by only 12 percent.

The national trend of population movement from central cities and boroughs to suburban areas and the subsequent spread of suburban development into surrounding rural fringes are also

evident in the Region. Neighboring Mechanicsburg Borough has experienced declining populations while surrounding townships, including Upper Allen, have experienced growing populations. Both locally and nationally, reinvestment and revitalization in boroughs and cities has been a priority in order to reduce the trend of "urban flight."

TABLE 2-1

Comparative Population and Population Growth Trends, 1960-2010

							Population Change									
							1960-1970		1970-1980		1980-1990		1990-2000		2000-2010	
Jurisdiction	1960	1970	1980	1990	2000	2010	#	%	#	%	#	%	#	%	#	%
Upper Allen Twp	2,631	7,325	10,533	13,347	15,338	18,059	4,694	178.4%	3,208	43.8%	2,814	26.7%	1,991	14.9%	2,721	17.7%
Hampden Twp	6,558	11,847	17,732	20,384	24,135	28,044	5,289	80.6%	5,885	49.7%	2,652	15.0%	3,751	18.4%	3,909	16.2%
Lower Allen Twp	11,614	13,690	14,077	15,254	17,437	17,980	2,076	17.9%	387	2.8%	1,177	8.4%	2,183	14.3%	543	3.1%
Mechanicsburg Boro	8,123	9,385	9,487	9,452	9,042	8,981	1,262	15.5%	102	1.1%	-35	-0.4%	-410	-4.3%	-61	-0.7%
Monroe Twp	2,298	3,326	4,836	5,468	5,530	5,823	1,028	44.7%	1,510	45.4%	632	13.1%	62	1.1%	293	5.3%
Silver Spring Twp	4,044	6,324	7,148	8,369	10,592	13,657	2,280	56.4%	824	13.0%	1,221	17.1%	2,223	26.6%	3,065	28.9%
Carroll Twp	1,558	2,386	3,097	3,287	5,095	5,939	828	53.1%	711	29.8%	190	6.1%	1,808	55.0%	844	16.6%
Monaghan Twp	943	1,134	1,645	2,009	2,132	2,630	191	20.3%	511	45.1%	364	22.1%	123	6.1%	498	23.4%
Cumberland County	124,816	158,177	179,625	195,257	213,674	235,406	33,361	26.7%	21,448	13.6%	15,632	8.7%	18,417	9.4%	21,732	10.2%
York County	238,336	272,603	312,963	339,574	381,751	434,972	34,267	14.4%	40,360	14.8%	26,611	8.5%	42,177	12.4%	53,221	13.9%
Pennsylvania	11,319,366	11,800,766	11,864,720	11,881,643	12,281,054	12,702,379	481,400	4.3%	63,954	0.5%	16,923	0.1%	399,411	3.4%	421,325	3.4%
Upper Allen % of County	2.1%	4.6%	5.9%	6.8%	7.2%	7.7%	14.1%		15.0%		18.0%		10.8%		12.5%	

Source: 1960-2010 US Census

AGE AND SEX DISTRIBUTION

The age and sex distribution of Township residents is a key factor in population growth and in determining the type of public services best suited for the majority of residents. Different age groups have different public service needs that should be considered. Changes in the size and rate of growth of children under the age of 15 would have implications on the planning for educational facilities and programs. The age group ranging from 15 to 44 years of age is most frequently engaged in household formation and tends to produce the most children. Any substantial decline or imbalance in the number of residents will impact the birth rate, thus population increases or decreases. The age group ranging from 25 to 44 years of age is the segment of the population that comprises the majority of labor force and that is most frequently engaged in home buying or building. This group tends to be highly mobile and active in community functions. The mature labor force, 45 to 65 years of age, tends to be more settled and at the height of their earning power. Trends in the upper age groups, 65 year and older, should be examined closely to determine if transportation, housing, recreation or other community services geared toward the elderly are in need of change.

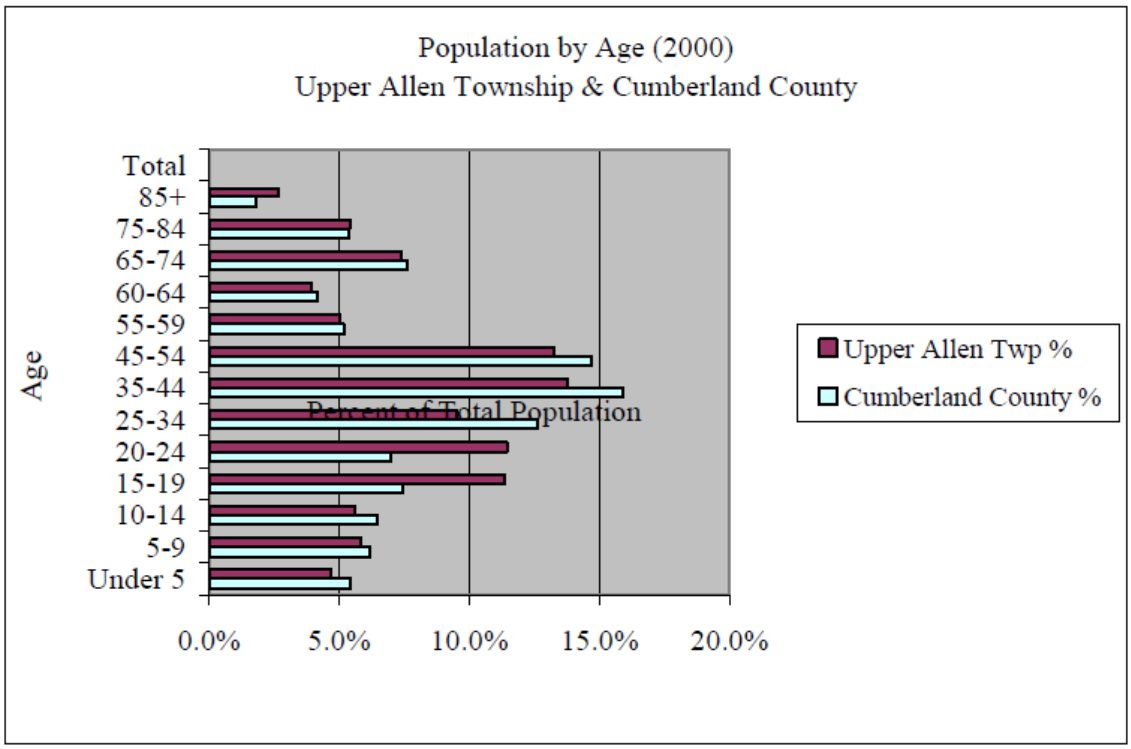
A comparison of the Township's population by age and sex distribution from 1970-2000 is presented in Table 2-2. A comparison of population by age for Upper Allen Township and Cumberland County is presented in Figure 2-2.

TABLE 2-2
Population by Age and Sex Distribution, 1970-2000
Upper Allen Township

	1970				1980				1990				2000			
	Male		Female		Male		Female		Male		Female		Male		Female	
Age Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Under 5	397	5.4%	320	4.4%	316	3.0%	295	2.8%	328	2.5%	282	2.1%	365	2.4%	354	2.3%
5-14	888	12.1%	877	12.0%	846	8.0%	783	7.4%	769	5.8%	710	5.3%	887	5.8%	870	5.7%
15-24	559	7.6%	715	9.8%	1187	11.3%	1322	12.6%	1407	10.5%	1843	13.8%	1531	10.0%	1975	12.9%
25-34	581	7.9%	643	8.8%	746	7.1%	816	7.7%	845	6.3%	930	7.0%	681	4.4%	779	5.1%
35-44	539	7.4%	529	7.2%	741	7.0%	749	7.1%	920	6.9%	1030	7.7%	1009	6.6%	1102	7.2%
45-54	372	5.1%	317	4.3%	583	5.5%	552	5.2%	722	5.4%	769	5.8%	947	6.2%	1086	7.1%
55-64	173	2.4%	160	2.2%	390	3.7%	398	3.8%	579	4.3%	578	4.3%	673	4.4%	709	4.6%
65 and Over	105	1.4%	150	2.0%	271	2.6%	535	5.1%	596	4.5%	1039	7.8%	896	5.8%	1474	9.6%
Total	3614	49.3%	3711	50.7%	5080	48.2%	5450	51.8%	6166	46.2%	7181	53.8%	6989	45.6%	8349	54.4%

Source: 2000 US Census

FIGURE 2-2



Source: 2000 US Census

As seen on the preceding table and figure, the Township's population is aging. The most dramatic changes have been in the 65 and over age group, especially the female population. The 65 and over age group increased from 3.4 percent of the population in 1970 to 15.4 percent in 2000. The female population ages 65 and over increased from 150 persons, totaling 2.0 percent of the total population in 1970, to 1,474 persons, totaling 9.6 percent in 2000. While some of this growth can be explained by the general aging of the population, a portion of the growth in the elderly population is likely attributed to Messiah Village. When combined with the population of the 55-64 age group, which also increased since 1970, nearly one fourth (24.4 percent) of the Township's population was 55 years or older in 2000.

Another notable increase in the population occurred within the 15-24 age group, again, particularly among females. The population of the 15-24 age group has grown from 17.4 percent of the Township's population in 1970 to 22.9 percent in 2000. The female population of the 15-24 age group grew from 877 persons, representing 9.8 percent of the total population, to 1,975 persons representing 12.9 percent in 2000. The growth in this age group has generally taken place in the 18-24 age group which represents college-age persons. The increase experienced in this age group is likely attributed to Messiah College.

The segments of the Township's population experiencing the greatest decreases include the under 5, 5-14 and 25-34 age groups. The percentage of the Township's population under 5 decreased from 9.8 percent of the total population in 1970 to 4.7 percent in 2000. In the 5-14 age group, the percentage decreased from 24.1 percent in 1970 to 11.5 percent in 2000. In the 25-34 age group,

the percentage decreased from 16.7 percent of the total population in 1970 to 9.5 percent in 2000.

The increases in population of upper age groups within the Township indicates that the Township should examine whether the Township facilities and services are and will meet the current and future needs of its older residents.

The distribution of the Township's population among males and females has changed from 1970 to 2000. The percentage of females increased from 50.7 percent in 1970 to 54.4 percent in 2000. The largest increases in the Township's female population from 1970 to 2000 occurred in the 15-24 and 65 and over age groups. Growth in these age groups is likely to be attributed to Messiah Village and Messiah College. Messiah Village's population of about 710 persons is approximately 75 percent female. Messiah College's population of about 2,900 students is approximately 60 percent female.

RACIAL COMPOSITION

In 2010, the racial composition of Upper Allen Township was 16,550 (91.6 percent) white persons, 589 (3.3 percent) black persons, 19 (0.10 percent) American Indians and Alaskan Native, 411 (2.3 percent) Asian, 3 (0.02 percent) Native Hawaiian and other Pacific Islanders and 475 (2.6 percent) Hispanic or Latino. An additional 487 persons considered themselves to be another race or mixed race. Table 2-3 shows racial composition of both Upper Allen Township and Cumberland County. The Township's racial composition in 2010 was similar to that of Cumberland County, which was composed of 90.8 percent white persons.

TABLE 2-3

Racial Composition, 2010
Upper Allen Township and Cumberland County

	Upper Allen Township		Cumberland County	
Race	**#**	**%**	**#**	**%**
White	16,550	91.64%	213,934	90.88%
Black	589	3.26%	7,527	3.20%
American Indian and Alaskan Native	19	0.11%	363	0.15%
Asian	411	2.28%	7,072	3.00%
Native Hawaiian and other Pacific Islander	3	0.02%	65	0.03%
Hispanic or Latino	475	2.63%	6,448	2.74%
Other Races	134	0.74%	2,203	0.94%
2 or More Races	353	1.95%	4,242	1.80%

Source: 2010 US Census

EDUCATIONAL ATTAINMENT

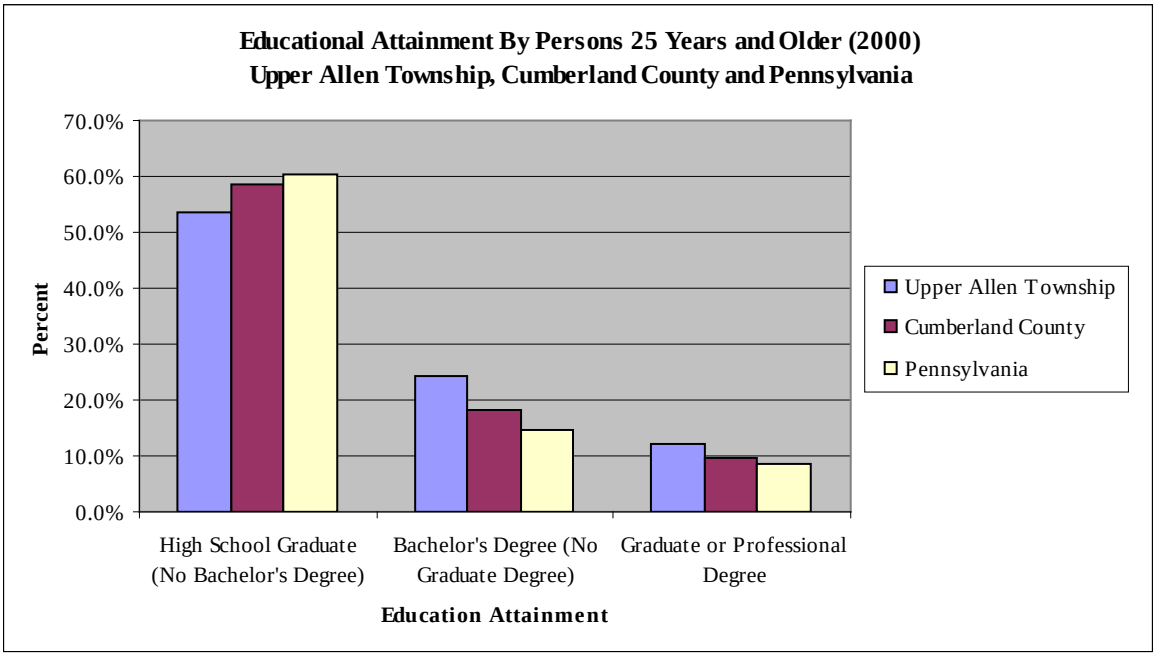
The educational level of Upper Allen Township residents is high compared to statewide levels. Almost 90 percent of all person 25 years and older in 2000 where high school graduates or higher. Almost one fourth of all persons 25 years and older in 2000 had a bachelor's degree. 12 percent of all persons 25 years and older in 2000 held graduate or professional degrees. A comparison of the educational attainment levels of persons 25 years and older in 2000 in Upper Allen Township, Cumberland County and Pennsylvania is presented on Table 2-3 and depicted graphically on Figure 2-3.

TABLE 2-4
Educational Attainment by Persons 25 Years and Older, 2000
Upper Allen Township, Cumberland County and Pennsylvania

Educational Attainment	Upper Allen Township		Cumberland County		Pennsylvania	
	#	%	#	%	#	%
Non High School Graduate	913	10.2%	18,582	13.5%	1,203,236	16.6%
High School Graduate (No Bachelor's Degree)	4804	53.4%	80,646	58.5%	4,373,570	60.3%
Bachelor's Degree(No Graduate Degree)	2191	24.37%	25,172	18.3%	1,055,399	14.6%
Graduate or Professional Degree	1081	12.0%	13,345	9.7%	619,693	8.5%
Total	8989	100.0%	137,745	100.0%	7,251,898	100.0%
High School Graduate or Higher	8076	89.8%	119,163	86.5%	6,048,662	83.4%
Bachelor's Degree or Higher	3272	36.4%	38,517	28.0%	1,675,092	23.1%
Graduate or Professional Degree	1081	12.0%	13,345	9.7%	619,693	8.5%

Source: 2000 US Census

FIGURE 2-3



Source: 2000 US Census

EMPLOYMENT

Table 2-4 presents the number and percentage of Upper Allen Township and Cumberland County residents working in the labor force categories defined by the U.S. Census. Employment characteristics in 2000 indicate that the Township's labor force is concentrated predominantly in "white collar" occupations. Three occupational groups accounted for about 85 percent of the township's workforce: (1) management, professional, and related occupations, (2) Service occupations, and (3) sales and office occupations. County employment characteristics are similar with approximately 78 percent of the population in "white collar" occupations.

TABLE 2-5
Employment By Occupation, Persons 16 Years and Older, 2000
Upper Allen Township and Cumberland County

Occupation	Upper Allen Township		Cumberland County	
	#	%	#	%
Management, professional, and related occupations	3,094	38.3%	36,965	34.6%
Service occupations	1,388	17.2%	14,206	13.3%
Sales and office occupations	2,437	30.2%	31,744	29.7%
Farming, fishing, and forestry occupations	14	0.2%	494	0.5%
Construction, extraction, and maintenance occupations	546	6.8%	7,836	7.3%
Production, transportation, and material moving occupations	593	7.3%	15,466	14.5%
Total	**8,072**	**100.0%**	**106,711**	**100.0%**

Source: 2000 US Census

INCOME & POVERTY LEVEL

Closely related to educational attainment and employment characteristics is income. Income statistics are grouped into three main categories: family income, household income, and per capita income. Median family income is derived by dividing the Township's family income into two equal parts. Median household income is determined by dividing the Township's household income, for all households and unrelated individuals, into two equal parts. Per capita income is calculated by dividing the aggregate income for persons 15 years and over by the total number of persons in the group.

Table 2-5 contains median family income, median household income and per capita income for Upper Allen Township, Cumberland County and Pennsylvania in 1999. As presented in the table, income levels in Upper Allen Township are high as compared to Cumberland County and Pennsylvania. Upper Allen Township's median family income of $65,349 ranks as the second highest in Cumberland County. Upper Allen Township's median household income of $54,706 ranks as the fourth highest in Cumberland County. Upper Allen Township's per capita income of $24,127 ranks as the eleventh highest in Cumberland County.

Another indicator of socioeconomics for the Township is poverty level. According to the 1990 Census, there were 196 persons living in the Township below the poverty level. In the 2000 Census, there were 507 persons. The percentage of persons below poverty in Upper Allen

Township in 2000 (3.3 percent) is low as compared to the percentage of persons below poverty within Cumberland County (6.1 percent) and Pennsylvania (10.6 percent).

TABLE 2-6

Income and Poverty, 1999
Upper Allen Township, Cumberland County and Pennsylvania

	Median Family Income	Median Household Income	Per Capita Income	Percent Persons Below Poverty
Upper Allen Township	$65,349	$54,706	$24,127	3.3%
Cumberland County	$56,406	$46,707	$23,610	6.1%
Pennsylvania	$49,184	$40,106	$20,880	10.6%

Source: 2000 US Census

POPULATION PROJECTIONS

As evidenced previously in the review of historical population data, Upper Allen Township has experienced substantial increases in population over the last 50 to 60 years. After peaking from 1960 to 1970, population increases have steadily declined over the last several decades. So while the population of the Township has continued to grow, it has grown at a slower pace.

Tri-County Regional Planning Commission has used the Pennsylvania State Data Center's Cumberland County population projections and allocated it throughout the County to determine municipal projections. The allocations through 2030 for Upper Allen Township are: 2010 - 18,628; 2015 – 19,568; 2020 – 20,409; 2025 – 21,976; and 2030 – 23,201. The population projections for Upper Allen Township and Cumberland County are presented in Table 2-6.

TABLE 2-7
Population Projections, 2010-2030
Upper Allen Township and Cumberland County

		Population Projections								
Municipality	**2000 Census**	**2010**	**2015**	**% Change 2010-2015**	**2020**	**% Change 2015-2020**	**2025**	**% Change 2020-2025**	**2030**	**% Change 2025-2030**
Upper Allen Township	15,338	18,628	19,568	5.05%	20,409	4.29%	21,976	3.69%	23,201	3.20%
Cumberland County	213,674	249,813	260,144	4.14%	269,375	3.55%	277,658	3.07%	285,089	2.68%

Source: 2000 US Census, Pennsylvania State Data Center

HOUSING

Housing characteristics are influenced by the age, income and other population characteristics of the Township's residents. This section describes existing housing types, conditions, vacancies and other factors that characterize the supply of housing in Upper Allen Township

HOUSING SUPPLY

The total supply of Upper Allen Township's housing stock increased from 3,337 units in 1980 to 4,539 units in 1990 to 5,198 units in 2000. This represented a 55.7 percent increase between 1980 and 2000. This rate of increase surpassed the population increase of 45.6 percent for the same time period.

HOUSING TYPE

In 2000, single family housing units (detached and attached) comprised over three quarters, 82.5 percent (4,292 units), of the Township's housing stock. Multi-family dwelling units accounted for 14.8 percent (768 units) of the Township's total housing units in 2000. Mobile homes and other units accounted for the remaining 2.7 percent (138 units). The housing types within Upper Allen Township were similar to those for Cumberland County in 2000 as presented in Table 2-7, with Upper Allen Township having a somewhat higher percentage of single family detached and attached housing units and a somewhat lower percentage of multi-family dwellings with 3 or more units and mobile homes.

TABLE 2-8
Housing Types, 2000
Upper Allen Township and Cumberland County

	Upper Allen Township		Cumberland County	
Type	Total Housing Units	Percent of Total	Total Housing Units	Percent of Total
Single Family				
1 unit, detached[1]	3,338	64.2%	53,203	61.2%
1 unit, attached[2]	954	18.4%	11,054	12.7%
Multi-Family[3]				
2 units	78	1.5%	3,105	3.6%
3 or more units	690	13.3%	13,431	15.4%
Mobile Home/Other	138	2.7%	6,158	7.1%
TOTAL	5,198	100%	86,951	100%

Source: 2000 US Census

[1] A building arranged or designed to provide living facilities for one family entirely separated from any other building or structure by space at all sides.

[2] A dwelling designed, occupied or used by one family, having two party walls in common with other buildings and no side yards, commonly called row houses or townhouses.

[3] A building designed, occupied or used by two or more families living independently of each other; including apartment houses.

VACANCY STATUS & HOUSING OCCUPANCY (TENURE)

Of the 7,007 total housing units, 6,716 housing units (95.8 percent) were occupied while only 291 were vacant in 2010. The resulting vacancy rate was relatively low at 4.2 percent. Within Cumberland County the vacancy rate in 2010 was 6.0 percent. Typically between three and six percent of the housing units within a community should be vacant to provide opportunities for mobility and housing choice.

In 2000, 80.5 percent (4,075 units) of the Township's total housing units were owner-occupied. The remaining 19.5 percent (986 units) were renter-occupied. The percentage of owner occupied units within Upper Allen Township was greater than that of Cumberland County (73.0 percent). The percentage of owner-occupied units within Upper Allen Township was slightly lower in 1990 at 76.2 percent.

HOUSEHOLD SIZE

The average number of persons per household in Upper Allen Township dropped from 2.92 in 1980 to 2.52 in 1990 to 2.45 in 2000. This decline reflects the national trend toward smaller families.

Table 2-8 indicates the distribution of household sizes in Upper Allen Township in 2000. Two-person households are most prevalent in Upper Allen Township, accounting for 37.9 percent of all households. One-person households are the next most common household size, followed by three-person and then four-person households. This table also indicates the distribution of household size for owner-occupied and renter-occupied units. The two-person household is the most common for owner-occupied units, while for renter-occupied units, the one-person household sizes is most common.

TABLE 2-9
Household Size and Occupancy, 2000
Upper Allen Township

Household Size	Total		Owner-Occupied		Renter-Occupied	
	Number	Percentage	Number	Percentage	Number	Percentage
1 person	1,211	23.9%	735	18.0%	476	48.3%
2 persons	1,917	37.9%	1,686	41.4%	231	23.4%
3 persons	814	16.1%	667	16.4%	147	14.9%
4 persons	708	14.0%	633	15.5%	75	7.6%
5 persons	317	6.3%	260	6.4%	57	5.8%
6 persons	67	1.3%	67	1.6%	0	0.0%
7+ persons	27	0.5%	27	0.7%	0	0.0%
Total	**5,061**	**100%**	**4,075**	**100%**	**986**	**100%**

Source: 2000 US Census

HOUSING VALUE

The median value of owner-occupied units in the Township in 2000 was $134,100, which was up 40 percent from $95,900 in 1990. It ranked sixth among municipalities in Cumberland County in 2000. This median value was higher than the $120,500 median value reported for Cumberland County in 2000.

HOUSING GROWTH TRENDS: 2000 to 2012

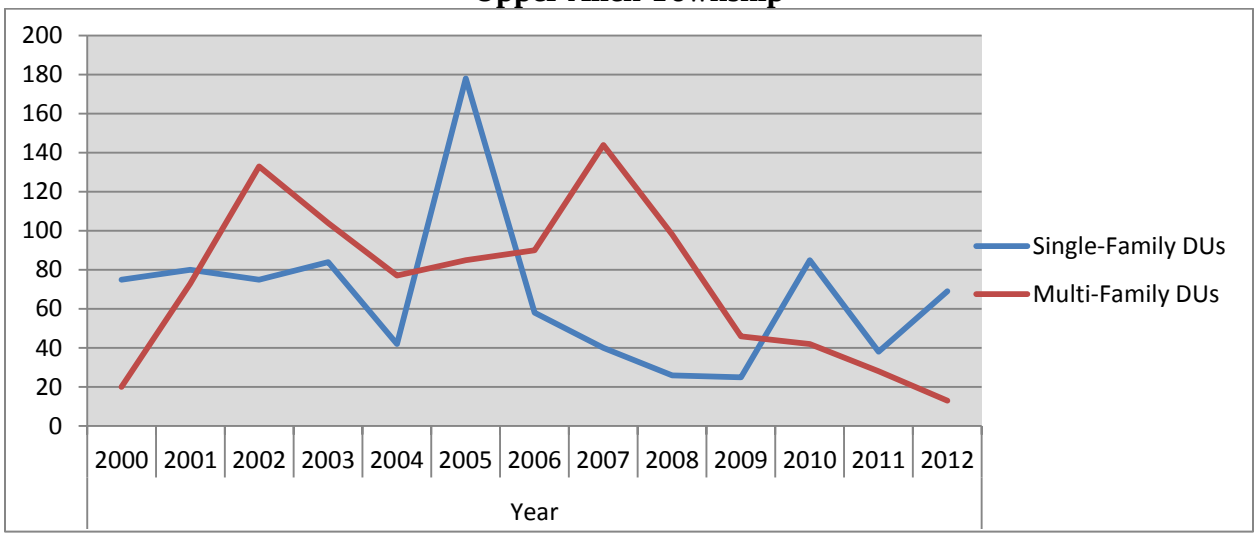
Housing growth between 2000 and 2012 is depicted in Table 2-9 and Figure 2-4 and included a mix of single family and multi-family dwelling units. Building permits were issued for 1,828 new housing units from 2000 and 2012. Eight hundred seventy five (875) of these new units, representing 48 percent of the total new units, were single family dwelling units. Nine hundred fifty-three units (953 or 52 percent) were multi-family dwelling units.

TABLE 2-10
Housing Starts, 2000 - 2012
Upper Allen Township

Unit Type	Year												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Single Family DUs[4]	75	80	75	84	42	178	58	40	26	25	85	38	69
Multi-Family DUs	20	73	133	104	77	85	90	144	98	46	42	28	13
Total	95	153	208	188	119	263	148	184	124	71	127	66	82

Source: Tri-County Regional Planning Commission, Building Permit Survey 2000-2009; Upper Allen Township 2010-2012

FIGURE 2-4
Housing Starts 2000-2012
Upper Allen Township



[4] Dwelling Units

POLICY PLAN

- Preserve and rehabilitate sound residential structures and neighborhoods to the extent feasible.

- Rehabilitate and preserve significant historic residential structures.

- Develop residential neighborhoods in areas that are adequately served by public facilities and services.

- Provide for a range of housing types to meet the needs of different household ages, sizes, and income.

- Continue to provide developers with the opportunity to construct a range of housing types at varying densities.

- Encourage greater use of alternative housing and subdivision designs, such as cluster housing.

- Regulate or prohibit housing, as appropriate, in unsafe areas such as wetlands, floodplains, and steep slopes, and require design and construction to minimize stormwater runoff, erosion, and sedimentation.

- Preserve natural amenities such as streams, floodplains, wetlands, and wooded areas, and incorporate these features into development plans to serve as open space and greenways and to provide a link to other similar areas.

- Encourage design of residential structures in harmonious relationships with one another-to the terrain, to adjacent roadways, and in ways suitable for creating interesting, useable spaces.

- Require buffering in the form of landscaping, open space, attractive fencing, and/or other creative site planning techniques to protect residential areas from commercial, industrial and other incompatible uses.

- Where feasible, require building setbacks and/or berms or acoustical fencing to deflect noise and to screen visual impacts, especially at major road intersections and where conflicts may develop between land uses.

- Plan for senior citizen living areas in appropriate locations. Elderly housing should be encouraged either in areas convenient to existing shopping and commercial centers, recreation facilities, social and medical services and with good transportation access, or in new sustainable development-type communities that provide housing in conjunction with a mix supporting land uses (commercial and shopping, medical and social services, offices, and/or recreational facilities).

- Enforce housing and building codes to ensure that all housing units and other structures comply with Township requirements.

IMPLEMENTATION STRATEGY

- Update the Township Zoning Ordinance to allow for greater use of innovative and/or alternative housing designs, such as cluster housing. (H/2014-2015/T)[5]

- Update the Township Subdivision and Land Development Ordinance to allow for greater use of innovative and/or alternative housing designs, such as cluster housing. (H/2015-2016/T) [5]

- Review and modify, if necessary, Township regulations, codes, and procedures relating to buffering. (H/2013-2014/T)[5]

- Review and modify, if necessary, Township regulations, codes, and procedures relating to housing development, to eliminate unnecessary restrictions, while ensuring safe and proper development. (H/2013-2014/T)[5]

- Work with landowners and developers to explore alternatives to conventional residential subdivisions. (T,P)[5]

- Work with landowners and developers to preserve and rehabilitate sound residential structures and neighborhoods to the extent feasible. (T,P)[5]

- Continue to enforce Township housing and building codes to ensure that all housing units comply with Township requirements. (T)[5]

- Maintain the Township Historic Preservation Ordinance, and update if necessary, to define historic district boundaries, appointment and duties of the Historical Architectural Review Board, the application and review process, criteria for determining appropriateness of existing structure alterations and new construction, the local governing body reporting process, and appeals process and related penalties. (M/2014-2015/T)[5]

[5] Priority: (H)-High; (M)-Medium; (L)-Low/Implementation Year(s)/Responsible Party(ies): (T)-Township; (C)-County; (S)-State; (P)-Private; (M)-Mechanicsburg Area School District (See Chapter 9 for corresponding 12-Year Improvements Program).

CHAPTER 3. ENVIRONMENTAL AND CULTURAL RESOURCES

GOALS

- Protect and enhance natural resources, and maintain the Township's suburban/semi-rural setting and a safe and attractive living environment.

- Protect cultural resources in the Township.

OBJECTIVES

- To preserve farmland/open space to the extent feasible.

- To encourage participation in agricultural preservation and tax reduction programs.

- To preserve and enhance scenic qualities along and from major roadways.

- To encourage the design of new development to complement the township's scenic and historic character.

- To protect woodlands to the extent possible.

- To maintain the natural character and aesthetic qualities of stream valleys, floodplains, and wetlands—properly planning for stormwater management to enhance water quality, prevent loss of life, minimize property damage, and avoid interruption of utility and municipal services.

- To promote watershed stormwater management as a means to reduce stormwater runoff, flooding, and erosion and sedimentation of streams.

- To promote and maintain natural stream buffers that would enhance and maintain water quality to provide for the protection and propagation of fish and wildlife and the enjoyment of water recreation activities.

- To encourage protection and proper utilization of moderate (50 to 100 gallons per minutes calculated sustained yield) and high (100 gallons per minute or greater calculated sustained yield) groundwater recharge areas to prevent groundwater depletion and meet local needs.

- To regulate development on slopes 15 percent or greater.

- To protect historic resources in Historic Districts established by Upper Allen Township, including the African American cemetery in the vicinity of Chestnut Hill, and those resources on the Natural Register of Historic Places.

- To support the identification and designation of properties of national, state, and local historic significance.

- To encourage the preservation, rehabilitation, and adaptive reuse of historic structures as identified in the 1976 publication, *Early Architecture in Upper Allen Township*, by the Upper Allen Heritage Committee and in Cumberland County's historic structure inventory.

BACKGROUND

An inventory and analysis of the natural resources of Upper Allen Township is essential to the development of goals, objectives, and policies that will direct future land use and public service decisions. An understanding of the Township's natural environment is important not only for planners, developers, and Township officials, but also for the citizens of the Township as well. Use of natural resources provides us with essentials for human living. However, excessive use of land and natural resources may adversely affect the ecological functions and values they provide. The natural environment and its positive impacts to the overall quality of life has been cited as one of the primary values that attract people to Upper Allen Township. This creates increased demand for new housing and other development, and increases the need to manage growth and avoid adverse impacts on the natural environment. For the community's long term health and quality of life, the Township and landowners need to collectively balance their use and conservation of natural resources.

CULTURAL RESOURCES AND HISTORIC PRESERVATION

Cumberland County was created in 1750, carved from the western end of Lancaster County. The County was divided at a line near Newville into East Pennsborough and West Pennsborough Townships. In 1757, the voters of Cumberland County selected as their representative in the General Assembly a patrician from Philadelphia named William Allen. William Allen served as Mayor of Philadelphia and Chief Justice of Pennsylvania. About one year later (1758), Cumberland County created Allen Township in honor of their Assemblyman (Christ, 1993).

Allen Township initially included what we know today as Lower Allen, Upper Allen and Monroe Townships, the Boroughs of New Cumberland and Shiremanstown, and portions of the Boroughs of Lemoyne and Mechanicsburg (Christ, 1993). In 1825, during the last year of James Monroe's presidency, Allen Township was reduced in size when the westernmost section became Monroe Township (Keefer, 1976). In 1831, Allen Township was reduced in size again when the eastern portion became the Borough of New Cumberland. In 1849 the County Court received a petition, instigated by citizens of the lower portion of Allen Township, stating that the Township was "long and inconvenient for Township purposes for those living in the extreme ends." In January of 1850 the Township was divided and Upper Allen and Lower Allen Townships were created. However, the boundary line between the two Townships was drawn rather hastily and severed the Village of Lisburn. In 1857, Upper Allen residents of Lisburn petitioned to change the boundary because they were closer to the Lower Allen School than to the Upper Allen School. The Court sided with the petitioners and the boundary line was redrawn to include the Village of Lisburn within Lower Allen Township (Christ, 1993).

Early settlers of current day Cumberland County and Upper Allen Township were, by design, of Scottish-Irish descent (Upper Allen Heritage Committee, 1976). The proprietary authorities decided to set aside land in a new county (Cumberland County) as an exclusive Scotch-Irish preserve. The settlement pattern was for the first arrivals to buy land at the power sites along the Yellow Breeches Creek (Christ, 1993). By 1740 a handful of genuine settlers were living in Upper Allen Township, including Robert Roseberry, builder of the Rose Garden Mill (Upper Allen Heritage Committee, 1976). Several other mills were later constructed along the Yellow Breeches Creek (Christ, 1993). The nearest village was Lisburn, which by the 1750s was a thriving community. The settlement patterns of the Upper Allen Township and Cumberland County changed in the 1760s. Following the French and Indian War (1765), land offices were opened to receive warrants for land in Bedford, Somerset, and Westmoreland Counties. Most of the Scotch-Irish moved from this area to the newly opened western tracts. Local landholdings were readily sold to migrating Germans moving in from Lancaster County (Upper Allen Heritage Committee, 1976).

In 1810, construction of the Gettysburg Pike began, and it soon became the main north-south roadway. Within the next 10 to 15 years, the settlement of Shepherdstown grew to become the largest village in the Township (Upper Allen Heritage Committee, 1976).

In preserving historic resources, Upper Allen Township has four Municipal Historic Districts and two structures on the National Register of Historic Places (Figure 3-1). Each of these is described briefly below:

Yellow Breeches Historic District consists of approximately 10 properties within an area along both sides of McCormick Road from the Nauman Bridge to McCormick's Mill, an area along the east side of Arcona Road from the intersection with McCormick Road to a point approximately 500 feet north thereof, and an area along the west side of Arcona Road from the intersection with McCormick Road to a point approximately 800 feet north thereof. The district features one stone arch bridge, one tenant house, one "grange," one spring house-dwelling, and four homesteads, primarily along McCormick Road. One of the homesteads has an associated summer kitchen, barn, and mill. All were built between ca 1780 and ca 1841.

Rosegarden Mill Historic District is bound by Gettysburg Pike on the west, the Yellow Breeches Creek on the south, U.S. Route 15 on the east, and a line approximately 1,200 feet from the Yellow Breeches Creek on the north. The district features the Rosegarden Mill (ca 1740) and Miller's House along Gettysburg Pike. The Rosegarden Mill was the first mill in Upper Allen Township.

Shepherdstown Historic District consists of approximately 15 properties along both sides of Gettysburg Pike from a point approximately 900 feet northeast of the intersection with Fisher Road to a point approximately 300 feet northeast of the intersection with South York Street, and the properties on both sides of South York Street from the intersection with Gettysburg Pike to a point approximately 300 feet northwest thereof. The district features 15 houses and one hotel along Gettysburg Pike, which were built between ca 1820 to 1870.

Trout Run Historic District consists of properties located on both sides of West Lisburn Road west of the intersection with Stumpstown Road and the surrounding Trout Run and the springs at the source thereof. The district features five dwellings and a corn crib-wagon shed off Stumpstown Road, which were built between ca 1773-75 and ca 1821-22.

Bishop Bridge, located on Bishop Road, was built ca. 1900 and is on the National Register of Historic Places.

Union Hotel, located in Shepherdstown at the corner of South York Street and ~~Old~~ Gettysburg Road, was built in 1860 and is on the National Register of Historic Places.

SURFACE WATER

Surface waters include streams and ponds, which may provide aquatic habitat, carry or hold runoff from storms, and provide recreation or scenic opportunities. These features are often highly valued for their aesthetic qualities.

Generally, streams in the Township drain toward the south and east into the Yellow Breeches Creek (Figure 3-2); the Yellow Breeches forms the southern border of the Township. Trout Creek starts in Monroe Township and drains the southwest corner of the Township, passing through Trout Run Preserve, several subdivisions, and Grantham Park. It also serves as the primary water source for Grantham Pond. Eight other small, unnamed tributaries also drain the southern portion of the Township into the Yellow Breeches. Spring Run, with headwaters just south of the Township Municipal Building and in Spring Run Acres Park, drains the central part of the Township to the east through Lower Allen Township; its headwaters flow under Route 15 and past or through several subdivisions. Cedar Run Watershed drains most of the northern part of the Township in an easterly direction through Lower Allen Township as well; within the Township, the creek flows through a couple of subdivisions and Upper Allen Business Park. In 2010, a county-wide Pennsylvania Act 167 Stormwater Management Plan was enacted.

FLOODPLAINS

For regulatory purposes, the National Flood Insurance Program defines floodplains by the 100-year or base year flood event, which has a one percent chance of being equaled or exceeded in a given year. A floodplain is divided into the floodway and the flood fringe. The floodway is the stream or river channel and adjacent land area that carry the base flood without cumulatively increasing the base flood elevation more than one foot. The flood fringe is the portion of the 100-year floodplain outside the floodway.

Floodplains serve the purpose of holding and carrying excess water runoff from heavy precipitation. Floodplains provide natural areas for the infiltration of rainfall and wildlife habitat. They can also afford scenic and recreational opportunities. Floodplains are generally flat or gently sloped, low-lying areas adjoining a watercourse, which make these areas not only attractive, but also serious hazards for development. Preserving floodplain areas from development is crucial in minimizing potential damages to property and risk of injury due to flooding.

The Township currently uses two sources of information for determining floodplain locations. The Federal Insurance Administration's (FIA) Flood Hazard Boundary Map serves as the official resource for determining floodplain location. A flood elevation map, prepared for the Township by a consultant, depicts recorded flood elevations and provides an additional source of information.

Floodplains are primarily present along the major water courses including the Yellow Breeches Creek, Trout Run, Spring Run, and Cedar Run, and comprise about 790 acres. The floodplains at the headwaters of Cedar Run include virtually all of the Webercroft development and areas to the west (Figure 3-2).

WETLANDS

According to the U.S. Fish and Wildlife Service, "Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. These transitional habitats occur between upland and aquatic environments where the water table is at or near the surface of the land, or where the land is covered by shallow water that may be up to six feet deep."

Wetlands can be valuable natural resources and serve as flood and water storage areas, wildlife habitats, and fish spawning areas. Wetlands can also provide recreational, scientific, and educational opportunities. To protect wetlands values, federal and state statutes have been implemented to regulate the use of wetlands.

The National Wetlands Inventory (NWI) of the U.S. Fish and Wildlife Service has mapped wetlands nationwide based on aerial photography interpretation. While these maps prove to be valuable for desk-top reviews and evaluations, they also have certain limitations. On-site investigations are needed to determine accurate limits and acreages of wetlands. Therefore, these maps should only be used as a planning tool, and should not be used for regulatory, jurisdictional wetland delineations.

Based on NWI maps, Upper Allen Township contains approximately 85 acres of wetlands (Figure 3-2). Practically all the wetlands are located along the Yellow Breeches Creek, Trout Run, and Spring Run. One other is shown in a quarried area on the west side of Bumble Bee Hollow Road, near the intersection of East Lisburn Road.

GROUNDWATER RECHARGE AND YIELD

A groundwater aquifer is a geologic formation or structure which stores and transmits water in usable quantities. The areas where water enters the aquifer are termed recharge areas. An understanding of local groundwater sources is important in the allocation of future land use so as to protect important groundwater recharge areas, assure adequate water supply for rural neighborhoods reliant on wells, and plan for sewage facilities.

Within Upper Allen Township, approximately 12 percent of the area is classified as having *high* groundwater recharge/yield, about 39 percent is classified as having *moderate* groundwater

recharge yield, and around 49 percent is classified as having *low* groundwater recharge/yield (Figure 3-2). For the purposes of this plan, 100 gallons per minute (gpm) calculated median sustained yield or greater is considered *high*, 50 to 100 gpm is considered *moderate*, and less than 50 gpm is considered *low*. Classifications were based on geologic and hydrologic information as described and illustrated in the Pennsylvania Geological Survey publications, *Groundwater and Geology of the Cumberland Valley, Cumberland County, Pennsylvania* (Becher and Root, 1981) and *Groundwater Resource of the Gettysburg and Hammer Creek Formations, Southeastern Pennsylvania* (Wood, 1980). High groundwater recharge/yield areas include the Rockdale Run formation (405 gpm median sustained yield), which protrudes into the northeastern and northwestern portions of the Township, and the Elbrook Formation (218 gpm median sustained yield), which is located in the southwestern portion of the Township. Moderate groundwater recharge/yield areas are primarily comprised of the Gettysburg Shale and Epler formations in the southeastern portion of the Township, with small intrusions of Gettysburg Limestone Conglomerate. Other moderate groundwater recharge/yield areas are delineated by the Zullinger formation in the central-western part of the Township and the Stonehenge formations in the northern part of the Township. Median sustained yields for these formations range from 50 to 85 gpm. Low groundwater recharge/yield areas are underlain by the Stoufferstown, Shadygrove, and Martinsburg Formations in the northern and central parts of the Township. There are also some intrusions of Diabase and Gettysburg Quartz Conglomerate formations in the most southern and southeastern portions of the Township that also have low recharge/yield. Reported median sustained yields for low recharge/yield areas vary from 6 to 26 gpm.

STEEP SLOPES

Slope is the amount of rise or fall for a given horizontal distance. It is a measure of the steepness of the land. The slope of land can influence the physical and economic feasibility of various land uses. For example, it is harder to build on a steep slope than on a gentle one, and it is harder to farm steep land than flat land. Steep slopes have a high potential for erosion and can present a number of constraints and challenges to the site development process. For planning purposes, areas with slopes of 15 percent or greater should require special site planning and slopes of 25% or greater should also be avoided when possible.

Limited steep slopes are found in the western part of the Township (Figure 3-2). Some areas with slopes from 15 to 25 percent are found at Chestnut Hill, southwest of South York Street and West Winding Hill Road, and in the southwest corner of the Township, primarily east of Route 15. A limited number of slopes 25 percent or greater are also found in these areas.

PRIME AGRICULTURAL SOILS

Prime agricultural soils are one of the Township's most valuable natural resources. Upper Allen Township has more than 300 acres of preserved farmland and nearly 1,000 acres enrolled in the Township's Agriculture Security Area (ASA) Program (see Figure 4-2). The identification of prime agricultural soils is important in maintaining or preserving land for future farming activity. Prime agricultural soils are those soil types designated by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as being best suited to producing food, feed,

forage, fiber, and oil-seed crops. Prime farmland produces the highest yields with minimal inputs of energy and economic resources, and farming it results in the least damage to the environment. It has the soil quality, growing season, and moisture supply needed to produce a sustained high yield of crops while using acceptable farming methods.

Soils types designed by the NRCS as prime farmland are listed in Table 3-1 and shown on Figure 3-2. Prime farmland soils are interspersed through the Township and make up about 2,875 acres of the unsewered area within the municipality. Most of the prime farmlands are located either northwest of Route 15 or in proximity to the railroad tracks.

Table 3-1

Prime Farmland Soils

Abbreviation	Unit	Slope
AtB	Athol gravelly loam	3 to 8 percent
BdB	Bedington shaly silt loam	3 to 8 percent
BoA	Birdsboro silt loam	0 to 5 percent
DuA	Duffield silt loam	0 to 3 percent
DuB	Duffield silt loam	3 to 8 percent
EdB	Edom silty clay loam	3 to 8 percent
HaA	Hagerstown silt loam	0 to 3 percent
HaB	Hagerstown silt loam	3 to 8 percent
HuA	Huntington silt loam	0 to 5 percent
Ls	Lindside silt loam	0 to 3 percent
Mf	Middlebury soils	0 to 3 percent
MnA	Monongahela silt loam	0 to 3 percent
MuB	Murrill channery loam	3 to 8 percent
NeB	Neshaminay grabelly silt loam	3 to 8 percent

WOODLANDS

Woodlands are tracts of land dominated by trees, including tree lines. Woodlands reduce stormwater runoff, prevent erosion, aid aquifer recharge areas, provide valuable wildlife habitat, absorb noise, reduce wind, reduce the effects of air pollution, and enhance the natural and scenic character of the Township. They are a valuable resource, which should be protected from indiscriminate cutting, particularly on steep slopes, on floodplains, and along streams, where they prevent erosion and serve as a natural buffer.

Because of extensive agriculture and development in the Township, woodlands throughout the Township are spotty. They are generally associated with some hilltops, slopes, intermittent and small streams, and reaches of the Yellow Breeches Creek. However, with the development of farmland, particularly with large lot development as in the southeastern portion of the Township, some areas are reverting back to woodland through natural succession.

NATURAL HABITAT

Natural habitats of threatened or endangered wildlife species are important natural resources that should be identified and protected. For the purposes of this plan, the Pennsylvania Natural Diversity Inventory (PNDI), managed by the Pennsylvania Department of Conservation and Natural Resources (DCNR), was consulted for information regarding the location of natural habitats of threatened or endangered species. No habitats of threatened and endangered species were identified in Upper Allen Township. However, PNDI identified one nature preserve—Trout Run Nature Preserve—which is owned and managed by the Appalachian Audubon Society (Figure 3-2).

Trout Run Nature Preserve is 21.4 acres of land along Stumpstown Road. The dominant features are the Trout Run Stream and its associated wetlands. The wetlands are classified as palustrine emergent wetlands and serve as important wildlife habitat. Significant wildlife usage includes reported use and 1988 confirmed nesting of sedge wren, a Pennsylvania threatened species, and use on migration by least bittern, also a Pennsylvania threatened species. The wetlands also serve as useful waterfowl and wader habitat. The Appalachian Audubon Society's goals for Trout Run Nature Preserve are to preserve the wetlands and water quality of Trout Run for the benefit of wildlife and the human community of which it is a part. Educational, recreational, and community relations goals are secondary to the extent that their impact on wildlife habitat is within acceptable limits (Diethorn, 1998).

SCENIC VIEWS

Scenic views are important to residents from the standpoint of maintaining property values and quality of life. There are a number of scenic views in the Township that help to make it a desirable community in which to live and work. Some of the key vistas are from the hills in the center of the Township toward the Blue Mountain to the north and the Yellow Breeches Creek and South Mountain to the south. Shepherdstown area also has some pretty vistas to the west, looking towards Monroe Township. Points along the Yellow Breeches Creek also provide scenic views, such as the area along McCormick Road and by Grantham and Messiah College. The remaining farmland and open space in the Township also provide views that are important to the semirural atmosphere in the Township; these are especially evident in the northwest and southeast sectors of the Township off of Williams Grove Road, East Winding Hill Road, and East Lisburn Road to name a few. Preservation of scenic views to the extent possible is key to maintaining the Township's character.

POLICY PLAN

- Maintain the floodplain overlay district, which includes areas subject to a 100-year flood as defined in the Federal Insurance Administration for Upper Allen Township. Regulate the district according to standards suggested by the Pennsylvania Department of Community and Economic Development (DCED), which conform to Pennsylvania Act 166 and the National Flood Insurance Program (NFIP). The following guidelines shall remain in place:

- ❖ Maintain floodplain regulations adopted as an overlay zone that corresponds to the 100-year floodplain, which then supersedes the underlying zoning district.

- ❖ Maintain a list of permitted, conditional use, and special exception uses.

- ❖ Maintain provisions that separate the floodplain into the flood fringe and floodway.

- ❖ Maintain a list of land use activities that are specifically prohibited within the floodplain. Examples include jails, hospitals, nursing homes, and mobile home parks.

- ❖ Regulations shall continue to include special exception provisions for permitting a reasonable use of the property in the floodplain. For example, the floodplain can be used for open-field farming and some forms of recreation (e.g., ballfields, fishing, hiking, nature study).

- ❖ Deduct floodplain areas from lot calculations.

- ➢ Enhance the floodplain portion of stream corridors or a buffer, if the floodplain is narrow or nonexistent, by allowing natural succession to occur. Cooperate with state and federal agencies, and nonprofit conservation organizations to preserve flood hazard areas and stream corridors.

- ➢ Continue to require wetland delineations and deduct wetland areas from lot calculations. Also require a wetland margin of 100 feet or to the limits of hydric soils, whichever is less. Count wetland margins toward lot calculations.

- ➢ Continue to require slope delineations 15 percent or greater. Deduct slope areas 15 percent or greater from lot calculations. Regulate slope areas by applying the following management standards:

  - ❖ Limit the number of lots, units or percentage of impervious surface such that useable lots and buildings can be created with minimum necessary disturbance of slopes.

  - ❖ Regulate disturbance and vegetation removal to minimize erosion; include both ultimate limits and construction management (erosion and sedimentation control).

  - ❖ Regulate setbacks of structures from the top of slopes to prevent undermining of structural stability of the slope and to provide an adequate buffer for the structure if the top of the slope fails.

- ➢ Require minimal disturbance to existing vegetation and reasonable efforts to harmonize development plans with the preservation of existing vegetation.

  - ❖ In subdivisions or land developments, preserve trees, tree clusters, and their associated vegetation layers to the maximum extent possible.

- ❖ Preserve woodlands, which interconnect with existing wooded areas to maintain continuous woodland corridors and allow for the natural movement and migration of wildlife.

- Require compliance with watershed stormwater management plans and use of best management practices (BMPs) for subdivisions, land developments, and roads.

- Support Township Historical Architectural Review Board (HARB) in the preparation of a Historic Preservation Plan, which would serve to identify policies and develop procedures necessary to achieve historic preservation goals.

- Reevaluate and redefine Municipal Historic Districts in accordance with the Pennsylvania Historic District Act.

- Develop design guidelines for the historic districts to encourage preservation of the existing architectural character.

- Incorporate review criteria into a historic preservation ordinance, which provide guidance for alterations to existing structures and for new construction. Use the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings as a general guide.

- Incorporate the Historic Preservation Ordinance into the Township Zoning Ordinance and identify the historic district boundaries as an overlay on the Official Map.

- Promote the preservation of remaining agricultural areas within the Township through conservation zoning and development techniques, and effective agricultural zoning.

- Encourage participation in programs such as: Agricultural Security Areas (ASA), Agricultural Conservation Easement programs (ACE), and Clean and Green (tax reduction) programs.

IMPLEMENTATION STRATEGY

- Update the Township Zoning Ordinance and Official Map, if appropriate, to: Zoning Map as necessary.

  - ❖ Maintain the 100-year floodplain overlay district that supersedes the underlying zoning district in accordance with suggested DCED standards, Act 166, and NFIP.

  - ❖ Maintain wetland area deductions from lot calculations, and wetland disturbance provisions.

  - ❖ Maintain steep slope provisions for sloped areas of 15% or greater.

  - ❖ Continue to identify and preserve the most viable agricultural lands.

- Update the Township Subdivision and Land Development Ordinance, if appropriate, to:

  - Require a vegetation inventory in the preliminary plan requirements that establishes where vegetation removal is necessary (i.e., road surface) and more importantly where it is not necessary (i.e., buffers, screens, corridors); and require a review of the inventory by a qualified professional to establish what specimen trees, native vegetation, and/or woodlands should be preserved and what vegetation could be or should be removed. Also, establish and incorporate tree protection zone standards.

  - With respect to watershed stormwater management,

    - Require compliance with Pennsylvania Act 167 Watershed Stormwater Management Plans for watersheds in the Township.

    - Include the most current BMP specifications.

    - Establish a hierarchy of stormwater management practices that promote groundwater recharge, protect water quality, and enhance flood control.

    - Establish a monitoring program to ensure proper installation, maintenance, and operation of stormwater management systems so they function to meet their design objectives. (H/2013-2014/T)[6]

[6] Priority: (H)-High; (M)-Medium; (L)-Low/Implementation Year(s)/Responsible Party(ies): (T)-Township; (C)-County; (S)-State; (P)-Private; (M)-Mechanicsburg Area School District; (NA)-Not Applicable. (See Chapter 9 for corresponding 12-Year Improvement Program.)

Figure 3-1

Upper Allen Township Historic Districts Map

MECHANICSBURG BOROUGH

MONROE TOWNSHIP

LOWER ALLEN TOWNSHIP

CARROLL TOWNSHIP

MONAGHAN TOWNSHIP

YORK COUNTY

PENNSYLVANIA TURNPIKE I-76

WILLIAMS GROVE RD

S YORK ST

RT 114

W WINDING HILL RD

ROUTE 15

E WINDING HILL RD

S MARKET ST

E LISBURN RD

ARCONA RD

W LISBURN RD

GRANTHAM RD

Union Hotel

Sheridan Row Historic District

Scott Farm Historic District

Rosegarden Mill Historic District

Yellow Breeches Historic District

Gilbert Bridge
Replaced circa. 2007

LEGEND

- Historic Districts
- Gilbert Bridge
- Union Hotel

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 3-1 HistoricDistricts.pdf

Areas
Quadrant: A, B, C, D

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mcw - January 2, 2014

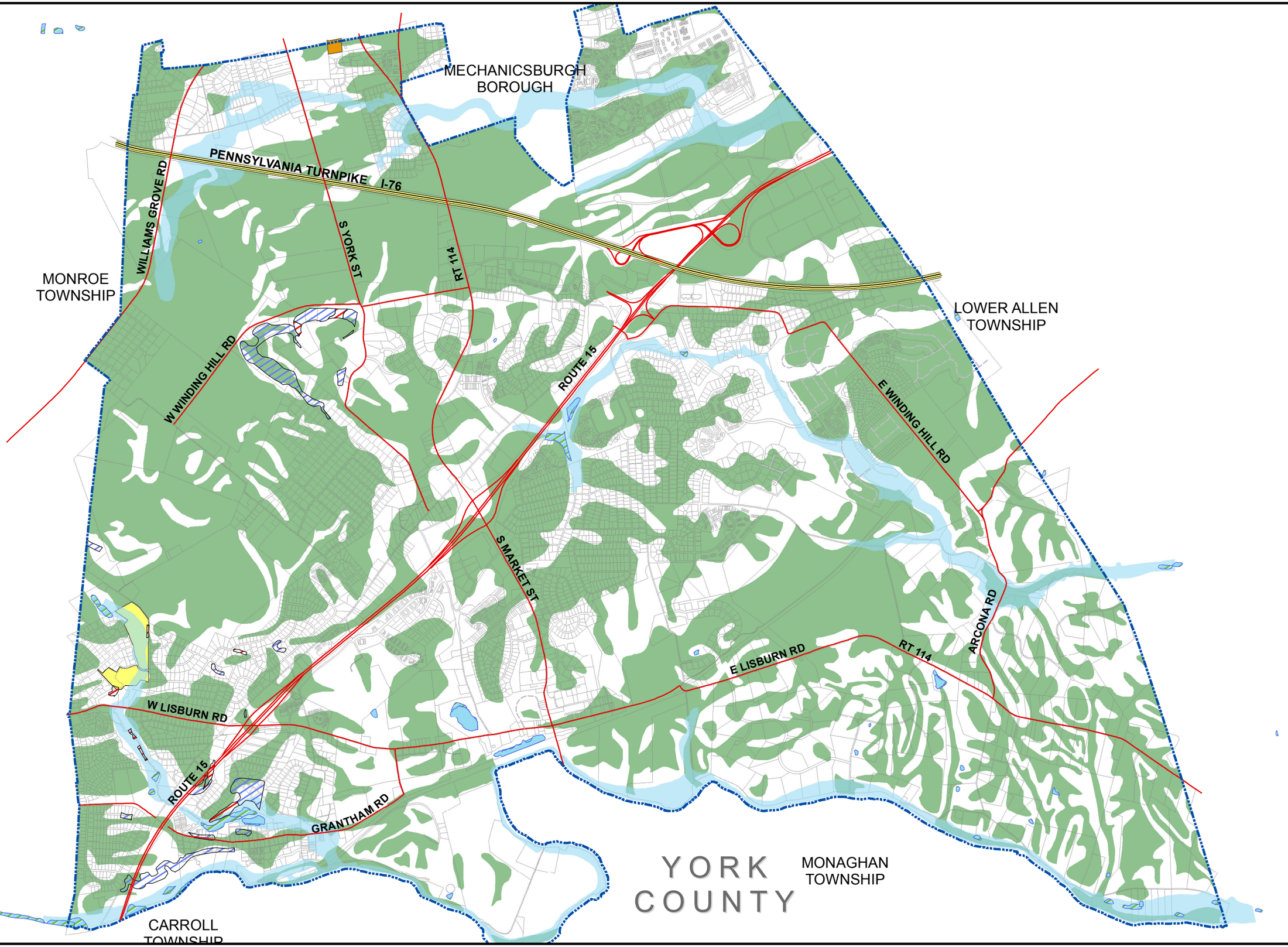

Figure 3-2

Upper Allen Township Environmental Features Map

LEGEND

- 100-Year Floodplain
- Wetlands
- Prime Ag Soils
- Trout Run Preserve
- Conservancy
- Water bodies

Slope

- 15%-24%
- 25% or Greater

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 3-2 EnviroFeatures.pdf

Areas
Quadrant: A, B, C, D

www.upperallentwp.org

jmb- January 2, 2014

CHAPTER 4. LAND USE

GOAL

To maintain the excellent quality of life in Upper Allen Township while accommodating additional development that will harmonize and enhance the existing community.

OBJECTIVES

- To preserve existing agricultural, single-family detached residential and recreational land uses.

- To establish low and moderate growth land uses with cluster development to preserve open space, promote sustainable agriculture, and protect natural resources.

- To encourage development of commercial centers and locate such development where infrastructure (water and sewer) is available, vehicular access is adequate and, if possible, pedestrian/bicycle trails can be integrated into the design. Commercial development should be located in areas where there will be minimal traffic, noise, and visual impacts on residential areas.

- Encourage mixed-use development in selected locations along major transportation corridors, including Route 114 and Gettysburg Pike.

- To limit new industrial development, but permit expansion of existing industries consistent with the character of the surrounding area.

- To encourage residential and commercial designs and apply development criteria, which preserve as much of the original land form, tree cover and natural resources as possible and enhance the quality and character of the development.

- To promote the reuse of existing vacant structures, especially commercial/business/industrial buildings.

- To provide for an effective transition between residential land uses and adjoining nonresidential land uses through creative subdivision design and buffering techniques and standards.

- To encourage commercial development to serve the daily needs of the residents.

- To allow limited mixed land uses, grant setback allowances, and establish performance standards in Bowmansdale, Grantham, and Shepherdstown.

- To maintain or enhance the character of existing residential neighborhoods.

- To promote a greenways system along stream corridors to enhance flood control and water quality that would interconnect with a County greenway system, if developed, and adjoining municipality parks to the extent possible.

- To promote continuation of agricultural activities on prime farmland soils by permitting a wide variety of farm-related land uses, supplemental farm businesses, and other compatible activities, and significantly curtailing non-farm activities.

- To control development of intensive agricultural operations, such as concentrated animal feeding operations (CAFOs).

BACKGROUND

EXISTING LAND USE

Important components of any comprehensive plan are the study and mapping of existing land use. This analysis takes a look at land use within the Township at a static point in time, allowing for the examination of past and present development trends which have shaped the Township into its present form. The study and mapping of existing land use provides a picture of land use patterns and, together with other factors, outlines restrictions and opportunities for future land use planning. Information on existing land uses was collected in April of 2011.

Existing land uses are depicted on Figure 4-1, Existing Land Use Map. Table 4-1 shows the number of acres devoted to the various land use categories.

Table 4-1

Existing Land Use – 2011
Upper Allen Township

Land Use	Acres	%
Single-Family Residential	3,135	35.51%
Multi-Family Residential	924	10.47%
Commercial	444	5.03%
Industrial	330	3.74%
Recreation	223	2.53%
Public/Semi-Public	773	8.76%
Transportation	755	8.55%
Agricultural	1,709	19.36%
Subtotal Developed	8,293	93.94%
Vacant	535	6.06%
Total	8,828	100.00%

The majority of the Township has been developed (93.94 percent), which includes land used for agricultural purposes (19.36 percent). The remainder of the Township is considered

undeveloped or vacant land (6.06 percent). The following paragraphs briefly describe the individual land use types.

RESIDENTIAL

Residential land uses account for nearly one-half (45.98 percent) of the total land area in the Township. For purposes of this study, residential areas have been further identified as being either single-family or multi-family residential development.

- Single-family residential development, as identified for this study, consists of single family detached units and mobile homes. Single-family residential development is present throughout much of the Township and is by far the most dominant developed land use type, comprising of more than one-third (35.51 percent) of the Township's land. Much of this single-family residential development has occurred within moderate to large sized subdivisions. Concentrations of single-family residential land uses with smaller lot sizes are situated in close proximity to the Route 15 corridor and in the northwestern portion of the Township, along the border with Mechanicsburg Borough. Single-family residences with larger lot sizes are typically concentrated in the southeastern portion of the Township.

- Multi-family residential development, as identified for this study, consists of apartment, townhouse, and condominium developments. The percentage of multi-family residential development has increased from 1.9 percent to 10.47 percent since 1998. Multi-family residential developments are scattered throughout the Township with the largest concentration of multi-family residences in the northeastern corner of the Township.

COMMERCIAL

Commercial land uses generally include those establishments engaged in retail trade or services. This category generally includes restaurants, shopping centers, convenience stores, banks, motels/hotels, lawn and garden centers, and professional and medical offices. Commercial land uses occupy a small portion (5.03 percent) of the Township's overall land area. Concentrations of commercial land uses are found along Route 15, Route 114 and Cumberland Parkway, and within the Rossmoyne Business Center.

INDUSTRIAL

This land use category generally includes (1) establishments engaged in transforming raw materials into new products, usually for distribution to other regions and not on sale on-site; and, (2) establishments engaged in wholesale trade, storage or distribution with little or no retail trade or service. Industrial uses currently occupy 3.74 percent of the Township's land area. These uses are concentrated in various buildings adjacent to the Pennsylvania Turnpike between South Market Street and Cumberland Parkway, and within the Rossmoyne Business Center and the Upper Allen Business Park.

RECREATION

This land use category includes public and private parks and recreation areas. This category does not include recreation and open space areas found with public and private schools or other similar institutional uses (see public/semi-public lands). Recreation areas are scattered throughout the Township, with a somewhat larger concentration of such lands along Fisher Road and East Winding Hill Road (see Figure 4-2). The Township's percentage of land area dedicated for recreational uses has increased from 1.6 percent to 2.53 percent since 1999.

PUBLIC/SEMI-PUBLIC

Land uses within this category typically involve establishments or properties that provide educational, cultural, or social services for the community. This category includes uses such as public and private schools, municipal offices and grounds, churches, and cemeteries. These are scattered throughout the Township with some concentration of institutional uses in the central and eastern portions of the Township. Messiah Village and Messiah College are both large institutional uses within Upper Allen Township. Public/–semi-public uses occupy about 8.76 percent of the Township's land area.

TRANSPORTATION

This category includes land in transportation use, such as highway and railroad right-of-ways. In addition to the many miles of local roads found within the Township, several transportation corridors bisect the Township, including the Pennsylvania Turnpike, Route 15, and Conrail railroad right-of-ways. Transportation uses occupy about 8.55 percent of the Township's land area.

AGRICULTURAL

This category includes all land areas that are currently being used for agricultural purposes. Although agricultural lands can be found throughout the Township, most are concentrated in the western and eastern portions of the Township. Less than one quarter (19.36 percent) of the Township's land area is in agricultural use.

Some farms or farmed parcels are surrounded by development. These farms provide a pastoral backdrop to many of the Township's residential developments. As evidenced through the Township's extensive architectural survey, many of the farms contain 19th Century structures, which have varying degrees of historical architectural significance.

VACANT

Lands that are presently not in use have been classified as vacant. These lands may include wooded areas, unimproved areas not used for agriculture or recreation, or improved areas or buildings that are not occupied. Only 6.06 percent of the Township's land area is presently vacant. Vacant lands are scattered throughout the Township.

EXISTING LAND USE TRENDS

Table 4-2 presents a comparison of existing land use (in acreage) with previous land use studies performed within the Township. Please note that the results from the various land use studies vary due to a variety of factors such as differences in land use classifications, available base mapping, quantification techniques, and levels of detail.

Table 4-2

Trends in Land Use: 1964-1971-1985-1998 - 2011
Upper Allen Township

Land Use	1964	1971	% Change from 1964-1971	1985	% Change from 1971-1985	1998	% Change from 1985-1998	2011	% Change from 1998-2011
Residential	389	698	79.43%	1,596	230.85%	2,174	36.22%	4,059	86.71%
Commercial	56	56	0.00%	120	114.29%	305	154.17%	444	45.57%
Industrial	28	134	378.57%	66	-242.86%	189	186.36%	330	74.60%
Public/Semi-public	111	191	72.07%	450	233.33%	542	20.44%	773	42.62%
Transportation	475	520	9.47%	750	48.42%	805	7.33%	755	-6.21%
Agriculture				4,461		2,070	-53.60%	1,709	-17.44%
Recreation								223	
Subtotal Developed	**1,059**	**1,599**	**50.99%**	**7,443**	**551.84%**	**6,085**	**-18.25%**	**8,293**	**36.29%**
Vacant				945		2,378	151.64%	535	-77.50%
Total	**8,489**	**8,389**	**-1.18%**	**8,388**	**-0.01%**	**8,463**	**0.89%**	**8,828**	**4.31%**

Sources: 1964 Rodgers and Associates Field Survey
1971 and 1985 Buchart-Horn, Inc. Field Surveys
1998 Gannett Fleming, Inc.
2011 Cumberland County GIS

As presented in Table 4-2, the amount of developed land continues to increase, while undeveloped lands within the Township have decreased in the area. All of the developed land use types experienced growth from 1998 to 2011, except for agriculture and transportation. Residential land uses experienced the largest increase in acreage (86.71%).

FUTURE LAND USE/GROWTH MANAGEMENT PLAN

The Future Land Use Plan establishes desired land uses and general development designs for Upper Allen Township. The Future Land Use Map (Figure 4-4) defines land areas best suited for new growth, redevelopment, or infill development. The Township has identified areas where

limited commercial and mixed-use activities should occur, while still preserving residential, agricultural, and open space land uses.

AGRICULTURAL

Agricultural areas account for 19% of the Township's land area and has been steadily declining since the 1980's, mostly for the development of residential homes. As the Township continues construction of public sewer lines throughout the western part of the Township, an interest may arise to redevelop existing agricultural land that is not part of the ASA program. Agricultural uses should be recognized as the primary use in these areas. Residential and other uses should be considered secondary and identified as compatible with agricultural operations. The Township should establish stronger policies and zoning regulations to preserve its existing agricultural land, limit development, and encourage sustainable agricultural uses. Locate this use according to the Future Land Use Map (Figure 4-4).

- Establish **agricultural land uses**. If a tract is less than 20 acres, permit a maximum 5 acres per dwelling unit overall density. If a tract is between 20 acres and 40 acres, permit a maximum of 8 acres per dwelling unit. For tracts over 40 acres, permit a maximum of 10 acres per dwelling unit.

- Consider allowing an accessory dwelling on a farm, to be occupied by a family member, farm hand, or rented for additional income.

- Promote the preservation of remaining agricultural areas within the Township through conservation zoning and development techniques, and effective agricultural zoning.

- Encourage the compatibility of agricultural and rural uses by recognizing the conflicts that may exist between the developments, and recommend potential new residents to be aware of the impacts of living in an agricultural area.

- Encourage participation in programs such as: Agricultural Security Areas (ASA), Agricultural Conservation Easement programs (ACE), and Clean and Green (tax reduction) programs. In Cumberland County, PA there are approximately 74,000 acres of land enrolled in the Agricultural Security Area (ASA) program. The Township currently has approximately 20 properties (nearly 1,000 acres total) identified in the ASA program, and four properties totaling more than 300 acres of preserved farmland (see Figure 4-3).

- Identify and preserve viable agricultural lands. The following should receive priority:
    - Land that is protected by existing restrictions and/or easements against development or that is adjacent to such land.
    - Land currently in agricultural use.
    - Land with Class I, II, or III soils.
    - Land designated for protection by the Cumberland County Comprehensive Plan.

Regulations for intensive agricultural operations should be upheld for on-lot coverage, setback requirements, animal housing, expansion of operation, access/traffic, water supply, runoff,

removal of dead animals, manure storage, odor, and other factors that could impact the health, safety, and welfare of Township residents.

- Agricultural areas should provide for agricultural enterprises, with the following stipulations:

  - **Allowed enterprises and activities:**

    - Direct sale to the public of agricultural products principally on the farm. Farmers markets or roadside stands may be permitted.

    - Any and all structures contributing to the production, primary processing, direct marketing, and storage of agricultural products produced principally on the farm.

    - Structures and facilities associated with irrigation, farm pond impoundment, and soil and water conservation.

    - Structures associated with the production of energy for use principally on the farm and structures and facilities for the storage and treatment of animal waste.

    - The provision of services or production and sale, by persons in residence, of incidental agricultural goods, services, supplies and repairs, as long as these uses remain incidental to the agricultural and/or principally agricultural structures of the property. (Maximum area should be specified.)

    - The conduct of traditional trades, and the production and sale of home occupation goods, arts and crafts, as long as these uses remain incidental to the agricultural and/or principally agricultural structures of the property. (Maximum area should be specified.)

    - The accommodation of tourists and visitors within principally family residential and/or agricultural structures otherwise permitted under the law. Accommodation of tourists and visitors must be a part-time or off-season minor enterprise and incidental to the agricultural and open space character of the property.

  - **Setbacks from incompatible activities.** The business should be separated from adjacent residential districts, manure storage, and other potentially conflicting uses.

  - **Limitations of future expansions.** Successful businesses naturally tend to grow, but expansions should be limited to prevent the business from overwhelming the farm or the farming community that it is intended to preserve.

  - **Traffic and congestion.** Applicants for farm businesses should demonstrate that they can safely control parking and traffic.

  - **Future use of the tract.** In the event that the business is terminated or abandoned, there should be a contingency plan in place for converting the business's buildings and other

facilities to another permitted use. The township could require the applicant to permit a periodic inspection of the premises to ensure compliance with the regulations.

RESIDENTIAL

Residential land uses account for nearly one-half of the Township's land area. It is important to not only preserve existing residential neighborhoods, but to also identify successful key features of these neighborhoods and incorporate them into new development. All residential areas should be protected from adjacent land uses that may alter the character of the neighborhood.

Conversion of existing single-family homes into additional numbers of housing units should be prohibited in order to not only control density, but to also promote home ownership, neighborhood stability, and to avoid parking problems. Sidewalks and pedestrian trails should be required in all new developments to ensure pedestrian safety and access to adjoining neighborhoods and nearby parks. New development should incorporate connectivity to existing roadways to control traffic flow and allow for alternative routes during emergencies.

The Township should distinguish between low density, medium density, and high density residential land uses. These uses should be located according to the Future Land Use Map (Figure 4-4).

- **Low Density Residential:** Low density residential areas should be primarily intended to provide for single-family detached development. If a tract of land is less than 10 acres, a minimum lot size of 40,000-square-feet should be permitted, assuming water and sewer are available. If a tract is 10 or more acres, a minimum lot size of 80,000-square-feet should be permitted. Preservation/dedication of open space through conservation design should be encouraged through additional incentives offered to all low-density residential areas.

- **Medium Density Residential:** Medium density residential areas should provide for development that has an average of 3-5 homes per acre, although larger lots may exist. A mix of housing types is appropriate, but emphasis should be placed on single-family detached dwellings, duplexes, and townhouses that are most likely to involve owner-occupancy. Specialized residential uses such as life-care facilities should also be permitted. If a tract is less than 10 acres, a minimum lot size of 15,000-square-feet should be permitted, assuming water and sewer are available. If a tract is 10 or more acres, a minimum lot size of 17,000-square-feet should be permitted, if sewer and water are available. Preservation/dedication of open space through conservation design should be encouraged through additional incentives offered to all medium-density residential areas.

- **High Density Residential:** High density residential areas should be located within close proximity to major roadways, including the Route 15 corridor. A mix of housing types should be permitted, with a maximum gross density of ten (10) dwelling units per acre.

MIXED-USE

The Township should encourage mixed use areas to provide for a variety of housing needs and activity needs for residents. Commercial activity should meet the daily needs of the neighborhood and should be limited to uses which do not generate large volumes of traffic or have extended hours of operation. Additional nonresidential uses such as schools, parks, places of worship, and libraries should also be encouraged. This district can also serve as a transitional area between more intensive and less intensive uses.

The Township should distinguish between village areas and neighborhood commercial centers. These districts should be appropriately located within the mixed-use areas depicted on the Future Land Use Map (Figure 4-4).

- **Village -** Village areas should be densely developed centers that encourage a mix of residential and commercial uses. Development should complement, rather than distract from the existing character of the area. A variety of residential uses should be encouraged, including apartments located above lower level businesses. Limited commercial uses should be encouraged, such as retail stores, offices, personal services, home occupations, and other similar uses. More intense commercial businesses such as drive-thru facilities, 24-hour convenience stores, gas stations, and vehicle repair shops should be prohibited so they do not create nuisances for neighbors.

  Village areas should encourage reuse/redevelopment of existing buildings, rather than demolition. Compact development, non-internally lit signs, and parking to the rear or the side of buildings should also be encouraged. The integration of sidewalks and pedestrian/bicycle paths should be required, where appropriate, to limit the amount of vehicular traffic in the area. Connection to existing developments, trails and greenway networks should also be encouraged, where appropriate.

  Architectural design, whether for new construction or an addition to an existing building, is an important consideration of village protection. Several of the design elements that are important to the preservation of village character include proportion and scale, massing of buildings, directional expression, sense of entry, materials, and landscaping. This list is not all inclusive; for additional information, design standards cited under the Environmental and Cultural Resources Policy Plan should be consulted.

    - **Zoning and Subdivision and Land Development Ordinance Considerations.** The Township currently has two identified village areas along Grantham Road and East Lisburn Road, known as Bowmansdale and Grantham. The Zoning Ordinance identifies them as two separate zoning districts. Revisions should be made to the Zoning Ordinance, as necessary, to consolidate the two zoning districts into one district and to allow for a mix of residential and limited commercial uses.

- **Neighborhood Commercial Center -** Neighborhood Commercial Centers should be located in areas of the Township where there is access to a major roadway and on land adjacent to

existing commercial uses. Uses permitted within these areas should serve a population of approximately 4,000 to 10,000 people, and have an estimated service area of one-half mile to three-quarter mile in radius. Typical uses found within this area may include small-scale, neighborhood oriented services such as a grocery/convenience stores, bakeries, daycares, restaurants, offices, personal services, home occupations, or other similar uses. A mix of residential uses should also be permitted.

Development approval should include design requirements that define and show the integration of sidewalks, pedestrian/bicycle trails and greenway network, if possible, and the relationship of the proposal to nearby residential development, pedestrian/bicycle trails, and the greenway network. Off-street parking facilities should be limited or placed in the rear of the lots. Loading/unloading facilities should also be placed in the rear of the lot. Sidewalks should be part of the design to provide safe pedestrian access.

Commercial uses adjacent to residential uses or residential districts should include buffers to mitigate noise, glare, and other nuisances to surrounding residential development.

- **Zoning and Subdivision and Land Development Ordinance Considerations.** Several properties along Route 114, Gettysburg Pike, and Williams Grove Road have been identified as areas where light commercial/mixed-uses could flourish. The Zoning Ordinance and the Subdivision and Land Development Ordinances should be updated, as necessary, to accommodate a mix of residential and commercial uses.

COMMERCIAL

Commercial land uses have increased over the past ten years, even though the amount of commercial land accounts for only 5 percent of the total acreage within the Township. As residential growth continues, the Township should include opportunities for services that meet the needs of those who live and work in the vicinity.

Commercial areas allow for a broader range of commercial, office, and other business uses that service a regional population, with access by a collector or arterial highway. Typical uses within this category include commercial services, retail services, business/office parks, light manufacturing, auto service/sales, communication facility (publicly regulated), and other similar uses. Residential uses should not be permitted in commercial areas.

Commercial areas should benefit from access afforded by major roadways without impairing the efficiency and operation of these streets. As commercial areas are developed, renewed, and/or expanded, plans should introduce a cohesive design and include multiple-uses in lieu of development as single-function shopping centers. Commercial areas should be subject to high standards of site design, and should be of similar architectural design, building material, texture, and design to other buildings in the area. The design of commercial areas as they are developed, renewed and/or expanded should be subject to aesthetic, as well as functional design review criteria and, where possible, should include open space such as parks, plazas, or similar areas.

Innovative site design and/or ample landscaping should be used within and around new, renewed and/or expanding commercial areas, to minimize surface water runoff, reduce paved areas, to enhance the aesthetic qualities of the areas and to break up otherwise monotonous parking areas.

Off-street parking facilities should be designed to allow on-site vehicular circulation, in order to eliminate the need to back onto highways and to prevent the blocking of public rights-of-way. Adequate off-street loading and unloading space should be provided and located where public access ways will not be blocked.

Commercial uses adjacent to residential uses or residential districts should include buffers to mitigate noise, glare, and other nuisances to surrounding residential development.

Natural amenities should be preserved and incorporated into the design of commercial facilities, where feasible. No departures from design standards should be granted, that conflict with this guidance.

The Township has identified key areas along Cumberland Parkway, Gettysburg Pike, and Route 114 that have potential for future commercial growth (Figure 4-4). All proposals for development, renewal and/or expansion of commercial uses should include analyses of the potential impacts on the local transportation system.

INDUSTRIAL

The Township should limit growth of industrial land uses, particularly in areas adjacent to residential land uses. Industrial areas should remain consistent with the character of the surrounding areas to produce minimal impacts to adjacent land uses. Only non-nuisance industrial uses such as warehouses, trucking terminals, offices, storage facilities, mills, convenience stores, restaurants, and other similar type uses should be encouraged to ensure that new industries do not constitute hazards or nuisances. Heavy industrial uses should require additional review and granting of a special permit. Heavy buffering along adjacent residential uses should be encouraged to further minimize impacts. Infill development and reuse of existing buildings should also be encouraged, particularly during the subdivision review process, where applicable. The Future Land Use Map (Figure 4-4) identifies Industrial areas.

PUBLIC/SEMI-PUBLIC

Public/semi-public land areas account for nearly 1,000 acres of land within the Township. Public/semi-public land areas identified on the Future Land Use Map (Figure 4-4) includes such uses as public and private schools, municipal offices and grounds, and public and private parks. Other public/semi-public land areas such as churches and cemeteries are identified within other land uses.

Recreation and open space areas should be preserved and encouraged in new developments, when appropriate. Subdivision incentives should be given for the preservation/dedication of open space.

During the development process, consideration should be given to the interconnectivity with new and existing recreation/open space areas, through the use of greenways and trails, within the Township and neighboring municipalities. Development of future open space and trail systems in the Township should connect with County systems and adjoining municipal parks to the extent possible.

Planning for recreation and open space should be consistent with the Township's Comprehensive Recreation and Open Space Plan. A Parks, Greenways, and Trails Map is included in this Comprehensive Plan as a practical basis for development of this system (Figure 4-2).

New development should determine adjusted tract acreage that deducts environmental features, which can be linked to the community's health, safety, and welfare, from development density calculations. At a minimum, these features should include steep slopes (due to possible threat of structural stability and erosion), watercourses and floodplains (for their water quality and quantity and flood control functions), and wetlands (for their equally important water quality and flood control functions, as well as their wildlife habitat and risk of potential damage to structures). Environmentally sensitive features should not be included as part of the recreation/open space land contribution requirements.

CONSERVATION

Conservation areas, as identified in Figure 3-2 and Figure 4-4 depict flood-prone land along creeks, watershed areas, wetlands, and steep slopes. Regulations preserving or limiting development in these areas should be updated, as necessary.

IMPLEMENTATION STRATEGY

- Encourage reuse of existing vacant structures in industrial, commercial, and mixed use areas.
- Update the Township Zoning Ordinance and Official Map, if appropriate, to:
  - Consolidate zoning districts
  - Designate and define zoning districts for agricultural land use, low density residential land use, medium density residential land use, high density residential land use, village centers, neighborhood commercial centers, commercial centers, industrial land use, and public/semi-public land use.
  - Provide for and regulate agricultural enterprises in agricultural land use areas.
  - Preserve existing agriculture land by encouraging sustainable agricultural uses and limit development.
  - Regulate subdivisions to encourage conservation designs to preserve open space.

- ❖ Encourage infill development on vacant lands that is consistent with surrounding land uses.

- Update the Subdivision and Land Development Ordinance, if appropriate, to:

  - ❖ Require that all subdivision and land development applications identify and calculate the areas of environmental features, which affect adjusted tract acreage.

  - ❖ Continue participation in the regional trail study and consider adopting and implementing provisions in the Greenways and Trails Plan.

- Update the Greenways and Trails Plan, as necessary, as an outgrowth of the Comprehensive Plan that identifies the natural features and recreational needs of the Township and indicates the general path of proposed greenways, and their type and uses. Include an acquisition strategy that addresses determination of ownership, funding sources, type of access permitted, and methods to realize the greenways and trails network. (M/2014-2016T)[7]

- Review greenways and trails acquisition/development activities, consistently over time. (M/2014-2022+/T,S,P,M)[7]

COMMUNITY AUDIT

The community audit portion of the background studies examines the existing framework for development and estimates a future buildout condition based on current trends and the regulatory framework for development. The buildout condition assumes that development will continue based on density standards allowed under current zoning. The process for determining the ultimate buildout for Upper Allen Township is outlined in the following paragraphs.

Step 1 – Identify Developed Land. Using the existing land use map, block out existing developed areas, assuming that these areas will not be redeveloped to a more intense use.

Step 2 – Sensitive Features Overlay. Block out environmentally and culturally sensitive lands by overlaying critical feature maps on top of developed areas map.

Step 3 – Establish Areas Available for Future Development. Those areas not already developed or not occupied by sensitive features will be designated as potential future development areas.

Step 4 – Overlay Zoning Map. Determine zoning designations for potential future development areas.

[7] Priority: (H)-High; (M)-Medium; (L)-Low/Implementation Year(s)/Responsible Party(ies): (T)-Township; (C)-County; (S)-State; (P)-Private; (M)-Mechanicsburg Area School District; (NA)-Not Applicable. (See Chapter 9 for corresponding 12-Year Improvement Program.)

Step 5 – Apply Adjustment Factors. Apply adjustment factors to account for land needed for roads and other infrastructure and unmapped sensitive environmental features. For residential potential future development areas, apply a factor of 0.75 (25 percent reduction), except urban residential zones; for these areas apply a factor of 0.70 (30 percent reduction). For nonresidential potential future development areas apply a factor of 0.9 (10 percent reduction).

Step 6 – Determine Buildout. Apply zoning and subdivision regulations to the adjusted potential future development areas using the maximum densities allowed per zoning district. Residential development is quantified in terms of additional housing units. Nonresidential land is quantified in terms of gross square feet of development.

Based on the criteria above, the estimated buildout of the Township is presented in Table 4-3.

Table 4-3

Build Out Projections 2012*

Zoning	Total Acres	Adjusted Acres	Units/Acre	Total Units
Low Density Residential	874	655	2.00	1,317
Medium Density Residential	112	84	2.90	243
High Density Residential	0	0	10.00	0
Village	0	0	17.42	0
Planned Residential Development**				916
Residential units approved but not constructed***				332
Total Units				**2,808**
Neighborhood Commercial	7	6	0.5	130,680
Commercial Center	43	39	0.25	424,710
Industrial	175	157	0.5	3,419,460
Institutional	0	0	0.5	0
Business Professional Office****	48	43	0.30	1,123,848
Total Gross Building Area (sq. ft.)				**5,098,698**

* Assumes agricultural land areas will not be developed.
** Assumes PRD units that have been approved, but not yet constructed.
*** Assumes the unit had not been issued a building permit as of September 2012.
**** Assumes two stories.

The total number of new housing units that could be built based on current development conditions is estimated to be 2,808 units. This total number of units includes the 1,248 housing units that have been approved for development. This would increase the amount of existing households (7,007) within the Township, resulting in a grand total of 9,815 housing units. Based on the current housing construction patterns within the Township, averaging almost 150 new

units per year (from 2000 to 2010), it would take nearly 19 years to achieve the residential buildout projections of 2,808 new units. Based on current zoning regulations, homes would typically be single-family detached dwellings, duplexes, or townhomes and would be located in the low and medium density residential areas.

With regard to population, based on the current Township household size of about 2.33 persons per household, the additional 2,808 housing units would generate approximately 6,542 more persons. When added to the estimated existing population of 18,059, the Township's population would total over 24,601 persons at buildout.

Based on current development conditions, over 5 million square feet of new nonresidential development could take place. The majority of the potential nonresidential development is expected to be either industrial or business professional office land uses.

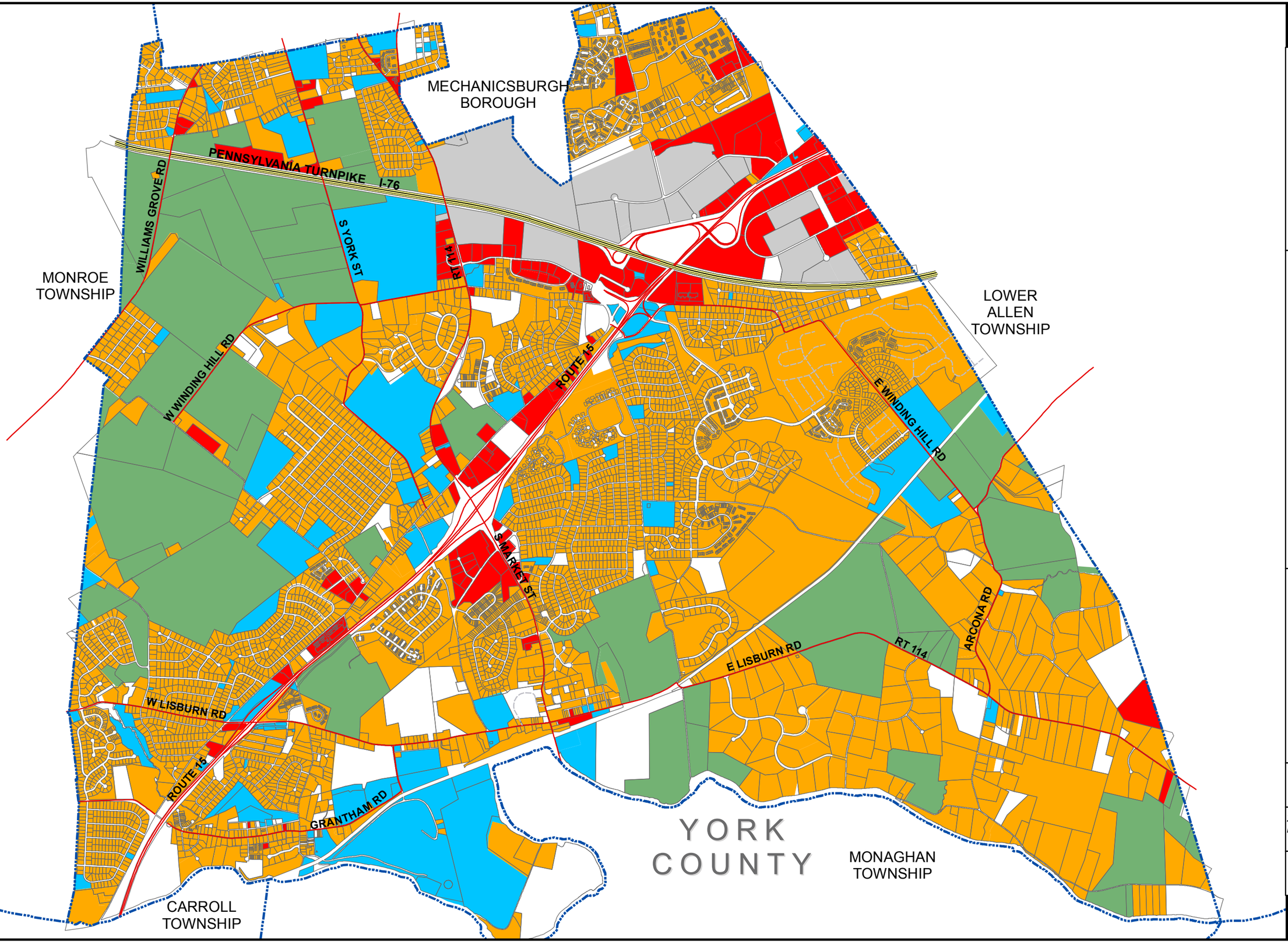

Figure 4-1

Upper Allen Township Existing Land Use Map

LEGEND

Existing Land Use

- (R) Residential
- (C) Commercial
- (I) Industrial
- (P) Public, Semi-Public, Rec
- (A) Agriculture
- (V) Vacant

ref. Cumberland County Existing Land Use Data

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 4-1 ExistingLandUse.pdf

Areas
Quadrant: A, B, C, D

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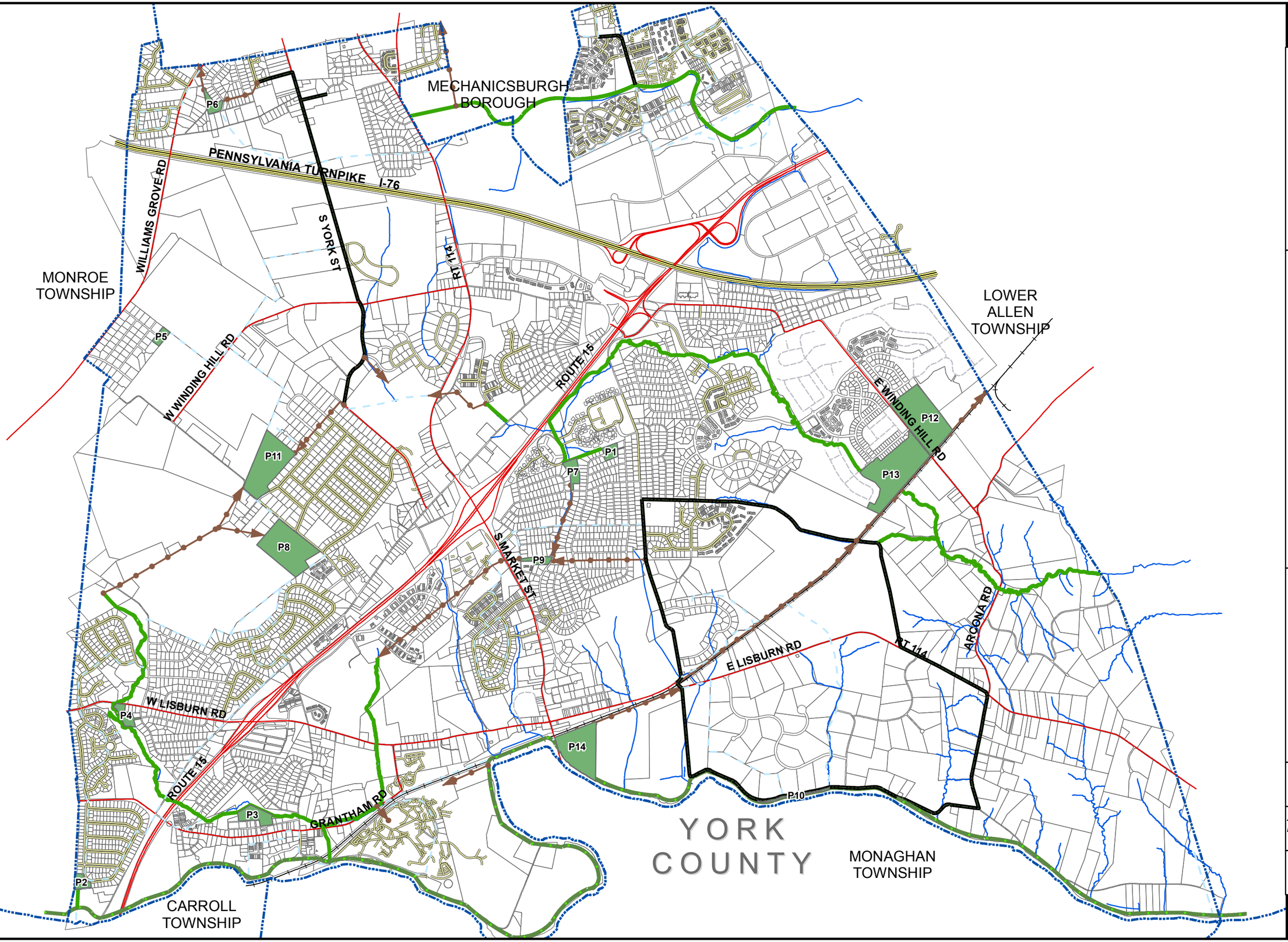
Figure 4-2

Upper Allen Township Parks, Greenways, and Trails Map



LEGEND

Parks
- (P1) Mt. Allen Park
- (P2) Rosegarden Park
- (P3) Grantham Park
- (P4) Center Square Park
- (P5) Country Estates Park
- (P6) Millers Crest Park
- (P7) Spring Run Acres Park
- (P8) Community Park
- (P9) Aspen Park
- (P10) McCormick Park
- (P11) Friendship Park
- (P12) Winding Hill Park East
- (P13) Winding Hill Park West
- (P14) Simpson Park

Greenway

Trail Type
- Regional Greenway Corridor
- Municipal Greenway/Trail
- On-road Trail
- Greenway/Trail Links
- Other Trails
- Railroad
- Sidewalks

1 inch = 2,000 feet

0 1,000 2,000 "

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A B C D

Areas
Quadrant: A, B, C, D

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Figure 4-3

Upper Allen Township Agricultural Security Area

MECHANICSBURG BOROUGH

MONROE TOWNSHIP

LOWER ALLEN TOWNSHIP

CARROLL TOWNSHIP

YORK COUNTY

MONAGHAN TOWNSHIP

PENNSYLVANIA TURNPIKE I-76

WILLIAMS GROVE RD

S YORK ST

RT 114

ROUTE 15

W WINDING HILL RD

E WINDING HILL RD

S MARKET ST

E LISBURN RD

W LISBURN RD

ARCONA RD

GRANTHAM RD

42-10-0644-084

42-10-0646-002

42-10-0644-016

42-10-0644-016

42-10-0646-019

42-10-0646-020A

42-10-0644-015

42-10-0644-086

42-10-0644-017

42-10-0644-027

42-10-0644-028

42-10-0644-031

42-10-0644-029

42-29-2456-001

42-11-0276-015

42-11-0276-022

42-11-0276-009

42-11-0274-023

42-11-0274-023

42-11-0272-019

42-12-0358-004A

42-12-0358-004A

LEGEND

- Ag Security Area
- Zoned Agriculture

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 4-2 AgSecurityArea.pdf

A B C D **Areas Quadrant: A, B, C, D**

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Figure 4-4

Upper Allen Township Future Land Use Map

MECHANICSBURG BOROUGH

MONROE TOWNSHIP

LOWER ALLEN TOWNSHIP

MONAGHAN TOWNSHIP

CARROLL TOWNSHIP

YORK COUNTY

PENNSYLVANIA TURNPIKE I-76

WILLIAMS GROVE RD

S YORK ST

RT 114

W WINDING HILL RD

ROUTE 15

E WINDING HILL RD

S MARKET ST

E LISBURN RD

ARGONNE RD

W LISBURN RD

GRANTHAM RD

LEGEND

Future Land Use

- AGRICULTURAL
- LOW-DENSITY RESIDENTIAL
- MEDIUM-DENSITY RESIDENTIAL
- HIGH-DENSITY RESIDENTIAL
- NEIGHBORHOOD COMMERCIAL
- VILLAGE
- COMMERCIAL
- INDUSTRIAL
- PUBLIC/SEMI-PUBLIC
- CONSERVATION AREA

N

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 4-4 FutureLandUse.pdf

Areas
Quadrant: A, B, C, D

www.upperallentwp.org

jmb - January 2, 2014

CHAPTER 5. COMMUNITY FACILITIES AND SERVICES

GOALS

Provide community facilities and services which promote the health, welfare, and safety of a variety of users including the elderly, the handicapped, and children.

POLICE

GOALS

Protect all citizens and their property and create an environment where people feel safe and are safe.

Increase automotive and pedestrian safety, and reduce the rate of property damage, injury, and loss of life.

OBJECTIVES

- To improve crime prevention and apprehension techniques.
- To enhance and expand existing police facilities.
- To utilize professional standards to evaluate police service.
- To foster good working relationships with mutual aid agreement partners.

POLICY PLAN

- Support improved crime prevention and apprehension techniques.
- Support the enhancement and potential expansion of existing police facilities, as necessary.
- Utilize Federal Bureau of Investigation standards to evaluate police service.
- Support good working relationships with mutual aid agreement partners.

IMPLEMENTATION STRATEGY

- Continually monitor and address the impacts of residential, commercial and industrial growth on the provision of police services (evaluating personnel, equipment and facility needs). (T)[8]
- Adjust the level of police service, as necessary, by utilizing professional standards. (T)[8]

[8]Responsible Party(ies): (T)—Township; (C)—County;(S)—State;(P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable.

FIRE

GOALS

Prevent the loss of life and property as a result of fire.

Provide adequate fire protection services to residents and businesses within the Township.

OBJECTIVES

- To achieve satisfactory response times.
- To maintain adequate levels of equipment, personnel, and facilities.
- To maintain a replacement schedule for major equipment.
- To continue to foster good working relationships with mutual aid agreements.

POLICY PLAN

- Support the Fire Department in their efforts to attain the objectives listed above.
- Support the Fire Department in their efforts to maintain and attract new trained volunteers for fire service.

IMPLEMENTATION STRATEGY

- Monitor performance and responsiveness of services provided by the Fire Department. (T)[9]
- Perform an annual analysis of community fire needs, including a replacement schedule for major equipment, to determine if additional equipment, personnel or facilities are needed. (T)[9]
- Review recruitment measures currently used to attract people to volunteer for fire service. (T)[9]

EMERGENCY MEDICAL SERVICES (EMS)

GOAL

- Provide quality out-of-hospital medical service, defined as emergency medical services, medically-related transportation services, and limited community/home health care services, to residents and businesses within the Township.

[9]Responsible Party(ies): (T)—Township; (C)—County;(S)—State;(P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable.

OBJECTIVES

- To support the provision of quality out-of-hospital medical service to residents and businesses within the Township.

- To maintain satisfactory response times.

- To assure community input into the planning and operation of the Township's EMS system via the Basic Life Support (BLS) Advisory Committee.

- To continue to cooperate with other municipalities to provide the best possible Advanced Life Support (ALS) and BLS services to residents of the Township.

POLICY PLAN

- To support the provision of quality out-of-hospital medical service to residents and businesses within the Township.

- To provide community input into the planning and operation of the Township's EMS system via the BLS Advisory Committee.

IMPLEMENTATION STRATEGY

- Monitor performance and responsiveness of services provided by the Township's EMS provider. (T)[10]

SCHOOLS

GOAL

- Promote appropriate facilities to adequately meet the general and specialized needs of Township residents.

OBJECTIVES

- To encourage the development of adequate school facilities to serve the Township's school age children.

- To support the location of schools convenient to the area from which the majority of the school population will be drawn.

- To encourage the use of school grounds and facilities to supplement existing recreation facilities, where possible.

[10] Responsible Party(ies): (T)—Township; (C)—County;(S)—State;(P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable.

POLICY PLAN

- Encourage the development of adequate school facilities to serve the Township's school age children.

- Support the location of schools convenient to the area from which the majority of the school population will be drawn.

- Encourage the use of school grounds and facilities to supplement existing recreation facilities, where possible.

IMPLEMENTATION STRATEGY

- Maintain or increase cooperation and the exchange of information between the Township and the Mechanicsburg Area School District. (T)[11]

LIBRARIES

GOAL

- Support library service to Township residents through appropriately maintained facilities.

OBJECTIVE

- To support the provision of library service to Township residents through appropriately maintained facilities of the Cumberland County Library System.

POLICY PLAN/IMPLEMENTATION STRATEGY

- Continue annual monetary support of the Joseph T. Simpson Public Library and support the Cumberland County Library System. (T)[11]

PARKS AND RECREATION

GOAL

Provide Township residents with safe and adequate recreational facilities that meet the needs of the community, and establish priorities for acquisition and development of new recreation facilities within the Township.

- To provide sufficient open space in the Township, which would include a new community park, by working with developers and Township regulatory boards.

[11] Responsible Party(ies): (T)—Township; (C)—County;(S)—State;(P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable.

OBJECTIVES

- To continue the practice of requiring developers to provide cash and/or land for recreation. The amount should be determined by current standards with review every two years.

- To plan and implement a community system of bicycle/pedestrian trails within the Township, which will be functional, sensitive to the surrounding environment, consistent with property rights, and compatible with the siting of public open space.

- To create a bicycle/pedestrian trail system that, to the extent feasible, will connect parks and neighborhoods, and follow stream and road corridors, utility rights-of-way, and easements through existing and new developments.

- To provide adequate play fields for organized sports (e.g., baseball, softball, football, soccer).

- To use alternative methods of park and trail acquisition and facility development, such as donations and easements.

- To meet National Recreation and Park association standards of ten acres of parkland per 1,000 residents.

- To assure that parks and recreation are extended in concert with capital programming and the Township Comprehensive Plan.

- To encourage joint efforts between various public agencies and private organizations, including Messiah College, which can result in the provision of additional parks, recreation, and trail facilities.

- To periodically evaluate and replace or upgrade recreational facilities at existing parks.

- To utilize the Mechanicsburg Area Recreation Department to support the needs and facilities of Upper Allen residents.

POLICY PLAN

- Update the Open Space and Recreation Plan, which determines the Township's recreational needs and contains definite standards for recreational lands and facilities.

- Through the Township's dedication/fee-in-lieu requirements, proposed residential cluster development provisions, and proposed residential/commercial land use guidelines, continue to promote greenways and trails within new land developments and subdivisions based on the level of service required.

- In parks, design playfields for baseball, softball, soccer, lacrosse and other team sports to provide for overlap or multiple uses as long as the design will not impede concurrent activities or jeopardize the safety of the participants.

- Maintain dedication/fee-in-lieu requirements as part of the Township subdivision and land development ordinance. Include the following provisions:
  - Board of Commissioners adjusts the fee for land market value or inflationary changes.
  - Structure dedication requirements to meet the Township's goals and plans for open space, recreation, and natural resources.
  - Place deed restrictions or easements on donated land to prevent future subdivision or uses not in accordance with the intended purpose.
- Based on input by the various Mechanicsburg/Upper Allen Township area sports organizations, add the following facilities to Upper Allen Township parks to help accommodate their needs.
  - One regulation football field
  - One Pixie League field, two Maxi League fields, and Mini League field at Mt. Allen
  - Two Little League fields and one Teener field
  - Three full-size fields, one ten-year-old youth field, and five eight-year-old youth fields for soccer
  - Adequate parking facilities to accommodate park facility use
  - Appropriate concession and restroom facilities at parks with multiple fields
- Develop a system of bicycle/pedestrian trails which is sensitive to the environment, is integrated with natural and manmade features, facilitates safe non-vehicular circulation, and is consistent with the Land Use and Transportation Policy Plans, including a Greenways and Trails Plan.
- Investigate the feasibility of forming a conservation easement program and working with a local land trust to facilitate alternative means of park, greenway, and bicycle/pedestrian trail acquisition.
- Annually evaluate and, if necessary, replace or upgrade facilities at existing parks.
- Annually evaluate recreational needs to update program and facility requirements.
- Annually determine and evaluate park expansion and improvement needs in concert with Township capital programming and the Comprehensive Plan.
- Annually coordinate with public and private organizations including, but not limited to, Mechanicsburg Borough, Mechanicsburg Area Recreation Department, and Messiah College,

for provision of recreational facilities and programs which complement the Township's facilities and accommodate the residents' needs.

IMPLEMENTATION STRATEGY

- Update the Township Open Space and Recreation Plan as necessary, incorporating a Greenways and Trails Plan, through a systems approach to park, recreation, open space, and greenway planning as recommended in the National Recreation and Park Association's and the American Academy for Park and Recreation Administration's *Park, Recreation, Open Space and Greenway Guidelines.* (M/2013-2024/T)[12]

- Update the Township's Subdivision and Land Development Ordinance to provide dedication/fee-in-lieu requirements in accordance with the previously stated policies. (H/2015-2016/T)[12]

- Through the subdivision/land development review process, promote development of greenways and trails based on estimated level of service and Open Space and Recreation/Greenways and Trails Plans. (M/2012-2024/T)[12]

- Work with the subdivision/land development review process, and state and local organizations and funding sources to:

  - Improve and add active and passive recreation facilities at existing and new parks in accordance with the previously stated policies and projected level of service. (M/2013-2014/T,P) [12]

  - Update a system of greenways and bicycle/pedestrian trails. (M/2015/T,C,P,M)[12]

- Contact a local land trust, such as the Central Pennsylvania Conservancy or the Appalachian Audubon Society, to investigate alternative means of park, greenway, and bicycle/pedestrian trail acquisition. (T)[12]

- Conduct an annual evaluation of needs for:

  - Replacement or upgrade of existing park facilities;

  - Update of program and facility requirements; and

  - Park expansion and improvements. (T)[12]

- Based on an annual evaluation of needs, replace or upgrade existing park facilities in concert with Township priorities and available funding. (T)[12]

[12]Priority: (H)—High; (M)—Medium; (L)—Low;/Implementation Year(s)/Responsible Party(ies): (T)—Township; (C)—County; (S)—State; (P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable. (See Chapter 9 for corresponding 12-Year Improvements Program.)

- Periodically meet with the public and private organizations cited above to coordinate provision of recreational facilities and programs. (T)[13]

- Biannually evaluate the recreation land acquisition and improvement fee. (T)[13]

BACKGROUND

A study of the community facilities and services that a municipality offers to its residents is necessary to identify any current inadequacies and future needs. Many of Upper Allen Township's community facilities and services are overseen and managed on a daily basis by Township staff. The Township staff works with a number of boards and commissions to help meet the needs of the Township residents. Some community facilities and services (such as schools) are overseen and managed by others. This section provides a discussion of existing conditions and issues associated with the provision of community facilities and services within Upper Allen Township.

POLICE

The Upper Allen Police Department provides police protection services for the majority of residents of Upper Allen Township. Messiah Village and Messiah College each have their own security staff. The Upper Allen Township Police Department currently has 20 sworn officers including three sergeants and one detective sergeant. The Police Department also has one full-time clerical staff and one part-time clerk.

The Township employs a Police Chief as the top officer in charge. Emergency dispatching is handled through Cumberland County. Governed by a County agreement on intermunicipal coverage, the Upper Allen Township Police Department assists adjoining municipalities who, in turn, assist Upper Allen Township on an as-needed basis. Emergency dispatching is handled through Cumberland County.

The Township Police Department is located in the lower level of the Township Offices at 100 Gettysburg Pike (Figure 5-1). Presently, the Department is using all its available space within the Township Building.

The Department has 12 vehicles, including five marked cars, four unmarked cars, and one specialty trailer. The Department is highly computerized and tied into the Harrisburg Metro computer system. The Department conducts SMARTS (Students Making Appropriate Responses to Tough Situations) programs for Mechanicsburg Area School District schools. They also conduct other programs for community organizations upon request.

Nationally recognized standards recommend a level of service of 1.0 to 1.3 officers/1,000 persons in an urban-suburban area. Based on the provision of 20 officers and the Township's

[13] Priority: (H)—High; (M)—Medium; (L)—Low;/Implementation Year(s)/Responsible Party(ies): (T)—Township; (C)—County; (S)—State; (P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable. (See Chapter 9 for corresponding 12-Year Improvements Program.)

2010 estimated population of 18,059, the level of service provided by the Police Department is 1.11 officers/1,000 persons, slightly above the 1.0 officers/1,000 persons as recommended.

FIRE

Upper Allen Township has one volunteer fire company that provides fire protection services for the entire Township. Approximately 25 to 30 volunteers currently serve in the Upper Allen Fire Company. The Fire Company assists adjoining municipalities on an as-needed basis. Emergency dispatching is handled through Cumberland County.

The Fire Company is located in a garage adjacent to the municipal building at 104 Gettysburg Pike (Figure 5-1). The Fire Department's major equipment currently includes one 1992 1500 gpm Pierce Lance Rescue Pumper, one 2008 E-One 2000 gpm Typhoon Wagon, one 2004 E-One HP95 Mid-mount Ladder Tower, one 2012 2000-gallon International 4/Guys Tanker, and one 2001 Ford F-450 4-wheel drive.

The National Board of Underwriters recommends a maximum four-mile radius to a fire company. The American Planning Association's "Small Town Planning Handbook" contains the standards presented in Table 5-1.

Table 5-1

Recommended Distribution Standards for Fire Protection

	Suggested Service Radius	
Type of Land Use	**Engine or Pumper Company**	**Ladder Company**
Commercial/Industrial	.75-1.0 miles	1.0 miles
High to Medium Density Residential	2 miles	2.0 miles
Scattered Residential	3-4 miles	3.0 miles
Rural Low Density Residential	4-6 miles	-----

The Township is adequately covered in terms of engine or pumper companies for residential development. Several commercial and industrial areas fall just beyond the recommended 1 mile radius including the Rossmoyne Business Park, portions of Upper Allen Business Park, portions of Route 114 north of the turnpike and south of Spring Run Manor, and commercial areas on Gettysburg Pike south of Fisher Road.

The primary issue of concern confronting the Fire Department is its volunteer status. The Township is primarily a bedroom community, which can result in a gap of volunteer fire fighter availability during the business day. So far the Department has been able to rely on volunteers from cooperating businesses, but this situation is tenuous at times. As the Township grows, the Fire Department's ability to provide adequate service under its current operating procedures is questionable.

Several needs were identified by the Upper Allen Fire Chief as follows:

- Replace or rehab existing fire station excluding engine bays (offices and general use) to bring the fire station up to code and improve space requirements (original station was built in 1985)
- Establish a recruitment and retention benefit program with the Township.
- Rehab the 2004 E-One HP95 Mid-mount Ladder Tower
- Purchase a traffic unit for firefighter safety on accident scenes
- Continue annual PPE gear replacement program
- Install diesel exhaust removal system in the engine bay (Plymovent System)
- Add additional feature to the fire safety training simulator (fire safety house)
- Upgrade Bishop Road Bridge, which currently has a 10-ton weight limit, or purchase a minipumper (there are four residents on Bishop Road, which is the only part of the Township that the Fire Department cannot adequately service because of the bridge weight limit).

AMBULANCE/EMERGENCY SERVICE

The West Shore EMS provides ambulance/emergency services to Upper Allen Township. In addition to the Township, the Boroughs of Mechanicsburg and Shiremanstown are also served by West Shore EMS. Emergency dispatching is handled through Cumberland County.

SCHOOLS

Upper Allen Township is in the Mechanicsburg Area School District. The school district, which is independent of the Township, also includes the Boroughs of Mechanicsburg and Shiremanstown. Two elementary schools are situated within Upper Allen Township (Figure 5-1). Shepherdstown and Upper Allen Elementary Schools are located adjacent to one another on South Market Street. Shepherdstown serves grades 1 and 2, while Upper Allen serves grades 3 through 5. The Elmwood Elementary School in the Borough of Mechanicsburg, serves grades 1 through 5. Mechanicsburg Kindergarten Academy in Mechanicsburg Borough services all kindergarten students. Minor increases in enrollment are projected by the Mechanicsburg Area School District. No new school facilities within Upper Allen Township are proposed at this time.

LIBRARIES

There is no public library within Upper Allen Township. The Cumberland County Library system is available for use by Township residents. The Cumberland County Library system offers 8 branch libraries, with the Joseph T. Simpson Public Library in Mechanicsburg being the closest. Township residents may also use the Messiah College Library.

PARKS AND RECREATION

Recreational facilities available to Upper Allen Township residents within or adjacent to the Township include public municipal and institutional facilities and private institutional facilities (Figure 5-1). A description of each facility is found in Table 5-2.

Aspen Park: This is an undeveloped open space grass area that is part of a power line right-of-way.

Center Square Park: Play field and a small play apparatus area accent site development. A play structure is present with one single tube slide, a double slide, pole, and tic-tac-toe board. Two swings and merry-go-round are also present on turf play area. Also included on this site are a volcano climbing toy, a basketball backboard, two picnic tables, and a pavilion. A recreational area sign is present for identification purposes. The site lies along Trout Run, which accents the physical character.

Country Estates Park: A wooden play structure with tire swing, sliding board, and curved metal ladder is present. Other equipment includes a sandbox, two swings, and a basketball backboard. There are also two picnic tables under a small pavilion and parking on grass for about three cars.

Fisher Park: Located along Fisher Road, this is the most extensively developed of any of the Township-owned recreational sites. Upper Allen Baseball Association's North, South and West Little League Fields are present at this site. All fields are well fenced with player benches and bleachers for both teams. Near these fields is a turf play area with a play structure, which includes a sliding board, rings, a climber, and a tic-tac-toe board. Also present are swings, spring animals, and a climb-on. A Teener Baseball Field has also been constructed, complete with player benches, bleachers, and a pitcher warmup area. Near this field is a second small play area. A tot lot with small climbers is also included in this turf area. Other amenities at this park include three batting cages, a basketball court, a bike trail and a fifth baseball field with a backstop, player benches and bleachers. There is also a large grass play area. A large paved parking area with approximately 75 spaces is present.

Friendship Park: This 19.6 acre site is located along Fisher Road and includes open space and a .52 mile walking trail. There are two playground areas, one with sliders, a merry-go-round, and climbing structures. Also present are two medium size soccer fields, one championship soccer field, four small soccer fields, and a paved parking area with 160 parking spaces.

Grantham Park: Grantham Pond of approximately 2.5 acres is the focal point of recreational development. Trout Run Creek flows adjacent to the pond. There is a turf play area with two swings, climbing toy with slide, and a sandbox. Also present is a pavilion with a stove and picnic tables. The remainder of the picnic tables and stoves are scattered around the pond. Trash receptacles are on site. There is a small gravel parking area.

McCormick Park: A linear park along the Yellow Breeches Creek, McCormick Park provides fishing, canoeing, and tubing access. Roadside parking is available.

Miller's Crest Park: This site includes a small apparatus area consisting of two swings, and a play structure complete with double slide, climber, monkey bars and a small roofed play area. A pavilion with two tables, a trash receptacle, and a grill are present for picnicking opportunities.

A basketball backboard is also available. An open grass area is present but appears not to be flat enough for soccer activities. A recreational sign completes the existing development.

Mt. Allen Park: This area has a midget softball field with player bench and bleachers. A turf play area includes two swings, a merry-go-round, two spring animals, and a play apparatus with a tube slide, two climbers and monkey bars. There are two tables under a small pavilion as well as bicycle racks at either end of the park, and trash receptacles. Recreational area signs identify the site. There is a parking area for about four cars.

Rosegarden Park: This site includes a turf area with a play apparatus that is comprised of a double slide, and two climbers. Also present in the play area are two spring animals, a metal sliding board, and four swings. Other amenities include a pavilion with two picnic tables, and a basketball court with three basketball hoops.

Simpson Park: This 19.5-acre site includes a boat launch, two picnic pavilions, volleyball, horseshoes, walking trails and is used primarily for passive recreation.

Spring Run Acres Park: Adjacent to the Messiah Village private recreation area and bisected by Spring Run Creek, this area is largely open space with mature trees at the perimeters. There is a play turf area consisting of a volcano climber, four swings, a sliding board, spring animals, and a sandbox. There is also a basketball court, a picnic table, trash receptacle and a recreational sign. There is limited parking on grass for three to four vehicles.

Winding Hill Park East: Located along East Winding Hill Road and across the street from Winding Hill Park West, this 25-acre site has been developed for baseball, softball and soccer fields. The 25 acres were originally purchased by the Township. An additional 13 acres will be donated in 2014 by an adjoining developer. A concession stand with restrooms was constructed in the summer of 2013, along with a .73 mile walking trail. Future development includes additional Lacrosse fields, a basketball court, and a tennis court. A large paved parking area with approximately 147 spaces is present.

Winding Hill Park West: Located along East Winding Hill Road and across the street from Winding Hill Park East, this site is approximately 26 acres in size. The park has two soccer fields and a pavilion. In the summer of 2013, a concession stand with restrooms was constructed, along with a .36 mile walking trail. Future development includes a tot lot. A large paved parking area with approximately 126 spaces is present.

Mechanicsburg Senior High School: Because of its close proximity to Upper Allen Township, the facilities of the Senior High School are reasonably accessible to many residents. The facilities include a football field/running track, six tennis courts, two basketball courts, a softball field, and a girls' field hockey/play field.

Mechanicsburg Middle School: Located in Upper Allen Township, the facilities at the Middle School include a field hockey field, soccer field, and practice football field.

Elmwood Elementary School: The available outdoor recreation facilities include a football field/running track and various playground equipment.

Mechanicsburg Area School District Trails and Trees Environmental Center: The environmental center opened in 2012. This natural area, which includes forest, fields, springs and streams, has an extensive trail system complete with identification signposts and benches at various intervals. A picnic pavilion and pre-civil war farmhouse is also present.

Shepherdstown Elementary School: Included at this site are a basketball hoop, swings, and various playground equipment.

Upper Allen Elementary School: There are two basketball hoops, a funnel ball game, and various playground equipment.

Mechanicsburg Kindergarten Academy: Located in Mechanicsburg Borough, the facilities include six softball fields and various playground equipment.

Messiah College: Messiah College makes the indoor and outdoor tracks, baseball fields, the performing arts center, and the lecture hall available to the public. The college also runs sports camps for men's and women's soccer, men's and women's basketball, women's volleyball, women's field hockey, track and field, and music, which are open to the public.

Thirteen parks are owned by Upper Allen Township and collectively occupy about 153 acres. Of these, eight are smaller neighborhood parks (less than 5 acres) and are associated with subdivisions; at a minimum, each contains play equipment and picnic tables. Two of the eight parks—Center Square and Grantham—are centered on natural features of Trout Run and Grantham Pond. Fisher Park, Friendship Park and Winding Hills Parks are community parks and have the most facilities of all the Township parks; they are located in the southwest and eastern portions of the Township, east and west of Route 15. McCormick Park, a linear park along the Yellow Breeches Creek in the southeast portion of the Township, provides canoeing, tubing, and fishing access. Simpson Park is a passive recreation park that also provides access to the Yellow Breeches Creek for canoeing, tubing, and fishing access. All Township parks are open during daylight hours throughout the year. The Parks Maintenance Department maintains the parks and the Park and Recreation Board provides recommendations on their improvements.

Township park lands are acquired in a number of ways under the Upper Allen Township Subdivision and Land Development Code. Every subdivision or land development for residential purposes containing an aggregate of 50 or more dwelling units must contain open space for recreational, scenic, or aesthetic purposes. In addition, every subdivision or land development for residential purposes must contribute an amount per dwelling unit, as established by the Board of Commissioners, to the Township Recreation and Land Acquisition and Improvement Fund. The Board may alternatively require a subdivision or land development to substitute a donation of recreation land in lieu of a monetary recreation contribution to the fund. When a monetary contribution is waived, which the Board may permit for any subdivision, the developer must set aside recreation land at a rate of 1 acre per 25 dwelling units.

Moneys from the Recreation and Land Acquisition and Improvement Fund may also be used for developing capital improvements in new or existing recreation areas in the Township. Authorization of expenditures from the fund must be made by the Board of Commissioners after taking into consideration recommendations by the Park and Recreation Board. The fund does not cover routine maintenance of the Township's recreation areas; such costs are to be covered by the Township's operating budget.

In addition to the Township-owned parks, residents benefit from facilities at five educational institutions. Mechanicsburg Area Senior High School and Mechanicsburg Middle School have play fields (football, soccer, field hockey), tennis courts, basketball courts, and running tracks. Shepherdstown and Upper Allen Elementary Schools have basketball courts and play equipment, including some fitness equipment. As a facility of interest, Mechanicsburg Area School District maintains an Environmental Center with an extensive trail system. Messiah College contains a wide variety of facilities ranging from an indoor track to outdoor play fields. School district and college facilities are available at times that do not conflict with school hours or activities, and are consistent with the institutions' policies.

Recreational activities are operated by the Mechanicsburg Joint Recreation Commission, which is supported by the borough, the school district, Upper Allen Township, and Shiremanstown. The Commission offers a wide range of activities to area residents.

SOLID WASTE SERVICE

Garbage collection for residents of the Township is currently performed by a contracted service provider. Collection of refuse from businesses is done on an individual contractual basis with private haulers. In addition, residents and businesses are required to separate and recycle several items for biweekly collection.

The Township occasionally sponsors brush pickup several times over the spring, summer and fall and leaf collection each fall. Residents can rake their leaves to the curbside for collection. Leaves are then composted and are available to residents each spring. Currently, bulk items can be left at the curbside along with regular trash for pickup by a contracted service provider. In 2010 Cumberland County replaced the centralized household hazardous waste (HHW) drop off program with a door-to-door HHW program. For more information about the HHW program, visit Cumberland County Recycling and Waste Authority website.

There are no dumps, landfill sites, incinerators or any other disposal facilities in Upper Allen Township.

OTHER PUBLIC BUILDINGS AND LANDS

The Township Municipal Building is located at 100 Gettysburg Pike and was built in 1981. It consists of two levels. The Upper Allen Township Police Department and Public Works Department occupy the lower level and the Township's administrative offices occupy the upper level. In 2007-08 a feasibility study was conducted to expand the existing municipal building. In 2010 construction started on a new addition to the existing municipal building, which was

completed in 2011. The new addition more than doubled the size of the upper and lower levels and also provided for additional garage space for Public Works.

The Township's Fire Station is situated adjacent to the municipal building.

Table 5-2

Recreational Facilities in and Adjacent to Upper Allen Township

Park	Location	Ac.	Owner	Tennis Courts	Basket - ball Courts	Ball Fields	Soccer Fields	Play Fields	Play Equip-ment	Walking/ Bike Trails	Pavilions	Picnic Tables	Other
Aspen Park	Between Spring Run Drive and Aspen Drive	3.0	UAT										
Center Square Park	West of Stumpstown Road at the end of Emily Drive; Entrance off Lisburn Road	2.3	UAT		½			X	X		1	X	Trout Run
Community Park	South Side of Fisher Road	24.5	UAT	2	1	5		X	X	X	2	X	Batting Cages
Country Estates Park	End of Frost Road	3.5	UAT						X		1	X	
Friendship Park	North Side of Fisher Road	19.7	UAT				3		X	X	1	X	
Grantham Park	Along Grantham Road between Mill Road and Route 15	4.5	UAT						X		1	X	Trout Run Grantham Pond
McCormick Park	Between McCormick Road and Yellow Breeches Creek	2.0	UAT										Fishing, Canoeing, and Tubing Access
Miller's Crest Park	Fronts on Old Grove Road	2.0	UAT		½				X		1	X	
Mt. Allen Park	Between the End of Berkshire and Cascade Roads	3.0	UAT			1			X		1	X	
Rosegarden Park	Along Rosegarden Boulevard	2.0	UAT		1				X		1	X	
Simpson Park	S. Market Street	19.5	UAT						X	X	X	X	Volleyball, Boat Launch, Horseshoe Pits
Spring Run Acres Park	Fronts on Nittany Drive	3.0	UAT		1				X			X	
Winding Hills East Park	E. Winding Hill Road	38	UAT			X	X				X	X	
Winding Hills West Park	E. Winding Hill Road	26	UAT				X				X	X	
Elmwood Elementary School	Elmwood Avenue	N/A	MASD				X	X					Running Track
Mechanicsburg Area School District Trails and Trees Environmental Center	Behind Teener Baseball Field at Upper Allen Elementary School on South Market Street	N/A	MASD							X	X	X	Environmental Center

Park	Location	Ac.	Owner	Tennis Courts	Basket - ball Courts	Ball Fields	Soccer Fields	Play Fields	Play Equip-ment	Walking/ Bike Trails	Pavilions	Picnic Tables	Other
Mechanicsburg Area Senior High School	Williams Grove Road & Broad Street	N/A	MASD	X	X		X	X					Running Track
Mechanicsburg Middle School	South Market Street	N/A	MASD			X	X	X					
Shepherdstown Elementary School	South York Street	N/A	MASD		X				X				Fitness Equipment
Upper Allen Elementary School	Behind Upper Allen Elementary School on South Market Street	N/A	MASD		X				X				Various playground equipment
Messiah College	Grantham Road	N/A	MC			X							Indoor and Outdoor Track

UAT—Upper Allen Township
MASD—Mechanicsburg Area School District
MC—Messiah College

NOTE: "Play Fields" include football and hockey field

Figure 5-1

Upper Allen Township Community Facilities Map

MECHANICSBURG BOROUGH

MONROE TOWNSHIP

LOWER ALLEN TOWNSHIP

CARROLL TOWNSHIP

MONAGHAN TOWNSHIP

YORK COUNTY

PENNSYLVANIA TURNPIKE I-76

WILLIAMS GROVE RD

S YORK ST

RT 114

W WINDING HILL RD

ROUTE 15

E WINDING HILL RD

S MARKET ST

E LISBURN RD

ARCONA RD

W LISBURN RD

GRANTHAM RD

P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14

LEGEND

- Fire, Police & Municipal Buildings
- Schools

Parks

- (P1) Mt. Allen Park
- (P2) Rosegarden Park
- (P3) Grantham Park
- (P4) Center Square Park
- (P5) Country Estates Park
- (P6) Millers Crest Park
- (P7) Spring Run Acres Park
- (P8) Community Park
- (P9) Aspen Park
- (P10) McCormick Park
- (P11) Friendship Park
- (P12) Winding Hill Park East
- (P13) Winding Hill Park West
- (P14) Simpson Park
- Sidewalks

N

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 5-1 CommunityFacilities.pdf

Areas
Quadrant: A, B, C, D

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mcw - January 2, 2014

CHAPTER 6. PUBLIC UTILITIES

PUBLIC WATER

GOAL

Promote the orderly expansion of water systems within the Township to meet the existing and planned development while taking into account the impacts on cost, public health, surrounding land use, and environmental conditions.

OBJECTIVES

- To make efficient use of areas that has existing public water by allowing a variety of housing types and densities.

- To discourage extension of public water into those areas of the Township that are intended for nominal or no development, such as low density residential and agricultural areas, steep slopes, and floodplains.

- To promote construction of public water systems that are required to support growth in the Township and to protect public health.

POLICY PLAN

- Encourage various types and densities of infill development in areas currently served by public water.

- Discourage the extension of public water into those areas of the Township that are intended for nominal or no development, such as rural and agricultural areas, steep slopes, and floodplains, except where public health needs have been documented.

IMPLEMENTATION STRATEGY

- Update the Zoning Ordinance to accommodate infill of medium and high density residential development, and commercial development in areas that have existing public water (H/2014-2015/T)[14]

- Update the Zoning Ordinance and Subdivision and Land Development Ordinance to provide for minimum lot sizes in rural and agricultural areas, which can accommodate onsite wells and septic systems, and restrict or prohibit development on steep slopes and floodplains. (H/2014-2015/T) [14]

[14]Priority: (H)—High; (M)—Medium; (L)—Low/Implementation Year(s)/Responsible Party(ies): (T)—Township; (C)—County; (S)—State; (P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable. (See Chapter 9 for corresponding 12-Year Improvements Program.)

PUBLIC SEWER

GOAL

Provide for or promote the methodical expansion of the sanitary sewer system throughout the Township to meet existing and planned development while taking into account the impacts on cost, public health, surrounding land use, and environmental conditions.

OBJECTIVES

- To regulate discharges into the groundwater supply by on-lot *wastewater treatment* systems on the basis of soil suitability and Pennsylvania Department of Environmental Protection (DEP) standards. This is to be supplemented by the recent implementation of an On-Lot Sewage Disposal System program.

- To comply with all applicable state laws on sewage facility planning, and enforce DEP regulations.

- To make efficient use of areas that have existing public sewers by allowing a variety of housing types and densities.

- To discourage extension of public sewers into those areas of the Township that are intended for nominal or no development, such as low density residential and agricultural areas, steep slopes, and floodplains.

- To assure that sewer services are extended systematically in concert with the availability of other public facilities and are keyed to public health, capital programming, and the Township Comprehensive Plan and Act 537 Sewage Facilities Plan. This action is supported by the Act 537 Sewage Facilities Plan Special Study for Grantham WWTP Nutrient Removal Upgrade, Country Estates Needs Area Service, and Class A Biosolids Processing Alternatives completed in May 2010.

- To develop a cost-effective implementation program for the staged construction of sewerage systems that are required to support growth in the Township and to protect public health.

- To properly maintain and efficiently use the existing sewerage system, including minimizing infiltration and inflow (I/I). This objective is supported by funds totaling approximately $325,000 that are budgeted annually for identification and removal of I/I and restoring defective sewers and manholes.

POLICY PLAN

- Secure sufficient wastewater treatment capacity to meet the anticipated needs of the Township for new growth and for protection of public health.

- Do not extend public sewer service to those areas of the Township that are intended for nominal or no development, such as rural residential and agricultural areas, steep slopes, and floodplains.

- Enforce Township ordinances to prevent the discharge of stormwater and groundwater into the public sanitary sewer system.

- Require developers to construct sewage facilities in accordance with Township standard specifications and to place the facilities at locations consistent with the Township's long-term sewerage facilities plans.

- Establish a program that provides homeowner education and requires maintenance to ensure the long-term efficacy of on-lot sewage treatment and disposal systems.

- Extend public sewers to existing development areas where a public health need has been documented, on-lot system repairs are not practical, and affordable public sewer service can be provided.

- Maintain the sewer system rate structure at a level that is both affordable and sufficient to meet system needs.

IMPLEMENTATION STRATEGY

The following strategies should be considered:

- Securing additional capacity at Upper Allen Township's Grantham wastewater treatment plant and the Lower Allen Township Authority's wastewater treatment plant to satisfy Township needs in both the Grantham and Lower Allen drainage basins. This is currently being addressed through regulatory actions resulting from the Chesapeake Bay Tributary Strategy. New DEP NPDES permit requirements have imposed nutrient loading limits for all point source wastewater treatment facilities tributary to the bay. As a result of this action, both the Grantham WWTP and the Lower Allen Township Authority (LATA) WWTP must undergo biological nutrient removal (BNR) upgrades. As part of the design and construction process, each facility is being designed to accommodate anticipated future build-out conditions, based on the estimated total pounds of nitrogen and phosphorus to be discharged to each facility. (H/2014-2015/T)[15]

- Conducting an on-going sewer system investigation and rehabilitation program to reduce the amount of infiltration/inflow entering the sanitary sewer system. This is an on-going program in the Township that currently budgets approximately $325,000 budget annually for identification and removal of I/I and for restoration of defective sewers and manholes. (H/2012-2022+/T)[15]

[15] Priority: (H)—High; (M)—Medium; (L)—Low/Implementation Year(s)/Responsible Party(ies): (T)—Township; (C)—County; (S)—State; (P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable. (See Chapter 9 for corresponding 12-Year Improvements Program.)

- Updating Chapter 200, Sewers, of the Township Code.

- Updating standard construction and material specifications for sanitary sewer extensions. (H/2012-2013/T)[16]

- Updating the sewer system tapping fee to provide sufficient funds for planned system improvements. (H/2012, 2015, 2017, 2019, 2021/T)[16]

BACKGROUND

Existing utilities operating within the community were identified. Information on service areas, capacities, current inadequacies and future needs were collected.

PUBLIC WATER

Public water supply is available to portions of the Township that are more densely developed. Two private companies provide water supply services to the Township, as discussed below.

The Pennsylvania American Water Company (PAWC) serves all or parts of 12 West Shore communities including the Boroughs of Camp Hill, Enola, Lemoyne, New Cumberland, and Shiremanstown, and the Townships of Hampden, Lower Allen, Newberry, Silver Spring, and Upper Allen. Within Upper Allen Township, PAWC services a small area at the Rossmoyne Business Park. Water is distributed to West Shore communities from two purification facilities. The Yellow Breeches Purification complex has a capacity of 11 million gallons per day and is located in New Cumberland on the Yellow Breeches Creek. The Silver Spring Plant has a capacity of 8 mgd and uses the Conodoguinet Creek as its source of supply.

United Water Pennsylvania provides public water service to a large area of Upper Allen Township, as well as all or portions of surrounding municipalities including the Borough of Mechanicsburg and Monaghan and Monroe Townships. Within Upper Allen Township, United Water Pennsylvania's service area covers the majority of the Township—all areas other than the Rossmoyne Business Park and areas in the extreme southwestern corner of the Township served by Center Square Water Company and PAWC. Sources of water supply include the Yellow Breeches Creek and a well on Market Street near Mechanicsburg. Storage facilities include a low dam on the Yellow Breeches, a 3-million-gallon open concrete reservoir and two 500,000-gallon storage tanks. The source of water is two wells along Stumpstown Road and the storage facilities are one 239,000 gallon and one 250,000 gallon standpipe tanks and one 2,100 gallon pneumatic storage tank. Current water supply capacity is 3.7 mgd. They currently have adequate supply for existing users. No major expansions or upgrades for their facilities or service areas are planned.

[16] Priority: (H)—High; (M)—Medium; (L)—Low/Implementation Year(s)/Responsible Party(ies): (T)—Township; (C)—County; (S)—State; (P)—Private; (M)—Mechanicsburg Area School District; (NA)—Not Applicable. (See Chapter 9 for corresponding 12-Year Improvements Program.)

PUBLIC SEWER

Approximately half of the geographic area of Upper Allen Township is provided with public sanitary sewer service (Figure 6-1), while the remainder of the Township is served by individual on-lot septic systems. The Township is geographically divided into two sewer service basins; the Grantham basin in the southwest corner of the Township and the Lower Allen basin in the remainder of the Township. Public sanitary sewer service is provided in the Township by Upper Allen Township, which owns all public sewers and the Grantham wastewater treatment plant (WWTP).

Wastewater generated within the Grantham basin is conveyed to the Grantham WWTP for treatment. Wastewater generated in the Lower Allen basin is conveyed to the Lower Allen Township Authority (LATA) sewer system for eventual treatment at the LATA WWTP.

The Grantham WWTP currently has a permitted capacity of 1.10 million gallons per day (mgd) and discharges treated effluent to the Yellow Breeches Creek adjacent to the plant site. This capacity is reduced to 0.92 mgd with new draft NPDES nutrient limits, as discussed below. Average annual flows to the facility during 2010 were approximately 0.614 mgd, well below its permitted capacity. The WWTP's discharge has been in conformance with the Township's National Pollutant Discharge Elimination System (NPDES) permit issued for the facility since the facility was last upgraded and expanded in 1992. The Grantham WWTP is serviced by approximately 35 miles of sanitary sewers ranging from 8-inch diameter to 18-inch diameter. In addition, the sewer system contains approximately 1.3 miles of low pressure and force main sewers. A total of six wastewater pumping stations are located in the Grantham basin. Flows to the pumping stations during 2010 were within the stations' permitted capacities.

Conveyance and treatment capacity in the Lower Allen system is provided by way of an intermunicipal agreement with Lower Allen Township. Upper Allen currently holds 10.3 mgd of conveyance capacity (peak instantaneous flow) and 1.986 mgd of treatment capacity (annual average flow) in the Lower Allen system. Current annual average flows generated in the Lower Allen basin during 2010 equaled approximately 1.565 mgd. This system is currently operating within its allocated capacity. Approximately 57 miles of collector, trunk and interceptor sanitary sewers ranging from 8-inch diameter to 24-inch diameter are provided within the Lower Allen basin of Upper Allen Township. In addition, there are approximately 5.3 miles of low pressure and force main sewers in this basin. Two wastewater pumping stations are located in the Lower Allen basin. Flows to the pumping stations during 2010 were within the stations' permitted capacities.

In order to meet PA DEP mandated nutrient removal requirements in connection with the Chesapeake Bay Strategy, biological nutrient removal (BNR) upgrades and improvements are currently in the design phase for the Upper Allen Township Grantham Wastewater Treatment Plant and in the construction phase for the LATA Wastewater Treatment Plant. Nutrient based loading criteria are included in the new NPDES Permit for LATA and in the draft permit for Upper Allen Township. Design improvements at each facility are such that they can handle future build-out sewage flows, based on pounds of Nitrogen and Phosphorus.

The anticipated build out average daily flow requirement at the Grantham WWTP is 1.36 mgd, and is possible with the future addition of a third SBR tank. The anticipated average daily build-out flow requirement at LATA WWTP is 7.50, with design improvements incorporated into the current upgrade. Upper Allen's new allocation is 2.488 mgd.

Wastewater generated outside the public sewer service areas of Upper Allen Township is treated by individual on-lot septic systems owned and maintained by the property owner. The Township employs a licensed Sewage Enforcement Officer (SEO). The SEO is responsible for reviewing soil horizon and percolation tests to determine the suitability of specific sites in the Township for on-lot sewage disposal. The SEO also reviews on-lot system planning modules, system applications and designs, performs inspections before and during construction of the on-lot system, and investigates reports of malfunctioning systems.

ELECTRICITY

Two electric utility companies provide service to Upper Allen Township. PPL is the primary provider and currently maintains several substations within or immediately adjacent to Upper Allen Township. Several electric transmission lines run through the Township (see Figure 6-1). PPL provides electricity to all residents and businesses within the Township, with the exception of several residences in the Country Estates subdivision along the border with Monroe Township. GPU Energy, which provides electricity to Monroe Township, also provides electricity to a small number of homes in the aforementioned Country Estates subdivision.

NATURAL GAS

UGI Corporation provides natural gas service to a number of communities in eastern Cumberland County, including Upper Allen Township. UGI supplies natural gas to approximately 600 customers in the Township. Natural gas service is available in the areas surrounding major industry and business centers (Book of the Month Club, Rossmoyne Business Center, Cumberland Parkway area and Messiah Village) as well as to residences along portions of some arterials (South Market Street, South York Street, Winding Hill Road and Gettysburg Road) and in some subdivisions. Expansion of gas service will probably occur. Those densely developed areas near existing gas lines and those in between current service areas are the most likely areas for expansion. Major industry or institutional uses currently not served, such as Messiah College, may also see gas service expansion in the future.

TELEPHONE

Comcast and Verizon provide telephone service and maintains telephone lines within Upper Allen Township. Telephone service is available throughout the Township.

CABLE TV

Comcast and Verizon provide cable TV service to a number of communities in eastern Cumberland County including Upper Allen Township. Cable TV service is available throughout much of the Township.

CELLULAR COMMUNICATION TOWERS

Recently, the tremendous growth in personal wireless telecommunications services, which includes cellular telephones, personal communications services and paging, has caused the demand for new facilities for wireless antennas and equipment to grow rapidly. There are currently five cellular communications towers located within the Township (see Figure 6-1). As the demand for additional wireless communications facilities grows, the Township will be faced with the challenge of investing in local infrastructure by encouraging and facilitating the use of new telecommunications networks, while at the same time managing their integration into the existing infrastructure. With respect to cellular and other wireless services, local governments generally have the authority to manage the use of public rights-of-way and to enforce reasonable zoning requirements. The Township should review its zoning and other land use ordinances and make revisions where necessary to address wireless communications and facilities.

Figure 6-1

Upper Allen Township Public Utilities Map

MECHANICSBURG BOROUGH

MONROE TOWNSHIP

LOWER ALLEN TOWNSHIP

CARROLL TOWNSHIP

MONAGHAN TOWNSHIP

YORK COUNTY

PENNSYLVANIA TURNPIKE I-76

WILLIAMS GROVE RD

S YORK ST

RT 114

W WINDING HILL RD

ROUTE 15

E WINDING HILL RD

S MARKET ST

E LISBURN RD

RT 114

ARCONA RD

W LISBURN RD

ROUTE 15

GRANTHAM RD

LEGEND

- Township Boundary
- Power Lines
- Substation
- Cell Towers
- Township Roads
- State Roads
- PA Turnpike
- Future Roads
- SewerServiceArea

N

1 inch = 2,000 feet

0 1,000 2,000 "

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A B C D

Areas
Quadrant: A, B, C, D

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mcw - January 2, 2014

CHAPTER 7. TRANSPORTATION

GOAL

Provide a safe, efficient and adequate transportation system within the Township capable of accommodating existing and foreseeable future travel demands.

OBJECTIVES

- To reduce traffic congestion, modify roadway and intersection deficiencies (including lighting and signing), decrease potential for crashes and develop a transportation system with sufficient capacity to accommodate additional traffic generated by future development.

- To reduce conflict between local and through traffic by locating shopping and employment areas where adequate access to major arterials exists or will exist for patrons, employees, and for the movement of goods and by keeping through traffic, especially heavy truck traffic, off local neighborhood streets.

- To provide non-vehicular facilities, where possible, which are safe for people to travel on and may link residential areas to recreation facilities, scenic and natural features, schools, and other community facilities; non-vehicular facilities include pedestrian walkways and trails, and bikeways.

- To cooperate with surrounding townships, the county and the state to improve the transportation system.

- To establish a desired operating level of service for all existing and future transportation facilities in the Township through 2030.

- To assure that transportation improvements are planned and implemented systematically in concert with the availability of other public facilities and are keyed to public health and safety, capital programming, and the Township Comprehensive Plan.

BACKGROUND

- The transportation network of a community is the backbone for its development and prosperity. It can help to attract a thriving society of merchants and residents and is the overall baseplate for community growth. A carefully planned roadway network, designed to properly fit the structure of the community and suit its needs, will ultimately mold the framework for its future population. The advancement and success of a community is often influenced by its transportation network, and if poorly planned or maintained, it can sometimes deter affluence and overshadow many of the community's positive attributes.

EXISTING ROADWAY NETWORK

- The existing roadway network of Upper Allen Township consists of a system of minor arterial roadways, collectors and local roads, divided by US 15, currently documented as a freeway, and the Pennsylvania Turnpike, Interstate 76. A railroad line that bisects the Township also acts as a barrier within the community. The local roadways were originally established to connect the various farms within the community. With the major barriers of US 15, the Pennsylvania Turnpike and the railroad, along with a roadway network initially designed to suit the needs of the local farms; the result is an asymmetric roadway system layout. The major roadways servicing the Township are as follows:

  - The Pennsylvania Turnpike (1-76) provides rapid access east to Philadelphia, New Jersey, New York and New England, and westward to Pittsburgh and beyond.

  - US Route 15 traverses the Township in a northeast/southwest direction, from the northern boundary with Lower Allen Township to the Rosegarden section in the southern part adjacent to York County. US 15 is a major north-south route in the central part of Pennsylvania, connecting Corning, New York to Frederick, Maryland, while passing through Williamsport and Gettysburg.

  - PA Route 114 (South Market Street to East Lisburn Road) provides north/south access through Upper Allen Township from Mechanicsburg to Bowmansdale and an east/west access from Bowmansdale to Lower Allen Township.

  - Cumberland Parkway, between US Route 15 and PA Route 114, and West Winding Hill Road, between South Market Street and South York Street, are the primary east/west roadways in the north central part of the Township and connect South York Street and South Market Street with US 15 near the Turnpike Interchange.

  - Gettysburg Pike runs parallel to US 15 between the Winding Hill Road interchange and the Carroll Township line and provides an alternate northeast-southwest route to US 15.

ACCESS POINTS TO MAJOR ROADWAYS

- As indicated in Section 6.1, the Pennsylvania Turnpike (1-76) and US Route 15 are the major roadways that service Upper Allen Township. The Turnpike provides an interchange (#236) and toll plaza at US Route 15. Several satellite toll lanes have been added at this plaza in recent history, but the facility does not provide sufficient capacity during peak periods of use resulting in delays and congestion.

- U.S. 15 provides several grade-separated and at-grade intersections along its length within the township. Grade-separated interchanges are provided at the Turnpike, Winding Hill Road/Cumberland Parkway, PA Route 114, and Lisburn Road. The interchanges at Winding

Hill Road, PA Route 114 (Bowmansdale), and Lisburn Road relieve traffic backups on US 15 during rush hour and provide a tremendous safety improvement.

ROADWAY CLASSIFICATIONS

- With this update to the Comprehensive Plan, the Township proposes to incorporate the principles of Smart Transportation into recommended procedures for roadway and sub-division design. The *Smart Transportation Guidebook*, published in 2008, encourages a new approach to roadway planning and design that integrates the desired characteristics of the roadway system with the function purpose of the roadway and the context of surrounding land-use. Table 7-1 provides an overview of the proposed Smart Transportation based functional classification system for Upper Allen Township.

Table 7.1 Roadway Classification Categories

Roadway Class	Roadway Type	Desired Operating Speed (mph)	Average Trip Length (ml)	Volume	Intersection Spacing (ft)	Comments
Arterial	Regional	30-55	15-35	10,000-40,000	660-1,320	Roadways in this category would be considered "Principal Arterial" in traditional functional classification.
Arterial	Community	25-55	7-25	5,000-25,000	300-1,320	Often classified as "Minor Arterial" in traditional classification but may include road segments classified as "Principal Arterial."
Collector	Community	25-55	5-10	5,000-15,000	300-660	Often similar in appearance to a community arterial. Typically classified as "Major Collector."
Collector	Neighborhood	25-35	<7	<6,000	300-660	Similar in appearance to local roadways. Typically classified as "Minor Collector."
Local	Local	20-30	<5	<3,000	200-660	

Figure 7-1 graphically illustrates the proposed classifications for roadways within the Township.

Table 7-2 provides a listing of Township roadways categorized by the proposed roadway classification. All roads not shown on the table are considered local roads.

Table 7-2. Proposed Roadway Classifications

Interstate	Regional Arterial	Community Arterial	Community Collector	Neighborhood Collector	Local
Pennsylvania Turnpike (I-76)	US Route 15	Cumberland Parkway PA Route 114 Lisburn Road Gettysburg Pike, north of PA Route 114 Winding Hill Road, between Gettysburg Pike and Orchard Blvd	Gettysburg Pike, south of PA Route 114 Winding Hill Road, between PA Route 114 and Gettysburg Pike Mt. Allen Drive Market Street, south of Lisburn Williams Grove Road	Bumblebee Hollow Road Kim Acres Drive Grantham Road Winding Hill Road, west of PA Route 114 Orchard Blvd Lake Drive Harvest Drive Hertzler Road Arcona Road Fisher Road S York Street McCormick Rd Mill Road Louise Drive and Ritter Road Stumpstown Road Shepherdstown Road Allendale Road Wilson Lane Independence Avenue	All Other Roads Not Listed

TRAFFIC VOLUMES

Existing (2010) and future (2030) traffic volumes were established for the major roadways in the Township based on a travel demand model developed specifically for the study area. This model considers the following factors in the projection and validation of traffic volumes:

- Existing traffic volumes;
- Existing land-use trip generation;
- Estimated origin-destination travel patterns;
- Future population growth trends;
- Future employment growth trends;
- Pending approved/un-built/partially built land-use development by location, type, and, intensity;
- Future land-use projection by location, type, and intensity;
- Existing and future physical roadway characteristics (e.g., capacity, speed limit, number of lanes);
- Existing and future intersection characteristics, land-use allocations, and type of traffic control;
- Estimated regional traffic growth in through traffic projected to Year 2030.

The most significant determinants of future traffic volumes is the location and intensity of future land-use development. These are also the primary factors where local government has some control. Regional population and employment trends will have a significant impact on growth of the Township. However, growth can be regulated by the Township's ability to plan, zone, and approve both commercial and residential developments, encourage employment opportunity, program capital transportation improvements, and foster alternative modes of travel.

Forecasts of future afternoon peak hour and average daily traffic (ADT) volumes have been prepared for 2030 based on the anticipated growth in through traffic (not originating or destined to the Township), future land-use forecasts, and the existing/proposed configuration of streets and intersections. Utilizing these forecasted volumes, levels of service have been estimated to identify potential areas of congestion.

Table 7-3 illustrates the predicted trip generation associated with pending land development within the Township.

Table 7-3. Trip Generation, Pending Land-Use Development

TAZ	Development	ITE Code	Size	Units	Trip Generation (VPH) Afternoon Peak Hour		
					Total	Enter	Exit
262	Terrace @ Shepherdstown	210	37	Dwellings	37	23	14
243	Melbourne Place	210	57	Dwellings	58	37	21
178	Orchard Glen PRD	210	289	Dwellings	292	184	108
202	Autumn Chase	210	295	Dwellings	298	188	110
248	Winding Hills	210	506	Dwellings	511	322	189
17	Bumble Bee	210	120	Dwellings	121	76	45
202	Pennington	210	37	Dwellings	37	23	14
263	Arborfield	210	4	Dwellings	4	3	1
1	Trindle Station	210	5	Dwellings	5	3	2
19	Bowmans Preserve	210	33	Dwellings	33	21	12
240	Hollinger Assisted Living	254	155	Beds	34	15	19
9	Meadowview Estates	210	89	Dwellings	90	57	33
246	American Mint, Expansion	110	54	KSF	52	6	46
9	Lindenwood	210	3	Dwellings	3	2	1
262	635 Gettysburg Pike	710	6.82	KSF	10	2	8
16	Messiah Performing Arts			KSF	46	29	17
244	Hampshire			KSF	334	259	75
TOTAL					**1965**	**1250**	**715**

Table 7-4 illustrates the predicted trip generation associated with the projected Year 2030 land-use assumptions. The traffic analysis zones referenced in these two tables are illustrated in Figure 7-1.

Table 7-4. Trip Generation, Forecasted Land-Use Development

TAZ	Land-Use	ITE Code	Size	Units	Trip Generation (VPH) Afternoon Peak Hour		
					Total	Enter	Exit
3	Ag-Residential	210	4	Dwellings	4	3	1
3	Ag-Residential	210	11	Dwellings	11	7	4
9	Ag-Residential	210	5	Dwellings	5	3	2
3	Residential – Low	210	123	Dwellings	124	77	47
14	Residential-Medium	210	118	Dwellings	119	74	45
502	Commercial Retail	820	299	KSF	1115	147	968
17	Hotel/Convention Center	310	650	Rooms	384	345	39
224	Residential-Medium	210	72	Dwellings	73	45	28
172	Ag-Residential	210	11	Dwellings	11	7	4
220	Ag-Residential	210	5	Dwellings	5	3	2
500	TND-Commercial	814	100	KSF	271	44	227
500	TND-Residential	210	530	Dwellings	535	334	201
58	Residential-Low	210	42	Dwellings	42	26	16
501	Ag-Residential	210	15	Dwellings	15	9	6
61	Village Mixed Use	814	93	KSF	252	41	211
262	Village Mixed Use	814	120	KSF	325	53	272
234	Village Mixed Use	814	96	KSF	260	42	218
TOTAL					**3551**	**1260**	**2291**

LEVEL-OF-SERVICE

Level of service (LOS) provides an objective measure of how well a facility operates and is generally estimated utilizing the methodologies contained in the Highway Capacity Manual published by the Transportation Research Board. Table 7-5 provides a brief description of levels of service for signalized and un-signalized intersections as well as roadway segments.

Table 7-5. Level of Service Definitions

Level of Service	Roadway Segment	Signalized Intersection	Unsignalized Intersection
A	Primarily free-flow operations. Vehicles are almost completely unimpeded.	Very low delay (<10.0 sec./veh.). Most vehicles do not stop at all.	Delay less than 10.0 sec/.veh. Little or no delay to minor street traffic.
B	Reasonable free-flow. Ability to maneuver is only slightly restricted.	Delay in the range of 10.1 to 20.0 sec/veh. More vehicles stop than for LOS A.	Delay in the range of 10.1 to 15.0 sec./veh. Short delays to minor street traffic.
C	Speeds still at or near free-flow speed. Freedom to maneuver is noticeably restricted.	Delay in the range of 20.1 to 35.0 sec/.veh. Individual cycle failures may begin to appear. The number of vehicles stopping is significant.	Delay in the range of 15.1 to 25.0 sec./veh. Average delays to minor street traffic.
D	Speeds begin to decline slightly. Minor incidents can be expected to create queuing.	Delay in the range of 35.1 to 55.0 sec./veh. Influence of congestion becomes more noticeable. Individual cycle failures are noticeable.	Delay in the range of 25.1 to 35.0 sec./veh. Long delays to minor street traffic.
E	At capacity. There are virtually no usable gaps in the traffic stream.	Delay in the range of 55.1 to 80.0 sec./veh. Considered to be limit of acceptable delay. Individual cycle failures are frequent.	Delay in the range of 35.1 to 50.0 sec./veh. Very long delays to minor street traffic.
F	Breakdown in vehicular flow. Condition exists in queues behind breakdown points.	Delay in excess of 80.0 sec./veh. Arrival flow rates exceed capacity. Considered to be unacceptable.	Delay exceeds 50.0 sec./veh. Demand volume exceeds capacity. Extreme delays with queuing.

ROAD SEGMENTS

Level-of-service analyses were conducted to identify areas of traffic congestion; locations where operational performance with existing intersection characteristics fall below LOS D. Table 7-6 details existing and anticipated ADT volumes and levels of service for the major thoroughfares of the Township's roadway system. This table indicates that the major thoroughfares throughout the Township will continue to operate at acceptable levels of service in the future. However, there may be point locations along these routes (traffic signals, commercial areas), which inhibit traffic flow and would therefore require some type of improvement or modification to facilitate traffic flow. In addition, U.S. Route 15 in the vicinity of the Pennsylvania Turnpike will begin to approach capacity, and improvements may be required to increase capacity in this area.

Table 7-6. Level-of-Service on Road Segments

NODE	INTERSECTION	YEAR 2011 BASE			YEAR 2030 PENDING			YEAR 2030 Buildout			YEAR 2030 Buildout Mitigate		
		PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT
1	Hertzler, West of Arcona	35	A	440	68	A	850	75	A	940	82	A	1030
1	Arcona, North of Hertzler	128	A	1600	185	A	2310	215	A	2690	238	A	2980
1	Arcona, South of Hertzler	109	A	1360	135	A	1690	158	A	1980	172	A	2150
2	Winding Hill, West of Arcona	91	A	1140	240	A	3000	269	A	3360	211	A	2640
2	Arcona, North of Winding Hill	150	A	1880	307	A	3840	349	A	4360	318	A	3980
2	Arcona, South of Winding Hill	127	A	1590	185	A	2310	216	A	2700	237	A	2960
3	Cumberland Parkway, east of Gettysburg Pike	1259	C	15740	1912	D	23900	2152	D	26900	1755	D	21940
3	Cumberland Parkway, west of Gettysburg Pike	1044	C	13050	1290	C	16130	1524	D	19050	1289	C	16110
3	Gettysburg Pike, north of Cumberland Parkway	1051	C	13140	1050	C	13130	1051	C	13140	1052	C	13150
3	Gettysburg Pike, south of Cumberland Parkway	1276	C	15950	1760	D	22000	2007	D	25090	1362	C	17030
4	York St, west of Gettysburg Pike	259	A	3240	351	A	4390	359	A	4490	360	A	4500
4	Gettysburg Pike, north of York St	696	B	8700	816	B	10200	1055	C	13190	1118	C	13980
4	Gettysburg Pike, south of York St	609	B	7610	699	B	8740	878	B	10980	1002	C	12530
5	Winding Hill, west of Gettysburg Pike	137	A	1710	332	A	4150	388	A	4850	603	B	7540
5	Gettysburg Pike, north of Winding Hill	1277	C	15960	1761	D	22010	2006	D	25080	1361	C	17010
5	Gettysburg Pike, south of Winding Hill	1326	C	16580	1797	D	22460	2200	E	27500	1792	D	22400
6	Fisher, west of Gettysburg Pike	244	A	3050	334	A	4180	384	A	4800	375	A	4690
6	Gettysburg Pike, north of Fisher	550	A	6880	553	A	6910	653	B	8160	882	B	11030
6	Gettysburg Pike, south of Fisher	444	A	5550	447	A	5590	495	A	6190	769	B	9610
7	Lisburn Rd, east of Gettysburg Pike	1235	C	15440	1530	D	19130	1757	D	21960	1675	D	20940
7	Lisburn Rd, west of Gettysburg Pike	903	B	11290	1135	C	14190	1278	C	15980	1240	C	15500
7	Gettysburg Pike, north of Lisburn	378	A	4730	428	A	5350	452	A	5650	683	B	8540
7	Gettysburg Pike, south of Lisburn	512	A	6400	673	B	8410	771	B	9640	762	B	9530
8	Mt. Allen Drive, east of Gettysburg Pike	1094	C	13680	1729	D	21610	2208	E	27600	2096	D	26200
8	Gettysburg Pike, north of Mt. Allen Drive	1325	C	16560	1796	D	22450	2200	E	27500	1793	D	22410
8	Gettysburg Pike, south of Mt. Allen Drive	421	A	5260	377	A	4710	458	A	5730	773	B	9660
9	Grantham, west of Gettysburg Pike	196	A	2450	231	A	2890	282	A	3530	276	A	3450
9	Gettysburg Pike, north of Grantham	487	A	6090	651	B	8140	749	B	9360	743	B	9290
9	Gettysburg Pike, south of Grantham	333	A	4160	448	A	5600	495	A	6190	495	A	6190
10	Lisburn Rd, east of Grantham Rd	495	A	6190	674	B	8430	803	B	10040	681	B	8510
10	Lisburn Rd, west of Grantham Rd	498	A	6230	549	A	6860	683	B	8540	616	B	7700
10	Grantham Rd, south of Lisburn Rd.	377	A	4710	481	A	6010	456	A	5700	407	A	5090
11	Hertzler Rd, east of Klinedinst Rd	35	A	440	68	A	850	75	A	940	81	A	1010
11	Hertzler Rd, west of Klinedinst Rd	57	A	710	157	A	1960	196	A	2450	198	A	2480
11	Klinedinst Rd, south of Hertzler Rd	22	A	280	89	A	1110	121	A	1510	117	A	1460

NODE	INTERSECTION	YEAR 2011 BASE			YEAR 2030 PENDING			YEAR 2030 Buildout			YEAR 2030 Buildout Mitigate		
		PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT
12	Lisburn Rd, east of Route 15S Ramp	872	B	10900	1109	C	13860	1287	C	16090	1383	C	17290
12	Lisburn Rd, west of Route 15S Ramp	1235	C	15440	1530	D	19130	1756	D	21950	1676	D	20950
12	Route 15S Ramp, north of Lisburn Rd	873	B	10910	928	C	11600	1060	C	13250	1037	C	12960
13	Lisburn Rd, east of Mill Rd	496	A	6200	558	A	6980	688	B	8600	628	B	7850
13	Lisburn Rd, west of Mill Rd	770	B	9630	937	C	11710	1072	C	13400	1304	C	16300
13	Mill Rd, north of Lisburn Rd	27	A	340	87	A	1090	280	A	3500	280	A	3500
13	Mill Rd, south of Lisburn Rd	293	A	3660	416	A	5200	548	A	6850	598	B	7480
14	Lisburn Rd, east of Route 15N Ramp	794	B	9930	1010	C	12630	1155	C	14440	1383	C	17290
14	Lisburn Rd, west of Route 15N Ramp	873	B	10910	1111	C	13890	1287	C	16090	1383	C	17290
14	Route 15N Ramp, south of Lisburn Rd	85	A	1060	160	A	2000	177	A	2210	167	A	2090
15	Hertzler Rd, east of Mt Allen Rd	143	A	1790	513	A	6410	513	A	6410	533	A	6660
15	Mt Allen Rd, north of Hertzler Rd	278	A	3480	507	A	6340	727	B	9090	490	A	6130
15	Mt Allen Rd, south of Hertzler Rd	243	A	3040	602	B	7530	824	B	10300	517	A	6460
16	Winding Hill Rd, west of Mt Allen Drive	1095	C	13690	1729	D	21610	2209	E	27610	2097	D	26210
16	Winding Hill Rd. north of Mt Allen Drive	794	B	9930	1220	C	15250	1478	D	18480	1597	D	19960
16	Mt Allen Drive, south of Winding Hill Rd	547	A	6840	649	B	8110	895	B	11190	656	B	8200
17	Route 114, east of Arcona Rd	432	A	5400	527	A	6590	602	B	7530	602	B	7530
17	Route 114, west of Arcona Rd	425	A	5310	463	A	5790	526	A	6580	529	A	6610
17	Arcona Rd, north of Route 114	106	A	1330	121	A	1510	147	A	1840	161	A	2010
17	Arcona Rd, south of Route 114	29	A	360	41	A	510	43	A	540	44	A	550
18	Route 114, east of Bumblebee Hollow Rd	864	B	10800	899	B	11240	1027	C	12840	1020	C	12750
18	Route 114, west of Bumblebee Hollow Rd	1379	C	17240	1661	D	20760	1976	D	24700	1851	D	23140
18	Kim Acres, north of Route 114	401	A	5010	476	A	5950	733	B	9160	477	A	5960
18	Bumblebee Hollow Rd, south of Route 114	560	A	7000	662	B	8280	958	C	11980	720	B	9000
19	Cumberland Parkway, east of Route 114	879	B	10990	1108	C	13850	1269	C	15860	1099	C	13740
19	Cumberland Parkway, west of Route 114	165	A	2060	163	A	2040	207	A	2590	179	A	2240
19	Route 114, north of Cumberland Parkway	1517	D	18960	2124	D	26550	2389	E	29860	2599	E	32490
19	Route 114, south of Cumberland Parkway	1173	C	14660	1527	D	19090	1621	D	20260	2001	D	25010
20	Route 114, east of Gettysburg Pike	1454	D	18180	1669	D	20860	2380	E	29750	1876	D	23450
20	Route 114, west of Gettysburg Pike	1008	C	12600	751	B	9390	1730	D	21630	1365	C	17060
20	Gettysburg Pike, north of Route 114	591	B	7390	690	B	8630	465	A	5810	541	A	6760
20	Gettysburg Pike, south of Route 114	697	B	8710	816	B	10200	1141	C	14260	1206	C	15080
21	Shepardstown Rd, east of Route 114	546	A	6830	785	B	9810	1184	C	14800	1382	C	17280
21	Route 114, north of Shepardstown Rd	954	C	11930	1272	C	15900	1460	D	18250	1460	D	18250
21	Route 114, south of Shepardstown Rd	1494	D	18680	1955	D	24440	2204	E	27550	2402	E	30030

NODE	INTERSECTION	YEAR 2011 BASE			YEAR 2030 PENDING			YEAR 2030 Buildout			YEAR 2030 Buildout Mitigate		
		PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT
22	Route 114, east of Klinedinst	423	A	5290	472	A	5900	534	A	6680	533	A	6660
22	Route 114, west of Klinedinst	405	A	5060	385	A	4810	441	A	5510	422	A	5280
22	Klinedinst, north or Route 114	22	A	280	89	A	1110	121	A	1510	117	A	1460
23	Route 114, east of McCormick	400	A	5000	398	A	4980	454	A	5680	435	A	5440
23	Route 114, west of McCormick	415	A	5190	423	A	5290	489	A	6110	470	A	5880
23	McCormick, south of Route 114	21	A	260	25	A	310	39	A	490	39	A	490
24	Route 114, east of Mt. Allen	416	A	5200	423	A	5290	489	A	6110	470	A	5880
24	Route 114, west of Mt. Allen	392	A	4900	539	A	6740	611	B	7640	532	A	6650
24	Mt. Allen, north of Route 114	64	A	800	160	A	2000	184	A	2300	118	A	1480
25	Route 114, east of Route 15N Ramp	1381	C	17260	1660	D	20750	1977	D	24710	1851	D	23140
25	Route 114, west of Route 15N Ramp	288	A	3600	357	A	4460	723	B	9040	476	A	5950
25	Route 15N Ramp, south of Route 114	135	A	1690	133	A	1660	147	A	1840	269	A	3360
26	Route 114, east of Route 15S Ramp	1334	C	16680	1527	D	19090	1995	D	24940	1883	D	23540
26	Route 114, west of Route 15S Ramp	1455	D	18190	1710	D	21380	2381	E	29760	1876	D	23450
26	Route 15S Ramp, north of Route 114	326	A	4080	296	A	3700	357	A	4460	466	A	5830
27	Lisburn, east of Market St.	408	A	5100	562	A	7030	659	B	8240	622	B	7780
27	Route 114, west of Market St.	280	A	3500	457	A	5710	439	A	5490	494	A	6180
27	Route 114, north of Lisburn	600	B	7500	646	B	8080	765	B	9560	767	B	9590
27	Market St, south of Lisburn	458	A	5730	593	B	7410	631	B	7890	631	B	7890
28	Winding Hill Rd, east of Route 114	229	A	2860	305	A	3810	298	A	3730	554	A	6930
28	Winding Hill Rd, west of Route 114	218	A	2730	279	A	3490	382	A	4780	398	A	4980
28	Route 114, north of Winding Hill Rd	1173	C	14660	1526	D	19080	1621	D	20260	2001	D	25010
28	Route 114, south of Winding Hill Rd	1004	C	12550	1138	C	14230	1283	C	16040	1325	C	16560
29	Orchard Blvd, east of Winding Hill Rd	175	A	2190	511	A	6390	552	A	6900	534	A	6680
29	Route 15N Ramp, west of Winding Hill Rd	592	B	7400	870	B	10880	1120	C	14000	1262	C	15780
29	Winding Hill Rd, north of Orchard Blvd	289	A	3610	453	A	5660	500	A	6250	409	A	5110
29	Winding Hill Rd, south of Orchard Blvd	794	B	9930	1218	C	15230	1478	D	18480	1599	D	19990
10216	Route 15 NB, South of Lisburn	2263	B	28290	2975	C	37190	3009	C	37610	3009	C	37610
10215	Route 15 SB, South of Lisburn	1867	B	23340	2430	C	30380	2515	C	31440	2515	C	31440
10456	Route 15 NB, Soute of Route 114	2481	C	31010	3110	C	38880	3204	C	40050	3259	C	40740
10453	Route 15 SB, South or Route 114	2644	C	33050	3247	C	40590	3449	D	43110	3405	D	42560
10650	Route 15 NB, South of Winding Hill	2635	C	32940	3334	C	41680	3779	D	47240	3466	D	43330
10959	Route 15 SB, South of Winding Hill	2767	C	34590	3284	C	41050	3468	D	43350	3567	D	44590
10773	Route 15 NB, South of Turnpike	3033	C	37910	3943	D	49290	4539	E	56740	4584	E	57300
10760	Route 15 SB, North of Turnpike	3749	D	46860	4974	F	62180	5295	F	66190	4933	F	61660

NODE	INTERSECTION	YEAR 2011 BASE			YEAR 2030 PENDING			YEAR 2030 Buildout			YEAR 2030 Buildout Mitigate		
		PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT	PEAK HOUR (vph)	LOS	ADT
11020	Route 15 NB, South of Rossmoyne	3333	C	41660	3960	D	49500	4031	D	50390	4231	E	52890
11019	Route 15 NB, North of Rossmjoyne	3793	D	47410	4695	E	58690	4992	F	62400	4674	E	58430
TOTAL		**59232**		**712220**	**73169**		**914690**	**88106**		**1101420**	**85410**		**1067750**

ADT = Average Daily Traffic

LOS for 2-lane roads based on percent time spent following

LOS for freewayss (US Route 15) based on volume/capacity ratio at 65 MPH free-flow speed.

INTERSECTIONS

Level-of-service analyses were conducted to identify areas of traffic congestion at intersections, intersection approaches, and intersection lane groups. Table 7-7 illustrates existing and future peak hour traffic volumes, levels of service, queue lengths, and status of auxiliary turn lane/peak hour traffic signal warrants for 29 key intersections located throughout the Township. Additionally, Table 7-7 illustrates projected traffic volumes, level-of-service, and warrant analyses with full implementation of a capital improvements program to restore preferred LOS D or better conditions at the key intersections.

Traffic congestion currently or is projected to occur at the following locations within the Township:

- Gettysburg Pike at Cumberland Parkway;
- Gettysburg Pike at York Street;
- Gettysburg Pike at Winding Hill Road;
- Lisburn Road at Route 15 South Ramps;
- Lisburn Road at Mill Road;
- Mt. Allen Drive at Hertzler Road;
- Winding Hill Road at Mt. Allen Drive;
- PA Route 114 at Cumberland Parkway;
- PA Route 114 at Gettysburg Pike;
- PA Route 114 at Shepherdstown Road;
- PA Route 114 at Route 15 North Ramps;
- PA Route 114 at Route 15 South Ramps; and
- PA Route 114 at Winding Hill Road.

Table 7-7. Summary of Traffic Projections and Analyses

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
1			EBL	2	14	26	20	A(8.8)	A(9.3)	A(9.5)	A(9.6)	1	2	3	2	---	---	---	---
1			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1		Minor	EBR	5	4	5	4	A(8.8)	A(9.3)	A(9.5)	A(9.6)	1	2	3	2	---	---	---	---
1			WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1		Minor	WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1	Arcona at Hertzler		NBL	3	5	4	4	A(0.7)	A(0.9)	A(0.7)	A(0.7)	0	0	0	0	---	---	---	---
1			NBT	30	37	40	39	A(0.7)	A(0.9)	A(0.7)	A(0.7)	0	0	0	0	---	---	---	---
1		Major	NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1			SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
1			SBT	71	89	109	125	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
1		Major	SBR	25	45	40	54	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
1		**Un-Signalized**	**AVG**	**136**	**194**	**224**	**246**	**A(0.6)**	**A(1.1)**	**A(1.5)**	**A(1.1)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**
2			EBL	18	111	137	55	A(9.1)	B(10.5)	B(10.9)	B(10.3)	4	17	23	11	---	---	---	---
2			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2		Minor	EBR	24	37	47	44	A(9.1)	B(10.5)	B(10.9)	B(10.3)	4	17	23	11	---	---	---	---
2			WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2		Minor	WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2	Arcona at Winding Hill		NBL	10	22	21	21	A(2.4)	A(3.3)	A(2.5)	A(2.8)	1	1	1	1	---	---	---	---
2			NBT	21	29	45	38	A(2.4)	A(3.3)	A(2.5)	A(2.8)	1	1	1	1	---	---	---	---
2		Major	NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2			SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
2			SBT	72	97	103	134	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
2		Major	SBR	39	70	64	91	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
2		**Un-Signalized**	**AVG**	**184**	**366**	**417**	**383**	**A(2.5)**	**A(4.7)**	**A(5.2)**	**A(3.1)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
3	Gettysburg Pike at Cumberland Parkway	Signal	EBL	139	100	83	120	C(32.0)	E(55.0)	D(40.8)	D(53.8)	#143	m#161	m63	#188	150	100	100	150
3			EBT	19	30	97	116	-	-	-	-	79	#294	m#335	278	---	---	---	---
3			EBR	233	347	409	216	C(20.8)	D(36.0)	E(63.1)	C(26.7)	0	0	0	0	175	250	275	175
3		Signal	WBL	489	881	977	607	C(33.3)	D(44.7)	E(56.4)	D(44.0)	#193	#449	#526	#289	350	525	600	400
3			WBT	388	611	709	667	D(41.0)	C(23.8)	C(27.8)	C(28.2)	#328	512	#672	#667	---	---	---	---
3			WBR	243	309	304	286	C(20.0)	C(24.4)	C(24.4)	C(24.7)	66	206	208	175	200	250	250	200
3		Signal	NBL	101	86	124	69	B(18.8)	C(31.9)	C(32.9)	B(18.4)	61	67	m#104	m83	100	100	150	---
3			NBT	172	145	168	149	C(32.3)	D(37.4)	C(33.9)	C(31.0)	#195	150	m#214	187	---	---	---	---
3			NBR	34	1	0	2	C(32.3)	C(31.5)	C(31.5)	C(31.0)	0	0	0	0	---	---	---	---
3		Signal	SBL	86	80	65	77	B(19.6)	D(35.9)	D(36.0)	D(35.5)	52	87	76	84	100	100	100	100
3			SBT	247	300	329	319	C(26.1)	D(48.2)	D(53.1)	D(48.8)	#99	#175	#226	#192	---	---	---	---
3			SBR	164	116	102	101	C(23.0)	C(27.3)	C(27.3)	D(38.8)	#61	64	62	60	150	100	100	100
3		**Signal**	**AVG**	**2315**	**3006**	**3367**	**2729**	**C(29.0)**	**D(37.5)**	**D(45.7)**	**D(35.2)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4	Gettysburg Road at York St	Minor	EBL	83	134	173	125	B(14.6)	C(18.6)	E(36.4)	D(46.0)	28	62	136	197	---	---	---	---
4			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4			EBR	56	88	50	84	B(14.6)	C(18.6)	E(36.4)	D(46.0)	28	62	136	0	---	---	---	---
4		Minor	WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4		Minor	NBL	30	29	41	38	A(1.2)	A(1.0)	A(1.0)	A(5.1)	2	2	3	0	---	---	75	75
4			NBT	209	275	461	441	A(1.2)	A(1.0)	A(1.0)	A(5.1)	2	2	3	m185	---	---	---	---
4			NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4		Major	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
4			SBT	314	307	326	439	A(0.0)	A(0.0)	A(0.0)	A(7.2)	0	0	0	258	---	---	---	---
4			SBR	90	100	95	113	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	100	100	100
4		**Un-Signalized**	**AVG**	**782**	**933**	**1146**	**1240**	**A(3.0)**	**A(4.8)**	**A(7.5)**	**B(12.9)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**Yes**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
5	E. Winding Hill at Gettysburg Pike	Minor	EBL	17	29	11	0	C(17.2)	F(53.7)	F(67.7)	E(37.7)	23	171	250	284	---	---	---	---
5			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5			EBR	73	163	226	477	C(17.2)	F(53.7)	F(67.7)	E(37.7)	23	171	250	284	---	---	---	325
5		Minor	WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5		Major	NBL	20	21	65	40	B(10.1)	B(13.4)	C(16.4)	B(10.9)	2	4	15	5	75	75	100	75
5			NBT	290	203	281	219	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
5			NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5		Major	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
5			SBT	943	1410	1628	1056	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
5			SBR	27	119	86	86	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	100	100	100
5		**Un-Signalized**	**AVG**	**1370**	**1945**	**2297**	**1878**	**A(1.3)**	**A(5.4)**	**A(7.4)**	**A(9.8)**	**-**	**-**	**-**	**-**	**No**	**Yes**	**Yes**	**Yes**
6	Fisher Road at Gettysburg Pike	Minor	EBL	71	86	101	96	B(12.1)	B(12.8)	B(14.2)	C(19.6)	10	14	19	29	---	---	---	---
6			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6			EBR	47	60	47	63	A(9.7)	A(9.4)	A(9.2)	B(10.6)	5	6	4	7	---	---	---	---
6		Minor	WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6		Major	NBL	22	54	66	68	A(1.1)	A(2.3)	A(2.2)	A(2.1)	1	3	4	5	---	---	---	100
6			NBT	154	163	230	298	A(1.1)	A(2.3)	A(2.2)	A(2.1)	1	3	4	5	---	---	---	---
6			NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6		Major	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
6			SBT	221	170	152	340	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
6			SBR	104	134	170	148	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	150
6		**Un-Signalized**	**AVG**	**619**	**667**	**766**	**1013**	**A(2.4)**	**A(3.2)**	**A(3.3)**	**A(3.3)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
8	Gettysburg Pike at Mt. Allen Drive		EBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8		Signal	EBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8			WBL	37	49	57	41	A(4.7)	B(10.8)	C(28.8)	C(25.5)	11	20	m44	69	---	---	---	---
8			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8		Signal	WBR	232	171	193	161	A(1.2)	B(16.2)	B(16.2)	B(10.8)	15	0	25	23	175	---	---	---
8			NBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8			NBT	78	53	153	99	D(44.5)	D(47.2)	D(54.2)	D(49.2)	102	m79	m#181	m120	---	---	---	---
8		Signal	NBR	58	106	176	497	D(41.3)	C(28.4)	C(28.4)	D(45.5)	44	67	m62	m#541	---	---	150	350
8			SBL	767	1403	1782	1397	D(36.5)	B(10.9)	B(11.1)	B(16.7)	313	m129	m163	267	475	800	975	800
8			SBT	248	169	72	136	B(18.4)	A(3.3)	A(1.5)	A(4.2)	143	m19	m6	m26	---	---	---	---
8		Signal	SBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
8		**Signal**	**AVG**	**1420**	**1951**	**2433**	**2331**	**C(27.4)**	**B(13.0)**	**B(16.0)**	**C(23.2)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9	Gettysburg Pike at Grantham Road		EBL	49	67	72	71	A(8.4)	A(9.0)	A(9.3)	A(9.3)	0	0	0	0	---	---	---	---
9			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9		Minor	EBR	10	5	5	5	A(8.4)	A(9.0)	A(9.3)	A(9.3)	0	0	0	0	---	---	---	---
9			WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9		Minor	WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9			NBL	11	9	9	9	A(8.2)	A(8.8)	A(9.1)	A(9.1)	0	0	0	0	---	---	---	---
9			NBT	112	169	180	180	A(8.2)	A(8.8)	A(9.1)	A(9.1)	0	0	0	0	---	---	---	---
9		Major	NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9			SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
9			SBT	200	265	301	301	A(9.2)	B(10.7)	B(12.5)	B(12.4)	0	0	0	0	---	---	---	---
9		Major	SBR	126	150	196	191	A(9.2)	A(9.0)	A(9.0)	B(12.4)	0	0	0	0	---	150	175	175
9		**Un-Signalized**	**AVG**	**508**	**665**	**763**	**757**	**A(8.8)**	**A(10.0)**	**B(11.3)**	**B(11.2)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
10	Grantham Road at Lisburn road	Major	EBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10			EBT	177	172	270	204	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10			EBR	86	88	79	82	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10		Major	WBL	83	106	175	111	A(3.4)	A(3.2)	A(4.3)	A(3.1)	5	7	13	7	---	100	150	100
10			WBT	131	199	245	241	A(3.4)	A(3.2)	A(4.3)	A(3.1)	5	7	13	7	---	---	---	---
10			WBR	0	0	0	0	A(3.4)	A(3.6)	A(3.6)	A(3.1)	5	7	13	7	---	---	---	---
10		Minor	NBL	104	90	89	89	B(14.7)	C(16.6)	D(26.1)	C(17.7)	42	68	86	56	---	---	---	---
10			NBT	0	0	0	0	B(14.7)	C(16.6)	D(26.1)	C(17.7)	42	68	86	56	---	---	---	---
10			NBR	104	197	113	125	B(14.7)	C(15.1)	C(15.1)	C(17.7)	42	68	86	56	---	---	---	---
10		Minor	SBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10			SBT	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10			SBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
10		**Un-Signalized**	**AVG**	**685**	**852**	**971**	**852**	**A(5.5)**	**A(6.8)**	**A(7.3)**	**A(5.7)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**
11	Klinedinst at Hertzler	Major	EBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11			EBT	7	18	31	24	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
11			EBR	12	68	103	96	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
11		Major	WBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
11			WBT	28	50	44	57	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
11			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11		Minor	NBL	10	21	18	21	A(8.7)	A(9.1)	A(9.2)	A(9.2)	1	2	2	2	---	---	---	---
11			NBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11			NBR	0	0	0	0	A(8.7)	A(8.8)	A(8.8)	A(9.2)	1	2	2	2	---	---	---	---
11		Minor	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11			SBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11			SBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
11		**Un-Signalized**	**AVG**	**57**	**157**	**196**	**198**	**A(1.5)**	**A(1.2)**	**A(0.8)**	**A(1.0)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	No

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
12	Route 15S at Lisburn Road	Signal	EBL	0	0	0	0	A(4.8)	B(12.7)	B(15.2)	C(24.0)	0	0	0	0	---	---	---	---
12			EBT	324	432	544	558	A(4.8)	B(12.7)	B(15.2)	C(24.0)	31	164	135	m272	---	---	---	---
12			EBR	46	28	53	56	A(2.9)	A(7.3)	A(9.7)	C(33.6)	m3	m9	m14	m42	---	---	---	75
12		Signal	WBL	50	83	72	90	A(3.9)	B(13.3)	B(16.9)	B(13.2)	13	51	89	55	---	100	100	100
12			WBT	245	368	385	380	A(4.6)	B(15.5)	B(19.9)	B(14.4)	159	340	368	172	---	---	---	---
12			WBR	0	0	0	0	A(4.6)	A(5.8)	A(5.8)	B(14.4)	0	0	0	0	---	---	---	---
12		Signal	NBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
12			NBT	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
12			NBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
12		Signal	SBL	253	226	286	355	D(40.0)	B(19.3)	B(17.8)	C(23.0)	231	131	159	214	---	---	---	---
12			SBT	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
12			SBR	620	702	774	682	E(79.7)	D(40.0)	D(40.0)	D(35.7)	#461	445	#652	431	400	450	475	450
12		Signal	AVG	1538	1839	2114	2121	D(40.7)	C(21.2)	C(24.3)	C(25.7)	-	-	-	-	-	-	-	-
13	Mill Road at Lisburn Road	Major	EBL	11	37	151	171	B(12.0)	C(16.8)	F(74.5)	D(32.4)	3	3	3	3	---	75	150	150
13			EBT	250	242	227	268	B(12.0)	C(16.8)	F(74.5)	D(32.4)	3	3	3	3	---	---	---	---
13			EBR	139	210	230	292	B(12.0)	C(16.8)	F(74.5)	B(12.1)	3	3	3	10	150	175	175	200
13		Major	WBL	6	17	14	14	B(10.1)	B(12.2)	C(17.4)	C(17.6)	10	10	10	0	---	---	---	---
13			WBT	226	261	258	278	B(10.1)	B(12.2)	C(17.4)	C(17.6)	10	10	10	0	---	---	---	---
13			WBR	3	14	63	43	B(10.1)	A(10.0)	A(10.0)	C(17.6)	10	10	10	0	---	---	---	---
13		Minor	NBL	135	167	174	260	B(10.3)	B(11.9)	C(17.8)	C(17.8)	0	0	0	0	---	---	---	---
13			NBT	2	4	13	13	B(10.3)	B(11.9)	C(17.8)	C(17.8)	0	0	0	0	---	---	---	---
13			NBR	10	15	111	13	B(10.3)	A(9.8)	A(9.8)	C(17.8)	0	0	0	0	---	---	---	---
13		Minor	SBL	1	9	15	12	A(8.3)	A(9.3)	B(11.2)	B(10.9)	0	0	0	10	---	---	---	---
13			SBT	1	3	6	6	A(8.3)	A(9.3)	B(11.2)	B(10.9)	0	0	0	10	---	---	---	---
13			SBR	9	20	32	35	A(8.3)	A(8.1)	A(8.1)	B(10.9)	0	0	0	10	---	---	---	---
13		**Un-Signalized**	**AVG**	**793**	**999**	**1294**	**1405**	**B(11.1)**	**B(14.3)**	**E(44.0)**	**C(20.9)**	**-**	**-**	**-**	**-**	**No**	**No**	**Yes**	**Yes**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
14	Route 15N at Lisburn Road	Signal	EBL	188	202	269	225	D(37.1)	D(51.5)	D(40.2)	D(46.5)	84	118	148	129	175	175	200	175
14			EBT	390	457	561	688	A(2.2)	A(2.5)	A(4.6)	A(4.4)	54	63	221	124	---	---	---	---
14			EBR	0	0	0	0	A(2.2)	A(2.5)	A(4.6)	A(4.4)	0	0	0	0	---	---	---	---
14		Signal	WBL	0	0	0	0	A(7.4)	A(8.6)	A(9.4)	A(8.8)	0	0	0	0	---	---	---	---
14			WBT	250	377	385	403	A(7.4)	A(8.6)	A(9.4)	A(8.8)	61	97	105	104	---	---	---	---
14			WBR	114	91	104	192	A(7.2)	A(6.7)	A(6.7)	A(8.5)	29	28	31	41	---	100	100	175
14		Signal	NBL	45	75	72	67	D(44.7)	D(44.5)	D(44.6)	D(44.7)	68	99	96	91	---	---	---	---
14			NBT	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
14			NBR	40	85	105	100	D(42.5)	D(48.9)	D(48.9)	D(41.7)	37	54	61	60	---	---	---	---
14		Signal	SBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
14			SBT	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
14			SBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
14		**Signal**	**AVG**	**1027**	**1287**	**1496**	**1675**	**B(13.9)**	**B(17.4)**	**B(17.0)**	**B(15.4)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
15	Mt. Allen at Hertzler Road	Minor	EBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15			EBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15		Minor	WBL	32	157	130	139	A(10.0)	C(22.8)	E(35.3)	C(22.2)	6	70	91	63	---	---	---	---
15			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15			WBR	29	35	21	40	A(10.0)	A(9.9)	A(9.9)	C(22.2)	6	70	91	63	---	---	---	---
15		Major	NBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15			NBT	56	46	45	42	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
15			NBR	22	147	175	141	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
15		Major	SBL	60	174	187	213	A(2.5)	A(3.9)	A(3.4)	A(4.8)	3	11	12	13	---	150	175	175
15			SBT	133	252	474	195	A(2.5)	A(3.9)	A(3.4)	A(4.8)	3	11	12	13	---	---	---	---
15			SBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
15		**Un-Signalized**	**AVG**	**332**	**811**	**1032**	**770**	**A(3.3)**	**A(7.5)**	**A(7.3)**	**A(7.7)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
16	Winding Hill Road at Mt. Allen Drive	Signal	EBL	503	1003	1207	1392	A(0.6)	A(1.3)	A(0.7)	B(13.5)	11	56	m23	373	---	---	---	---
16			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16			EBR	322	506	751	502	A(0.4)	A(1.1)	A(0.6)	C(27.2)	0	m0	m0	m83	250	350	475	350
16		Signal	WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16		Signal	NBL	102	73	62	76	F(137.2)	E(67.5)	F(116.0)	C(32.2)	#159	#108	#111	90	---	---	---	---
16			NBT	95	56	66	66	D(38.9)	D(40.5)	D(40.5)	C(29.8)	106	74	82	76	---	---	---	---
16			NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16		Signal	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
16			SBT	28	14	16	12	F(82.8)	F(109.4)	F(108.7)	C(22.9)	159	136	145	53	---	---	---	---
16			SBR	168	147	189	127	F(82.8)	C(26.2)	C(26.2)	C(22.9)	0	0	0	0	---	---	---	---
16		**Signal**	**AVG**	**1218**	**1799**	**2291**	**2175**	**C(28.2)**	**B(14.8)**	**B(14.6)**	**B(18.4)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
17	Arcona at Route 114	Major	EBL	10	9	12	11	A(0.4)	A(0.4)	A(0.4)	A(0.4)	1	1	1	1	---	---	---	---
17			EBT	192	192	244	240	A(0.4)	A(0.4)	A(0.4)	A(0.4)	1	1	1	1	---	---	---	---
17			EBR	2	9	10	9	A(0.4)	A(0.4)	A(0.4)	A(0.4)	1	1	1	1	---	---	---	---
17		Major	WBL	1	4	4	4	A(0.0)	A(0.1)	A(0.1)	A(0.1)	0	0	0	0	---	---	---	---
17			WBT	190	237	240	240	A(0.0)	A(0.1)	A(0.1)	A(0.1)	0	0	0	0	---	---	---	---
17			WBR	13	19	20	20	A(0.0)	A(0.0)	A(0.0)	A(0.1)	0	0	0	0	---	---	---	---
17		Minor	NBL	3	6	6	6	B(11.7)	B(11.6)	B(12.1)	B(12.1)	2	3	3	3	---	---	---	---
17			NBT	8	7	7	7	B(11.7)	B(11.6)	B(12.1)	B(12.1)	2	3	3	3	---	---	---	---
17			NBR	2	7	8	8	B(11.7)	B(11.7)	B(11.7)	B(12.1)	2	3	3	3	---	---	---	---
17		Minor	SBL	34	68	86	90	B(11.6)	B(13.5)	B(15.0)	B(14.9)	10	15	22	25	---	---	---	---
17			SBT	13	8	8	10	B(11.6)	B(13.5)	B(15.0)	B(14.9)	10	15	22	25	---	---	---	---
17			SBR	28	10	14	23	B(11.6)	B(11.6)	B(11.6)	B(14.9)	10	15	22	25	---	---	---	---
17		**Un-Signalized**	**AVG**	**496**	**576**	**659**	**668**	**A(2.3)**	**A(2.6)**	**A(3.1)**	**A(3.3)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
18			EBL	131	124	185	138	A(7.6)	A(7.8)	B(12.8)	A(5.9)	60	m41	m63	m17	150	150	175	150
18			EBT	478	492	522	611	A(9.5)	A(9.6)	B(14.9)	A(7.6)	228	m251	m231	m147	---	---	---	---
18		Signal	EBR	152	222	368	368	A(6.8)	A(2.2)	B(10.3)	A(6.0)	32	m12	m17	m11	150	175	275	275
18			WBL	26	6	8	8	B(13.4)	B(12.3)	C(22.2)	B(14.6)	27	m8	m12	m11	75	---	---	---
18			WBT	266	336	364	346	B(16.1)	B(16.9)	C(27.8)	B(16.8)	#183	261	345	311	---	---	---	---
18		Signal	WBR	8	20	19	19	B(16.1)	B(18.4)	B(18.4)	B(16.8)	0	0	0	0	---	---	---	---
18			NBL	226	304	341	213	C(33.3)	C(33.1)	C(32.2)	C(31.3)	#151	257	#289	183	175	250	250	---
18			NBT	57	59	52	57	B(16.3)	C(23.4)	B(19.3)	C(25.8)	50	m60	m49	m60	---	---	---	---
18		Signal	NBR	53	13	11	11	B(16.3)	D(38.0)	D(38.0)	C(25.8)	0	0	0	0	---	---	---	---
18			SBL	33	32	103	25	C(26.6)	D(47.3)	D(45.5)	D(45.3)	37	56	#140	46	---	---	100	---
18			SBT	46	58	178	63	C(27.7)	D(47.9)	D(51.9)	D(47.2)	46	86	#231	89	---	---	---	---
18		Signal	SBR	126	183	196	175	C(20.5)	D(50.7)	D(50.7)	D(35.6)	37	72	67	66	---	---	175	---
18	Bumblebee Hollow at Route 114	**Signal**	**AVG**	**1602**	**1849**	**2347**	**2034**	**B(15.8)**	**B(18.9)**	**C(24.2)**	**B(16.1)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
19			EBL	26	21	27	59	B(17.1)	D(35.5)	D(35.2)	D(37.0)	29	37	50	74	---	---	---	---
19			EBT	36	42	59	0	B(16.6)	C(33.6)	C(32.6)	D(35.1)	43	63	85	0	---	---	---	---
19		Signal	EBR	37	35	29	28	B(16.6)	C(33.6)	C(32.6)	D(35.1)	0	0	0	0	---	---	---	---
19			WBL	178	177	193	163	C(22.1)	C(29.9)	C(30.7)	D(37.0)	#146	m140	m150	m110	150	150	175	150
19			WBT	28	0	0	41	B(17.4)	C(26.6)	D(36.4)	C(26.9)	101	351	m#427	m23	---	---	---	---
19		Signal	WBR	380	560	630	583	B(17.4)	C(20.4)	C(20.4)	D(38.6)	0	0	0	m443	275	375	400	375
19			NBL	10	49	73	27	A(9.9)	B(12.0)	B(17.3)	B(11.0)	11	m42	m61	m21	---	75	75	75
19			NBT	386	520	734	741	B(14.8)	B(16.0)	C(32.1)	C(21.6)	240	#483	#760	#801	---	---	---	---
19		Signal	NBR	61	34	0	81	B(14.8)	B(18.7)	B(18.7)	A(8.8)	0	0	0	m27	---	---	---	161
19			SBL	196	295	387	231	A(6.6)	A(8.8)	E(60.5)	B(12.1)	59	140	#435	119	236	261	336	236
19			SBT	501	712	592	961	A(7.7)	A(9.2)	A(9.0)	B(11.1)	199	485	310	#893	---	---	---	---
19		Signal	SBR	28	16	19	24	A(7.7)	A(8.1)	A(8.1)	B(11.1)	0	0	0	0	---	---	---	---
19	Cumberland Parkway at Route 114	**Signal**	**AVG**	**1867**	**2461**	**2743**	**2939**	**B(13.3)**	**B(17.2)**	**C(31.5)**	**C(21.6)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
20	Gettysburg Pike at Route 114	Signal	EBL	35	2	4	2	B(13.9)	B(14.8)	B(10.2)	B(19.2)	30	m5	m6	m5	75	---	---	---
20			EBT	470	566	1046	697	C(28.7)	C(29.5)	F(167.5)	C(26.0)	#450	#649	#1183	293	---	---	---	---
20			EBR	87	50	0	67	C(28.7)	C(29.5)	F(167.5)	C(26.0)	0	0	0	0	100	---	---	100
20		Signal	WBL	201	295	267	255	B(13.0)	C(28.1)	F(500.8)	B(18.2)	#93	#241	m#366	107	175	200	200	200
20			WBT	309	0	440	401	A(7.6)	A(0.0)	A(7.1)	A(4.5)	118	0	m180	72	---	---	---	---
20			WBR	129	417	118	67	A(6.3)	A(6.2)	A(6.2)	A(1.3)	24	0	m24	m0	150	275	100	100
20		Signal	NBL	81	122	206	165	C(21.3)	C(34.2)	F(462.2)	C(30.5)	72	m132	m#347	#247	100	150	175	150
20			NBT	75	47	71	110	C(21.2)	D(35.8)	F(171.6)	C(29.4)	101	m130	m#518	#326	---	---	---	---
20			NBR	136	240	434	368	C(21.2)	C(30.8)	C(30.8)	C(29.4)	0	0	0	0	---	175	325	275
20		Signal	SBL	209	151	75	88	D(46.6)	F(141.4)	F(280.2)	E(75.8)	#228	#248	#167	#174	175	---	100	100
20			SBT	117	62	163	241	C(21.1)	C(25.4)	D(37.3)	C(27.4)	102	68	205	257	---	---	---	---
20			SBR	26	11	34	33	C(21.1)	C(31.0)	C(31.0)	C(27.4)	0	0	0	0	---	---	---	---
20		**Signal**	**AVG**	**1875**	**1963**	**2858**	**2494**	**C(22.0)**	**C(34.5)**	**F(183.1)**	**C(23.9)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
21	Route 114 at Shepardstown Rd	Minor	EBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21			EBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21			EBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21		Minor	WBL	234	343	330	559	F(194.0)	F(2985.4)	F(Err)	D(46.9)	481	2921	Err	#688	---	---	---	---
21			WBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21			WBR	2	20	97	97	F(194.0)	F(415.4)	F(415.4)	D(46.9)	481	2921	Err	0	---	---	100	100
21		Major	NBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21			NBT	436	544	583	583	A(0.0)	A(0.0)	A(0.0)	C(23.8)	0	0	0	#511	---	---	---	---
21			NBR	309	391	634	603	A(0.0)	A(0.0)	A(0.0)	B(18.3)	0	0	0	131	250	275	400	400
21		Major	SBL	1	31	123	123	A(0.0)	A(1.1)	A(5.8)	C(25.9)	0	3	20	#161	---	75	150	150
21			SBT	515	677	657	657	A(0.0)	A(1.1)	A(5.8)	C(26.2)	0	3	20	#656	---	---	---	---
21			SBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
21		**Un-Signalized**	**AVG**	**1497**	**2006**	**2424**	**2622**	**D(30.6)**	**F(540.6)**	**F(1763.2)**	**C(29.0)**	**-**	**-**	**-**	**-**	**Yes**	**Yes**	**Yes**	**Yes**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
22	Klinedinst at Route 114	Major	EBL	1	0	1	1	A(0.0)	A(0.0)	A(0.0)	A(0.1)	0	0	0	0	---	---	---	---
22			EBT	196	153	186	174	A(0.0)	A(0.0)	A(0.0)	A(0.1)	0	0	0	0	---	---	---	---
22			EBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22			WBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22			WBT	207	231	241	245	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
22			WBR	9	21	17	20	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
22		Minor	NBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22			NBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22			NBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22		Minor	SBL	11	67	90	94	B(11.0)	B(11.6)	B(12.2)	B(12.3)	1	9	15	15	---	---	---	---
22			SBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
22			SBR	1	1	13	2	B(11.0)	B(11.8)	B(11.8)	B(12.3)	1	9	15	15	---	---	---	---
22		**Un-Signalized**	**AVG**	**425**	**473**	**548**	**536**	**A(0.3)**	**A(1.7)**	**A(2.3)**	**A(2.2)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**
23	McCormick at Route 114	Major	EBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23			EBT	196	163	197	185	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
23			EBR	12	11	20	20	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
23			WBL	1	0	1	1	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
23			WBT	201	235	255	248	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
23			WBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23		Minor	NBL	6	14	17	17	B(10.6)	B(11.1)	B(11.5)	B(11.4)	1	2	2	2	---	---	---	---
23			NBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23			NBR	2	0	1	1	B(10.6)	B(10.8)	B(10.8)	B(11.4)	1	2	2	2	---	---	---	---
23		Minor	SBL	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23			SBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23			SBR	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
23		**Un-Signalized**	**AVG**	**418**	**423**	**491**	**472**	**A(0.2)**	**A(0.4)**	**A(0.4)**	**A(0.5)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
24			EBL	6	32	32	31	-	-	-	-	-	-	-	-	---	---	---	---
24			EBT	187	163	201	189	A(10.0)	A(9.9)	B(10.1)	B(10.1)	20	17	22	20	---	---	---	---
24		Major	EBR	0	0	0	0	A(10.0)	A(9.9)	B(10.1)	B(10.1)	20	17	22	20	---	---	---	---
24			WBL	0	0	0	0	A(10.0)	B(10.4)	B(10.6)	B(10.6)	19	27	30	29	---	---	---	---
24			WBT	185	238	257	253	A(10.0)	B(10.4)	B(10.6)	B(10.6)	19	27	30	29	---	---	---	---
24		Major	WBR	23	11	15	12	-	-	-	-	-	-	-	-	---	---	---	---
24	Mt. Allen at Route 114		NBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
24			NBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
24		Minor	NBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	A(0.0)	0	0	0	0	---	---	---	---
24			SBL	21	11	16	16	-	-	-	-	-	-	-	-	---	---	---	---
24			SBT	0	0	0	0	-	-	-	-	-	-	-	-	---	---	---	---
24		Minor	SBR	14	106	121	59	-	-	-	-	-	-	-	-	---	---	---	---
24		**Un-Signalized**	**AVG**	**436**	**561**	**642**	**560**	**A(10.0)**	**B(10.2)**	**B(10.4)**	**B(10.3)**	**-**	**-**	**-**	**-**	**No**	**No**	**No**	**No**
25			EBL	112	110	445	193	A(8.5)	A(9.1)	B(12.3)	A(6.4)	8	9	67	54	100	100	325	175
25			EBT	704	773	928	1044	A(0.0)	A(0.0)	A(0.0)	B(16.4)	0	0	0	#972	---	---	---	---
25		Major	EBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	B(16.4)	0	0	0	0	---	---	---	---
25			WBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	B(19.1)	0	0	0	0	---	---	---	---
25			WBT	442	576	624	451	A(0.0)	A(0.0)	A(0.0)	B(19.1)	0	0	0	335	---	---	---	---
25		Major	WBR	176	247	278	283	A(0.0)	A(0.0)	A(0.0)	D(36.4)	0	0	0	88	150	200	200	200
25	Route 15 at Route 114		NBL	76	69	0	196	F(57.4)	E(42.2)	F(Err)	C(34.7)	126	86	Err	0	---	---	---	---
25			NBT	0	0	0	0	F(57.4)	E(42.2)	F(Err)	C(34.7)	126	86	Err	201	---	---	---	---
25		Minor	NBR	59	64	147	73	F(57.4)	F(93.2)	F(93.2)	C(28.9)	126	86	Err	44	---	---	---	---
25			SBL	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
25			SBT	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
25		Minor	SBR	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
25		**Un-Signalized**	**AVG**	**1569**	**1839**	**2422**	**2240**	**A(5.6)**	**A(3.6)**	**F(Err)**	**C(20.6)**	**-**	**-**	**-**	**-**	**Yes**	**Yes**	**Yes**	**Yes**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
26	Route 15 at Route 114	Major	EBL	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	C(28.6)	0	0	0	0	---	---	---	---
26			EBT	684	816	1337	947	A(0.0)	A(0.0)	A(0.0)	C(28.6)	0	0	0	m243	---	---	---	---
26			EBR	131	140	219	206	A(0.0)	A(0.0)	A(0.0)	C(20.6)	0	0	0	m62	150	150	175	175
26		Major	WBL	72	119	120	99	A(9.5)	B(10.8)	D(25.7)	C(24.5)	7	14	51	82	100	100	100	100
26			WBT	446	525	503	547	A(9.5)	B(10.8)	D(25.7)	C(20.9)	0	0	0	261	---	---	---	---
26			WBR	0	0	0	0	A(0.0)	A(0.0)	A(0.0)	C(20.9)	0	0	0	0	---	---	---	---
26		Minor	NBL	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
26			NBT	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
26			NBR	0	0	0	0	-	-	-	-	-	-	-	0	---	---	---	---
26		Minor	SBL	132	67	35	290	F(188.8)	F(186.7)	F(Err)	C(23.0)	860	1040	Err	271	---	---	---	---
26			SBT	0	0	0	0	F(188.8)	F(186.7)	F(Err)	A(0.0)	860	1040	Err	0	---	---	---	---
26			SBR	194	229	322	176	F(188.8)	F(1821.9)	F(1821.9)	B(19.1)	860	1040	Err	63	175	175	250	150
26		**Un-Signalized**	**AVG**	**1659**	**1896**	**2536**	**2265**	**E(37.5)**	**D(29.8)**	**F(1408.8)**	**C(24.4)**	**-**	**-**	**-**	**-**	**Yes**	**Yes**	**Yes**	**Yes**
27	S. Market at Lisburn Road	Signal	EBL	8	18	13	17	B(13.3)	C(31.7)	C(29.1)	D(35.0)	0	0	0	0	---	---	---	---
27			EBT	96	179	165	198	B(13.3)	C(31.7)	C(29.1)	D(35.0)	64	192	170	222	---	---	---	---
27			EBR	30	25	27	30	B(13.3)	C(31.7)	C(29.1)	D(35.0)	0	0	0	0	---	---	---	---
27		Signal	WBL	12	53	64	21	B(15.5)	D(44.3)	D(44.1)	D(43.4)	0	0	0	0	---	---	---	---
27			WBT	117	196	205	210	B(15.5)	D(44.3)	D(44.1)	D(43.4)	93	322	355	316	---	---	---	---
27			WBR	74	102	121	113	B(15.5)	B(14.4)	B(14.4)	D(43.4)	0	0	0	0	---	---	150	---
27		Signal	NBL	14	21	12	22	A(6.4)	A(9.1)	B(10.1)	A(8.4)	0	0	0	0	---	---	---	---
27			NBT	121	154	165	155	A(6.4)	A(9.1)	B(10.1)	A(8.4)	46	115	121	110	---	---	---	---
27			NBR	4	9	9	9	A(6.4)	A(6.4)	A(6.4)	A(8.4)	0	0	0	0	---	---	---	---
27		Signal	SBL	105	23	95	71	A(9.9)	A(6.1)	A(4.5)	A(5.7)	0	0	0	0	100	---	100	100
27			SBT	277	331	354	394	A(9.9)	A(6.1)	A(4.5)	A(5.7)	#149	90	96	64	---	---	---	---
27			SBR	15	18	17	17	A(9.9)	A(10.0)	A(10.0)	A(5.7)	0	0	0	0	---	---	---	---
27		**Signal**	**AVG**	**873**	**1129**	**1247**	**1257**	**B(11.2)**	**C(23.5)**	**C(21.8)**	**C(22.1)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

SCENARIO				TRAFFIC FORECAST (veh/hr)				LEVEL-OF-SERVICE (delay/veh)				95th Percentile Queue Length (ft)				Signal/Auxiliary Turn Lane Warrant Tests (Turn Lane Storage, ft)			
				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour				Afternoon Peak Hour			
PEAK HOUR				2010	2030			2010	2030			2010	2030			2010	2030		
ID	Intersection	Ex. Traffic Control	Lane	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.	Base	Pending	Base	Mit.
28	E Winding Hill at Route 114	Minor	EBL	4	29	18	52	D(28.5)	F(506.9)	F(565.4)	D(47.8)	18	203	139	0	---	---	---	---
28			EBT	22	13	6	22	D(28.5)	F(506.9)	F(565.4)	D(47.8)	18	203	139	101	---	---	---	---
28			EBR	11	0	0	2	D(28.5)	F(506.9)	F(565.4)	D(47.8)	18	203	139	0	---	---	---	---
28		Minor	WBL	37	15	15	4	E(39.2)	F(99.2)	F(196.2)	C(32.9)	95	184	327	0	---	---	---	---
28			WBT	32	30	25	33	E(39.2)	F(99.2)	F(196.2)	C(32.9)	95	184	327	m63	---	---	---	---
28			WBR	72	74	103	83	E(39.2)	E(41.2)	E(41.2)	C(32.9)	95	184	327	0	---	---	---	---
28		Major	NBL	29	7	64	41	A(9.1)	A(9.7)	A(9.7)	A(3.2)	2	1	6	m11	75	---	100	75
28			NBT	381	499	686	714	A(0.0)	A(0.0)	A(0.0)	A(5.3)	0	0	0	146	---	---	---	---
28			NBR	8	33	61	36	A(0.0)	A(0.0)	A(0.0)	A(5.3)	0	0	0	0	---	---	100	---
28		Major	SBL	58	140	88	376	A(8.2)	A(9.0)	A(9.6)	B(13.4)	4	12	8	m#414	75	150	100	275
28			SBT	538	584	457	528	A(0.0)	A(0.0)	A(0.0)	A(4.1)	0	0	0	184	---	---	---	---
28			SBR	120	200	269	248	A(0.0)	A(0.0)	A(0.0)	A(4.1)	0	0	0	0	100	175	200	200
28		**Un-Signalized**	**AVG**	**1312**	**1624**	**1792**	**2139**	**A(5.6)**	**C(21.2)**	**C(24.0)**	**A(9.3)**	**-**	**-**	**-**	**-**	**No**	**Yes**	**Yes**	**Yes**
29	Winding Hill Road at Orchard Blvd	Signal	EBL	20	56	51	28	D(42.4)	D(39.5)	D(38.0)	D(35.2)	0	0	0	0	---	---	---	---
29			EBT	14	46	46	27	D(42.4)	D(39.5)	D(38.0)	D(35.2)	53	119	112	68	---	---	---	---
29			EBR	63	29	83	17	D(40.8)	C(34.4)	C(33.8)	C(33.4)	44	27	46	20	---	---	---	---
29		Signal	WBL	54	61	57	57	D(50.4)	D(47.6)	D(47.5)	D(46.9)	0	0	0	0	---	---	---	---
29			WBT	31	129	157	160	D(50.4)	D(47.6)	D(47.5)	D(46.9)	112	202	222	224	---	---	---	---
29			WBR	5	2	2	2	D(50.4)	D(38.2)	D(38.2)	D(46.9)	0	0	0	0	---	---	---	---
29		Signal	NBL	404	539	695	947	A(1.7)	A(5.3)	A(6.5)	C(21.7)	48	141	184	270	275	375	450	550
29			NBT	124	251	291	228	A(0.6)	A(3.5)	A(3.8)	A(5.0)	26	287	425	129	---	---	---	---
29			NBR	70	269	287	285	A(0.6)	A(2.7)	A(2.7)	A(5.0)	0	0	0	0	100	200	200	200
29		Signal	SBL	1	4	3	3	D(39.4)	D(40.0)	D(39.9)	D(40.0)	6	13	11	11	---	---	---	---
29			SBT	79	69	65	65	D(44.6)	D(44.7)	D(44.7)	D(44.7)	135	132	135	133	---	---	---	---
29			SBR	60	71	88	83	D(44.6)	D(35.2)	D(35.2)	D(44.7)	0	0	0	0	---	---	---	---
29		**Signal**	**AVG**	**925**	**1526**	**1825**	**1902**	**B(16.8)**	**B(16.5)**	**B(16.7)**	**C(22.4)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

The capital improvements program, along with preliminary cost estimates, is summarized in Table 7-8. The ID is shown on the Future Transportation Map (Figure 7-1).

Table 7-8. Capital Improvements Plan

Scenario	ID	Location	Description	Preliminary Cost Estimate
Existing/ Pending Land Development	1	Route 114 at Cumberland Parkway	Construct westbound right-turn lane on Cumberland Parkway with 375-ft storage length.	$300,000
	2	Route 114 at Winding Hill Road	Install traffic signal.	$275,000
	3	Route 114 at Shepherdstown Road.	Install traffic signal.	$275,000
	4	Williams Grove Road at Diehl Road.	Install traffic signal.	$275,000
	Sub-Total			**$1,125,000**
Fore-casted Future Land Development	5	Lisburn Road at Mill Road	Construct eastbound right-turn lane on Lisburn Road with 200-ft storage length	$200,000
	3	Route 114 at Shepherdstown Road	Construct southbound left-turn lane on Route 114 w/150-ft storage length. Construct northbound right-turn lane on Route 114 with 400-ft storage length.	$700,000
	1	Route 114 at Cumberland Parkway	Construct northbound right-turn lane on Route 114 with 175-ft storage length	$200,000
	6	Gettysburg Pike at Winding Hill Road	Prohibit eastbound left-turn move-ments from Winding Hill Road	$10,000
	7	Gettysburg Pike at York Street	Install traffic signal.	$275,000
	8	Route 114 at Gettysburg Pike	Construct auxiliary eastbound through lane on Route 114 from 300-ft west of Gettysburg Pike to US-15 North Ramp	$900,000
	Sub-Total			**$2,285,000**
TOTAL				**$3,410,000**

Project costs were estimated based on parametric models (i.e. general cost per foot of road widening) and should be referenced for general planning purposes only. Actual project costs may vary significantly based on location-specific needs such as right-of-way acquisition, utility relocation, etc.

ROADWAY CONDITIONS

Several of the Township roads are in need of improvements to facilitate increased safety, promote growth and accommodate the growing needs of the community. Poor horizontal and vertical geometry is a safety hazard and deters the development of surrounding areas. Roadways that are not in conformance with design and/or construction standards can cause the need for excessive maintenance or repair of rutted roadway or off-road repair for accidents or instances of vehicles "running off the road." Table 7-9 provides a listing of the roadways requiring attention and their associated deficiencies.

Table 7-9. Projects to Correct Geometric Deficiencies

Roadway	Geometric Improvement Recommendations
Fisher Road (North of Southview Drive)	Straighten roadway to remove two 90 degree curves.
Allendale Road (South of Wilson Road)	Provide horizontal and vertical realignment to remove sharp curve on steep grade and improve horizontal and vertical sight distance.
Allendale Road (Between Eric Avenue and Cocklin Avenue)	Straighten roadway to remove 90 degree curves.
Mill Road (South of Grantham Road)	Restrict traffic to only serve local movements to reduce the hazard of the sharp curve on steep grade with poor horizontal and vertical sight distance. Investigate alternate route.
Fisher Road (North of West Winding Hill Road)	Straighten roadway to remove two 90 degree curves.
McCormick Road (at Yellow Breeches Creek)	Straighten roadway to remove 90 degree curve.
Mount Allen Drive (North of East Lisburn Road)	Upgrade roadway for current horizontal geometry requirements.
Mount Allen Drive (across from Messiah Village Entrance)	Change vertical geometry of Mount Allen Drive to improve sight distance.
Arcona Road/Hertzler Road Intersection	Alter geometry of intersection to improve sight distance and remove sharp skew.
South York Street/Gettysburg Pike	Improve sight distance at intersection.
West Winding Hill Road/South York Street Intersection	Reconfigure intersection to remove horizontal offset and improve sight distance.
South Market Street/East Lisburn Road Intersection	Provide vertical adjustment to South Market Street to provide a landing at the intersection with East Lisburn Road.
South Market Street/Shepherdstown Road	Eliminate sharp skew at intersection to improve sight distance.
East Winding Hill Road (South of Midland Road)	Straighten roadway to remove sharp 90 degree curve.
Arcona Road (between East Winding Hill Road and Township line)	Upgrade roadway for current horizontal geometry requirements.

Arcona Road/East Lisburn Road Intersection	Alter geometry of intersection to improve sight distance.
East Lisburn Road (under Railroad)	Provide sufficient horizontal curves under Norfolk Southern Bridge per roadway classification.
Wilson Road	Straighten road to remove reverse curves.

CRASH HISTORY

The five year reportable crash history (2005 through 2009) of roadways within the Township was reviewed to identify those intersections, or portions of roadway, which experience a high frequency of crashes. When a predominant accident pattern exists at a particular location, improvements can sometimes be implemented to minimize the frequency of crashes based on an assessment of the probable cause.

Table 7-10 indicates locations within the Township where more than 5 crashes have occurred during the 5-year period between 2005 and 2009. The reported causal factors for crashes at each of these locations were reviewed to identify potential corrective measures. Each location requires field inspection to ascertain the likely cause and appropriate mitigation.

Table 7-10. Crash Locations

ID	Name	Count	Issue
4	15 N, N of Lisburn	6	
6	15 S, N of Lisburn	10	
13	15 N, N of Winding Hill	6	
18	15 S, N of Turnpike	6	
21	PA 114, S of Shepherdstown	8	
24	PA 114 at Winding Hill	15	Running Stop Sign
28	PA 114 at Gettysburg Pike	12	Running Red Light/Careless Turn
30	PA 114 at 15 NB Ramp	7	Running Stop Sign/Careless Turn
32	PA 114, S of Bumble Bee	5	
35	PA 114 at Mt. Allen	14	Running Stop Sign/Speeding/Fixed Object
36	PA 114 at McCormick	8	Speeding/Fixed Object
37	PA 114, E of McCormick	5	
38	PA 114 at Klinedinst	6	Running Stop Sign/Careless Turn
40	PA 114 at Arcona	5	
45	Lisburn at Gettysburg	5	
46	Lisburn at 15S	9	Careless Turn
50	Lisburn at Grantham	5	
58	Winding Hill, E of York	5	
63	Williams Grove Rd., S of Diehl	6	

64	Williams Grove at Diehl	5	
68	York Rd., N of Winding Hill	5	
74	Turnpike	48	

CURB AND SIDEWALK

With the exception of newer residential communities, such as Winding Hills, facilities for pedestrian circulation are somewhat limited in the Township, and many of the areas of high residential population are not equipped with sidewalk whatsoever and may be considered a hazard for pedestrian circulation, especially for children.

The *Smart Transportation Guidebook* recommends sidewalk facilities for all roadways within suburban areas with the exception of those roadways where pedestrians are prohibited by law (U.S. Route 15 and PA Turnpike) or the sparseness of population or other factors indicate an absence of need. While some of the Township's new residential communities provide sidewalks along the local streets within the communities, facilities for pedestrian circulation are generally not provided on the Collector streets that connect the neighborhoods with activity centers. A lack of sidewalk connectivity between neighborhoods and activity centers impedes walking as an option for travel, leading to increased reliance on the motor vehicle for transportation within the Township.

WALKING AND BIKING TRAILS

Traffic volumes will continue to increase throughout Upper Allen Township, resulting in increased fuel consumption, vehicle emissions, and driver delays. While roadway infrastructure improvements can facilitate mobility to a certain extent, the importance of bicycle and pedestrian systems should be recognized in order to be competitive as a region. Improvements to the overall transportation system, including bicycle and pedestrian facilities, will improve air quality, traffic flow, and reduce noise pollution.

Upper Allen Township has limited bicycle/pedestrian accommodations, both from a local and regional perspective. A bicycle route does exist along McCormick Road, following the Yellow Breeches Creek, but the route does not provide a separate path, isolating the cyclists from the vehicular traffic. Facilities do not exist solely for the walking and biking public, which could increase mobility between origin/destination points throughout the Township, such as residential, commercial, and recreational areas. This may be a result of previous zoning, which did not favor bicycle and pedestrian modes of travel. On a regional level, there is no mechanism for bicyclists to travel to other communities, such as Harrisburg, Camp Hill or Mechanicsburg. The Township has also represented that a pedestrian safety problem exists on US Route 15 near Lisburn Road, where several accidents have occurred in recent years.

PUBLIC TRANSPORTATION

Public transportation reduces congestion, provides a mode of transportation for those without automobiles, relieves stress on roadways, bridges and intersections, reduces the demand for expensive infrastructure upgrades, increases air quality, and reduces health risks. Capitol Area Transit currently has service to Upper Allen Township at several locations. Bus service locations within the township are at the Hampshire Development on South Market Street, Square D (near the Amp warehouse) on South Market Street, and the Park and Ride lot at the Winding Hill Road exit off US 15.

POLICY PLAN

- Acquire the funding and prepare the necessary plans to improve roadway conditions and eliminate current roadway geometric deficiencies to reduce current safety hazards and prepare for future development consistent with the Future Transportation Map (Figure 7-1).

- Locate future commercial centers adjacent to collector roads, minor arterials, major arterials, and interstates.

- Advance adequate public transportation to suit the needs of the community, particularly the expansion of Capital Area Transit bus routes to more residential areas.

- Make roadway and transportation improvements to help ensure public health, safety, and welfare, consistent with the Comprehensive Plan.

- Design new roadways and upgrade existing ones with sufficient capacity to accommodate future growth of both vehicular and pedestrian traffic.

- Add turning lanes at intersections, as needed, where capacity or safety is a problem.

- Consolidate access points where possible to provide safe, efficient travel for through traffic while maintaining a reasonable degree of access to and from adjacent properties.

- Provide improved guide/street signage that conforms to the latest standards, particularly at intersections where identifying crossroads is important.

- Improve safety through a regular pavement marking replacement program and with the installation of roadway lighting.

- Upgrade the classifications of roadways adjacent to current and future high development areas to comply with current needs and uses and prepare for the future growth of the areas.

- Provide features to increase the safety of pedestrians and encourage their circulation by means of off road facilities.

- Provide well lit, exclusive pedestrian and bicycle pathways, which link residential areas to recreational and commercial centers.

- Provide signalization as warranted where crashes and unacceptable delays are a problem.

- Encourage land use which reduces/minimizes traffic impacts on existing facilities.

IMPLEMENTATION STRATEGY

- Improve existing roadway conditions to provide suitable roadway surface conditions, address safety problems, and rectify current geometric deficiencies;

- Widen or reconstruct roadways to match recommended design values for the designated roadway classification;

- Where frequent driveway access points exist, install two-way left-turn lanes, especially in commercial centers;
- Widen the PA Route 114 and South York Street bridges over the Pennsylvania Turnpike to facilitate the anticipated future vehicular, pedestrian and bicycle traffic volumes;

- Plan future development within the Township in accordance with the Future Land-Use Map to maximize accessibility and provide an efficient transportation system for the patrons of the Township utilizing the proposed roadway classifications and improvements;

- Participate in initiatives and programs being pursued by surrounding municipalities, the county, and the state for transportation improvement projects, such as commuter/light rail systems, expanded public transportation routes to more residential areas, and park and ride facilities or ride share programs. Public transportation reduces congestion, provides a mode of transportation for those without automobiles, relieves stress on roadways, bridges and intersections, reduces the demand for expensive infrastructure upgrades, increases air quality, and reduces health risks;

- For existing and new development, especially commercial and industrial, reduce peak hour travel demand by encouraging employers to offer employee flex-time and telework, and by fostering alternative modes of transportation such as ride-sharing, van pools, and transit;

- Provide a minimum desired operating level of service (LOS) “D” for all existing and future transportation facilities;

- Review/amend zoning to reduce traffic impacts of future developments on already overburdened facilities;

- Upgrade the classifications of roadway to be compatible with the future growth expectations of the Township and the Future Land-Use Map;

- Address known crash problems at the following locations:

  - PA 114 at Winding Hill - Running Stop Sign

  - PA 114 at Gettysburg Pike - Running Red Light/Careless Turn

  - PA 114 at 15 NB Ramp - Running Stop Sign/Careless Turn

  - PA 114 at Mt. Allen - Running Stop Sign/Speeding/Fixed Object

  - PA 114 at McCormick - Speeding/Fixed Object

  - PA 114 at Klinedinst - Running Stop Sign/Careless Turn

  - Lisburn at 15S - Careless Turn

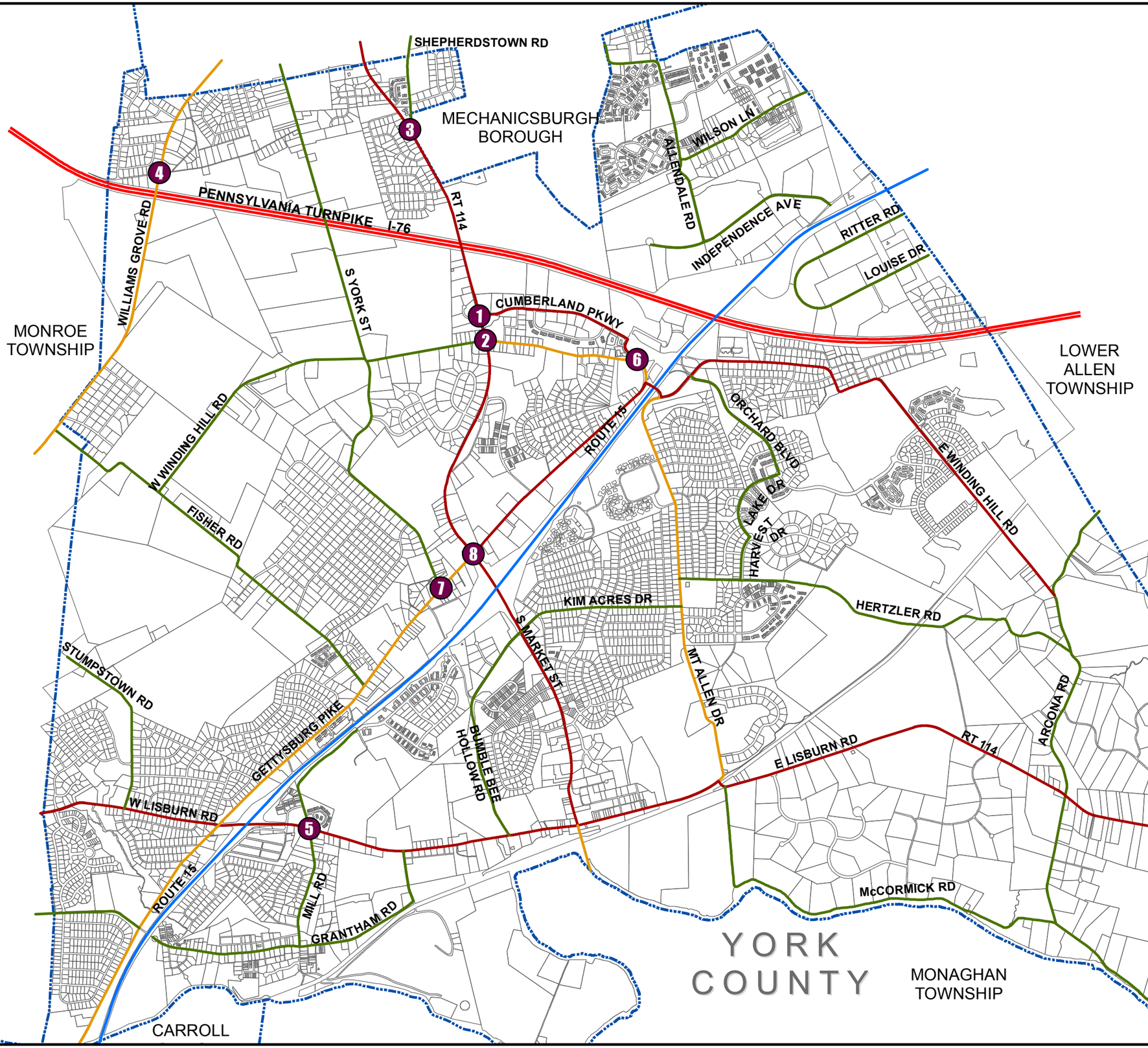
- Update the Subdivision and Land Development Ordinance to incorporate Smart Transportation principles for roadway and sub-division design and to provide consistency with Pennsylvania Department of Transportation procedures for traffic impact studies;

- Provide additional sidewalk in the Township to provide safe access from schools and parks to residential areas and provide safe residential access within the neighborhoods. Install curb cut ramps to comply with the Americans with Disabilities Act for existing sidewalk not currently in compliance;

- Consistent with a Township Greenways and Trails Plan, provide bicycle and pedestrian pathways. On existing roadways, which are or will be designated as bike routes, provide paved shoulders of sufficient width for safe bicycle travel.

Figure 7-1

Upper Allen Township Future Transportation Map



LEGEND

- Interstate
- Regional Arterial
- Community Arterial
- Community Collector
- Neighborhood Collector
- Township Boundary

Capital Improvements Plan
Table 7-8

1 ID

1 inch = 2,000 feet

0 1,000 2,000 "

Z:\GIS\Finished Maps\2012 Comp Plan\Fig 7-1 Future Transportation.pdf

A B C D

Areas
Quadrant: A, B, C, D

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Figure 7-2

Upper Allen Township Roadway Classification

SHEPHERDSTOWN RD
MECHANICSBURG BOROUGH
WILSON LN
ALLENDALE RD
INDEPENDENCE AVE
RITTER RD
LOUISE DR
PENNSYLVANIA TURNPIKE I-76
RT 114
WILLIAMS GROVE RD
S YORK ST
CUMBERLAND PKWY
MONROE TOWNSHIP
LOWER ALLEN TOWNSHIP
W WINDING HILL RD
FISHER RD
ROUTE 15
ORCHARD BLVD
LAKE ST
HARVEST DR
E WINDING HILL RD
KIM ACRES DR
HERTZLER RD
S MARKET ST
MT ALLEN DR
STUMPSTOWN RD
GETTYSBURG PIKE
BUMBLE BEE HOLLOW RD
E LISBURN RD
RT 114
ARCONA RD
W LISBURN RD
MILL RD
GRANTHAM RD
McCORMICK RD
YORK COUNTY
MONAGHAN TOWNSHIP
CARROLL TOWNSHIP

1 SHEPHERDSTOWN RD & RT 114
2 CUMBERLAND PKWY & RT 114
3 RT 114 & MECHANICSBURG BOROUGH
4 WILLIAMS GROVE RD & PENNSYLVANIA TURNPIKE I-76
5 W LISBURN RD & ROUTE 15
6 CUMBERLAND PKWY & ROUTE 15
7 ROUTE 15 & GETTYSBURG PIKE
8 ROUTE 15 & S MARKET ST

LEGEND

- Interstate
- Regional Arterial
- Community Arterial
- Community Collector
- Neighborhood Collector

N

1 inch = 2,000 feet
0 1,000 2,000 "

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Areas
Quadrant: A, B, C, D

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CHAPTER 8. ADJACENT AND REGIONAL PLANNING

GOAL

Promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities and regional planning agencies.

OBJECTIVE

- To promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities and regional planning agencies with respect to environmental resources, land use and zoning, community facilities and services, public utilities, and transportation.

BACKGROUND

An important component of the comprehensive planning process involves the consideration of land use, zoning and planning policies, concerns, and initiatives of the adjacent municipalities and regional planning agencies. Awareness of land use, zoning and other planning policies, concerns and initiatives of adjacent municipalities is critical to identifying potential conflicts as well as potential opportunities to cooperate with neighboring jurisdictions. Planning policies and initiatives such as comprehensive plans, existing future land use maps and plans, zoning ordinances and maps, and traffic, stormwater and sewer needs and concerns were gathered from neighboring municipalities and Cumberland County Planning Commission.

Lower Allen Township

Lower Allen Township adjoins Upper Allen Township along its eastern border. Land uses in both townships along this boundary include a mix of single-family residential and undeveloped land uses south of the Pennsylvania Turnpike, and a mix of office, commercial, industrial, and higher density residential land uses north of the Pennsylvania Turnpike.

Lower Allen Township's current Comprehensive Plan was adopted in 2006. The future land use plan from this document designates land along its border with Upper Allen Township primarily for single-family residential use south of the Pennsylvania Turnpike and a mix of business park, commercial and single- and multi-family residential uses north of the Pennsylvania Turnpike. These future land use patterns are generally consistent with current land uses within Upper Allen Township along its border with Lower Allen Township.

The Lower Allen Zoning Map, dated 2009, designates land along its border with Upper Allen Township as single-family residential use south of the Pennsylvania Turnpike and a mix of Business Park and single- and multi-family residential uses north of the Pennsylvania Turnpike. These zoning designations are generally consistent with the existing land use patterns and zoning designations with Upper Allen Township.

One notable project within Lower Allen Township is the recently approved "Meridian" project. The project will consist of 99 townhomes and 278 apartment units on a 35-acre tract of land that

is located just north of the Pennsylvania Turnpike along Lisburn Road and Sheepford Road. Development of the apartment units is scheduled to begin in January 2012.

Mechanicsburg Borough

Mechanicsburg Borough borders Upper Allen Township to the north. Existing land uses within Mechanicsburg Borough are primarily low residential, with some undeveloped and public lands (Mechanicsburg Area School District). The "Hess Tract," a 180 acre undeveloped farm, is notable and represents a significant growth opportunity for the Borough. Existing land uses in Upper Allen Township adjacent to its border with Mechanicsburg Borough include medium and high density residential, industrial and public properties. The existing land uses are generally compatible.

Mechanicsburg's 2007 future land use plan designates land along its border with Upper Allen Township for low intensity residential and traditional neighborhood development. The borough's existing Zoning Map, dated 2009, designates land along its border with Upper Allen Township as low intensity residential and traditional neighborhood development. Zoning designations within Upper Allen Township along its border with Mechanicsburg are generally compatible, as much of the lands are zoned residential and high-density residential. However, some lands along the boundary within the Township are zoned as industrial, which is generally less compatible with low density residential designations.

Monroe Township

Monroe Township borders Upper Allen Township to the west. Existing land use in both Monroe Township and Upper Allen Township, along their common boundary, are currently compatible, being comprised primarily of residential, agriculture and undeveloped land.

Monroe Township last revised its Comprehensive Plan in 2007. The future land use plan designates areas along its border with Upper Allen Township for agricultural and residential uses. Future land uses in Upper Allen Township are also agricultural and residential and generally compatible.

The current Monroe Township Zoning Map (1998, Amended 2008) designates lands along its border with Upper Allen Township as Suburban Residential north of the Pennsylvania Turnpike and south of Stumpstown Road. These designations are generally compatible with the corresponding zoning designations within Upper Allen Township of residential, rural living and planned residential development. Lands between Stumpstown Road and the Pennsylvania Turnpike are generally agricultural in both Townships.

Carroll Township

Carroll Township abuts Upper Allen Township to the south/southwest across the Yellow Breeches Creek. Existing land uses in both townships along the Yellow Breeches Creek are primarily undeveloped with some residential development. Within Carroll Township, the

Conrail railroad tracks run roughly parallel to the Yellow Breeches Creek, leaving a strip of undeveloped land in the extreme northeast corner of Carroll Township.

Carroll Township is part of the 2005 Northern York Regional Comprehensive Plan. The future land use map for Carroll Township designates land adjacent to Upper Allen Township as rural conservation and low density residential. Additionally, this area is designated as a future growth area in the plan. Adjacent lands in Upper Allen Township are designated residential and appear generally consistent.

Carroll Township's current Zoning Map, updated 2007, designates land along its border with Upper Allen Township as residential agriculture. These designations are generally compatible with the rural living designation found within Upper Allen Township along its border with Carroll Township.

Monaghan Township

Monaghan Township abuts Upper Allen Township to the south across the Yellow Breeches Creek. Land uses along both sides of the Yellow Breeches Creek are generally compatible and include a mix of undeveloped, low-density residential and institutional/semi-public uses (Messiah College).

Monaghan Township is part of the 2005 Northern York Regional Comprehensive Plan. The future land use map for Monaghan Township designates land adjacent to Upper Allen Township as rural conservation and public. This is generally consistent with the agriculture, residential, institutional and conservation future land uses in Upper Allen Township

The existing Monaghan Township Zoning Map designates land along its border with Upper Allen Township as Conservation. Zoning designations within Upper Allen Township are generally compatible and include areas zoned Rural Living and Institutional.

Cumberland County Planning Commission & Tri-County Regional Planning Commission

There are several plans and reports at the county and regional level that contain data, analysis, and recommendations that are pertinent to updating of the Upper Allen Comprehensive Plan. These plans and reports include the Cumberland County Comprehensive Plan (2003, 2011 Updates), 2006 Land Partnerships: A Countywide Strategy for Open Space Preservation and Smart Growth, 2010 Cumberland County Stormwater Management Plan, and 2011 Tri-County Regional Growth Management Plan.

The Cumberland County Comprehensive Plan was adopted in 2003 and had three elements updated in 2011—Future Land Use, Transportation, and Historic Preservation. Recommendations from the Land Partnerships Plan, County Stormwater Management Plan, and Regional Growth Management Plan were used to develop the goals of the County Comprehensive Plan. Therefore, a consistency review was performed based on the County's 2003 Comprehensive Plan with its 2011 updates.

The Cumberland County Comprehensive Plan is divided into two components: background studies which characterize existing conditions and trends, and plan chapters which provide recommendations to achieve stated goals.

Six goals were developed and presented in the County's Comprehensive Plan as follows:

- Future Land Use: Establish compatible land use patterns responsive to the need of the residents. These patterns should reflect the limitations and potential of both the natural and man-made environments.

- Natural Resources Management: Preserve and enhance the natural, scenic, and environmentally sensitive features of the County.

- Housing: Provide a sufficient supply of mixed housing types within the financial reach of all citizens of the County.

- Economic Development: Establish a stable, healthy, and balanced economic base, which is compatible with population growth. Provide for a variety of goods and services and employment opportunities.

- Transportation: Establish a safe, convenient, and balanced transportation network that adequately supports existing and future land uses in conjunction with land developments. The network should provide for efficient movements of people and goods by all modes of transportation.

- Community Facilities: Provide a complete and adequate system of community facilities and services that meets the needs of the County's residents and establishments.

From these goals (and objectives) several plans were derived including the County's Future Land Use Plan and map. The County's Future Land Use Plan uses the concept of "Character Areas" to delineate general land use categories. Character areas focus on form and patterns of development rather than individual land uses to promote land use compatibility.

For Upper Allen Township, the County's Future Land Use map identified the following general land use types and locations:

- Commercial uses planned primarily adjacent to U.S. Route 15, concentrated near the interchanges of PA Route 114 and Winding Hill Road.

- Industrial and commercial uses planned adjacent to the Pennsylvania Turnpike between PA Route 114 and the Township's boundary with Lower Allen Township.

- Agriculture uses planned for much of the west-central region, adjacent to Monroe Township.

- Rural residential and agricultural uses planned for the south-eastern portion of the Township.

- Institutional uses identified for Messiah College.

- Conservation uses designated along stream corridors, 100-year floodplains, and wetlands.

- Residential uses planned for the remainder of the Township, with higher density/mixed use indicated for the villages of Shepherdstown, Bowmansdale, and Grantham.

In comparing the Township and County comprehensive plans, the goals and policies proposed by the Upper Allen Township Comprehensive Plan are consistent with the stated goals of the County Comprehensive Plan. The County's Future Land Use Plan and map are also generally consistent with the future land uses proposed by the Upper Allen.

POLICY PLAN

- Promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities and regional planning agencies with respect to environmental resources; as appropriate, perform joint studies, share information, and set common policies for the protection of key natural resources.

- Promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities with respect to land use and zoning; as appropriate, perform joint studies and contact adjacent townships when land use or zoning of parcels along borders are proposed for change.

- Promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities with respect to community facilities and services and public utilities; as appropriate, perform joint studies and be open to the possibility of regionalization of certain public facilities, services, and utilities.

- Promote intergovernmental cooperation between Upper Allen Township and surrounding municipalities and state transportation agencies with respect to transportation; as appropriate, perform joint studies and coordinate improvements on roadways along the Township's borders.

- Promote intergovernmental cooperation between Upper Allen Township and regional planning agencies such as Cumberland County Planning Commission, Tri-County Regional Planning Commission, Capital Region Council of Governments and the West Shore Tax Bureau.

IMPLEMENTATION STRATEGY

- Perform joint studies, coordinate or cooperate with or notify, as appropriate, the adjacent municipality(ies) on issues of natural resource protection, land use or zoning, public facilities and services, utilities, and transportation, which may affect the adjacent municipality(ies) and/or the Township.

CHAPTER 9. 12-YEAR IMPROVEMENTS PROGRAM

A number of recommendations for improvements in the Township have been set forth in the Comprehensive Plan. The process recommended for the implementation of these project proposals is known as capital improvements programming. It involves the scheduling of public improvements over a period of time with consideration being given to the financial capabilities of the community in the establishment of project priorities.

The following table presents a recommended 12-year Improvements Program for the Township. Each project is prioritized by year and is assigned a lead responsible party(ies). Responsible parties include the Township, Cumberland County, the Commonwealth of Pennsylvania, private individuals and organizations, and the Mechanicsburg Area School District. The Improvements Program should be evaluated and revised each year. This will allow projects to be reevaluated for consideration in the program.

Table 9-1. 12-Year Capital Improvements Plan

Implementation Strategy	Priority	2012 - 2013	2014 - 2015	2016 - 2017	2018 - 2019	2020 - 2021	2022-2024	RP
Zoning Ordinance Update	H							T
Subdivision and Land Development Ordinance Update	H							T
Historic Preservation Plan	M							T
Historic Preservation Ordinance Update	M							T
Sewage Facilities Capital Recommendations								
- Conduct Sewer System Rehabilitation	H							T
- PS 3 Improvements	H							T
- Construct New Administrative/Control Building	M							T
- Construct New Garage at Grantham Plant	M							T
- Digester Upgrade	M							T
- Construct Garage Dumpster Bay	L							T
- Class A - Schwing Bioset	L							T
Sewage Facilities Administrative Recommendations								
- Update Sewer Tapping Fee	M							T
Roadway Condition Improvement Recommendations								
- Traffic Signal at RT 114 and Shepherdstown Rd	M							T/S
- Diehl Road Widening	M							T
- Allendale Road Widening	M							T
- Allendale Road Culvert Over Cedar Run	M							T
- Gettysburg Pike/S. York Street Sight Distance Improvements	M							T
- RT 114 at Cumberland Parkway - Westbout R/T Lane	M							T/S
- Install Traffic Signal at E. Lisburn Rd at Railroad Bridge	M							T/S
- Install Protected Left-Turn Lanes	M							T/S
- Bishop Road Bridge Upgrade (if most economical alternative)	L							C
Future Roadway Improvement Recommendations								
- E. Lisburn Rd and Mill Road - Construct Right-Turn Lane	M							T/S
- RT 114 at Shepherdstown Rd - Southbound Left-Turn Lane	M							T/S
- RT 114 at Cumberland Parkway - Northbound Right-Turn Lane	M							T/S
- Gettysburg Pike and E. Winding Hill Road - Prohibit Left-Turns	M							T/S

Implementation Strategy	Priority	2012 - 2013	2014 - 2015	2016 - 2017	2018 - 2019	2020 - 2021	2022-2024	RP
- Mt Allen Drive Road Improvements	H							T
- Gettysburg Pike and E. Lisburn Road - Install Left-Turn Signal	M							T/S
- RT 114 and Gettysburg Pike - Construct Southbound Thru Lane	M							T/S
- Market St and Winding Hill Rd - Right-Turn Only	M							T/S
- Kim Acres Drive Road Improvements	M							T
Geometric Improvement Recommendations								
- S. Market St/E. Lisburn Rd Vertical Alignment	H							S
- Allendale Road (S. of Wilson Rd) Realignment	M							T
- Two-Way Left Turn Lane Installation in Commercial Centers	M							T
- Fisher Road Straightening (North of Southview Dr)	L							T
Stormwater Improvements								
- Cedar Run, Miller's Crest, Diehl Rd. to S. Market St Improvements	H							T
- MS4 Implementation	H							T/S
- McCormick Rd Culvert Replacements (Multiple Locations)	M							T
- Hemlock Dr Stormwater Improvements	M							T
Accident Problem Recommendations								
- Lisburn Rd/Park Ridge Dr Channelized Right Turn	H							T/S
- Bicycle/Pedestrian Pathway Additions	H							T
- Lisburn Rd/Stumpstown Rd-Herman Dr Sight Distance	M							T/S
- S. Market St (Winding Hill Rd - Juniper Dr) Improvements	M							T/S
- Signage Updates	M							T
Park Improvements								
- Parks, Greenways and Trails Acquisition/Development	M							T
- Update Open Space and Recreation/Greenways and Trails Plans	M							T
- Develop Winding Hill Park - West	M							T
- Develop Winding Hill Park - East	M							T
- Update Comprehensive & Recreation Open Space Plan	M							T

CHAPTER 10. FUNDING SOURCES

Realization of a Capital Improvements Program will require support from a variety of sources outside the Township. External sources can help to fund a variety of projects that range from community planning, development and conservation to transportation; a directory is provided below.

For example, at the time of this writing, Pennsylvania has five major programs supporting parks, greenways and trails, which are relevant to the Township. Five are administered by the Pennsylvania Department of Conservation and Natural Resources (DCNR) and one is administered by the Pennsylvania Department of Transportation (PennDOT):

- Keystone Planning, Implementation and Technical Assistance Program (DCNR)
- Keystone Acquisition and Development Program (DCNR)
- Keystone Land Trust Program (DCNR)
- The Recreational Trails Program (DCNR)
- Transportation Enhancements Program (PennDOT)

Three of these programs are funded by the Keystone Recreation, Park, and Conservation Fund Act (Act 50 of 1993). This Pennsylvania law, sometimes referred to as "Key 93," annually provides money to DCNR from the sale of a bond issue and from real estate transfer taxes. The remaining program is funded under PennDOT's Transportation Enhancements Program that is described below (see Transportation Equity Act for the 21st Century). In general, the opening of a DCNR grant round is announced in the Pennsylvania Bulletin, DCNR's Resource newsletter, and on the DCNR Worldwide Website.

As for transportation there is a great deal of competition among Pennsylvania municipalities for the limited funds available from PennDOT for highway improvements. The Township will need to actively work with the PennDOT District Office to make them aware of the problems and concerns in the Township and the Township's strategy for correcting those problems. The Comprehensive Plan and Capital Improvements Program can be a starting point for initiating this dialogue. Some projects recommended for improvements in this Plan are on PennDOT-owned roadways and may be funded by the state. However, many projects will involve Township or joint Township-PennDOT funding. Some projects may be funded by private sources. There are various funding alternatives available to the Township for making transportation improvements as listed below.

However, funding sources change with bills passed, budgets adopted, and programs initiated by state and federal governments. For example, since 1999, more than $1.3 billion was spent over a five year period to put Pennsylvania on the path to growing greener in the 21st Century. In 2013, Governor Tom Corbett allocated only $18 million in growing greener grants. The availability of

monies that are available each year for initiatives such as watershed restoration, community conservation, local land stewardship, sewer and water incentives, and sound land use incentives will vary. Some of these may take the place of existing funding sources. Therefore, it is important for the Township to track new opportunities as they evolve.

TABLE 10-1

Director of Potential Funding Sources

Program	Program Description	Administering Agency/Internet Address
Community Planning, Development, and Conservation Funding Sources		
Community Development Block Grant (CDBG)	Offers grants for a wide variety of activities, provided the applicant proves by survey or census that the project will benefit 51% low and moderate income persons or handicapped persons or eliminate "blighted "conditions in officially designated areas. Funds can be used for water and sewage improvements, storm drainage, handicapped accessibility, housing rehabilitation, parks and recreation, street and sidewalk improvements, code enforcement, community planning, and historic rehabilitation.	U.S. HUD funds, implemented by DCED www.newpa.com
CDBG Section 108	Program offers loan guarantees to municipalities to allow financing of large loans for major physical projects.	Same as CDBG
Community Facilities Loan Program (Federal)	Offers low-interest loans to construct, enlarge or improve essential community facilities for public use in rural areas and towns with population less than 50,000. Also offers guarantees of loans by private lenders.	U.S. Department of Agriculture Rural Housing Service (formerly Farmers Home Administration) www.rurdev.usda.gov
Greenways, Trails and Recreation Program (GTRP)	Act 13 of 2012 establishes the Marcellus Legacy Fund and allocates funds to the Commonwealth Financing Authority (the "Authority") for planning, acquisition, development, rehabilitation and repair of greenways, recreational trails, open space, parks and beautification projects using the Greenways, Trails and Recreation Program (GTRP).	PA DCED www.newpa.com
Historic Preservation Tax Credits	Offers Federal income tax credits for a percentage of the qualified capital costs to rehabilitate a certified historic building, provided the exterior is restored. The program is generally limited to income-producing properties.	National Park Service www.nps.gov

Program	Program Description	Administering Agency/Internet Address
Historic Preservation - Certified Local Government Grants	Provides modest-sized matching grants to provide technical assistance to municipalities that have official historic districts and meet other criteria to be "certified".	Federal program administered by PHMC www.phmc.state.pa.us
Housing Programs - mainly including Federal HOME Program (Home Investment Partnerships Program)	Provides grants, low-interest loans and loan guarantees to for-profit and non-profit developers for the construction or rehabilitation of housing for low and/or moderate income persons. Funds are provided to local community-based housing development organizations to develop housing. Funds are also provided through private lenders to assist with down payment and closing costs for low income and disabled persons to purchase a home for their own occupancy.	PA Housing Finance Agency and DCED
Keystone Acquisition and Development Grant Program –-Community Recreation and Conservation Program Grants	Provide funding for the purchase of land for park, recreation, or conservation purposes and the rehabilitation and development of park and recreation areas and facilities, including greenways and trails. Municipalities COGs and some authorities are the only eligible applicants.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Acquisition and Development Grant Program -Rails-to-Trails Grants	Provide for acquisition of abandoned railroad right-of-way and adjacent land, and to develop them for recreational trail use. Open to municipalities and non-profit organizations.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Acquisition and Development Grant Program - Rivers Conservation Grants	Available to both municipalities and appropriate organizations for acquisition and development projects recommended in an approved Rivers Conservation plan (such as those created under the PITA Program; see below). To be eligible for acquisition or development funding, the Rivers Conservation Plan must be listed in the Pennsylvania Rivers Registry.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Historic Preservation Program	Provides 50% matching grants to fund analysis, acquisition or rehabilitation of historic sites. The site must be on the National Register of Historic Places, or officially determined to be eligible for listing. The site must be accessible to the public after funding. The grants can be	Federal program administered by PHMC www.phmc.state.pa.us

	made to public agencies or non-profit organizations.	
Keystone Historic Preservation Project Grants	Matching grants for historic surveys, historic preservation planning and National Register nominations. Available to municipalities and non-profit organizations. Cannot be used for construction.	Federal program administered by PHMC www.phmc.state.pa.us
Program	**Program Description**	**Administering Agency/Internet Address**
Keystone Land Trust Program	Provides grants to non-profit land trusts, conservancies, and organizations for acquisition and planning of open space and critical natural areas that face imminent loss. Although these funds are targeted to protecting critical habitat with threatened species, many of these lands also provide key open space, greenway, bikeway, trail and heritage corridor opportunities and connections in greenway systems. Lands must be open to public use and acquisition must be coordinated with the communities or counties in which the property is located. Funds require a 50-percent match.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Planning, Implementation and Technical Assistance (PITA) Program - Community Grants	Provides 50"/o matching grants to municipalities to fund overall planning for park and recreation, master plans for individual parks, acquisition of parkland and nature preserves, countywide natural area inventories, and rehabilitation and improvements to public recreation areas. Grants up to $20,000, without a local match, are available for material and design costs in small municipalities.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Planning, Implementation and Technical Assistance (PITA) Program - Rails-to-Trails Grants	Available for feasibility studies, master site plans, acquisition and improvement of former railroad lines for recreation trails. A 50% local match is required. Open to municipalities, authorities and non-profits.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Keystone Planning, Implementation and Technical Assistance (PITA) Program Rivers Conservation Grants	Available to municipalities and appropriate non-profit organizations for conducting watershed and river corridor studies and plans, many of which include greenway and trail elements. A 500/o local match is required.	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Land Use Planning Technical Assistance Program (LUPTAP)	Assists local governments and counties in preparing comprehensive plans, downtown plans, special community development studies and development regulations.	DCED www.newpa.com

	Typically provides 50% of eligible costs.	
PENNVEST	Offers low interest loans for construction and improvement of drinking water and wastewater systems.	PA Infrastructure Investment Authority and DEP Bureau of Water Supply Management www.dep.state.pa.us
Recreational Trails Program (Symms National Recreational Trails Act)	Grants are available to federal and state agencies, municipal government, organizations, and even private individuals. Money may be used for a variety of purposes, including work on trails to mitigate or minimize the impact on the natural	DCNR Southcentral Regional Office www.dcnr.state.pa.us
Program	**Program Description**	**Administering Agency/Internet Address**
Recreational Trails Program (Symms National Recreational Trails Act) cont.	environment, provide urban trail linkages, and develop trail-side and trail-head facilities. A 50% local match is required.	
State Planning Assistance Grant Program (SPAG)	Assists local governments and counties to prepare comprehensive plans, downtown plans, special community development studies and development regulations. Typically provides 50% of the eligible costs.	DCED www.dced.state.pa.us
Stream Improvement Program	Provides design and construction assistance to eliminate imminent threats to flooding and stream bank erosion.	DEP Bureau of Waterways Engineering. www.dep.state.pa.us
Urban Forestry Grants	Provides grants for tree planting projects. Is also a Federal "America the Beautiful" grant program for tree planting.	DCNR www.dcnr.state.pa.us
Transportation Funding Sources		
Impact Fees	Acts 203 and 209 of 1990 provide legal justification for the assessment of impact fees. The Township and adjacent municipalities could give some consideration to implementing such a system to supplement state and other local sources; although the initial costs of establishing impact fees will likely prove too expensive for the individual municipalities. The laws authorize the use of impact fees for costs incurred for improvements designated in the municipalities' transportation capital improvement program attributable to new development, including the acquisition of land and rights of way; engineering, legal and planning costs; and all other costs directly related to road	PennDOT District 8 Office www.dot.state.pa.us

	improvements within the service area or areas, including debt service. Municipalities are expressly prohibited under the impact fee law from using impact fees for: (1) the construction, acquisition or expansion of municipal facilities that have not been identified in the Township's Transportation Capital Improvement Program; (2) the repair, operation or maintenance of existing or new capital improvements; (3) the upgrade, update, expansion or replacement of existing capital improvements to serve existing developments to meet · stricter safety, efficiency, environmental or regulatory standards that are not attributable to new development; and, (4) the preparation and development of land use	
Program	**Program Description**	**Administering Agency/Internet Address**
Impact Fees cont.	assumptions and the Capital Improvements Plan. As a prerequisite to proceeding with plans for an impact fee ordinance, a municipality must have adopted a Township or County Comprehensive Plan, a subdivision and land development ordinance, and a zoning ordinance. In addition, municipalities must meet a number of specific requirements before adopting an impact fee ordinance, including: • Appoint an impact fee advisory committee • Develop future land use assumptions • Conduct a roadway sufficiency analysis • Develop a Capital Improvements Plan • Prepare an Impact Fee Ordinance Official Map - The Township could prepare an official Map in accordance with Article IV of the Pennsylvania Municipalities Planning Code as amended. The Official Map would be used to delineate areas for future land acquisition or easements for future roadway and infrastructure needs.	
Highway Transfer or Road Turnback Program	Under this program, PennDOT will bring a road up to current specifications and then dedicate it to the participating municipality. Annual maintenance fees are also included by PennDOT. In most instances, the Township gets a new roadway and funding	PennDOT District 8 Office www.dot.state.pa.us

	for maintenance.	
Local Share of Liquid Fuels Tax	This provides for a permanent allocation of part of the liquid fuels taxes collected by the state for municipalities. Liquid fuels allocations may be used for any road-related activity including maintenance, repair, construction, or reconstruction of public roads or streets. In any given year at least a portion of the money could be used for transportation facility projects.	PennDOT District 8 Office www.dot.state.pa.us
Moving Ahead for Progress in the 21st Century (MAP-21).	In 2012, funding for SAFETEA-LU was not extended and MAP-21 was created. MAP-21 provides funding to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. MAP-21 restructures core highway formula programs. Activities carried out under some existing formula programs – the National Highway System Program, the Interstate Maintenance Program, the Highway Bridge	USDOT / Federal Highway Administration www.fwha.dot.gov
Program	**Program Description**	**Administering Agency/Internet Address**
Moving Ahead for Progress in the 21st Century (MAP-21) cont.	Program, and the Appalachian Development Highway System Program – are incorporated into the following new core formula program structure: • National Highway Performance Program (NHPP) • Surface Transportation Program (STP) • Congestion Mitigation and Air Quality Improvement Program (CMAQ) • Highway Safety Improvement Program (HSIP) • Railway-Highway Crossings (set-aside from HSIP) • Metropolitan Planning It creates two new formula programs: • Construction of Ferry Boats and Ferry Terminal Facilities – replaces a similarly purposed discretionary program. • Transportation Alternatives (TA) – a new program, with funding derived from the NHPP, STP, HSIP, CMAQ and Metropolitan Planning programs, encompassing most activities funded under the Transportation Enhancements, Recreational Trails, and	

	Safe Routes to School programs under SAFETEA-LU. MAP-21 creates a new discretionary program – Tribal High Priority Projects (THPP) – and continues the following current discretionary programs: • Projects of National and Regional Significance (PNRS) • On-the-Job Training Supportive Services • Disadvantaged Business Enterprise (DBE) Supportive Services • Highway Use Tax Evasion (Intergovernmental enforcement projects) • Work Zone Safety Grants	
SAMI: Mobility Program-Safety and Improvements	This program is aimed at improving highway safety and reducing congestion. The source of the funding is the Center for Program Development and Management at PennDOT.	PennDOT District 8 Office www.dot.state.pa.us
Program	**Program Description**	**Administering Agency/Internet Address**
Safe Routes to Schools	Administered by the Federal Highway Administration, funding is available to support both infrastructure projects and non-infrastructure activities that encourage children to walk and/or bike to school. In July 2012, Congress passed a new transportation bill: Moving Ahead for Progress in the 21st Century (MAP-21). Beginning in October 2012, Safe Routes to School (SRTS) activities will be eligible to compete for funding alongside other programs, including the Transportation Enhancements program and Recreational Trails program, as part of a new program called Transportation Alternatives.	Safe Routes National Center for Safe Routes to Schools www.saferoutesinfo.org
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).	SAFETEA-LU was signed into law on August 10, 2005. It expanded on TEA-21. It established new resources and opportunities to advance highway safety throughout the country in a comprehensive, strategic manner. Funding is intended for improvements and maintenance of surface transportation infrastructure, including the interstate highway system, transit system,	USDOT / Federal Highway Administration www.fwha.dot.gov

	bicycling and pedestrian facilities, and freight rail operations. SAFETEA-LU was not renewed in 2012. (See MAP-21).	
Transportation Equity Act for the 21"Century (TEA-21)	Provides money for highway, highway safety, transit and other surface transportation programs through Fiscal Year 2003. TEA-21 builds on the initiatives established during Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Significant features ofTEA-21 are assurance of a guaranteed level of Federal funding for surface transportation; extension of the DBE Program; strengthening of safety programs; and continuation of the program structure established under ISTEA. These elements include: scenic beautification along highways, historic preservation, restoration of historic transportation facilities (such as canals), preservation of rail corridors (particularly for bicycle/walking routes), control and removal of outdoor advertising, archeological research, and mitigation of water pollution due to highway runoff. All projects must have a direct relationship to transportation. Section 4 was expanded to create SAFETEA-LU (see SAFETEA-LU).	USDOT/FHWA funds administered by PennDOT. Typically priority through regional or county transportation planning organizations.
Program	**Program Description**	**Administering Agency/Internet Address**
Transportation Partnerships	Under Act 47 of 1985, as amended, it provided for the PennDOT District 8 formation of "partnerships" between municipalities and, in most cases, local developers and businesses. A formal partnership requires the designation of a transportation development district in which all improvements will take place and in which assessments may be charged. The Township should consider participation in this program as a means of obtaining funding for roadway improvements	PennDOT District 8 Office www.dot.state.pa.us

Sources: Publications and Internet sites of various agencies listed in Table 10-1.

Abbreviations: DCED - Pennsylvania Department of Community and Economic Development
DCNR – Pennsylvania Department of Conservation and Natural Resources
DEP - Pennsylvania Department of Environmental Protection
FHWA - Federal Highway Administration
HUD - U.S. Dept. Of Housing and Urban Development
NRCS - U.S. Natural Resource Conservation Service

PennDOT - Pennsylvania Department of Transportation
USDOT - U.S. Department of Transportation

CHAPTER 11. INTERRELATIONSHIP OF THE COMPREHENSIVE PLAN COMPONENTS

Each of the elements of this Comprehensive Plan—Population and Housing, Land Use, Environmental and Cultural Resources, Community Facilities and Services, Public Utilities, and Transportation—has been developed with consideration to each of the other Plan elements. They are all interrelated and the consequences of any one element are reflected in the others. For example, the Land Use/Growth Management Plan is based on the community goals and objectives, as well as on the provisions of services, environmental constraints, capacity of the transportation system, need for recreation, and obligation to provide a variety of housing opportunities. Future greenways and trails were planned so that they interconnect existing parks, institutions, and housing and commercial developments, and protect streams. To the extent possible, all intensive land development is planned along the U.S. Route 15 corridor where most development already exists, infrastructure is largely in place or more efficiently provided, and less environmental impact is likely to occur. Moreover, the Township's Act 537 Sewage Facilities Plan was concurrently prepared with the Comprehensive Plan to ensure coordination between the two planning processes. Coordination of the Plan elements will minimize the cost of future services and maximize the quality of life for Upper Allen Township residents.

CHAPTER 12. PLAN REVIEW, APPROVAL, AND MAINTENANCE

Sections 301.3 and 302 of Article III of Act 247 (as amended) of the Pennsylvania Municipalities Planning Code sets forth the procedures that need to be followed to provide for review and adoption of the Comprehensive Plan.

Section 301.3 specifies that the municipality shall provide copies of the proposed plan to the county planning agency, local school district, and contiguous municipalities for their review and comments at least 45 days prior to the public hearing.

Adoption of the Comprehensive Plan begins with the Planning Commission. Under Section 302, the Planning Commission is required to hold at least one public meeting prior to forwarding the plan to the Board of Commissioners. The Commissioners should take into consideration comments on the plan and are required to hold at least one public hearing on the Plan. If, after the public hearing, the plan is substantially revised, the Commissioners shall hold another public hearing before proceeding to vote on the plans. Approval shall be by a resolution adopted by a majority of the Board of Commissioners. Within 30 days of adoption, the Township shall forward a copy of the approved Comprehensive Plan to the Cumberland County Planning Commission.

The Comprehensive Plan will be useful only if it is regularly used and updated. For this to occur, the Board of Commissioners and the Planning Commission need to perform the following functions on an annual basis to review and update the Plan.

- Annually evaluate the Comprehensive Plan and, if necessary, make modifications to the Plan to ensure that it remains a useful document to help make day-to-day decisions about the future growth and preservation of the Township.

- The Planning Commission should submit an annual written report to the Board of Commissioners that summarizes its conclusions on the evaluation of the Comprehensive Plan, the past year's major activities, the upcoming year's major projected activities, and crucial issues that will or may face the Township.

CHAPTER 13. REFERENCES

CET Engineering Services, Inc. 2010. *Master Plan for the Grantham Wastewater Treatment Facility.*

CET Engineering Services, Inc. 2010. *Wasteload Management Report – Grantham Wastewater Treatment Plant, Upper Allen Township, Cumberland County, PA.*

CET Engineering Services, Inc. 2010. *Wasteload Management Report – Lower Allen Township Authority Wastewater Conveyance and Treatment System, Lower Allen Township, Cumberland County, PA.*

Cumberland County Planning Commission. 2011. *Cumberland County Comprehensive Plan*. Cumberland County Planning Commission, Carlisle, PA.

Diethorn, R. 1198. Correspondence dated June 30. Appalachian Audubon Society.

Pennsylvania Department of Transportation and New Jersey Department of Transportation. 2008. *Smart Transportation Guidebook, Planning and Designing Highways and Streets that Support Sustainable and Livable Communities.* Harrisburg, PA.

Pennsylvania State Data Center. 2000. *U.S. Census Bureau.* Pennsylvania State Data Center, Middletown, PA.

Tri-County Regional Planning Commission. 2000-2009. *Building Permit Survey.* Tri-County Regional Planning Commission, Harrisburg, PA.

Upper Allen Heritage Committee. 1976. *Early Architecture in Upper Allen Township*. Center Square Press, Mechanicsburg, PA.

Upper Allen Township Planning Commission. 1999. *Upper Allen Township Comprehensive Plan, Cumberland County, Pennsylvania*. Upper Allen Township, Mechanicsburg, PA.

Upper Allen Township. 2002. *Upper Allen Township Comprehensive Recreation and Open Space Plan*. 2002. Upper Allen Township, Mechanicsburg, PA.

U.S. Census Bureau. 1960-2010. *U.S. Census Data.* U.S. Census Bureau. www. census.gov.

Yost Strodoski Mears Toole Recreation Planning. 2002. *Upper Allen Township Comprehensive Recreation and Open Space Plan.* "The Greening of Upper Allen Township."

CHAPTER 14. DEFINITIONS

Agriculture: The production, keeping, or maintenance, for sale, lease, or personal use, of plants and animals useful to man, including but not limited to forages and sod crops; grains and seed crops; dairy animals and dairy products; poultry and poultry products; livestock, including beef cattle, sheep, swine, horses, ponies, mules, or goats or any mutations or hybrids thereof, including the breeding and grazing of any or all of such animals; bees and apiary products; fur animals; trees and forest products; fruits of all kinds, including grapes, nuts, and berries; vegetables; nursery, floral, ornamental and greenhouse products; or lands devoted to a soil conservation or forestry management program.

Animal Feeding Operation (AFO): Federal regulations define an AFO as a facility where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

Arterial Highway: A Principal Arterial provides land access while retaining a high degree of thru traffic mobility and serves major centers of urban activity and traffic generation. They provide a high speed, high volume network for travel between major destinations in both rural and urban areas. A Minor Arterial gives greater emphasis to land access with a lower level of thru traffic mobility than a principal arterial and serves larger schools, industries, hospitals and small commercial areas not incidentally served by principal arterials.

Aquifer: A geologic formation that contains a usable supply of water.

At-Grade Intersections: Road intersections built on the ground. [Comment: At-grade (or grade level) differs from below grade or above grade. All use the existing grade, whether finished or natural, as the reference.]

Best Management Practices (BMPs): A broad array of management techniques to control the quantity and quality of stormwater runoff. The concept of BMPs implies that site design will include the most suitable technique (or practice) or combination of techniques (or practices) that will best manage the anticipated stormwater flow and quality based on an evaluation of site conditions and planning requirements.

Buffer: A strip of land established to protect one type of land use from another with which it is incompatible.

Buffers: Areas within a property or site, generally adjacent to and parallel with the property line, either consisting of natural existing vegetation or created by the use of trees, shrubs, fences, and/or berms, designed to limit continuously the view of and/or sound from the site to adjacent sites or properties.

Building Coverage: The ratio of the horizontal area measured from the exterior surface of the exterior walls of the ground floor of all principal and accessory buildings on a lot to the total gross lot area.

Buildout: A theoretical future point when all of the municipality's remaining buildable land is fully developed.

Ca: Symbol for the element calcium.

Calculated Median Sustained Yield: The median amount of water, in gallons per minute, that can be obtained continuously from a well for 24 hours.

Calculated Sustained Yield: The amount of water, in gallons per minute, that can be obtained continuously from a well for 24 hours.

Calculations: The studied care in analyzing or planning.

Cluster Housing: A development approach in which building lots may be reduced in size and buildings sited closer together, usually in groups or clusters, provided that the total development density does not exceed that which could be constructed on the site under conventional zoning and subdivision regulations. The additional land that remains undeveloped is then preserved as open space and recreational land.

Collector Road: A Collector Road serves dual functions—collecting traffic between local roads and arterial streets and providing access to abutting properties. It serves minor traffic generators, such as local elementary schools, small individual industrial plants, offices, commercial facilities, and warehouses not served by principal and minor arterials.

Commercial Land Use: Land uses type that generally includes those establishments engaged in retail trade or services.

Community Park: Focuses on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces; usually serves two or more neighborhoods and a ½ to 3-mile radius; and has an optimal size of between 20 and 50 acres, but should be based on the land area needed to accommodate the desired uses.

Concentrated Animal Feeding Operation (CAFO): Federal regulations define a CAFO as an animal feeding operation that (a) confines more than 1,000 animal units (AU); or (b) confines between 301 to 1,000 AU and discharges pollutants into waters of the United States through a manmade ditch, flushing system or similar manmade device, *or* directly into waters of the United States that originate outside of and pass over, across or through the facility or otherwise come into direct contact with the animals confined in the operation. Animal quantities equivalent to 1,000 AU are 1,000 slaughter and feeder cattle, 700 mature dairy cattle, 2,500 swine each weighing more than 25 kilograms, 30,000 laying hens or broilers (if a facility uses a liquid manure system), and 100,000 laying hens or broilers (if a facility uses continuous overflow watering).

Concentrated Animal Operation (CAO): Pennsylvania Nutrient Management Act regulations define a CAO as an operation where the animal density exceeds two animal equivalent units (AEU) per acre on an annualized basis. An AEU is defined as 1,000 pounds of live weight.

Density: The number of families, individuals, dwelling units, households, or housing structures per gross acre of land.

Dwelling Unit: A building or structure designed for living quarters for one (1) or more families, including manufactured homes which are supported either by a foundation or are otherwise permanently attached to the land, but not including hotels, boarding/rooming houses or other accommodations used for transient occupancy.

Effluent: A discharge of liquid waste, with or without treatment, into the environment.

Efficacy: Effectiveness, the ability to produce intended results.

Flood, 100-year: A flood, which is likely to be equaled or exceeded once every 100 years (i.e., that has a one percent (1%) chance of being equaled or exceeded in any given year). A study by the Federal Insurance Administration, the United States Army Corps of Engineers, the United States Department of Agriculture's Soil Conservation Service, the United States Geological Survey, the Susquehanna River Basin Commission, the Department of Environmental Protection, or a licensed professional registered by the Commonwealth of Pennsylvania to perform such a study is necessary to define this flood.

Flood Fringe: That portion of floodplain outside the floodway.

Floodplain: A floodplain may be either/or a combination of: (a) a relatively flat or low land area which is subject to partial or complete inundation from an adjoining or nearby stream, river or watercourse, during a 100-year design frequency storm; or (b) any area subject to the unusual and rapid accumulation of runoff or surface waters from any source.

Floodway: The areas identified as floodway in the Flood Insurance Study prepared by the FEMA. The term shall also include floodway areas which have been identified in the other available studies or sources of information for those floodplain areas where no floodway has been identified in the Flood Insurance Study.

Freeway: Limited access roads designed for large volumes of traffic between communities of 50,000 or more to major regional traffic generators (such as central business districts, suburban shopping centers and industrial areas); freeways should be tied directly to arterial roads, with accessibility limited to specific interchanges to avoid the impediment of through traffic.

Greenways: A linear area maintained as open space in order to conserve natural and cultural resources, and to provide recreational opportunities, aesthetic and design benefits, and linkages between open space and recreational facilities and between these facilities and their users.

Hazard: A state that may result in an undesired event, the cause of a risk. Something causing danger, peril, risk, or difficulty.

Historic Preservation Ordinance: A regulation that identifies historic districts and protects them from major changes, and provides for the appointment of a Historical Architectural Review Board or a Historical Commission.

Household: Persons living together in a single dwelling unit, with common access to, and common use of, all living and eating areas and all areas and facilities for the preparation and storage of food within the dwelling unit.

Housing Unit: A room or group of rooms used by one or more individuals living separately from others in the structure, with direct access to the outside or to a public hall and containing separate bathroom and kitchen facilities.

Hydric Soil: A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

Impervious Surface: A surface that does not absorb rain, including all buildings and other structures, parking areas, driveways, roads, sidewalks, storage areas and areas of concrete and nonporous asphalt and other such areas as shall be determined to be nonporous by the Board of Commissioners and/or Township Engineer.

Industrial Land Use: This land use category generally includes (1) establishments engaged in transforming raw materials into new products, usually for distribution to other regions and not on sale on-site, and (2) establishments engaged in wholesale trade, storage or distribution with little or no retail trade or service.

Infill Development: The development of new housing or other buildings on scattered vacant sites in a built-up area.

Infiltration: The flow of fluid into a substance through pores or small openings.

Inflow: Extraneous water that enters a sanitary sewer system during a storm event.

Interstate Highway: Limited access highways designed for traffic between major regional areas or larger urban communities of 50,000 or more; these highways extend beyond state boundaries, with access limited to interchanges located by the US Department of Transportation.

Intensive Agricultural Operation: One that is defined as an Animal Feeding Operation, Confined Animal Feeding Operation, or Concentrated Animal Operation, or a large scale greenhouse operation.

Local Roads: Those that are local in character and serve farms, residences, businesses, neighborhoods and abutting properties.

Lot: A designated parcel, tract, plat or area of land established by a plat or otherwise as permitted by law and to be used, developed or built upon as a unit.

Major Roadway: A major thoroughfare or part thereof, which when open to public use, access is limited from abutting property and other streets to location and in the manner approved by the municipality and/or the Pennsylvania Department of Transportation.

Mini Park: Addresses limited, isolated, or unique recreational needs; usually serves less than a ¼-mile radius; and is less than 5 acres in size.

Minor Arterial Highway: Minor Arterials give greater emphasis to land access with a lower level of thru traffic mobility than principal arterials and serve larger schools, industries, hospitals and small commercial areas not incidentally served by principal arterials.

Mixed Use: The development of a tract of land, building or structure with a variety of complementary and integrated uses such as, but not limited to, residential, office, manufacturing, retail, public or entertainment, in a compact form.

Multi-Family Residential: A building containing three or more dwelling units, including units that are located one over the other.

Mutual Aid Agreement Partners: Local government bodies or agencies engaged in a pre-arranged system for the timely use of resources of neighboring service providers when local resources prove temporarily insufficient.

Neighborhood Park: As the basic unit of the park system, serves as the recreational and social focus of a neighborhood with opportunities for informal active and passive recreation; serves a ¼ to ½-mile radius uninterrupted by nonresidential roads and other physical barriers; and is at least 5 acres in size with 7 to 10 acres being optimal.

Nonnuisance Industry: An industry which does not interfere with the use of or enjoyment of neighboring properties, endanger personal health or safety, or offend the senses.

On-Lot Wastewater Treatment System: An individual sewage disposal system consisting of a septic tank, seepage tile sewage disposal system, or any other approved sewage treatment device serving a single unit.

Open Space: Any parcel or area of land or water essentially unimproved and set aside, dedicated, designated, or reserved for the public or private use or enjoyment or for the use and enjoyment of owners and occupants of land adjoining or neighboring such open space.

Out-of-Hospital Medical Care: Emergency medical services, medically-related transportation services, and limited community/home health care services, provided to residents and businesses within the Township.

Overall Density: The average number of families, persons, or housing units per unit of land.

Palustrine Emergent: A Level 3 Class wetland dominated by herbaceous vegetation including grasses, cattails, rushes, and sedges.

Performance Standards: A minimum requirement or maximum allowable limit on the effects or characteristics of a use, usually written in the form of regulatory language.

Prime Farmland Soils: Prime farmland, as identified by the US Department of Agriculture, is the land that is best suited to producing food, feed, forage, fiber, and oilseed crops. It has the soil quality, growing season, and water supply needed to economically produce a sustained high yield of crops when it is treated and managed using acceptable farming methods. Prime farmland produces the highest yields with minimal outputs of energy and economic resources, and farming it results in the least damage to the environment.

Planned Residential Development: An area of land, controlled by a landowner, to be developed as a single entity for a number of dwelling units, or combination of residential and nonresidential uses, the development plan for which does not correspond in lot size, bulk, type of dwelling, or use, density, or intensity, lot coverage, and required open space to the regulations established in any one district created, from time to time, under the provisions of the zoning ordinance.

Prime Agricultural Soils: Prime farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed with modern farming methods. It can be farmed continuously or nearly continuously without degrading the environment and will produce the most with the least amount of energy. This land is the most responsive to management and requires the least investment for maximum productivity.

Prime Arterial Highway: Principal Arterials provide land access while retaining a high degree of thru traffic mobility and serve major centers of urban activity and traffic generation. They provide a high speed, high volume network for travel between major destinations in both rural and urban areas. There currently are no principal arterials classified in Upper Allen Township.

Public/Institutional Use: Land use category that typically involves establishments or properties that provide educational, cultural, or social services for the community. This category includes uses such as public and private schools, municipal offices and grounds, churches, and cemeteries.

Public/Quasi-Public Land Use: Areas or buildings where the public is directly or indirectly invited to visit or permitted to congregate.

Pumping Station: A building or facility containing the necessary equipment to lift sanitary sewage from a lower to a higher elevation.

Recharge: The addition to, or replenishing of, water in an aquifer.

Recreational Land Use: This land use category typically includes public and private parks and recreation areas.

Retail: The selling of goods or merchandise to the public for personal or household consumption and rendering services incidental to the sale of such goods. [Comment: An important characteristic of a retail trade establishment is that it buys goods for resale.]

Sanitary Sewers: Pipes that carry domestic or commercial sanitary sewage and into which storm, surface, and ground waters are not intentionally admitted.

Sec./veh.: Seconds per vehicle.

Setbacks: The distance between the building and any lot line.

Shoulder: The area between the moving traffic lanes and curb used for emergency stopping of vehicles or parking.

Single Family Residential: Consists of the following types:

1. **Dwelling, Single Family, Attached (Row):** A dwelling designed, occupied or used by one family, having two (2) party walls in common with other buildings and no side yards, except that end units have only one party wall, commonly called row houses or townhouses.

2. **Dwelling, Single Family, Detached:** A dwelling used by one (1) family, having only one (1) dwelling unit and having two (2) side yards.

3. **Dwelling, Single Family, Semi-Detached:** A building used by one (1) family, having one (1) side yard, and one (1) party wall in common with another building, commonly called a duplex.

Slope: The deviation of a surface from the horizontal, usually expressed in percent degrees. [Comment: Slope percent is calculated by dividing the vertical distance by the horizontal distance times 100.]

Supplemental Farm Business: An auxiliary use to the primary agricultural use of a property in which residents engage in a commercial activity that is secondary to the primary agricultural activity on the property, that is conducted on the farm, and that does not change the primary agricultural characteristics of the property or neighborhood.

Sustainable Development/Community: A community that lives off the "interest" of its "capital"—its natural, human/social, and financial/built resources—and maintains or enhances that capital.

Threatened or Endangered Species: Wildlife species who may become endangered if conditions surrounding them begin to or continue to deteriorate and so designated by a governmental agency.

Transportation Corridor: A combination of principal transportation routes involving a linear network of one or more highways of four or more lanes rail lines, or other primary and secondary access facilities that support a development corridor.

Tree Protection Zone: A specified area where measures are taken, such as temporary fencing and the use of tree wells, to protect existing trees from damage or loss during and after project construction.

Useable Spaces: The space remaining on a zoning lot after the minimum open-space requirements (coverage, yards, setbacks) have been met.

Vacant Land: This land use type includes lands that are presently not in use, such as wooded areas, unimproved areas not used for agriculture or recreation, and improved areas or buildings that are not occupied.

Wastewater: Water carrying waste from homes, businesses, and industries that is a mixture of water and dissolved or suspended solids; excess irrigation water that is runoff to adjacent land.

Watershed Stormwater Management Plan: Defined in the context of Pennsylvania Act 167, it provides the framework for improved management of the storm runoff impacts associated with the development of land. The purposes of the act are to encourage the sound planning and management of storm runoff, to coordinate the stormwater management efforts within each watershed, and to encourage the local administration and management of a coordinated stormwater program.

Wetlands, Freshwater: An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wholesale Trade: Establishments or places of business primarily engaged in selling merchandise to retailers; to industrial, commercial, institutional, or professional business users; to other wholesalers; or acting as agents or brokers and buying merchandise for, or selling merchandise to, such individuals or companies.