

Berkshire Township

DELAWARE COUNTY



*Striving for sustainable growth
and honoring our rural roots.*



Comprehensive Land Use Plan

Prepared by the
Delaware County
Regional Planning Commission

Adopted 12/11/2017

THE COMPREHENSIVE PLAN OF BERKSHIRE TOWNSHIP 2017

1454 Rome Corners Road
Galena, Ohio 43021

Approved by the Berkshire Township Zoning Commission on October 5, 2017
Adopted by the Berkshire Township Trustees on December 11, 2017

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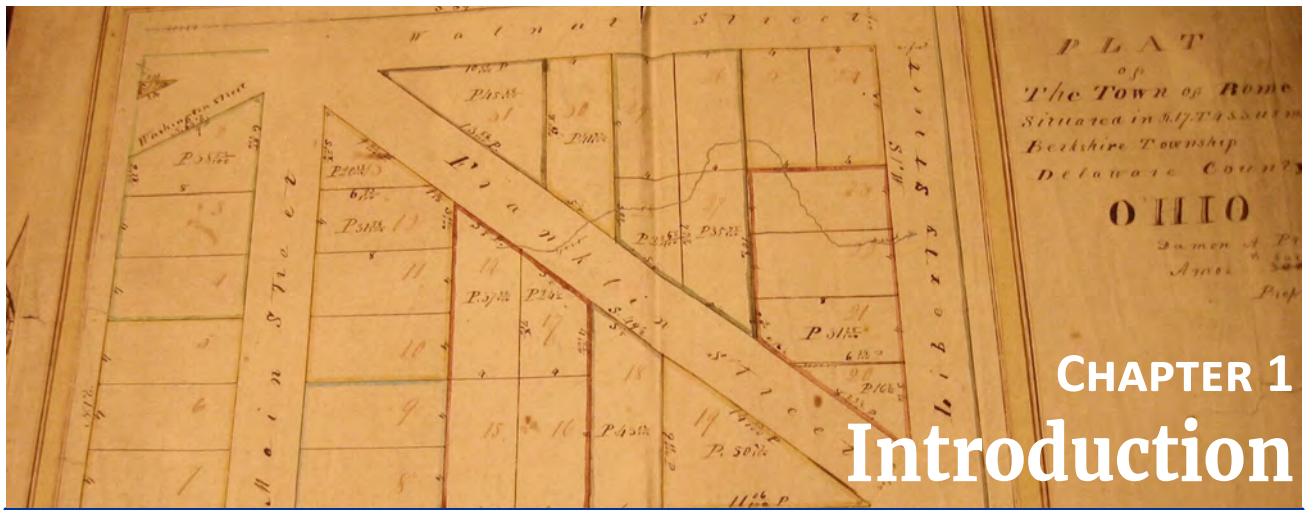
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Unless otherwise noted, base map datasets are provided by the Delaware County Auditor's Office DALIS Project (parcel, water, political boundaries, etc.). Except for Chapter 1, all chapter heading photos are from CONNECTExplorer Pictometry.



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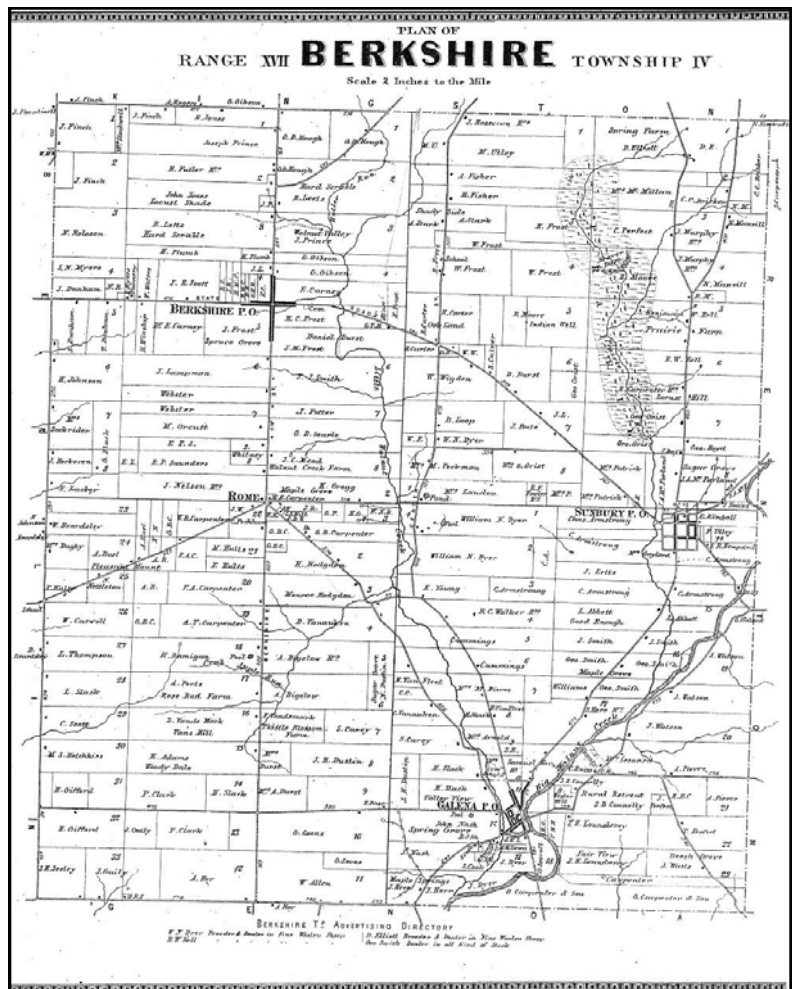


Colonel Moses Byxbe of Berkshire County, MA, purchased 8,000 acres in this Township and led his first group of settlers here in 1804. After erecting cabins, he returned east and persuaded others to follow to his lands.

By 1806, the original Berkshire Township was founded but it included parts of Brown, Kingston, Berlin, Orange, Genoa, Trenton, and Sharon Townships. The others formed separate townships until the present Berkshire was left around 1821. It included Berkshire Corners, Sunbury, and Galena villages.

Early settlers included Azariah Root, Edward Potter, Mr. Curtis, John Kilborn, Ralph Slack, Adonijah Rice, Maj. Elen Vining, Gideon and William Oosterhaus, Ichabod Plumb and Dr. Reuben Lamb. Most came from Massachusetts, Pennsylvania, and New Jersey.

- From "History of Delaware County and Ohio, 1880"



The image is from "Atlas of Delaware County, Ohio" by F. W. Beers, 1866.

The Berkshire Township Zoning Commission convened on April 13, 2017 for the purpose of beginning an update to its 2008 Berkshire Township Comprehensive Plan. The Zoning Commission is responsible (Ohio Revised Code 519.05) for the submission of a plan to the Township Trustees to achieve the purposes of land use regulation under zoning powers (ORC 519.02). At-large residents and landowners of the Township were encouraged to participate in the planning process.

The Township took steps to plan for its future by last amending its Plan in 2008 with an update around the I-71 Interchange in 2015. The Berkshire Township Comprehensive Land Use Plan (update) is intended to:

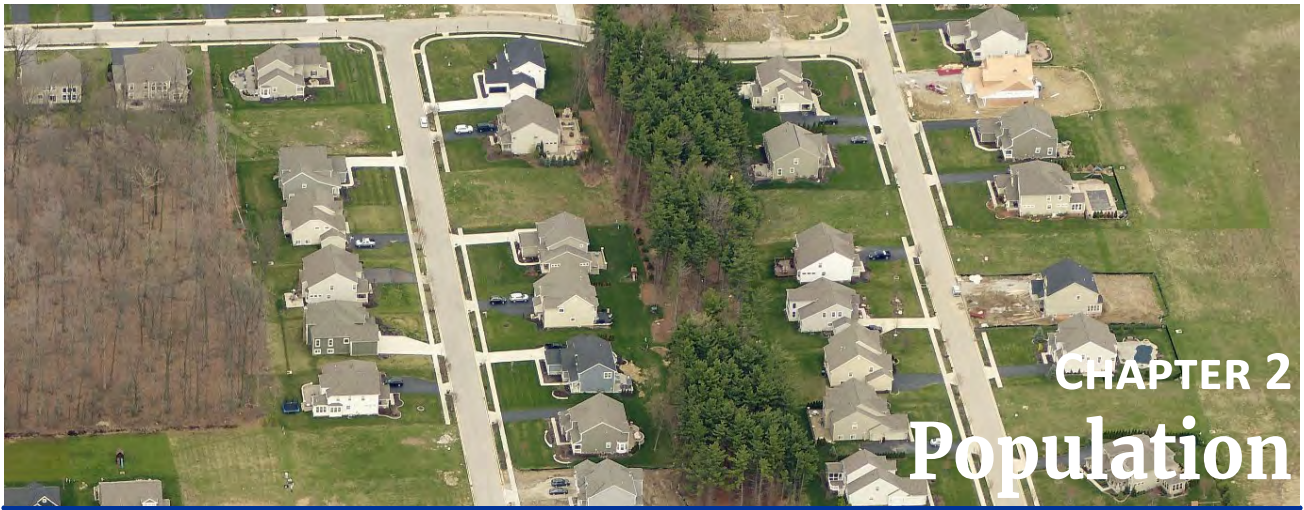
1. Review changes in land use, population, utility services, roads, boundaries that have occurred since 2008, as well as the changes in economic, legislative, judicial, and regulatory conditions;
2. Review any existing policies and judge whether they are still representative of the community's values and visions of its future, and if those policies conform

to current federal and state land use legislation and court decisions;

3. Review the goals and objectives for the growth in the ensuing 5 to 10 years;
4. Create a revised text and map for the recommended land use on a site-specific basis to guide future growth of the Township
5. Recommend amendments to local zoning, and the adoption of development policies to assure that the Township will be what it has envisioned when it is all built out.

The Comprehensive Plan contains policies, goals, and a recommended land use map for the future development of the Township. The Township must subsequently amend its zoning to implement these policies and visions. The Comprehensive Land Use Plan is intended to be site-specific, with land use and/or density classification attached to each parcel, and viewed from an environmental standpoint with policies to protect critical resource areas.





Regional Population

According to the U.S. Census Bureau, Delaware County’s population grew from 109,989 in April of 2000 to 174,214 in April, 2010 (an increase of 58%). Since 2010, Delaware County has posted an increase of 14%, to an estimate by DCRPC of 198,651 at the beginning of 2016.

Berkshire Township’s population was determined to be 1,946 by the Census Bureau in 2000. This increased 28% by 2010 to a total of 2,482 residents. The RPC estimates

that number to currently be 3,124 in 2017, an increase of about 26%. The RPC updates these figures annually, using a formula that uses building permits as its chief factor in determining growth. The formula takes into account the average number of residents per unit, a vacancy rate, and a typical period of time between building permit and home completion. The following table represents the building permits since 2000 in the Township.

Figure 1. Berkshire Township New Residential Building Permits 2001-2016

Yr	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	16	13	15	18	28	29	37	17	46	23	25	26	38	45	91	55

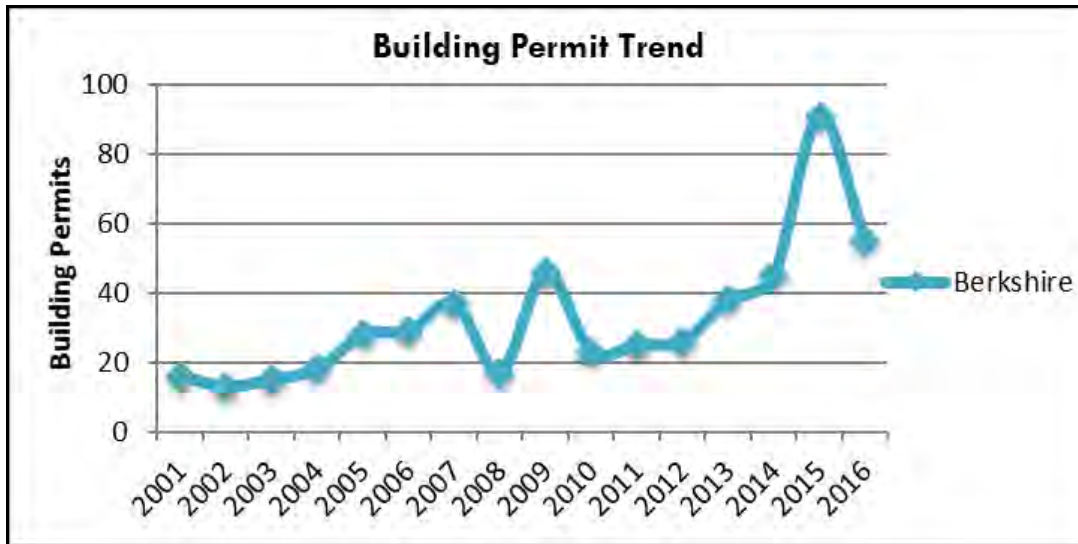


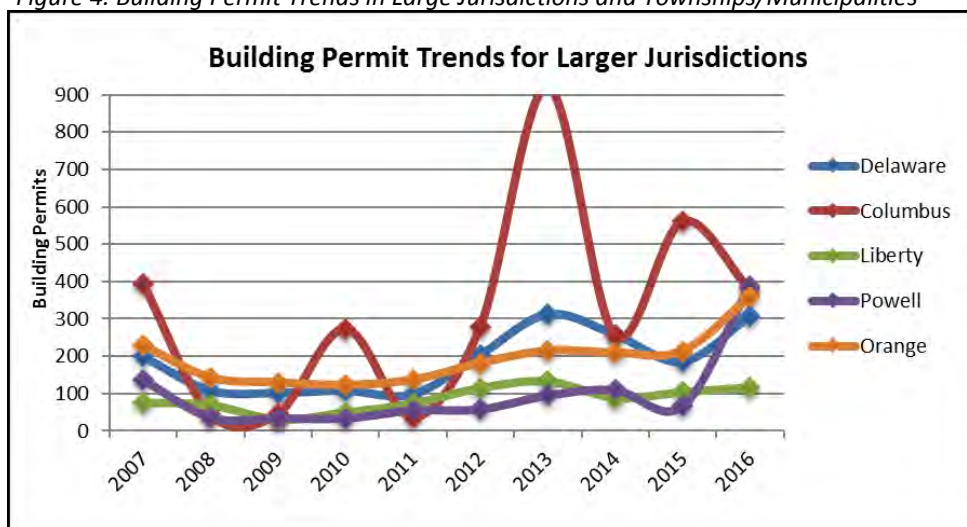
Figure 2. Historical Township Building Permits

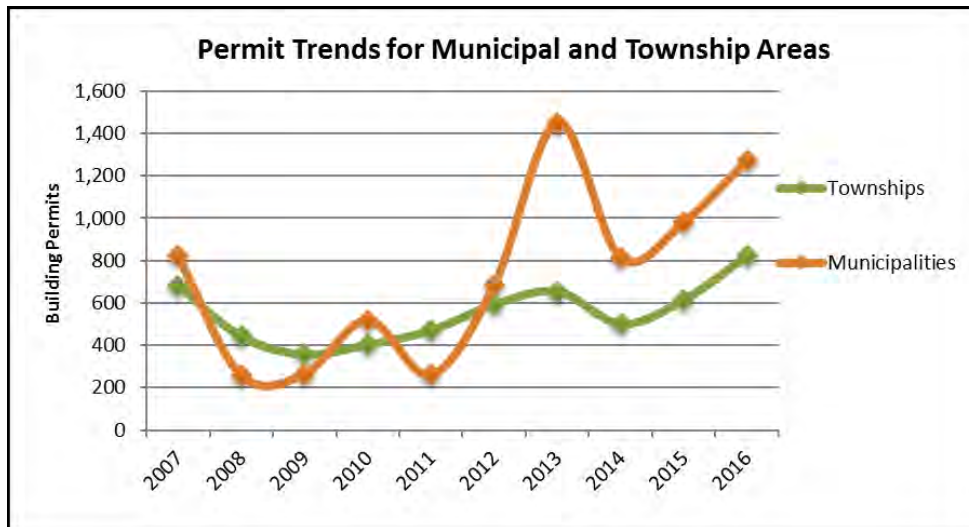
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Berkshire	37	17	46	23	25	26	38	45	91	55
Berlin	40	30	20	35	30	26	19	28	24	50
Brown	2	3	5	2	3	4	3	6	3	6
Concord	80	67	40	64	75	83	67	32	39	31
Delaware	1	3	1	4	9	6	7	1	7	4
Genoa	148	72	69	82	83	116	110	39	66	109
Harlem	19	17	5	5	13	9	21	13	22	29
Kingston	12	1	4	3	2	1	9	5	7	10
Liberty	75	69	30	49	73	115	133	89	104	117
Marlboro	2	0	1	0	0	0	0	2	0	0
Orange	228	142	129	122	136	181	214	209	213	358
Oxford	5	1	0	0	1	1	1	1	1	1
Porter	6	3	1	5	6	5	13	10	13	11
Radnor	3	3	0	0	1	3	6	6	2	5
Scioto	5	10	4	3	8	7	8	9	9	21
Thompson	7	0	0	2	2	2	1	0	2	1
Trenton	7	3	2	3	3	3	4	4	5	9
Troy	6	3	1	2	2	5	1	3	8	7
Total Twps	683	444	358	404	472	593	655	502	616	824

Figure 3. Historical Municipality Building Permits

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Delaware	199	108	102	108	98	204	313	259	186	306
Galena	4	3	4	1	7	11	4	6	7	5
Sunbury	20	31	37	34	19	34	73	36	36	31
Shawnee Hills	2	0	3	2	3	1	10	10	5	11
Powell	137	36	34	34	55	58	95	110	66	388
Ashley	0	1	0	0	0	1	1	0	0	0
Ostrander	7	6	0	7	8	10	23	12	12	7
Dublin	1	2	1	0	0	0	0	2	0	9
Westerville	61	29	37	60	36	89	10	121	111	136
Columbus	393	43	46	273	35	277	921	255	560	379
Total Municipalities	824	259	264	519	261	685	1,450	811	983	1,272

Figure 4. Building Permit Trends in Large Jurisdictions and Townships/Municipalities





The next table shows the population projections calculated by the DCRPC for all communities in Delaware County using the formula referenced above. These projections are considered more current than the U.S. Census because DCRPC has more current building permit data. The projections are speculative and may change drastically based upon major developments. The maximum build-out population is a true depiction of what the build-out population would be for each community as they are currently planned and zoned. Except in a few cases, no date for such maximum build-out is projected.

Figure 5. Township Population Projections (by DCRPC Housing Unit Method)

	2000 US CENSUS	2010 US CENSUS	2015	2016	2020*	2025*	2030*	Maximum Build-out**
Berkshire	1,946	2,428	2,923	3,124	3,669	4,346	5,115	17,113
Berlin	3,313	6,496	7,140	7,234	7,611	8,243	8,960	23,537
Brown	1,290	1,416	1,471	1,481	1,523	1,579	1,643	17,645
Concord	4,088	9,294	10,547	10,647	11,309	12,558	13,975	40,049
Delaware	1,559	1,964	2,061	2,074	2,127	2,206	2,296	15,014
Genoa	11,293	23,090	25,195	25,437	26,545	28,373	28,454	28,454
Harlem	3,762	3,953	4,134	4,186	4,353	4,577	4,832	29,069
Kingston	1,603	2,156	2,256	2,281	2,357	2,462	2,581	26,994
Liberty	9,182	14,581	16,246	16,525	17,666	19,088	20,702	29,900
Marlboro	227	281	290	290	294	309	326	5,499
Orange	12,464	23,762	27,084	27,743	30,194	33,434	37,038	37,038
Oxford	854	987	1,008	1,011	1,026	1,057	1,092	14,291
Porter	1,696	1,923	2,052	2,084	2,191	2,318	2,461	25,000
Radnor	1,335	1,540	1,598	1,607	1,655	1,708	1,769	20,404
Scioto	2,122	2,350	2,459	2,490	2,601	2,731	2,879	25,588
Thompson	558	684	712	717	734	773	818	13,771
Trenton	2,137	2,190	2,241	2,254	2,301	2,375	2,458	11,684
Troy	2,021	2,115	2,157	2,174	2,226	2,296	2,375	13,737
Total Twps	61,450	101,210	111,572	113,357	120,384	130,434	139,772	

Figure 6. Municipal Population Projections

	2000 US CENSUS	2010 US CENSUS	2015	2016	2020*	2025*	2030*	Maximum Build-out**
Delaware	25,243	34,753	37,952	38,497	40,921	43,671	46,037	106,061
Galena	305	653	764	781	863	963	1,049	1,500
Sunbury	2,630	4,389	5,008	5,085	5,516	6,051	6,512	11,638
Shawnee Hills	419	681	763	776	844	909	966	1,290
Powell	6,247	11,500	12,940	13,153	14,267	15,605	15,605	15,605
Ashley	1,216	1,330	1,344	1,345	1,352	1,359	1,366	4,705
Ostrander	405	643	833	864	1,023	1,087	1,087	1,087
Dublin	4,283	4,018	4,018	4,018	4,018	4,018	4,018	4,018
Westerville	5,900	7,792	8,781	9,121	9,633	9,633	9,633	9,633
Columbus	1,891	7,245	11,191	12,305	14,191	14,191	14,191	14,191
Total Municipalities	48,539	73,004	83,593	85,945	92,628	97,487	100,464	

*Based on historical trends, estimates are subject to localized increases/decreases, and do not include the potential for annexations and resulting changes in density.

**Source: RPC Demographic Web Page, 8/2016

Demographic Profiles

The 2000 and 2010 U.S. Census shows certain other profiles of Berkshire Township’s population. The picture is of an affluent, educated, mostly white population, two-thirds of whom are 18 or older. Less than one percent are unemployed. Less than one percent are below the poverty level.

Figure 7. U.S. Census Demographic Profile, Berkshire Twp

U.S. Census Population Category	2000 Township Population	2010 Township Population
Total Township population	1,943 persons	2,428 persons
White	1,906	2,319
African American	3	21
Latino	9	25
Native American	1	8
Asian	18	24
Other	6	0
Two or More	12	31
5-yr estimates, 2014		
Over 18 population	2,397 (74.3%)	
Male population	1,603 (49.7%)	
Female population	1,622 (50.3%)	
Median age	42.6	
Family households	84.2%	
Non family households	15.8%	
Average household size	2.92 persons	
Average family size	3.21	

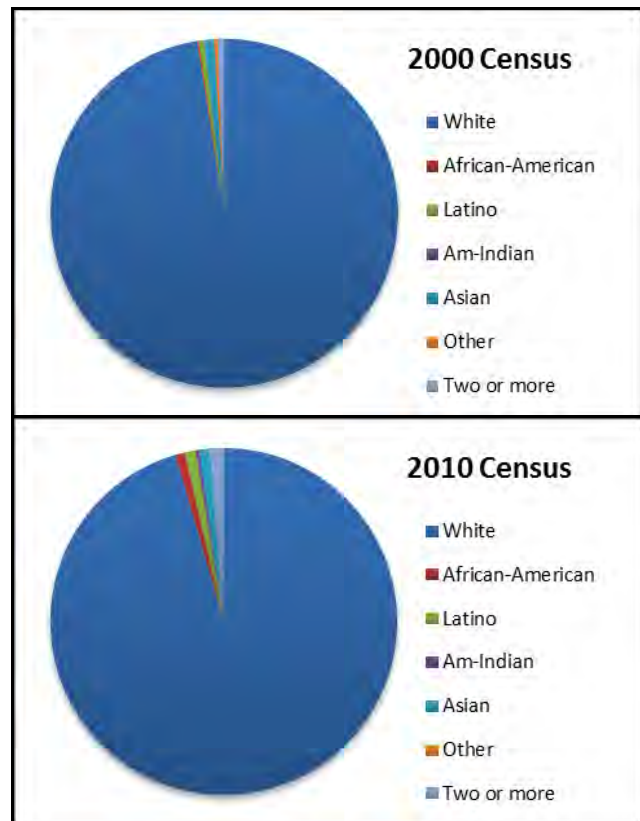


Figure 8. U.S. Census Demographic Profile, Berkshire Twp

U.S. Census 2014 Category	Berkshire Township	All Delaware Co Townships	All Delaware Co. Cities and Villages	All Delaware County
Education: Percent H.S. grad or higher	97.1%	94.1%	88.3%	96.3%
Education: Percent Bachelor's degree or higher	47.4%	52.9%	34.2%	51.1%
# Civilian labor force employed	1,740	53,569	33,258	91,842
% Civilian labor force employed	69.8%	95.8%	95.4%	67.6%
# Civilian labor force unemployed	113	2,362	1,620	3,964
% Civilian labor force unemployed	4.5%	4.2%	4.6%	2.9%
Median Household income	\$104,808	\$85,591	\$79,109	\$91,936
Median family income	\$109,375	\$94,641	\$90,843	\$106,830
Per capita income	\$40,947	\$36,764	\$34,944	\$41,357
Percent of families below poverty level	1.8%	2.6%	5.0%	3.4%
% Individuals below poverty level	2.0%	3.6%	7.0%	4.9%

Source: U.S. Census Bureau 2010-2014 ACS 5-Year Estimates

Berkshire Township Growth Summary

According to the U.S. Bureau of Census, Delaware County was the fastest growing county in Ohio by percentage of growth (64.3%) from 1990-2000 and the 13th fastest from 2000-2006 (42.5%). Orange (229%), Genoa (178.6%), and Liberty Townships (142.3%) displayed the most rapid growth rates in the County from 1990-2000. These three townships are served by centralized county sewer service, which permits higher densities. Centralized sanitary sewer can lead to responsible growth and yield development options that are less land consumptive. Future development within Berkshire Township is largely dependent on the availability of sewer service and whether annexations by the villages of Sunbury and Galena will continue to consume land within the Township.



Berkshire Township Development Activity

Platting activity for new subdivisions is a great indicator of future growth, as it precedes building permits. Historically, subdivisions in Berkshire Township were typically 2-acre to 5-acre lots utilizing on-site septic systems. After sewer became available to the I-71 corridor along the west of the Township, larger subdivisions began to develop. Until recently, Berkshire Township has seen limited subdivision platting activity. The Northstar subdivision with its own treatment plant is now beginning to be platted. Figure 9 illustrates the amount of subdivision activity in Berkshire Township

over the past 50 years, by number of lots and acreage platted during five-year periods.

The DCRPC approves platting for the unincorporated areas of the County. The County development trends over the past 15 years demonstrate that growth in the southern tier is different from growth at the interchange, but that is starting to change. Except at the interchange, Berkshire Township has limited centralized sewer, resulting in developments with lower densities. Figure 9 lists each platted area, including commercial developments.

Figure 9. Recorded Subdivisions, by date recorded, in Berkshire Township (10+ lots since 1995)

Name	Type	Acres	SF Lots	Recorded
Bob Evans Farm Subdivision	Commercial	14.91	NA	11/29/1995
Heather Glen	Residential	26.16	16	3/10/1999
Sage Creek Section 3, Phase B	Residential	22.65	12	11/19/2003
Killdeer Meadows 1	Residential	9.69	15	8/12/2004
Sage Creek Section 3, Phase A	Residential	27.73	11	8/23/2004
Killdeer Meadows Section 2	Residential	54.09	46	12/22/2004
Cheshire Woods Section 1	Residential	80.26	85	6/20/2006
Prairie Run	Residential	89.29	5	7/20/2006
Estates at Cheshire Section 1	Residential	36.28	21	8/18/2006
Cheshire Woods Estates Sec. 1	Residential	66.83	24	10/18/2006
Summerwood Lakes Section 1	Residential	28.41	35	12/15/2006
AD Farrow at Northstar	Commercial	17.39	NA	11/15/2006
Summerwood Lakes Section 1	Residential	28.41	32	12/15/2006
Sage Creek Section 4 Phase B	Residential	24.09	8	2/2/2007
Howard/Henschen CAD	Residential	52.70	2	10/22/2007
Northstar Section 1 PH A	Commercial	336.29	NA	11/15/2007
Northstar Section 1 Golf Course	Commercial	272.51	NA	12/20/2007
Hidden Creek Estates, Section 1	Residential	15.59	18	12/28/2007
Cheshire Woods Estates, Section 2, Phase A	Residential	4.23	2	11/12/2008

Name	Type	Acres	SF Lots	Recorded
Buckeye Acres	Residential	18.46	3	12/11/2008
Fourwinds, Section 3	Commercial	1.613	NA	6/20/2013
Estates at Cheshire, Section 2	Residential	53.82	20	11/5/2013
Sage Creek Section 5	Residential	37.70	6	2/7/2014
Killdeer Meadows, Section 3	Residential	9.840	33	9/8/2014
Northstar Section 1, Phase D	Residential	18.685	43	12/5/2014
Killdeer Meadows, Section 4	Residential	6.283	18	1/13/2015
Cheshire Woods, Section 3, Phase A	Residential	28.740	32	7/10/2015
Northstar Section 2 Phase A	Residential	7.22	10	7/15/2015
Northstar, Section 1, Phase C, Part 1	Residential	5.037	12	7/15/2015
Northstar, Section 1, Phase C, Part 2	Residential	15.470	33	7/15/2015
Summerwood Lakes, Section 3	Residential	23.070	31	3/16/2016
Cheshire Woods, Section 2	Residential	25.557	43	5/13/2016
Tanger Outlets	Commercial	70.433	NA	6/7/2016

A more simplified No Plat subdivision (NPA), or “lot split,” is another option for creating lots that is an illustrator of development history. The Ohio Revised Code (ORC) permits a division of a parcel of land along a public street not involving the opening, widening, or extension of any street or road, and involving no more than five lots after the original tract has been completely subdivided. An application for a lot split is approved by the RPC without a plat. The No Plat subdivision procedure is required for lots 5 acres or smaller.

Figure 10 indicates a relatively modest amount of No Plat lot split activity in the Township from 2005 to 2016, including the new building lots created.

Figure 10.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Splits	5	2	0	1	1	1	2	0	2	2	3	2
New lots	4	1	0	0	0	0	2	0	0	2	1	1

Subdivision platting and No Plat activity does not account for divisions that result in lots that are greater than 5 acres. From 2005 to 2016, 11 new vacant building lots were created using the No Plat lot split process and 516 subdivision lots were platted. During the same period, 432 new home permits were issued.

Another indicator of development and change in the Township is rezoning activity. Figure 11 indicates the change in acreage as a result of rezoning requests approved by the Berkshire Township Zoning Commission since 2005.

Out of a total of 35 rezoning cases since 2005, Berkshire Township had 18 A-1 to FR-1 requests, two A-1 to PRD requests, nine A-1 to PCD requests, one A-1 to C request, one PCD to A-1, one PCD to FR-1, and one PRCD to FR-1. There were also two other rezoning requests.

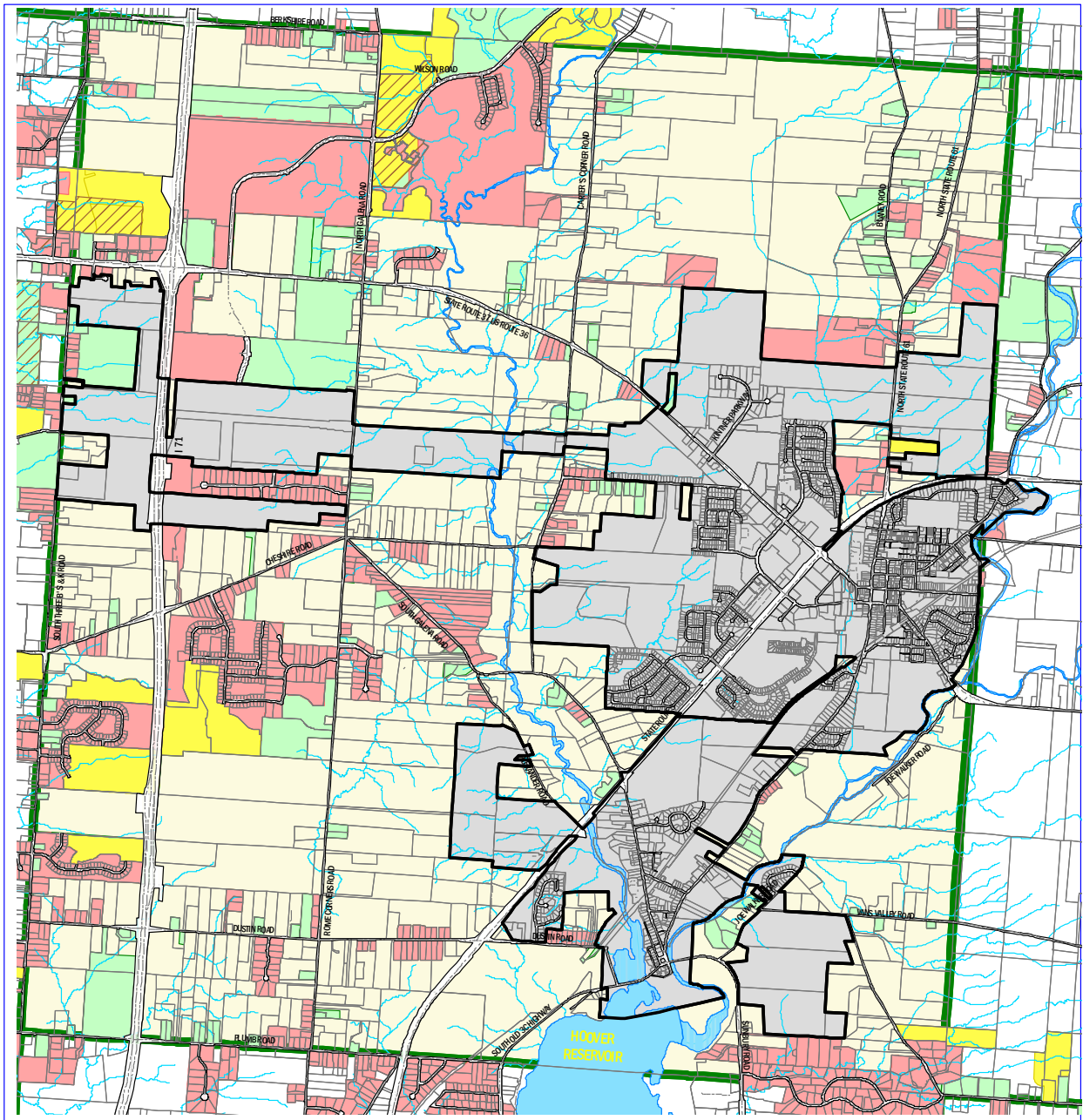
In terms of land, more than 800 acres of Berkshire Township experienced a change of zoning from 2005-2016, with 483 acres zoned from 2008-2016. On a fairly regular basis, small areas of land are zoned from A-1 to FR-1, allowing development with a 1.95-acre lot minimum instead of a 5-acre minimum. Most of the rezoned acreage is to the PCD (Planned Commercial District) designation, and 122.89 acres were rezoned to PRD (Planned Residential District).

Figure 11.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Zoning Reviews	9	5	4	0	3	1	1	0	4	2	2	4
Acres	208.64	97.37	27.39	0	12.48	2.96	2.5	0	396.21	7.86	7.3	53.59

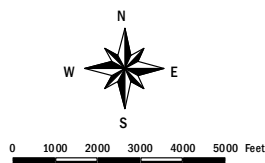
*Does not include overlays, or “cloud” zoning, until a Development Plan is approved.

Berkshire Township has experienced modest growth in the last 10 years and appears to be gaining momentum. This growth has not been as rapid in comparison to other townships in southern Delaware County and municipalities in Delaware and Franklin Counties due largely in part to the lack of centralized sanitary sewer availability. However, now that sewer is available to portions of the Township including the I-71/36/37 area, as well as within the Northstar subdivision, Berkshire Township is poised to experience a more rapid growth pattern.



Development Pattern

Berkshire Township,
Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (5/10/2007)

Township Boundary	Multi Family
Road Right of Way	Recorded Subdivision
Railroad	Proposed Subdivisions
Property Lines	Rezoning Subdivision
Rivers / Lakes	Incorporated Area
Streams / Drainage Courses	

Regional Development Activity

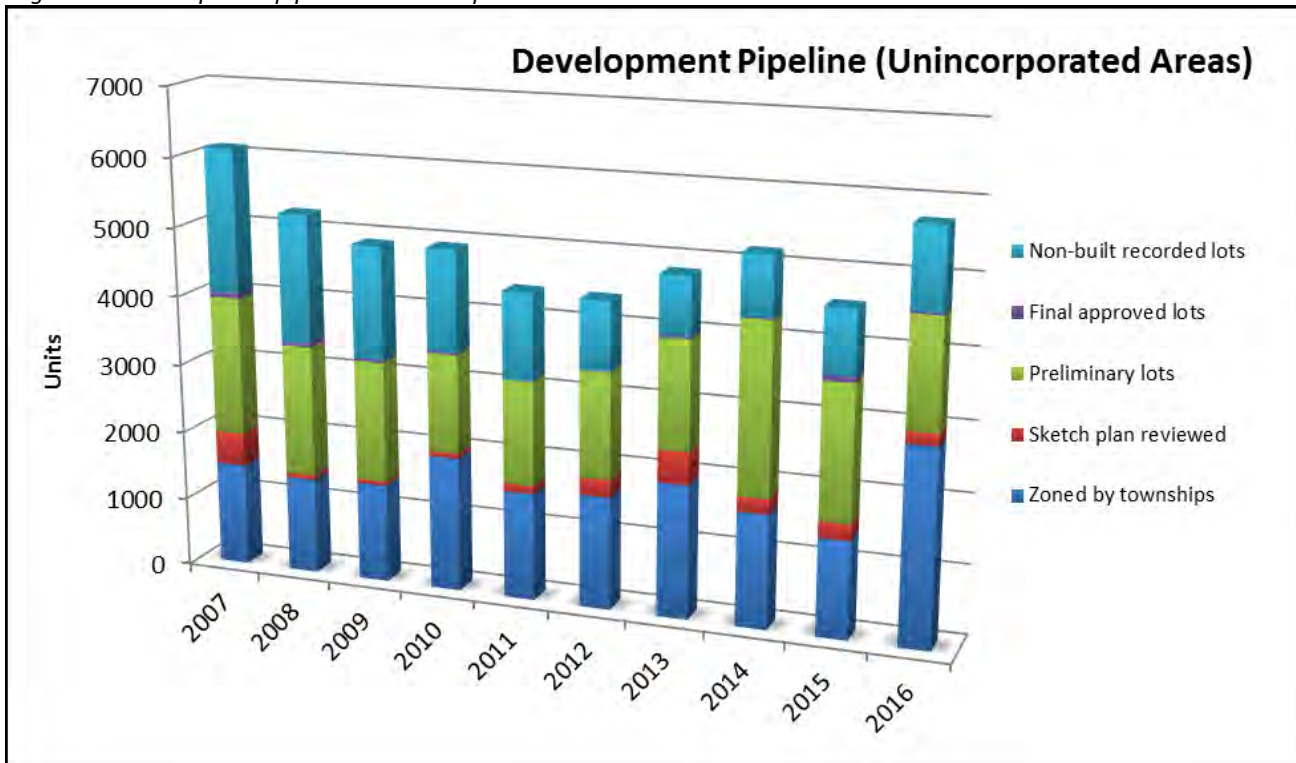
Typically, in new-growth areas, the subdivision platting process has served as an indicator of future growth. This section briefly describes the development of the overall County.

Much has been said about the growth rate of Delaware County over the last two decades. The County grew by 64.3% from 1990-2000, ranking it as the 15th fastest-growing county in the country by percentage of growth. For the period of 2000-2010, the growth was 58.4%, as the County was the 22nd fastest-growing by the same measure.

For the jurisdictions of Delaware County there are some

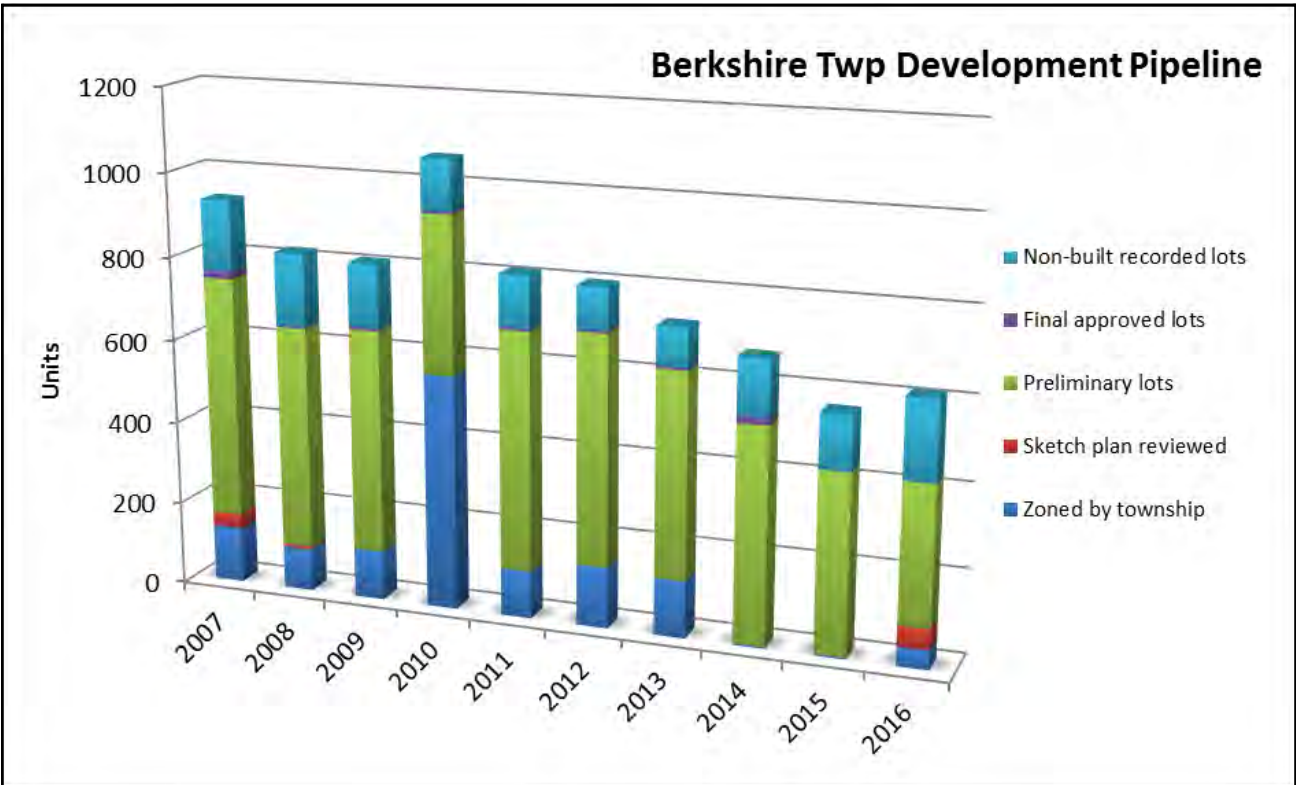
observed trends that merit concern. Significant zoning and subdivision activity has led to a potential oversupply in subdivision lots available for development. This trend is best represented in the following table, which is based on the development activity of the unincorporated areas of the County where much of the growth has been. It represents the number of lots in the various stages of the development process at the end of each year. The key is to notice that the overall number of lots in the pipeline has been decreasing until 2012, when several new subdivisions started through the process. Although those numbers have generally decreased over time, the DCRPC estimates that there is still a 14-year supply of lots in the development process.

Figure 12. Development pipeline in unincorporated areas



Development Process	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Zoning approved	1,486	1,386	1,423	1,941	1,549	1,626	1,925	1,636	1,401	2,816
Sketch Plan reviewed	479	71	64	76	119	247	464	220	228	176
Preliminary approved	1,998	1,889	1,736	1,417	1,488	1,523	1,563	2,454	1,934	1,565
Final Plat approved	74	63	38	30	6	7	36	19	83	29
Non-built, recorded lots	2,066	1,835	1,619	1,452	1,238	979	825	849	907	1,138
Total in Pipeline	6,103	5,244	4,880	5,528	4,400	4,382	4,813	5,178	4,553	5,724

Source: DCRPC, 2016

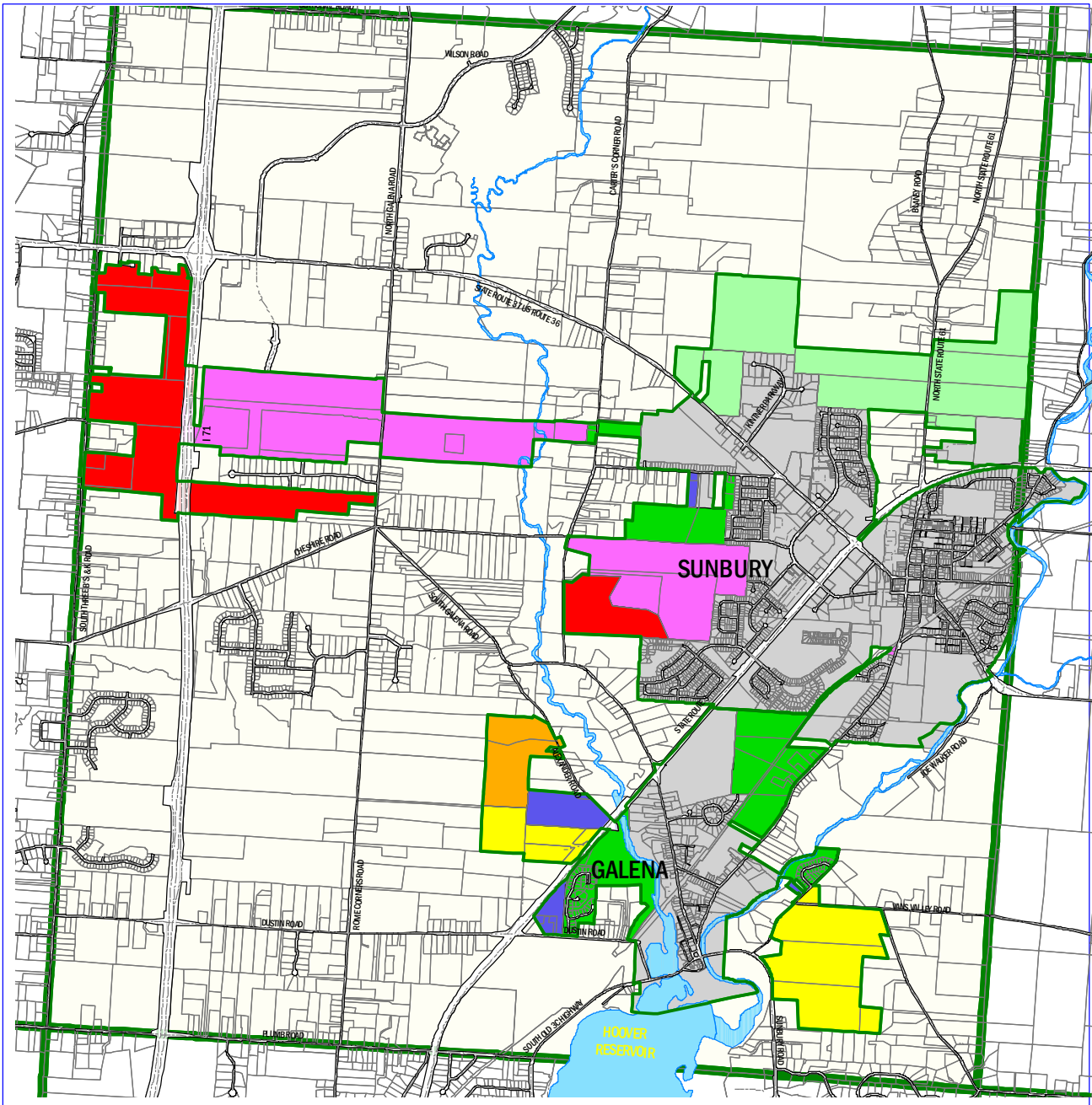


Development Process	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Zoning approved	134	102	118	651	114	146	136	4	4	46
Sketch Plan reviewed	34	6	0	0	0	0	0	0	0	49
Preliminary approved	578	534	534	376	569	548	490	515	428	331
Final Plat approved	18	3	6	6	6	6	6	18	83	0
Non-built, recorded lots	168	174	150	119	122	99	91	135	129	188
Total in Pipeline	932	819	808	1,062	811	799	723	669	561	614

Source: DCRPC, 2016

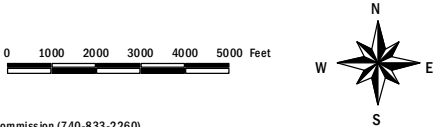
The annexation of unincorporated land into adjacent municipalities presents a set of challenges for a township that also has access to utilities like sewer and water. Land uses need to be coordinated, especially related to streets and other public and private utilities. It is important that communities work with each other as development occurs so that these utilities and services

can be provided in the most efficient manner possible. Over the years, the Villages of Sunbury and Galena have increased their municipal boundaries when landowners and developers have requested it. The following map shows the annexed land and the time-frame when the annexation occurred.



Annexation Map

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
 Sources: Delaware County Auditor's GIS Office (07/11/17)

	Incorporated Areas 6/2017 (2859.8 Acres)
	2002 Annexed Areas (736.84 Acres)
	Type 1; 509.38 Acres
	Type 2; 227.46 Acres
	2006 Annexed Areas (66.39 Acres)
	Type 2; 66.39 Acres
	Annexation after 2006 (Type 2)
	2015 (393.034 Acres)
	2012-2014 (560.23 Acres)
	2008 (80.841 Acres)
	2007 (266.36 Acres)



The existing land use of Berkshire Township, its surrounding jurisdictions, and the area within the historical township boundary is displayed and analyzed by type according to the County Auditor’s Geographic Information System and tax code.

Figure 13. Berkshire Township Land Use 4/2017

LAND USE	ACREAGE	PERCENTAGE
Single-Family	2,939.17	25.5%
Multi-Family	8.79	0.08%
Commercial	202.53	1.74%
Industrial	0.00	0.00%
Institution	322.66	2.77%
Agricultural	4,263.67	36.62%
Residential Vacant Land	1,646.35	14.14%
Other Uses Vacant Land	219.24	1.88%
Parks	478.77	4.11%
Golf Course	566.83	4.87%
ROW	603.42	5.18%
River/Lakes/Ponds	390.83	3.36%
Total	11,642.24	100.0%

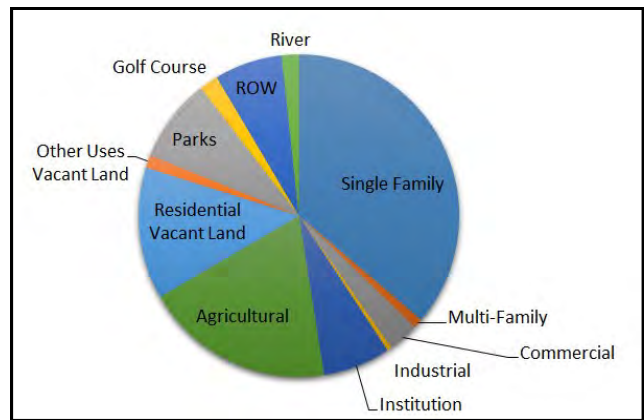


Figure 14. Sunbury Land Use 4/2017

LAND USE	ACREAGE	PERCENTAGE
Single-Family	604.91	19.83%
Multi-family	40.24	1.32%
Commercial	164.79	5.40%
Industrial	112.59	3.69%
Institution	208.13	6.82%
Agricultural	991.51	32.50%
Residential Vacant Land	291.38	9.55%
Other Uses Vacant Land	199.23	6.53%
Golf Course	65.24	2.14%
Parks	99.22	3.25%
ROW	224.46	7.36%
River/Lakes/Ponds	49.00	1.61%
Total	3,050.70	100.0%

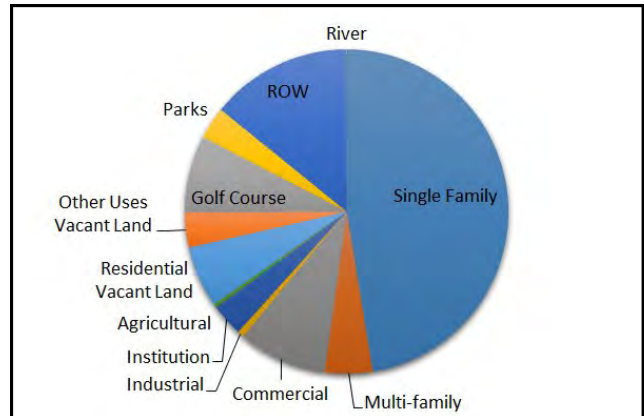


Figure 15. Galena Land Use 4/2017

LAND USE	ACREAGE	PERCENTAGE
Single-Family	196.69	18.12%
Multi-family	0.55	0.05%
Commercial	9.94	0.92%
Industrial	23.87	2.20%
Institution	8.35	0.77%
Agricultural	140.74	12.96%
Residential Vacant Land	267.89	24.68%
Other Uses Vacant Land	0.29	0.03%
Golf Course	243.71	22.45%
Parks	78.37	7.22%
ROW	44.66	4.11%
River/Lakes/Ponds	70.55	6.50%
Total	1,085.61	100.0%

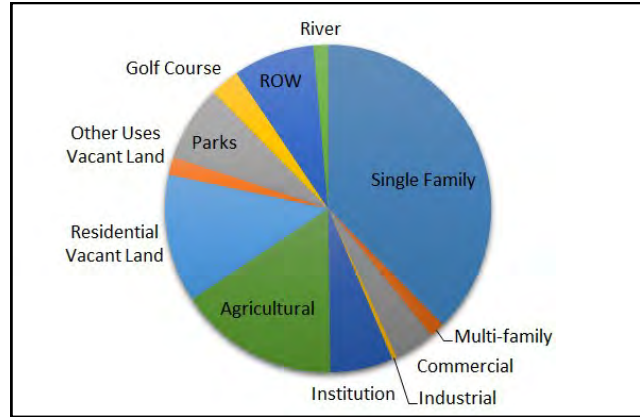
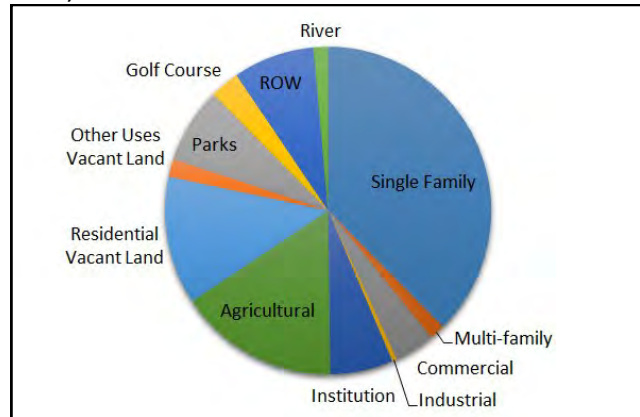


Figure 16. ALL Existing Land Use (Berkshire, Sunbury, and Galena 4/2017)

LAND USE	ACREAGE	PERCENTAGE
Single-Family	3,740.77	23.71%
Multi-Family	49.58	0.31%
Commercial	377.26	2.39%
Industrial	136.46	0.86%
Institution	539.14	3.42%
Agricultural	5,395.91	34.20%
Residential Vacant Land	2,205.62	13.98%
Other Uses Vacant Land	418.75	2.65%
Parks	821.70	5.21%
Golf Course	710.44	4.50%
ROW	872.53	5.53%
River/Lakes/Ponds	510.38	3.23%
Total	15,778.54	100.0%



Observations on Berkshire Township 2017 Land Use:

Single-family housing is the largest land use, with 37.7% of total land area.

Although multi-family development is significant, with over 217 acres developed, it remains a relatively small percentage (1.2%) of total acreage.

Commercial acreage is 3.3%; 4% is typical of a mature community.

Industrial acreage is less than one percent. Berkshire Township land is probably too valuable for significant industrial use.

Agriculture is still a significant land use (17.7% of the acreage), but is rapidly giving way to new development. Expect this number to continue to shrink.

32.1% of the Township is undeveloped (17.7% agriculture, plus 14.4% vacant land).

Road right-of-way is 7.0% of the Township. As roads are widened and new roads are built this number may increase typically to 10-15% at full build-out (see the 13.9% for Powell).

1.8% of the land area is in rivers and water. Since water proximity increases land value, the streams flowing toward the Hoover Reservoir are a major, permanent benefit to the Township.

Golf courses comprise 1.9% of the Township.

Parks comprise 8.4% of the Township.

The incorporated areas of Sunbury and Galena (3,456 acres) represent 16% of the entire Township.





CHAPTER 5

Natural Resources and Conservation

Berkshire Township's principal natural resources are the Big and Little Walnut Creeks and their rugged ravines and streams which join to form the Hoover Reservoir. Berkshire Township also has floodplains, wetlands, fertile soils, forests, and abundant wildlife. These resources should be conserved as much as possible while development continues.

Topography

Berkshire Township has relatively mild differences in elevations and slopes. The elevation map indicates a 150-foot difference in elevation from the highest point of 1,030 feet above mean sea level off U.S. 61 north of Sunbury to a low of 880 feet mean sea level at the low water elevation of Hoover Reservoir. (See Digital Elevation Map)

Slopes Greater than 20%

The Township set a goal to preserve ravines and slopes greater than 20% for open space when the Township develops. The steep slope map indicates slopes over 20%. Generally, roads do not exceed 10% slope. Houses with walkout basements can typically be built on slopes up to 20%. (See Slope Map)

Floodplains, bodies of water

Hoover Reservoir is a significant natural resource area; it is the dominant geographic feature in Berkshire Township. Its principal function is a drinking water reservoir for the City of Columbus. As development encroaches along the Little and Big Walnut Creeks that feed the reservoir, there is a potential for surface and ground water pollution, most notably from failed septic systems in rural areas. For this reason, the Ohio EPA has asked the Delaware County Board of Health to consider a minimum 3-acre lot size in areas without public water and sewer. Since Del-Co water is generally available

throughout the Township, this 3-acre standard lot size may be reduced to 2 acres in some areas. Where lands possess ravines or floodplains that flow directly to the Hoover, and no centralized sewer is available, the Township may wish to use even lower densities to preserve water quality, especially in rural areas where some houses still rely on well water.

Most of the floodplains in Berkshire Township relate to the Big and Little Walnut Creeks and Hoover Reservoir. The National Flood Insurance Program, (which includes Berkshire Township) discourages development in the 100-year floodplain and prohibits development in the 100-year floodway. These areas are mapped by the Federal Emergency Management Agency (FEMA). The floodplain map gives a general location of the floodplains. For specific information see the FEMA maps at the Delaware County Building Department, 50 Channing Street, Delaware Ohio (740-368-5850). (See Floodplain Map).

According to Protecting Floodplain Resources (FEMA, 1996) undisturbed floodplains perform several critical functions:

- **Water Resources - Natural flood and erosion control:** flood storage and conveyance; reduce flood velocities; reduce peak flows; reduce sedimentation.
- **Water Quality Maintenance:** filter nutrients and impurities from runoff; process organic wastes; moderate temperature fluctuations.
- **Groundwater Recharge:** reduce frequency and duration of low surface flows.
- **Biological Resources:** rich, alluvial soils promote vegetative growth; maintain bio diversity, integrity of ecosystems.

- **Fish and Wildlife habitats:** provide breeding and feeding grounds; create and enhance waterfowl habitat; protect habitats for rare and endangered species.
- **Societal Resources:** harvest of wild and cultivated products; enhance agricultural lands; provide sites for aqua culture; restore and enhance forest lands.
- **Recreation:** provide areas for passive and active uses; provide open space; provide aesthetic pleasure.
- **Scientific Study/Outdoor Education:** contain cultural resources (historic and archeological sites); environmental studies.

The Delaware County FEMA floodplain maps were revised in 2009. One hundred year floodplain elevations have risen in some areas. New development is a contributing factor to the rise in floodplains.

With floodplains rising, and with all the natural benefits of floodplains listed previously, it is unwise to permit residential development in the 100-year floodplains of Delaware County. Each land use decision to permit development in the 100-year floodplain not only puts people in harm's way, but also potentially burdens all American taxpayers with the cost of continuing to bail out bad development.

For all these reasons, the 100-year floodplains in Berkshire Township should be protected. In Delaware County, the floodplains are narrow and limited. They comprise a very small portion of the land area, and they occur on four rivers that are drinking water and recreational resources (Alum Creek, Big Walnut, Olentangy, and Scioto). It is critically important to protect the floodplains of these four rivers.

Wetlands

Berkshire Township has pockets of wetland soils. Some of these may be jurisdictional wetlands, which are regulated by the Clean Water Act of 1972. Wetlands are generally defined as soils that support a predominance of wetland vegetation, or are under water at least two weeks per year. A more specific wetland definition is provided by the U. S. Army Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1.

Wetlands provide many of the same functions as floodplains. They are natural stormwater detention systems that trap, filter, and break down surface runoff. In the Township some former wetlands are now agriculturally-drained (tiled) fields or low-lying areas by existing ponds and waterways.

The DCRPC's National Wetlands Inventory GIS data indicates general locations of potential jurisdictional wetlands. Wetlands often include other natural features such a woodland areas. Refer to the Wetlands map.

Prime Agricultural Soils

The Prime Agriculture Soils map shows the location of soils suited for high yields in Berkshire Township. Agriculture is still an important land use in Berkshire Township, although the land value for future development may exceed the short-term value for continued agricultural use.

Creative zoning and development techniques may be able to save some agricultural land as open space. There is a methodology to evaluate which farms should be preserved, based upon highest yield soils, proximity to utilities, four-lane highways, and dense settlements. The method is called the Land Evaluation Site Assessment system, or LESA, and is created by the U.S. Department of Agriculture. The DCRPC and the Delaware Soil and Water District can perform the LESA evaluation.

Soil Suitability for Septic Systems

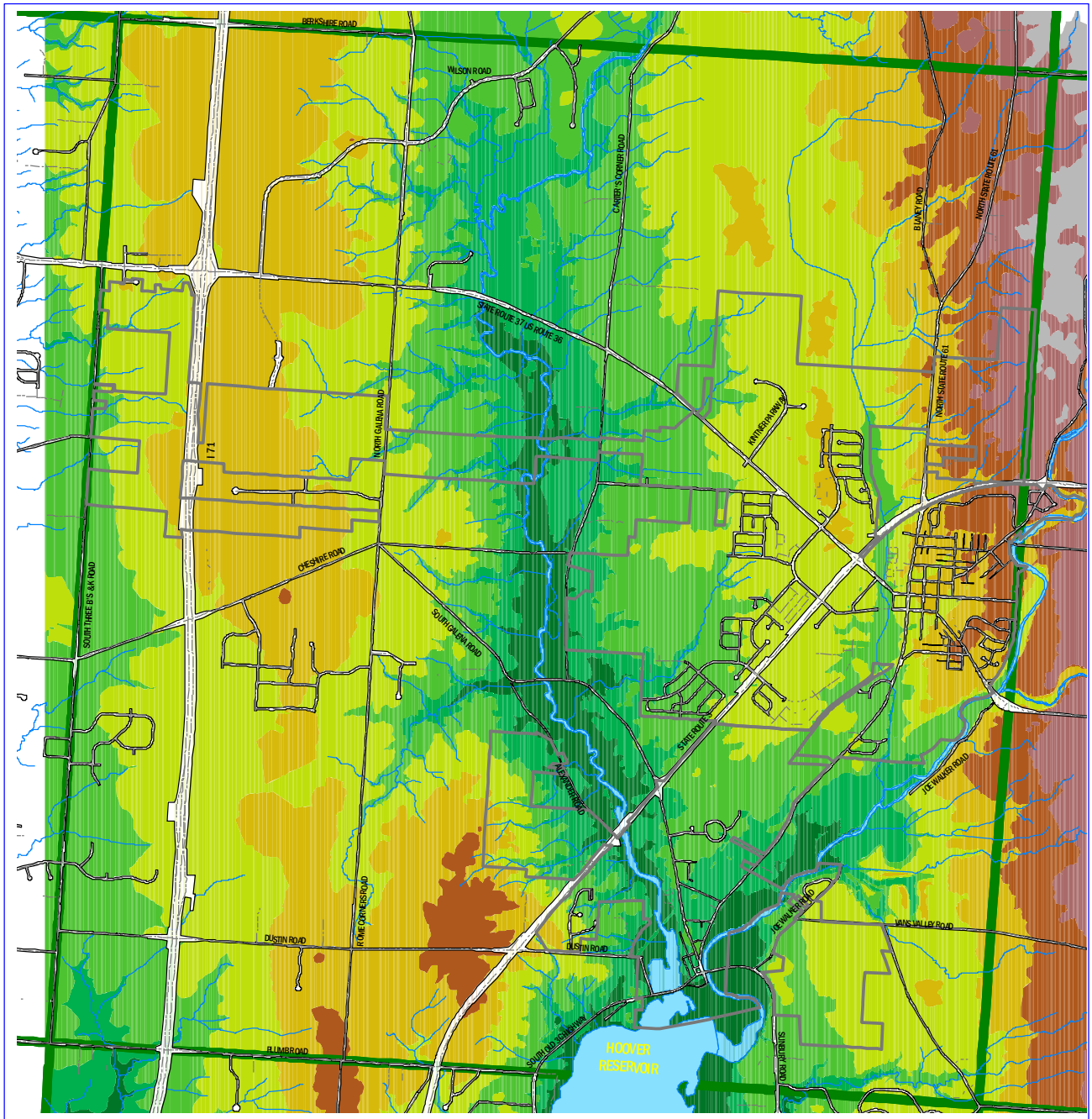
Since sanitary sewer service is not available to a large portion of the Township, it is useful to evaluate the soil capability for septic systems. Land with very poor suitability for septic systems should be served by centralized sanitary sewer or alternative sewage disposal systems. The Soil Suitability for Septic Systems Maps displays this information.

Combined Critical Resources

The combined Critical Resources map displays generalized floodplains, water, wetlands, prime agricultural soils, and 100-foot suggested setbacks from major watercourses. Since it is a goal to preserve the natural resources of the Township, this map should be used as an evaluation tool when land is developed.

Development or Harvesting of Natural Resources

There are no known deposits of natural resources in Berkshire Township that would be mined commercially (i.e. minerals, stone, gravel, oil, and natural gas). Prime agricultural soils are the main natural resource. It is conceivable that someday these soils could be extracted and moved for landscaping or other uses.

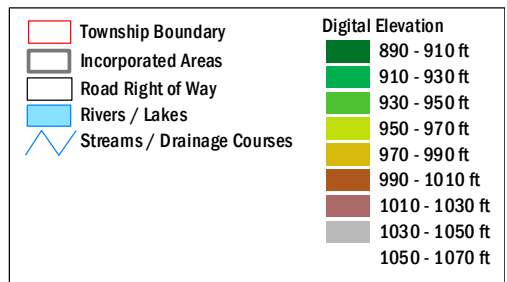


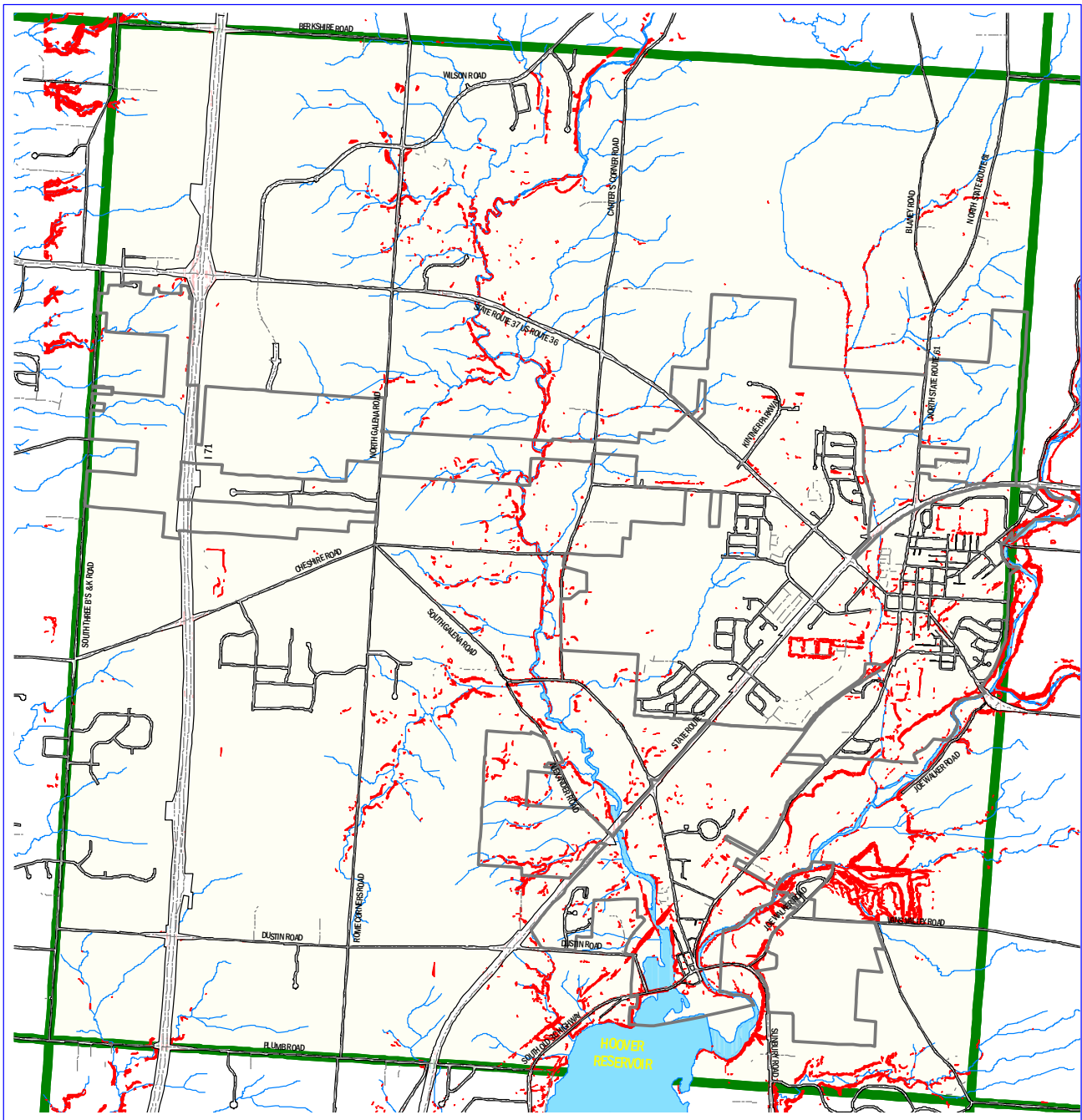
Elevation

Berkshire Township, Delaware County, Ohio



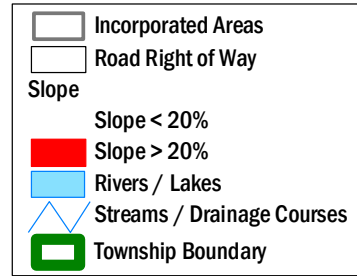
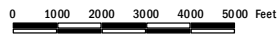
Prepared By: Delaware County Regional Planning Commission (740-833-2260)
 Source: Delaware County Auditor's Office DALIS project (12/3/2007)



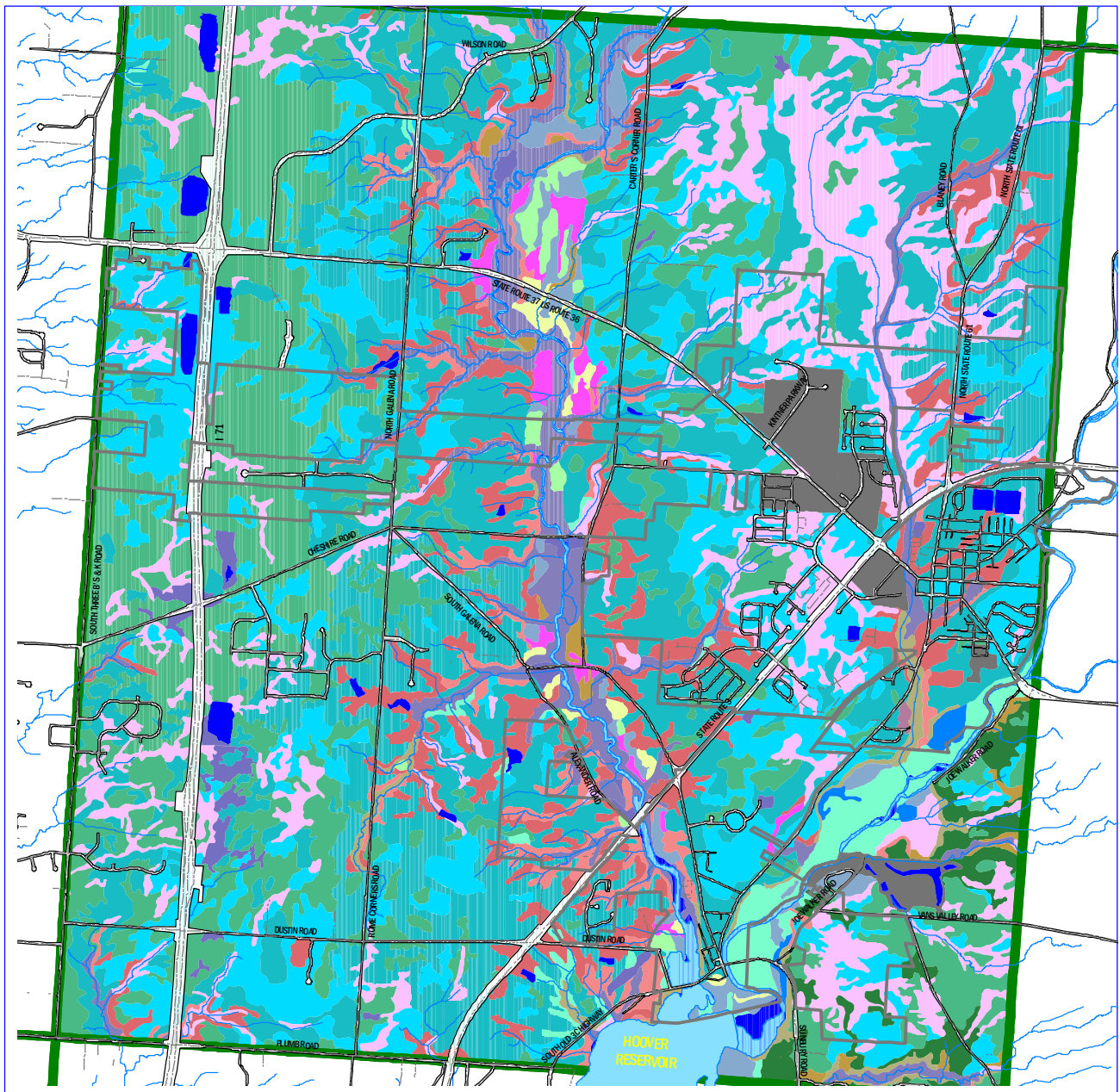


Steep Slopes

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (12/3/2007)

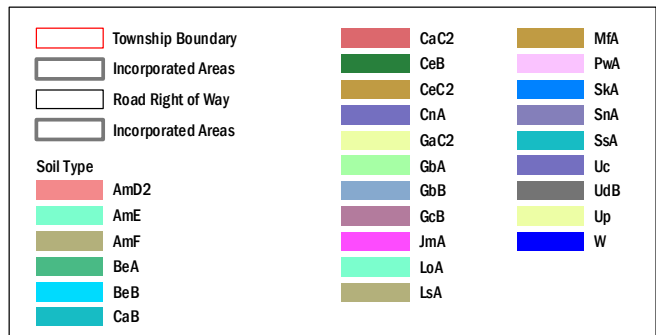


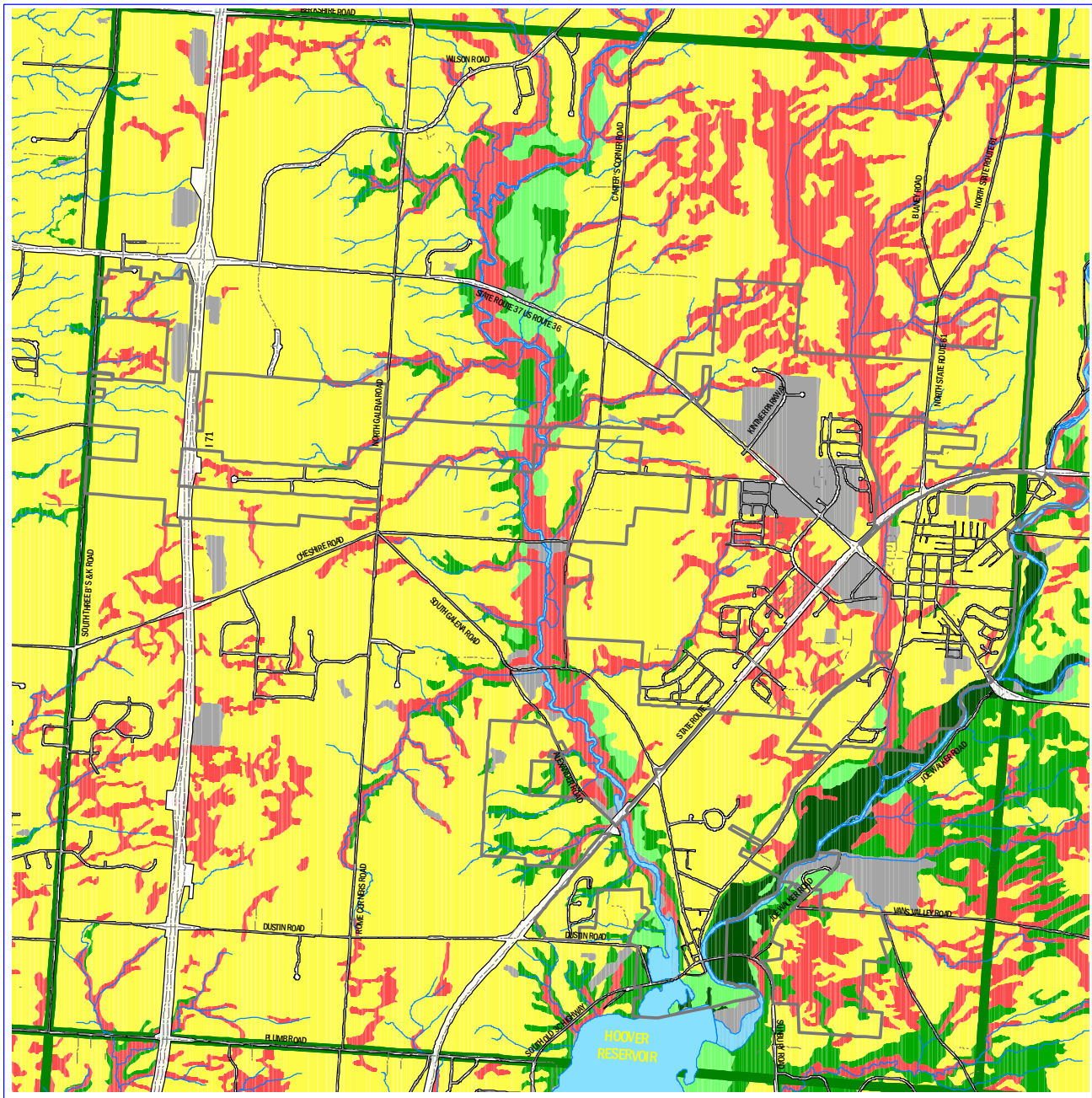
Soil Types

Berkshire Township,
Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Source: Delaware County Auditor's Office DALIS project (12/3/2007)





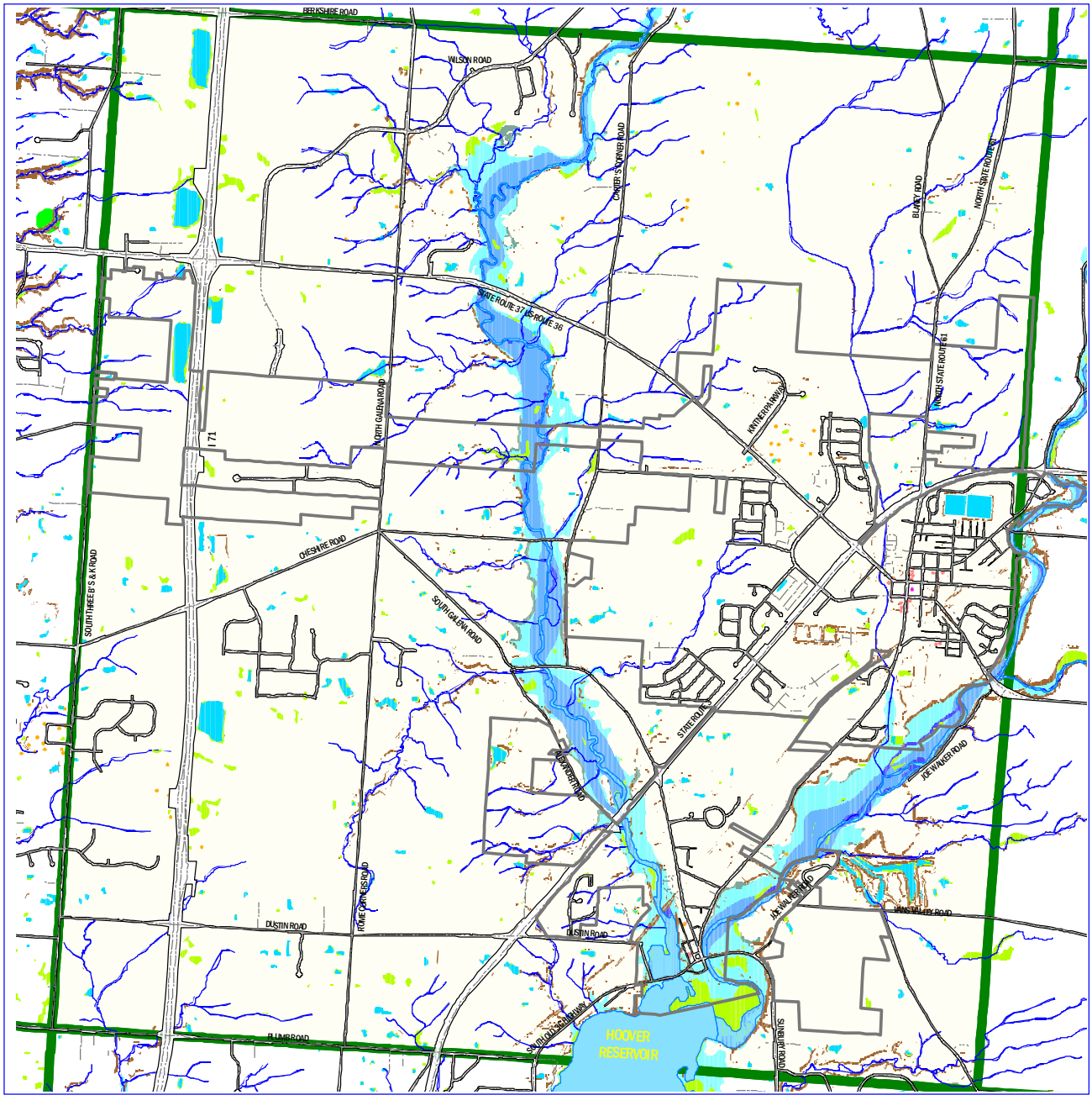
Soil Suitability for On-Site Sewage Treatment

Berkshire Township, Delaware County, Ohio



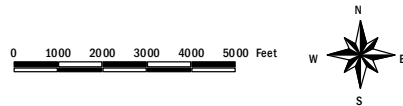
Prepared By: Delaware County Regional Planning Commission (740-833-2260) (12/3/2007)

	Incorporated Areas
	Road Right of Way
	Rivers / Lakes
	Streams / Drainage Courses
	Township Boundary
Soil Suitability for On-Site Sewage Treatment	
	Suited for Traditional Leach Lines Systems or Mound Systems
	Suited for Mound Systems
	Suited for Mound Systems, May be Subject to Flooding
	Not Suited for Soil-based Treatment, May be Suited for Irrigation
	Not Suited for Soil-based Treatment (Hydric Soils)
	Urbanized Area / Other Soils



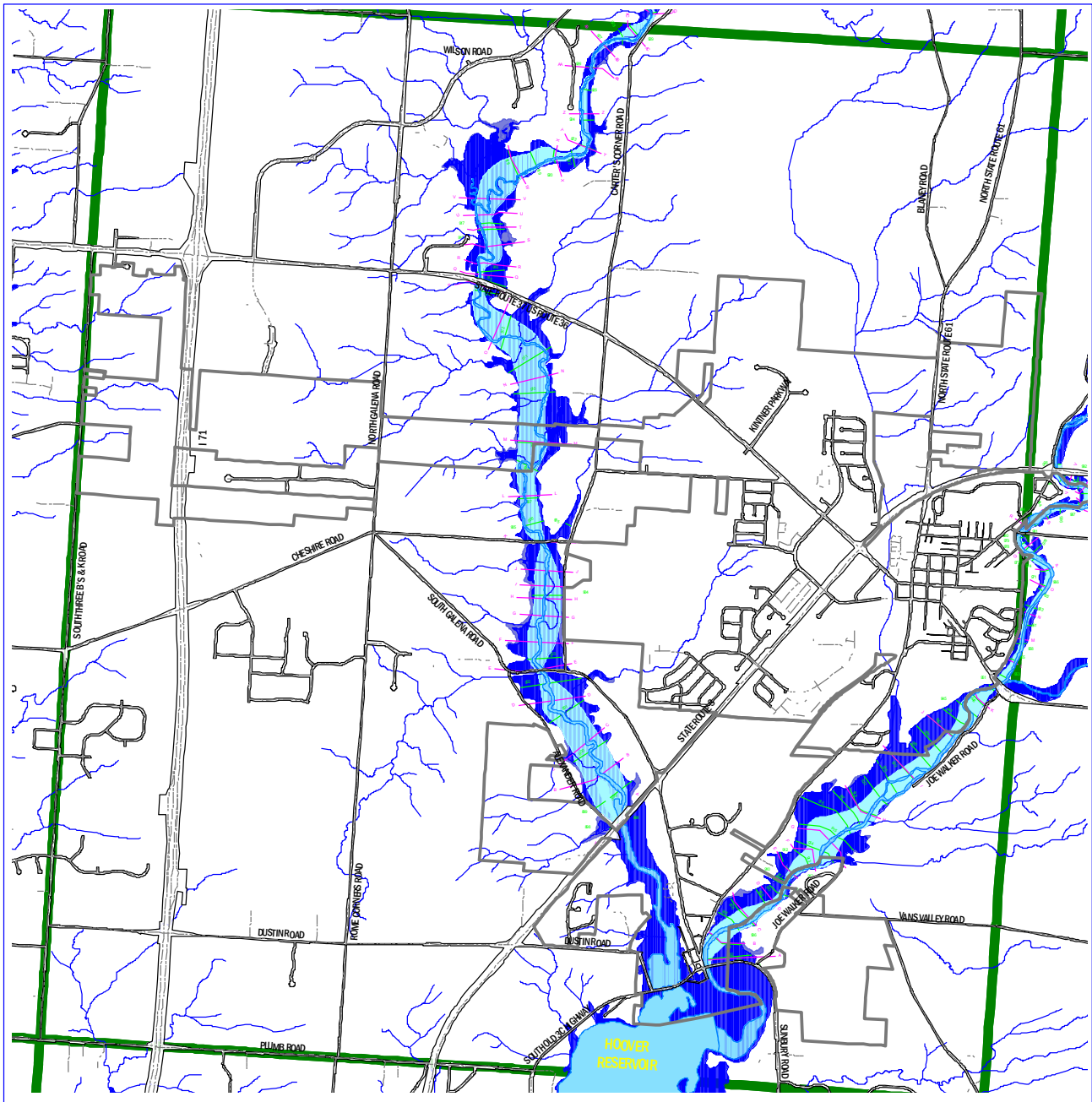
Critical Resources

Berkshire Township, Delaware County, Ohio



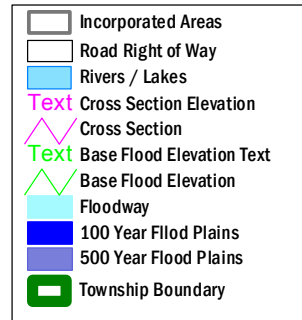
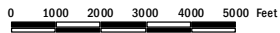
Prepared By: Delaware County Regional Planning Commission (740-833-2260) (12/3/2007)

Critical Resources	
	Township Boundary
	Incorporated Areas
	Road Right of Way
	Rivers / Lakes
	Archaeological Sites (OHPO) buffer 50'
	National Register Sites (OHPO) buffer 50'
	Historic Sites (OHPO) buffer 50'
	Streams / Drainage Courses
	Ponds
	Wetland (NWI)
	Rivers / Lakes
	Floodway
	Slope >= 20%
	100-year Floodplain
	500-year Floodplain
	Heritage Sites Buffer 328' by ODNR
	Heritage Sites Buffer 1/2 mile by ODNR



Flood Plains

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
 Source: Delaware County Auditor's Office DALIS project (12/3/2007)



CHAPTER 6 Housing

General

Housing has been the primary index of growth in Berkshire Township. Planning for a range of housing in a developing community is a complex issue. Many factors are involved, such as the availability or lack of public water and centralized sanitary sewer, land values, market demand, proximity to major employment and shopping centers, transportation network, as well as how the community wants to look. There are also legal considerations related to nondiscrimination in housing, and “fair share” provision of the regional housing needs, to the extent necessary services can be provided.

Much of the Township is zoned Farm Residential 1 (FR-1), which permits single-family residences on a minimum lot size of 2 acres with 150 feet of frontage on a public road. Flag lots with 60 feet of frontage may also be permitted in the FR-1 district, or the frontage may be provided on a private shared driveway (Common Access Drive or CAD). Lands within the FR-1 district have traditionally been located in areas not served by centralized sanitary sewer. Minimum square footage for a single-family home in FR-1 is 1,100 square feet.

Landowners served by centralized sanitary sewer may apply for Planned Residential District (PRD) zoning, which permits a variety of housing types, though it is primarily used for single-family development. PRDs range from a density-neutral 1 unit per acre to 1.25 units per net developable acre.

The Township’s zoning resolution provides for a variety of housing types, without restrictive minimum square footages or lot sizes. Minimum square footages for single-family houses are only 1,000 square feet for one-story, 800 square feet first floor for multi-story. Multi-family minimum square footages are 900, 1,000, and 1,100 square feet respectively for one, two, or three bedroom

apartments.

As the Township updates its Land Use Plan, consideration has been given to the appropriate timing and location of housing types.

Existing housing stock

A house-to-house windshield was conducted in August, 1999, finding that 96% of the housing stock at that time was either new/well maintained or in need of normal repair. It is assumed that all structures since that point are in comparable shape.

The Township is almost entirely single-family residential. This has been largely due to the lack of sanitary sewers and other services that multi-family housing demand. However, with the current growth around the Interstate 71 Interchange, that is in the process of changing. Berkshire Township may someday wish to adopt a housing code to assure the constant maintenance of its housing stock, to retain property values and stable neighborhoods.



Future Housing

To make housing projections, a community might anticipate what services they can provide, then anticipate their share of the future area population, and allocate the distribution of housing types. Few communities attempt such an analysis, leaving the housing mix up to the traditional power of zoning, which is seldom so analytical. In a high-growth area such as Delaware County, it is impossible to anticipate what the County's share of the State's population will be, and distribute that amount among the townships, villages, and cities.

Zoning battles over density sometimes occur along the edges of municipal areas. Where the possibility of annexation exists, townships cannot be certain of their future boundaries. For that reason, it is impossible to assess fair share allocations of housing to be provided by the township when a city or village with separate services may annex land and provide housing at a higher density. A more pragmatic approach to housing distribution is for the township to:

1. determine how the community wants to look when it is all built out (vision);
2. determine what services it can and should provide;
3. anticipate its fair share of the County's projected population;
4. permit a variety of housing that relates to the other items above.

Age-Based Housing

An emerging trend in the housing market is the recognition that communities need to respond to different generational needs based on the ages and lifestyles of its current and future residents. Single-family suburban development typically appeals to families with children. As children age and leave home, many parents no longer want the maintenance and responsibility related to the single-family home and yard. The desire to downsize is met with the reality that there is no available product in their community, and they must look elsewhere. This group of empty-nesters is a demographic group that will continue to grow in the coming decades.

In response to this trend (and the recent challenges in the single-family market), developers have proposed several "age-restricted" or "age-targeted" residential developments. These projects seek densities that are not necessarily comparable to those reflected on the local Comprehensive Plan. Those densities are factored on impacts to traffic, schools, services, and utilities. For example, the average single-family home generates

approximately 10 trip ends per day while "detached senior housing" generates approximately 3.71 trip ends per day (source: Institute of Transportation Engineers). For sewage use, an institutional residential unit can use a fourth of the average single-family residence (source: EPA). Delaware County calculates one-bedroom facilities at 60% per unit versus that of a single-family home. However, non-institutional uses are calculated on the same sanitary use as a single-family home.

While these numbers cannot be consistent in every case, it is fair to consider densities for age-restricted uses higher than those identified on the typical Comprehensive Plan. If the application can (1) truly be limited through zoning or deed to be age-restricted, (2) consider employees (if any) for traffic purposes, (3) justify that the use fits the location (arterial street, access to other uses), and (4) meet all other design standards, it may be appropriate to grant a higher density than the one noted on the Comprehensive Plan. This is only acceptable if such a density number was originally based on the impacts of single-family residential uses.



This Plan will recommend that the Township at least consider a policy that allows slightly adjusted densities in age-restricted developments that are either standalone developments or are incorporated as a part of a larger, more diverse community (usually a single-family PRD). Such uses should be situated on arterial streets with access to community services and retail uses. The Township may wish to monitor the status of these projects through an occasional census of demographic information.

Workforce, or Affordable Housing

The following information on affordable housing is copied from the Poggemeyer Design Group/Delaware County Affordable Housing Market Study, dated December 16th, 2002. "In April of that year, the Affordable Housing Task Force (AHTF) of Delaware

County undertook an Affordable Housing Market Study. The concerns of the task force were twofold: the current overall lack of available affordable housing in Delaware County, and the negligible production of such housing within the County on a yearly basis.”

“Affordable housing” refers to housing that is constructed for those that cannot afford to live in the average residential unit, but it can also refer to housing types that fill a need for a diverse population that are older, are downsizing, or are in a service-oriented field with lower wages.

Affordable housing as a percentage is diminishing in the County. National trends are showing an increasing population, while the number of all new housing units being built is constantly decreasing. This trend is accompanied by a decreasing household size and an increase in the market price for those units that are being built. HUD seeks to offer assistance to those households that are paying more than 30% of their gross household income toward housing without a choice. The low-skilled job market is not raising salaries to meet the needs of those employees where the cost of living is increasing significantly.

Delaware County is currently experiencing rising property values and an increased cost of living. As high-growth development continues, travel costs will rise and the relative impact on schools, public facilities, and infrastructure will be immense as each new house is constructed. As these costs of living increase, many local residents face job markets that cannot financially meet their needs. Low-skilled employees are forced into other market areas for housing that may meet their budget. If housing is unavailable, these individuals are forced to relocate. This can cause service sector unemployment to increase locally, thus affecting the entire community.

Within Berkshire Township many of these trends may not be completely evident. However, they exist locally just as they do nationally. A lack of affordable housing as population increases is unavoidable unless developers are encouraged and/or granted incentives to develop more reasonably priced units. The housing market is driven by developers’ profits, which increase with housing market values.

The *Delaware County Affordable Housing Market Study* produced the projections that demonstrate the need for affordable housing through 2020. The study estimated that the City of Delaware had 5,000 homes in the planning and construction stages, while the County has 16,000 homes. In order to reach the projected 19,900 units needed countywide by 2020, each local community is technically responsible for its fair share along with the remainder of the County. The demand for workforce housing will continue to increase throughout the County. Continued diversity in housing stock will be needed to make the local economy stronger and to house local residents to fill service jobs.

Source: Delaware County Affordable Housing Market Study. Kirkland, Washington: Poggemeyer Design Group, Inc., September 5th, 2002.

Housing Policies

Improved utilities in the Township will allow a mix of development densities that adds to the fiscal health of the Township while supporting rural character. Columbus and Delaware have been the primary multi-family providers in the Delaware County housing market. The Township has a unique opportunity to create a mixed-use area at the interchange that includes multi-family and other uses that positively affect the economic development of the region. Berkshire Township must also evaluate its housing mix in light of all state and federal housing laws, and binding court decisions.





Berkshire Township Economy

The majority of businesses in the Township are located in the northwestern corner near the I-71/36/37 Interchange. Twelve of the 49 businesses listed below are restaurants, five are gasoline service stations, and four are motels. There are also a number of construction industry-related businesses and two golf courses in the Township. There is currently limited retail. The following table was collected from the Auditor’s parcel information.

Category	Name	Auditor Category
Retail	Spellacy’s Turf-Lawn Inc	Commercial (Retail)
Retail	Pilot - Gas Station	Commercial (Retail)
Retail	BP Gas Station	Commercial (Retail)
Retail	Hotel - Holiday Inn Express	Commercial (Retail)
Retail	Hotel - Hampton Inn	Commercial (Retail)
Retail	Hotel - Days Inn	Commercial (Retail)
Retail	Rhinokote	Commercial (Retail)
Retail	Shell Gas Station	Commercial (Retail)
Retail	Sunbury Storage Building	Commercial (Retail)
Retail	Sunbury Garden Center	Commercial (Retail)
Retail	Leone Insurance	Commercial (Retail)
Retail	Flying J Travel Plaza	Commercial (Retail)
Retail	Wingfoot Truck Care Center	Commercial (Retail)
Retail	3 B’s Storage	Commercial (Other)
Retail	Heartland Home Cabinetry	Commercial (Retail)
Retail	Sunbury Rental Shop	Commercial (Retail)
Retail	Gossing Construction	Commercial (Retail)
Retail	A D Farrow Company Harley Davidson at Northstar	Commercial (Retail)
Restaurant	Burger King	Commercial (Other)
Restaurant	Taco Bell	Commercial (Other)
Restaurant	Starbucks	Commercial (Other)
Restaurant	Bob Evans	Commercial (Other)

Category	Name	Auditor Category
Restaurant	Wendy's	Commercial (Other)
Restaurant	Cracker Barrel Old Country Store	Commercial (Other)
Restaurant	Tim Hortons	Commercial (Other)
Restaurant	McDonald's	Commercial (Other)
Restaurant	White Castle	Commercial (Other)
Restaurant	Waffle House	Commercial (Other)
Restaurant	Arby's	Commercial (Other)
Restaurant	KFC/Long John Silvers	Commercial (Other)
Restaurant	Denny's	Commercial (Other)
Restaurant	Panera Brea	Commercial (Other)
Office	ERA Keller Realtors	Commercial (Office)
Office	Northstar GC Maintenance Building	Commercial (Office)
Office	Funeral Home - Snyder Funeral Home	Commercial (Other)
Office	Countryside Veterinary Clinic	Commercial (Office)
Golf Course	Bent Tree	Commercial (Other)
Golf Course	Northstar	Commercial (Other)
Golf Course	Sunbury	Commercial (Other)
Golf Course	Blackhawk	Commercial (Other)
Education	Johnnycake Corners Elementary (Olentangy)	Exempt, Utility
Education	Olentangy Berkshire Bus Compound	Exempt, Utility
Education	Berkshire Middle School (Olentangy)	Exempt, Utility
Public Bldg	(Quasi) Del-Co Water Company - Water Tower	Exempt, Utility
Public Bldg	Township - Berkshire Garage	Exempt, Utility
Public Bldg	County - Sanitary Sewer - Package Plant - Bent Tree	Exempt, Utility
Public Bldg	State - ODOT - Berkshire Outpost	Exempt, Utility
Public Bldg	State - Weigh Station - I-71	Exempt, Utility
Public Bldg	State - Rest Area - Northbound - I-71	Exempt, Utility
Public Bldg	State - Rest Area - Southbound - I-71	Exempt, Utility
Church	Northgate Community Church	Exempt, Utility
Church	St John Neumann Catholic Church	Exempt, Utility
Church	Living Word Evangelical Lutheran Church of Westerville	Exempt, Utility
Church	Galena United Methodist	Exempt, Utility
Church	Sunbury Church of the Nazarene	Exempt, Utility
Church	Gospel Light Baptist	Exempt, Utility
Cemetery	Berkshire	Exempt, Utility
Utility	Pump Station	Commercial (Other)
Utility	Verizon Wireless Cell Tower	Commercial (Other)

Berkshire Township has the potential for additional economic development on 36/37, especially adjacent to the I-71 Interchange. Access management (limiting left turn movements and combining curb cuts) is important for safe traffic flow. As noted in the Land Use statistics section of this plan, less than 2% of the Township land is currently developed for commercial or non-residential

use. Ideally, the community is seeking that figure to be closer to 9%, or a range between 7% and 11%. Non-residential growth shifts the tax burden for schools and other community services away from residents.

Since 2000, there have been three rezoning projects to Planned Commercial District (PCD), one to Planned Recreational District (PRCD), and one to Commercial (C).

Figure 17. Approved and Constructed Commercial Rezonings in Berkshire Township since 2000

RPC#	Applicant	Acres	Approved by Twp.	FROM	TO
Approved					
40-00 ZON	Richard Medellin Ent.	58.340	12/2000	FR-1	PCD
35-01A ZON	Northstar Land LLC	318.638	12/2001	FR-1	PCD
08-04 ZON	Northstar LLC	17.000	4/2004	FR-1	PCD
07-05 ZON	Jomar Partnership (condos)	63.900	4/2005	A-1	PCD
27-05 ZON	The Keethler Co.	70.204	7/2005	A-1	PCD
41-05 ZON	Northstar Land LLC	10.130	9/2005	A-1	PCD
42-05 ZON	Northstar Land LLC	5.605	9/2005	A-1	PCD
12-06C ZON	Groezinger Golf Ent.	0.297	7/2006	FR-1	PRCD
17-13 ZON	Northstar Commercial Development LLC	99.290	8/2013	A-1	PCD
Approved Total: 643.404					
Constructed					
21-00 ZON	Kenneth & Mary Hoover	2.846	3/2000	FR-1	PCD
04-01 ZON	Klaus Gossing	5.927	3/2001	FR-1	PCD
02-03 ZON	Kenneth & Donna Belczek	3.500	1/2003	FR-1	PCD
56-05 ZON	Schooley Caldwell/CAD F. Harley Davidson	17.573	10/2005	PCD	PCD
03-13 ZON	Berkshire Township Trustees	0.746	2/2013	A-1	C
09-13 ZON	Joe Ciminello (Simon-Tanger)	208.170	4/2013	A-1	PCD
Recorded Totals 238.762					
Totals 882.166					

Source: DCRPC, 2017

All but one of these rezonings have taken place near the I-71 Interchange at 36/37. Figure 17 shows those commercial projects which have been approved and those that have been constructed near the Interchange.

Nearly 1,120.54 acres of land in Berkshire Township have been rezoned to allow for commercial development

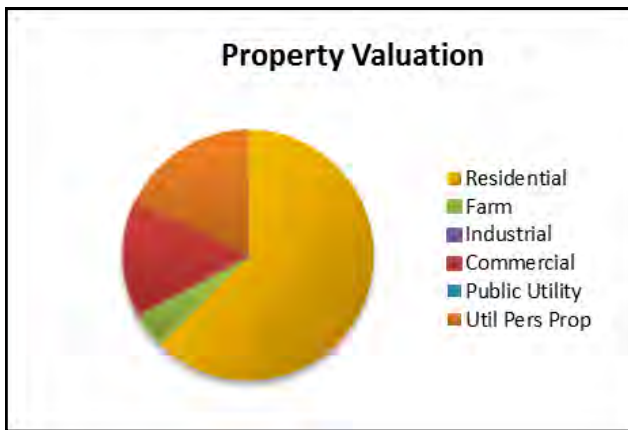
since 2000. However, 697.483 acres (62.25%) have been developed, leaving nearly all of the land rezoned to be developed. Of this land, 132.03 acres belong to the Northstar project which will drastically alter the commercial landscape within Berkshire Township, particularly the area surrounding the interchange.

Rates of Taxation and Revenues

Property Valuation

The County Auditor tracks real estate and personal property values in the County. Because the unincorporated areas in the County are funded with property taxes, it is important to note such valuation. As of Tax Year 2016, Berkshire Township's residential property was valued at \$122,303,400, sixth behind Orange (\$953 million), Genoa (\$929 million), Liberty (\$799 million), Concord (\$456 million), and Berlin (\$227 million). The Village of Sunbury's residential value is \$99 million. The Township has seen steady growth in its residential land value. Berkshire's Farm value is \$8,908,920.

The Township's commercial, industrial, and utility uses



Category	Value	Percentage
Residential	\$122,303,400	62.6%
Farm	\$8,908,920	4.6%
Industrial	\$5,290	0.003%
Commercial	\$28,815,020	14.7%
Public Utility	\$0	0.0%
Util Pers Prop	\$35,392,400	18.1%
Total	\$195,425,030	

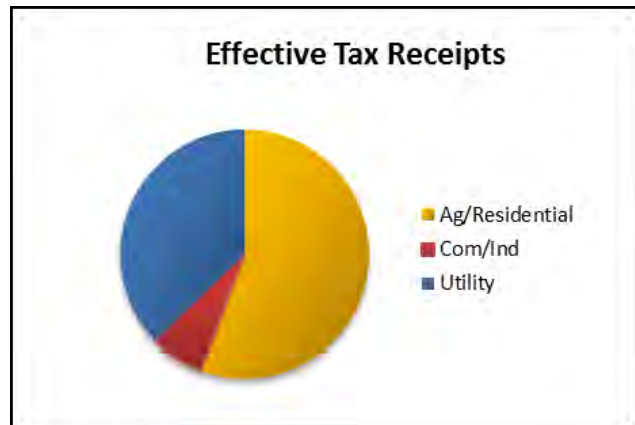
(including personal property) are valued in third place among the County's townships at \$64,212,710. For comparison, the value of the same land uses in Orange Township is \$243,644,690. Liberty's is second at \$125 million. Sunbury's non-residential land is valued at \$53 million.

Adding farm uses, utilities, and personal tangible value, the total valuation for Berkshire Township is \$194,425,030. This represents 3.9% of the county/township total \$4,986,723,050.

Effective Tax Receipts

The County Auditor estimates the effective tax receipts from each community, based on land use type. Unfortunately, there are only three broad categories listed: Agricultural/Residential, Utilities, and All Others (which are displayed as "Commercial/Industrial").

The revenue is divided among two categories in Berkshire Township: General (\$195,199) and Road (\$286,838).



Agricultural/Residential	Commercial/Industrial	Utilities	Total
\$268,685	\$34,139	\$179,212	\$482,036
55.7%	7.1%	37.2%	

Millage Paid by Property Owners

The County Treasurer maintains a list of all mills levied on each dollar of property within the County. Individual taxes are based on the rate multiplied by the property valuation of each property. Ohio law limits the amount of taxation without a vote of the people to what is known as the “10 mill limit” (\$10 per thousand of assessed valuation). Any additional real estate taxes for any purpose must be voted by residents.

With Berkshire Township within two school districts, there are several calculations for tax rate throughout the unincorporated Township. The Township’s **2016 effective** tax rates include the following, based on the Auditor’s online property report function:

	School	DACC	BST&G	Health	Pres Parks	Library	Twp.	Corp.	County	Mental Health	911
Township, Olentangy	58.901	1.5	2.76	0.597	0.573	0.952 (County)	0.8+1.3	N/A	5.703	0.947	0.607
Township, Big Walnut	29.51	1.5	2.76	0.597	0.573	0.929 (Community)	0.8+1.3	N/A	5.703	0.947	0.607
Sunbury Big Walnut	29.51	1.5	2.76	0.597	0.573	0.929 (Community)	N/A	1.25+1.25	5.703	0.947	0.607
Galena Big Walnut	29.51	1.5	2.76	0.597	0.573	0.929 (Community)	0.8	3.63	5.703	0.947	0.607

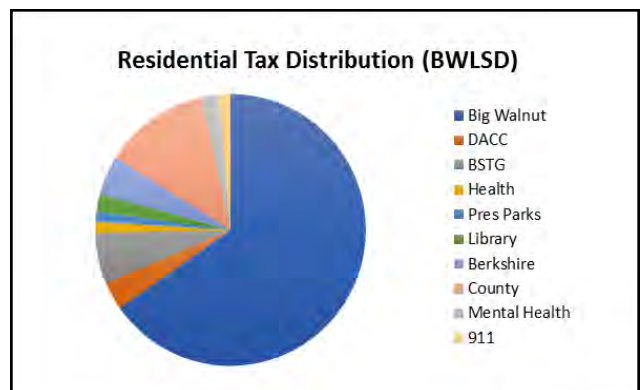
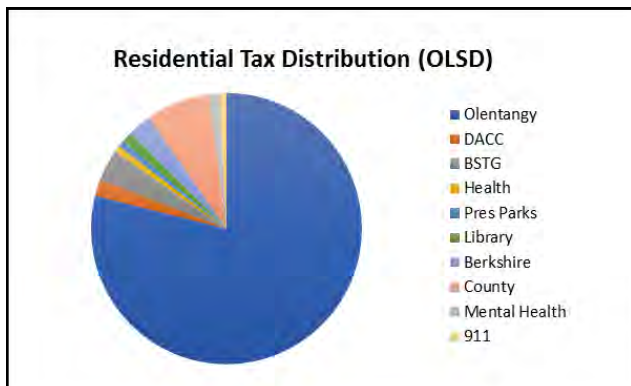
Residential

The following figures are taken from a sample property within the unincorporated portion of Berkshire Township in the Olentangy district. The total market value of this example is \$355,000, which is higher than the overall County average but typical for a recently-built suburban neighborhood.

Olentangy	\$6,403.65
DACC	\$163.08
BST&G Fire	\$300.00
Health	\$64.89
Preservation Parks	\$62.24
Library	\$103.54
Berkshire Township	\$86.98
Twp. Except for Villages	\$141.33
County	\$620.03
Mental Health	\$103.00
911	\$66.04

The following table and pie chart are from a similar home in the Big Walnut district.

Big Walnut	\$3,155.10
DACC	\$160.37
BST&G Fire	\$295.02
Health	\$63.81
Preservation Parks	\$61.21
Library	\$99.34
Berkshire Township	\$85.53
Twp. Except for Villages	\$138.99
County	\$609.77
Mental Health	\$101.29
911	\$64.95



Commercial/Office

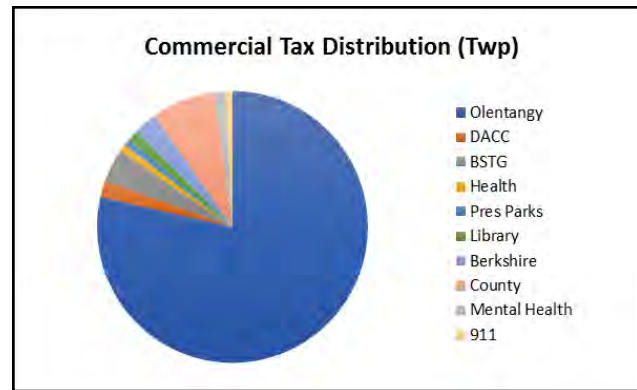
Townships receive a portion of the commercial and industrial taxes collected by the County. As noted previously, non-residential uses play a vital role in the fiscal health of any community. While they generate taxes for the community, they do not generate any costs to the school district. Tax rates within townships are different based on the school district boundaries, at rates slightly above the residential rate.

	Ag/Res Effective	Com/Ind Effective
Berkshire Twp., Olentangy	74.658185	75.619742
Berkshire Twp., Big Walnut	45.225780	47.653111
Village of Sunbury	45.625780	48.053111

The following figures are taken from a large single-use commercial property within the unincorporated portion of Berkshire Township in the Olentangy district. The total market value is \$1,200,000.

Olentangy	\$24,943.43
DACC	\$630.00
BST&G Fire	\$1,253.84
Health	\$275.89
Preservation Parks	\$247.49
Library	\$411.75
Berkshire Township	\$336.00
Twp. Except for Villages	\$546.00
County	\$2,440.56
Mental Health	\$414.19
911	\$261.15

**No figures in any of the proceeding tables take into consideration drainage maintenance fees or the effects of TIFs and impacts from other tools listed later.*



Economic Development in Delaware County

In the last 30 years, as water and sewer systems branched out into the townships, economic development has followed. As land in Polaris fully develops, Berkshire Township’s land adjacent to I-71 and U.S. 36, as the next northerly I-71 Interchange, becomes more attractive to developers. The development of the Simon-Tanger Outlet Mall has spurred new interest in the area.

Berkshire Township Future Economic Development

Berkshire Township should plan for future economic development by:

- Reserving land with sewer capacity at the I-71 Interchange for commercial development.
- Avoiding over-zoning property before there is an apparent market need.
- Continuing to put pressure on the Ohio Department of Transportation (ODOT) to ensure that developers mitigate their impact on state and county roads.
- Phasing of large projects helps the incremental absorption of the land costs to the developer and avoids oversupply of product.

Economic Development Tools

Economic Development, or the process of actively seeking businesses to locate to the County, is typically performed on the county and municipal levels. The following is a list of economic tools and development-related issues of which the Township should be aware.

Enterprise Zones

Enterprise Zones are defined areas within the County that allow for tax abatements on industrial projects conducted within the zone. Real property abatements can be made for improvements on the real property as a result of the project. Personal property abatements can be taken on machinery, equipment, furniture, fixtures, and inventory that is new or first-used in the State of Ohio. A three-member negotiation team reviews the project and negotiates a package specific to each project.

Delaware County currently has three active zones: the City of Delaware Enterprise Zone, the Orange Township Enterprise Zone, and the Village of Sunbury Enterprise Zone. Tax levels can be abated up to an agreed-upon percentage for a certain number of years. This program also has a requirement of job creation associated with any abated project. If properly managed, this program has proven to be an engine of growth.

Port Authority

Port Authorities are political subdivisions created by statute for the purpose of enhancing and promoting transportation, economic development, housing, recreation, research, and other issues within the jurisdiction of the port authority. Such organizations can acquire and sell property, issue bonds, loan monies for construction, operate property in connection with transportation, recreation, government operations, or cultural purposes, and engage in activities on behalf of other political subdivisions, among many other functions. Where funding is concerned, it may issue revenue bonds, apply for grants and loans, and even levy a property tax not exceeding one mill for a maximum period of five years. In short, the Port Authority can accomplish much more in the way of economic development in a competitive fashion than a government entity, which is limited by disclosure requirements.

New Community Authority

The “New Community Authority” (NCA) is a tool defined by Ohio Revised Code Chapter 349. It creates a process by which a district is created for the “conduct of industrial, commercial, residential, cultural, educational, and recreational activities, and designed in accordance



with planning concepts for the placement of utility, open space, and other supportive facilities.” The establishment of the Authority can identify sources of revenue, such as a community development charge, or “a dollar amount which shall be determined on the basis of the assessed valuation of real property.”

The new community district is an area of land described by the developer in a petition as a new community and approved by the County Commissioners. The ORC allows the addition of land to the district by amendment of the Resolution establishing the authority and by request of landowners.

A New Community Authority may do many things as defined in the Ohio Revised Code. In summary, it may:

- acquire and dispose of property;
- engage in educational, health, social, vocational, cultural, beautification, landscaping, and recreational activities and related services primarily for residents of the district;
- collect and receive service and user fees;
- adopt rules governing the use of community facilities;
- employ managers and employees;
- sue and be sued;
- enter into contracts, apply for and accept grants, and issue bonds;
- maintain funds or reserves for performance of its duties;
- enter agreements with boards of education for the acquisition of land or other services for educational purposes; and
- engage in planning efforts.

Several New Community Authorities have been established in Delaware County. The Liberty/Powell CA was established to help fund improvements in and around Golf Village. That NCA includes Scioto Reserve in Concord Township, as well as Liberty Village at Steitz Road. The Concord/Scioto NCA was created to accompany the development of the Lower Scioto Wastewater Treatment Plant. Projects that include extension of infrastructure into that plant may petition to be part of that NCA.

Community Reinvestment Areas

Community Reinvestment Areas (CRA) are designated zones in which tax abatements are allowable on real property improvements made as a result of an expansion or relocation project. These agreements are available for expanding or relocating businesses. Job creation is an additional requirement for participation in the Community Reinvestment Area program.

Only one CRA exists in Delaware County, located in the City of Delaware with the same boundaries as the Delaware Enterprise Zone. The available abatement rate can extend up to 100% on the real property improvements for a term of up to 15 years. The abatement rate and term is a unique negotiation for each project, considering such factors as job creation numbers and real and personal property investment levels.

Tax Increment Financing

Tax Increment Financing (TIF) is a program to finance public infrastructure by redirecting new real and personal property tax to a debt retirement fund. A portion of the real property tax on improvements to a site, up to 75% for 10 years, can be paid into a special fund, and that fund can be used to retire the debt on a public infrastructure improvement tied to the project. The value of the property tax exempted is paid as a Service Payment-in-Lieu of Taxes (equal to the amount

of exempted value), due at the same time property taxes are due, and goes into a special fund. This special fund, set up by the County Auditor, is used to retire the debt incurred from certain public infrastructure improvements associated with the project.

A county negotiating committee meets with a potential business and discusses if the TIF program can be utilized for the proposed project. If so, the committee will work with the business to reach an agreed exemption level. The Delaware County Economic Development Office works with both the business and negotiating committee to facilitate the process. Generally, TIFs are used exclusively in commercial and industrial settings. However, in larger residential projects, where required infrastructure may go beyond what is needed to serve the proposed development, a “residential TIF” may be considered. Such TIFs would be applied only if a number of conditions were met, and only related to external infrastructure. The TIF would have to be supported by the local jurisdiction, the applicable school district (unless the district is “made whole”), local fire district, and county representatives.

Joint Economic Development Districts (JEDD)

JEDDs are contractual agreements formed between local jurisdictions (cities and townships) to create a new board/political subdivision that is authorized to improve the economic vitality of an area. A JEDD allows a municipality to extend its ability to implement an income tax to a township. JEDDs must “facilitate economic development to create or preserve jobs and employment opportunities and to improve the economic welfare of the people in the state and in the area of the contracting parties.” JEDDs help to alleviate the need for municipalities to annex land from townships.

JEDDs are formed with the consent of the property owners and agreement by the partnering local jurisdictions. The agreement contains the terms by



which the JEDD will be governed, including income tax sharing arrangements and the authority of the JEDD's board. If the JEDD is authorized without the full consent of the township trustees, it must move forward to a vote. Land cannot include residential property or land zoned for residential use.

JEDDs should be supported by the County when funds are being provided to the County to undertake public infrastructure improvement projects. As the entity responsible for constructing sanitary sewers and roads (as well as other improvements), the County can receive reimbursement through the JEDD for certain services. The County can also help with the administrative responsibilities of the JEDD's board.

Designated Special Improvement Districts

There are multiple types of Special Improvement Districts (SID) that can be created to encourage new investments to occur within the County. Some of these SIDs that can be established are Transportation Improvement Districts (TID), Entertainment Districts, and Historic Technology Districts. These Improvement Districts allow government entities to combine funds from local, state, and federal entities to address infrastructure demands, issue a greater number of certain permits to encourage new development, and to reallocate property taxes to develop and support activities that grow the economy. The Economic Development Department will analyze each request on a one by one basis. The Department will engage all affected parties before issuing its recommendation to the County Commissioners.

Ohio Job Creation Tax Credit

The Ohio Department of Development administers this program in conjunction with local incentive program participation. This program allows a business to receive a tax credit or even a refund against its corporate franchise tax based upon the number of new jobs created with the project.

The requirements of the program are that at least 25 new, full-time jobs must be created within three years of the beginning of the project, and that the new employees must be paid a minimum of 150% of the federal minimum wage.

The Job Creation Tax Credit is a direct credit against a business' corporate franchise tax. The basis of the credit lies in the state income tax withholding per new employee. The tax credit will be figured from the state income tax withheld for the new employees. A percentage of the withheld tax will be credited against



the business' corporate franchise tax each year for the term of the agreement. This rate can be up to 75% with a term of up to 10 years.

The Delaware County Economic Development Office will work with businesses interested in this program and put them in contact with the Ohio Department of Development's representative.

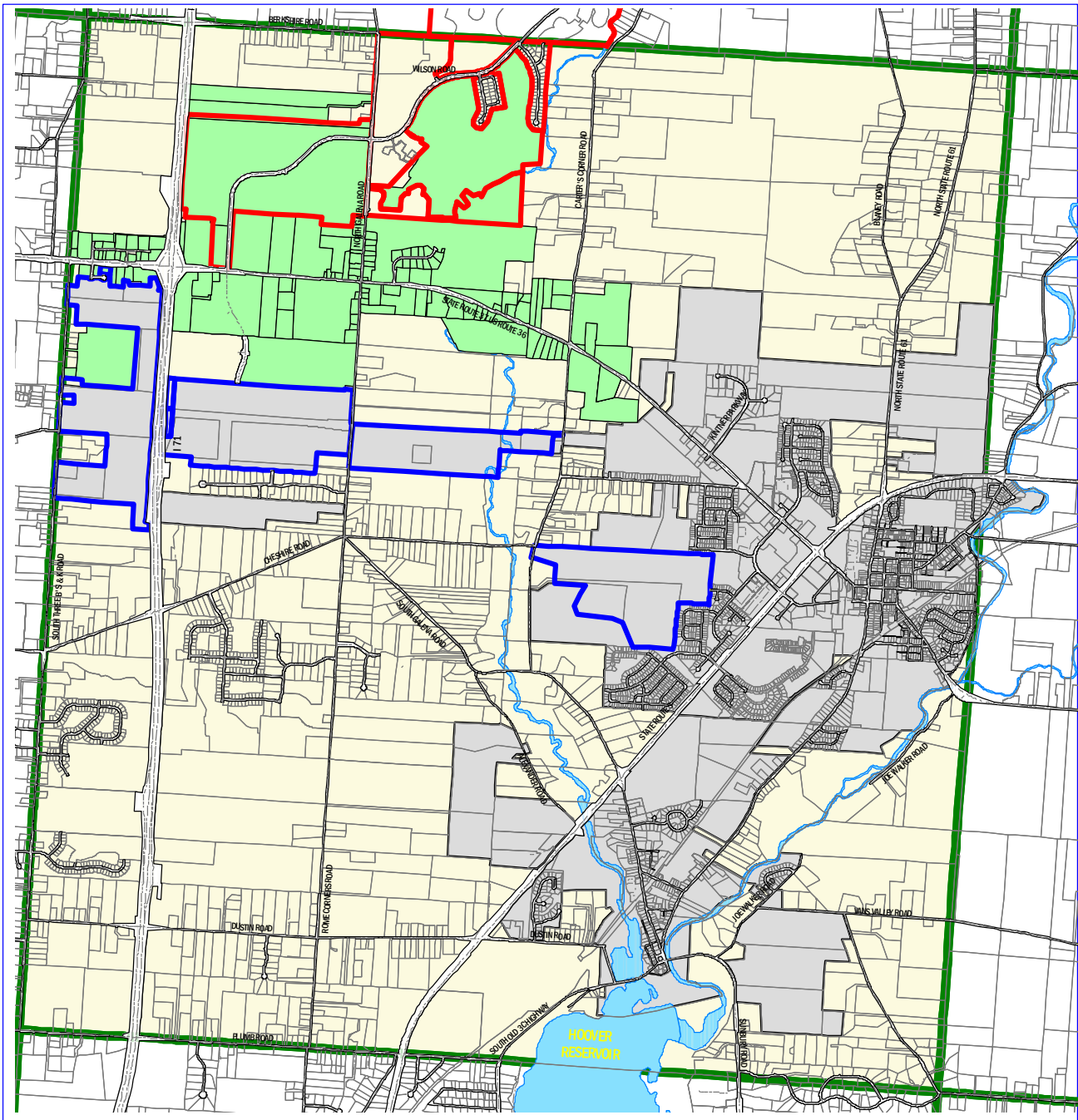
Impact Fees

With increased costs due to rapid growth, many communities would like to impose impact fees on new development. Models for estimating the fiscal impact of new development were developed by Robert Burchell, David Listokin, and William Dolphin in *The New Practitioner's Guide to Fiscal Impact Analysis*, (Center for Urban Policy Research, Rutgers University, 1985), and the *Development Assessment Handbook*, (Urban Land Institute, 1994).

Ohio planning and zoning legislation does not empower townships to charge impact fees that offset costs of service expansion (roads, schools, parks, etc.). It has been generally held, however, that if road improvements are needed immediately adjacent to the development, can be directly attributable to the project, and the benefit of contributing to the improvement outweighs the burden of such improvement for the development in question, then a "fair share" contribution to the improvement can be requested by the community.

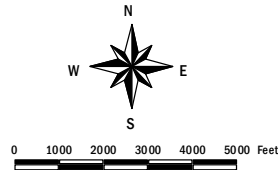
Alternatively, if large proposed developments do not reasonably mitigate their own impacts, they may impose an undue burden on the township. In such cases the rezoning may be premature.

Under the current legal system in Ohio, townships must be aware of the need to encourage a mix of commercial, industrial, and a variety of residential uses to curtail the growth of property taxes.



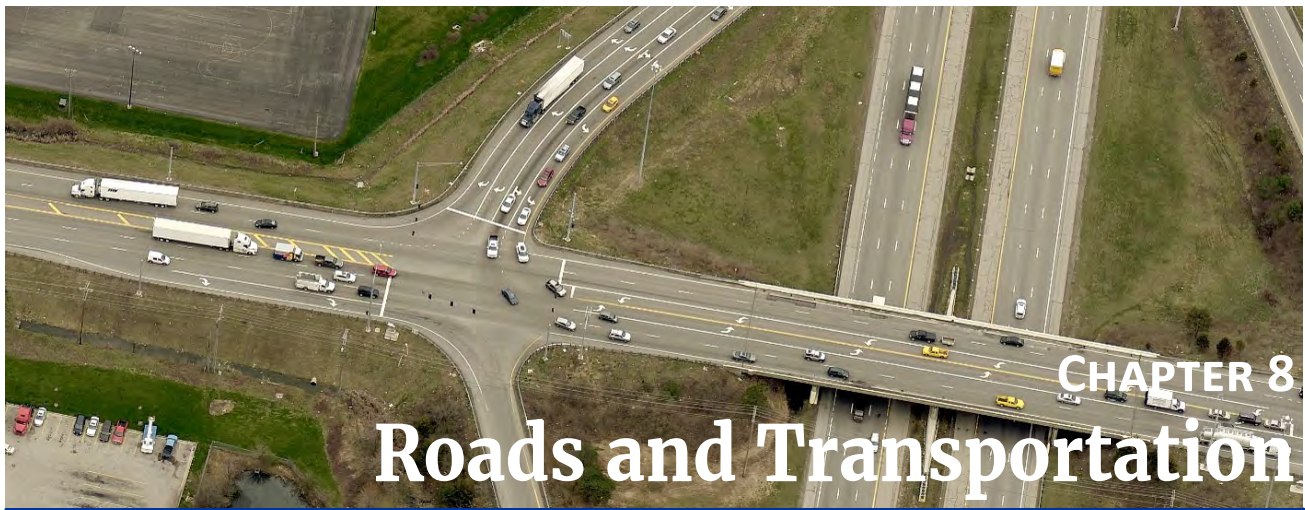
Economic Development

Berkshire Township,
Delaware County, Ohio



	Northstar New Community Authority (NCA)
	Northgate New Community Authority (NCA)
	Tax Increment Financing (TIF)

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (07/11/17)



General

Most of Berkshire Township’s roads were laid out in the 19th Century. With the exception of the Northstar subdivision and a few small residential subdivisions, all development in the Township has taken place along these original roads. As the area develops from a rural to a suburbanizing community, the function of these original roads is changing from farm-to-market roads to collector or arterial streets. As traffic counts increase, roadway improvements and new roads will be needed.

As noted in Figure 18, Berkshire Township roads are maintained by various authorities: federal and state roads are maintained by Ohio Department of Transportation, District 6; The Delaware County Engineer maintains county roads; Berkshire Township maintains township roads; Homeowner associations maintain private subdivision roads; Common Access Driveways (CADs) are private roads serving two to five lots, maintained by the lot owners.

Federal and State Roads

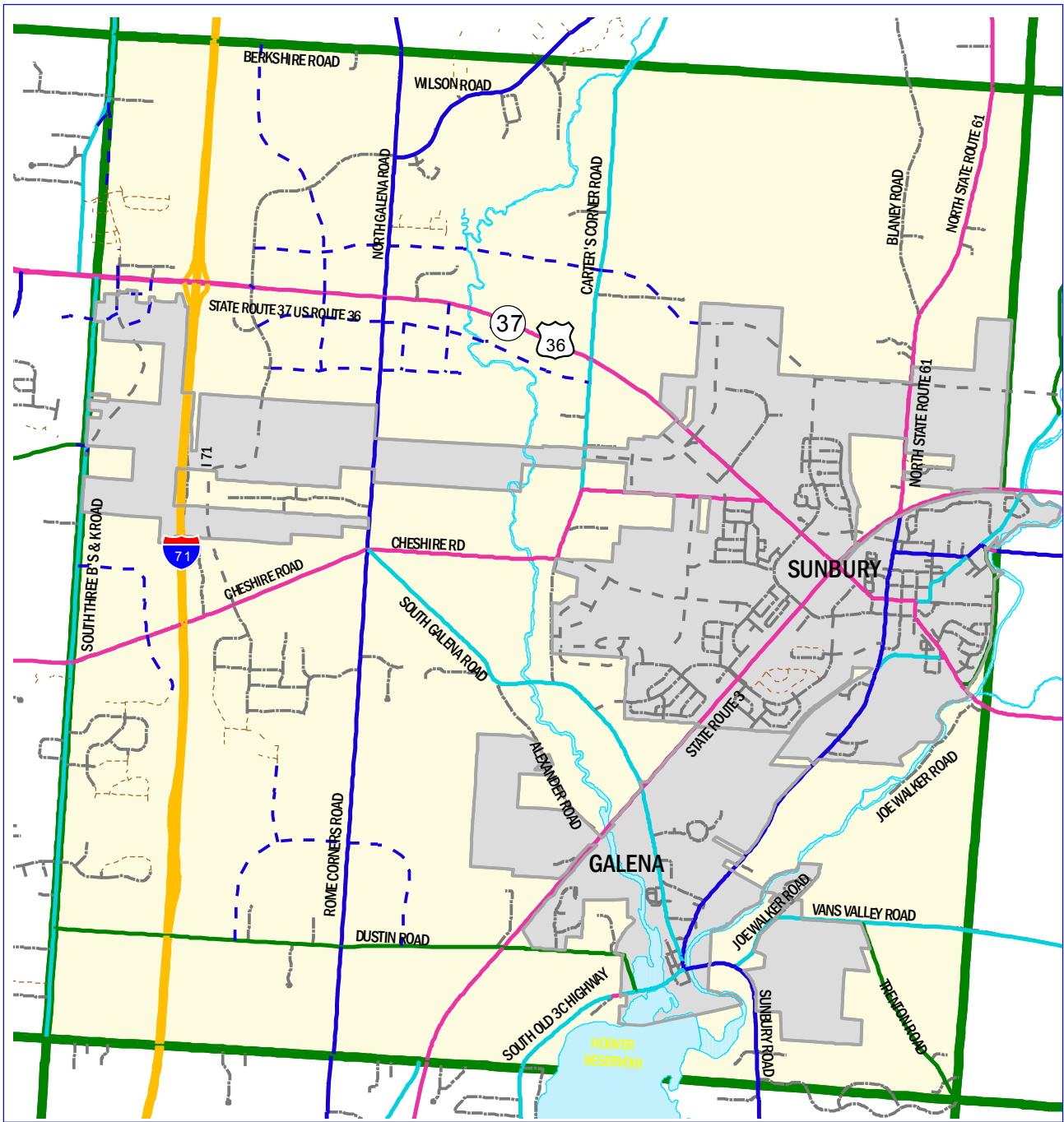
U.S. 36 – 3.2 miles of 36/37 pass through Berkshire Township. U.S. 36 acts as an east-west connector from U.S. 23 to I-71. This road is heavily traveled with trucks carrying interstate commerce and passenger vehicles. Truck traffic often clogs the diamond interchange at I-71

at peak hours, causing backups and a reduced level of service. ODOT District 6 recently completed a number of safety improvements prior to the construction of the

Figure 18. Principal Roads and Widths in Berkshire Township 2017

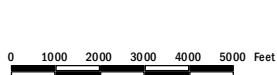
Road #	Maintained	Road Name	Surface Width (typ.)
I-71	ODOT	Interstate 71	72'
U.S. 36	ODOT	U.S. 36	22'-70'
S.R. 37	ODOT	S.R. 37/E. Granville St.	20'-36'
S.R. 3	ODOT	N. State St.	24'-36'
S.R. 61	ODOT	S.R. 61	20'
19	County	Vans Valley	16'-20'
22	County	Trenton	16'
24	County	Old 3C	20'
24A	County	Wiese	18'
30	County	Sunbury	20'
33	County	Carter’s Corner	16'
34	County	S. Galena	16'-20'
39	County	Rome Corners	16'
44	County	Hartford	20'
72	County	Cheshire	18'
33	Township	Alexander, Golf Course	16'
35	Township	S. 3 B’s & K	16'
50	Township	Stockwell	12'
56	Township	Wilson	20'
68	Township	Blayney	16'
73	Township	Joe Walker	12'-14'
75	Township	Berkshire	18'
104	Township	Dustin	16'-24'
105	Township	Plumb	16'
482	Township	Holley Wood	20'
483	Township	Renee Ct.	20'
581	Township	Bent Tree	22'

Source: ODOT Road Inventory

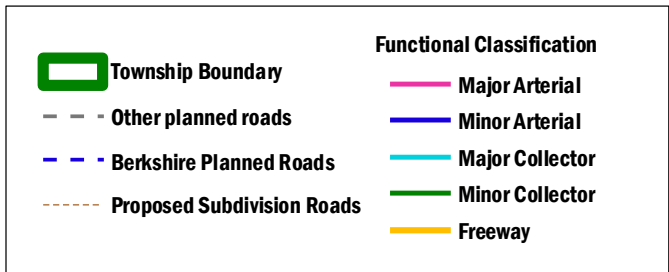


Functional Classification

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/17)



outlet mall. The safety study accomplished the following:

- Dual left and right turn lanes on the north and southbound exit ramp approaches to 36/37;
- Eastbound right turn lane on 36/37 at the southbound I-71 ramp intersection;
- Westbound right turn lane on 36/37 at the northbound I-71 ramp intersection;
- Converted bridge deck to accommodate six-lane section with side-by-side, single left turn lanes;
- Extension of the single, left turn lane on 36/37 at ramp intersections across the adjacent ramp intersection (east and westbound directions);
- Access road via Wilson Rd. intersection maintained eastbound access for the Flying J site.

Functional classification of roads

Roads are functionally classified by design and/or usage. Delaware County created a Functional Classification Map as part of the 2001 Delaware County Thoroughfare Plan. This plan incorporates these classifications by reference, unless exceptions are noted.

Arterial roads have the primary purpose of carrying through traffic to and from residential, commercial, and industrial areas, and the secondary purpose of providing access to abutting property. They are usually a continuous route carrying heavy loads and Average Daily Traffic (ADT) in excess of 3,500 vehicles. Arterials generally require a right-of-way of 80 to 100 feet for a two-lane section and 100 feet for a four-lane section.

- Major arterial roads in Berkshire Township: U.S. 36, S.R. 37, S.R. 3, S.R. 61.
- Minor arterial roads in Berkshire Township: Hartford Road, Wilson Road, N. and S. Galena Road.

Some roads may exceed the ADT related to their classification.

Collector roads have the primary purpose of intercepting traffic from intersecting local streets and handling this movement to the nearest major collector or arterial street. Average Daily Traffic typically range from 1,500 to 3,500 vehicles, with AM peak hour traffic about 7-8% and PM peak hour of 10%.

- Major collector roads in Berkshire Township: S. Old 3C Highway, N. and S. 3 B's and K Road, Domigan Road, Cheshire Road.
- Minor collector roads in Berkshire Township: Dustin Road, Trenton Road, Plumb Road, Berkshire Road,

Stockwell Road.

Some roads may exceed the ADT related to their classification.

Local Streets represent the lowest category. Their primary function is to serve abutting land use. Typical ADT's range from 100 to 1,500 vehicles. Local streets are further classified as Loop, Through, and Cul-de-sac.

- Examples: Blayney Road, Joe Walker Road.

Some roads may exceed the ADT related to their classification.

Access Management

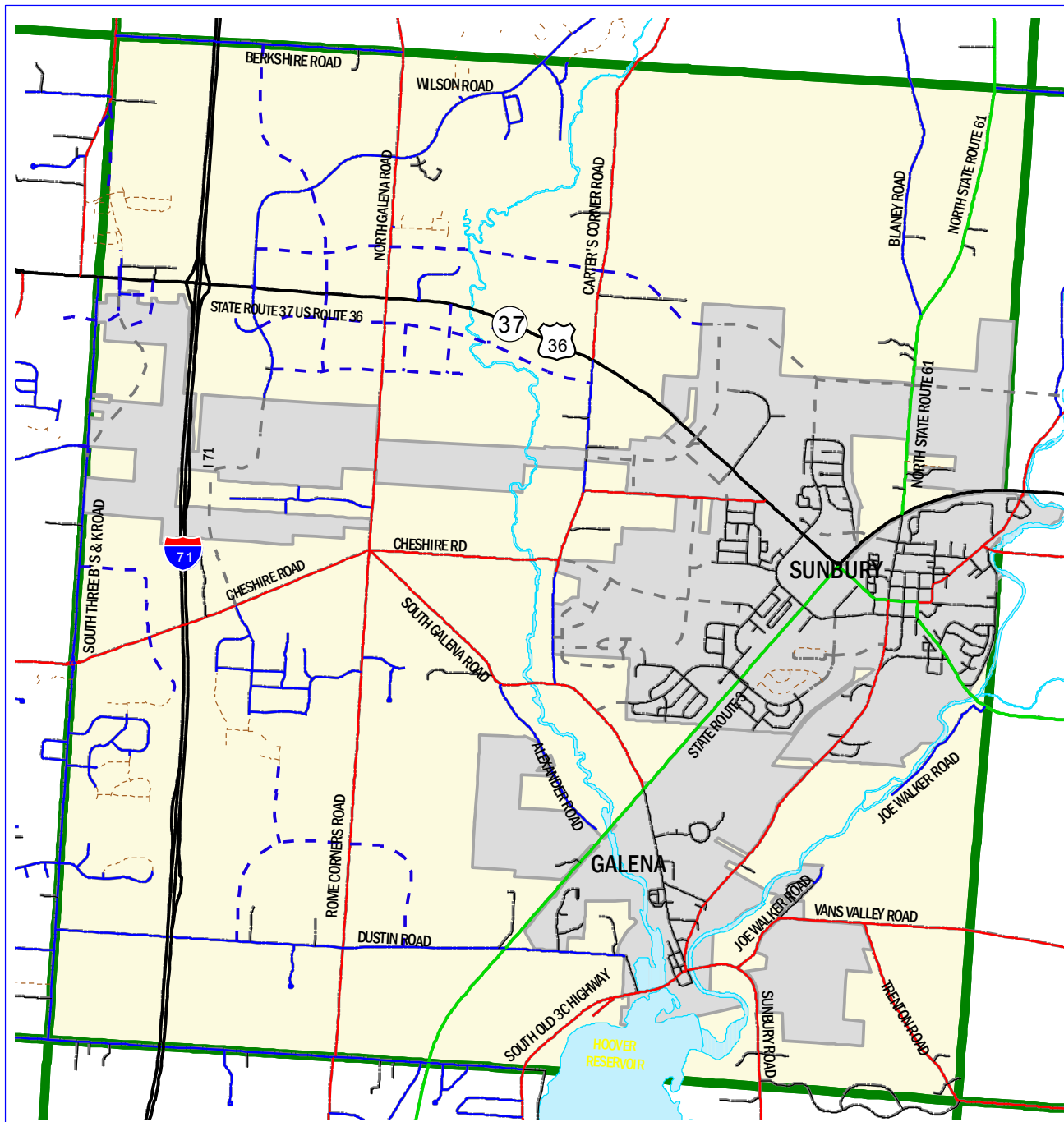
Access management is the practice of limiting curb cuts to major roads to prevent conflicting turning movements and maintain safe traffic flow. The Ohio Department of Transportation (ODOT), in July 2010, completed an Access Management Study that will impact future access to the 36/37 corridor. The resultant Access Management Plan (AMP) is used as development occurs, and particularly as properties that have direct access to 36/37 go through the zoning process. Access can be granted, denied, converted from a full access to a limited one, or temporarily granted until such time as other adequate access, such as a "backage" road, is provided.

According to ODOT, poor access management can reduce highway capacity to 20% of its design. Delay is as much as 74% greater on highways without access management. AMPs find the following to be true:

- Poor access management can reduce highway capacity to 20% of its design;
- Delay is as much as 74% greater on highways without access management;
- 60% of urban and 40% of rural crashes are driveway- and intersection-related;
- 15,000 access-related crashes occur each day at an estimated annual cost of \$90 billion.

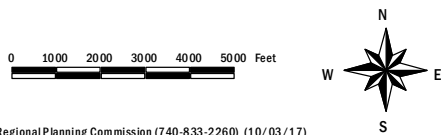
ODOT Access Management Principles:

- Avoid disconnected street systems.
- Regulate the location, spacing, and design of drives - space access points so they do not interact with each other.
- Provide adequate sight distance for driveways.
- Use appropriate curve radius, lane widths, and driveway angle.



Roads

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/17)

	Township Boundary		Berkshire planned roads
	US Highway		Other planned roads
	State Highways		Proposed Subdiv. Roads
	County Roads		Railroad
	Township Roads		Rivers / Lakes
			Incorporated Area

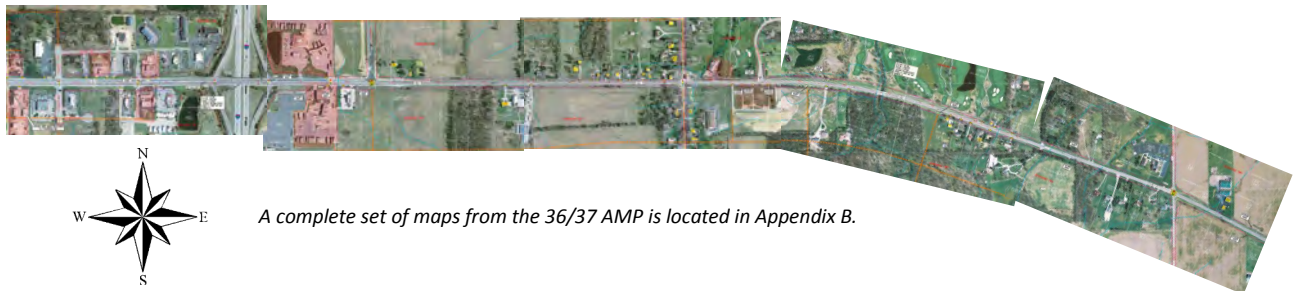
- Provide turn lanes to separate conflict points for acceleration, deceleration, and storage lanes.
- Prohibit some turns in critical areas; relocate that activity to a less conflicted point.
- Use feeder roads to relocate critical movements and to handle short trips parallel to the main road.
- Locate driveways away from intersections to reduce conflicts (corner clearance).
- Use right-in/right-out drives to prevent unwanted left turns across traffic.
- Ensure that Development Plans presented and approved at the zoning stage reflect appropriate access management design principles.
- Encourage internal access to out-parcels - connect parking lots; share driveways.
- Use frontage roads to connect commercial traffic, and keep it parallel to the main road - connect frontage roads to collector streets at properly spaced intersections.
- Use backage roads as rear access roads connecting commercial uses.
- Use the 30-curb cuts/mile standard, or maximum of one access each 350 feet.
- Minimize the number of traffic signals. Two per mile is ideal (half-mile spaced).
- Use medians to separate traffic flows.
- Coordinate access permit review between ODOT, local zoning, and building departments.

The U.S. 36 corridor offers potential commercial tax base to Berkshire Township. When new sites are zoned for commercial use, access management is imperative to maintain safe traffic flow. The following figures show the portions of the AMP that directly impact the Township. In short, all private accesses ideally would be closed. Drives that are limited to right-in/right-out only

movements would be allowed between main intersections. Backage roads would be planned approximately 650 feet on either side of the existing highway. This suggests the long-term desire to upgrade the road to a four-lane section. Some changes from the following plan have already been constructed on either side of the I-71 Interchange.

The AMP indicates the following highlights (from west to east within Berkshire Township). Locations of intersections and backage roads are conceptual and based on ideal spacing. Site distance, topography, environmental features, and other factors do not appear to have been considered. Construction of the “Sunbury Parkway” and other development access may impact the location and need of all backage roads and right-in/right-out configurations.

	Project Description
A	All individual accesses are removed when access is otherwise provided
B	Backage road at the southern end of Fourwinds Drive, connecting 3 B’s and K Road with McDonald’s
C	Convert the Wendy’s signal to right-in/right-out on both north and south side; remove signal
D	Backage road from Wilson (extension of Rider Road to the east to S. Galena Road and beyond to Domigan Road)
E	Extend backage road from Flying J access to the east to N. Galena Road
F	Gated access only to the Berkshire Cemetery
G	Right-in/right-out allowed at the eastern end of the Berkshire Cemetery property and at the property directly north (based on spacing)
H	Right-in/right-out allowed to the south directly across from the midpoint of Bent Tree Golf Course
I	Opposing right-in/right-out allowed at the Schilder/Clark properties (based on spacing)
J	New signal at Domigan Road/Carter Corner’s Road



Future Roads - The Thoroughfare Plan

A plan for the major streets or highways, or Thoroughfare Plan, is a tool for counties and local jurisdictions. A County-wide Thoroughfare Plan is enabled and defined by Ohio Revised Code Section 711.10.

The 2002 Delaware County Thoroughfare Plan identified an unpopular new road that would pass between Sunbury and Galena. Development has further complicated ever making a similar connection and is therefore not reflected in this plan. This plan recommends a number of new collector and arterial roads as described in the Implementation section. The local Thoroughfare Plan is reflected in the following map with a larger version following the Future Land Use map.

Delaware County Thoroughfare Plan Recommendations:

- Rome Corners Road is recommended to extend south to connect to Worthington Road in Genoa Township.

Additional new roads are suggested by the Comprehensive Plan Update:

- North of U.S. 36, **Fourwinds Drive** should extend north to connect with 3 B's and K Road.
- **Wilson Road South** extended to the east-west road that serves the new interchange (Sunbury Parkway). The connection should be made with Cheshire Road approximately halfway between I-71 and Galena Road.
- **Fourwinds Drive** should extend south based on interchange improvements and merge into 3 B's and K Road south of Sherman Road.

Delaware County Engineer Projects

The Delaware County Engineer maintains and improves a number of county roads, and also works closely with townships to assist in their efforts toward proper road maintenance and improvement. Some projects also involve other entities, such as ODOT and local municipalities, when projects impact multiple jurisdictions.

Metropolitan Transportation Plan

The Mid-Ohio Regional Planning Commission (MORPC) is the Metropolitan Planning Organization for the Columbus region. As such, MORPC maintains a Metropolitan Transportation Plan for Franklin, Delaware, and parts of Union and Fairfield Counties. This plan lists projects that are eligible for potential state and/or federal funding in the future.

The MTP in the Berkshire area only shows the following Bike and Pedestrian improvements:

Old 3C Hwy to Galena Brick Trail	2016-2020
S.R. 37 Bike/Ped Facilities	2030-2040
Ohio to Erie Trail	2030-2040
S.R. 61 Bike/Ped Facilities	2030-2040

Bikeways

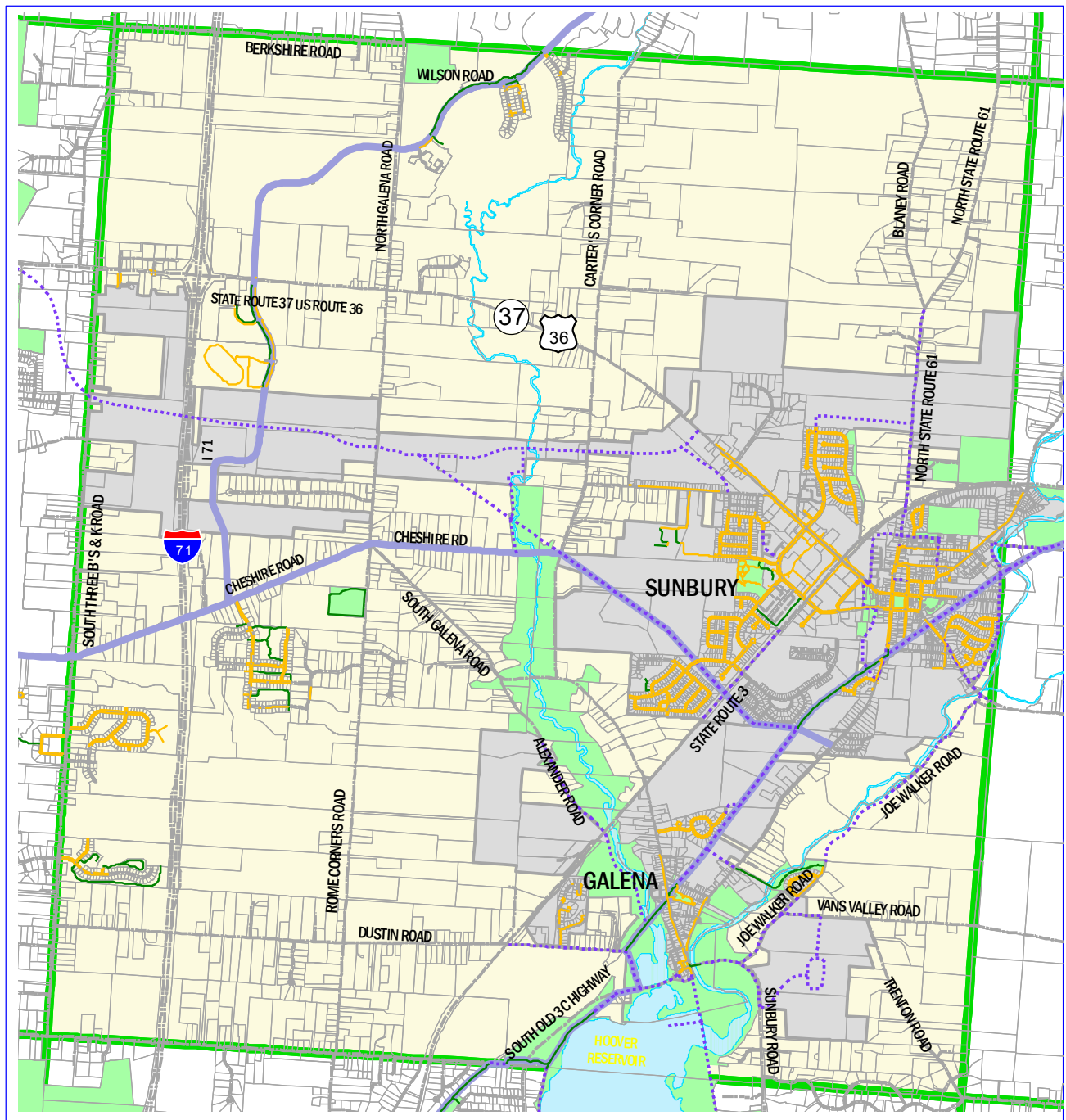
As roads become more congested there is a need to separate pedestrian and bicycle traffic from automobile and truck traffic for safety purposes, as well as for recreation and alternate transportation. There are no sidewalks or bike paths along "traditional" township collector and arterial roads. Bike paths should be placed along at least one side of collector and both sides of arterial roads. Most communities require standard sidewalks in subdivisions that go through the rezoning process. For many years, the Delaware County Regional Planning Commission has also sought sidewalks in subdivisions, adding a requirement in 2007 to the Subdivision Regulations to capture those neighborhoods that do not go through the rezoning process, such as under the FR-1 zoning designation.

In 2016, the County Commissioners established a trail working group as a result of the County's Economic Strategic Plan, which indicated strong interest in trails. This group will utilize the current version of the DCRPC's County trail plan updated with any new information including rough cost estimates for prioritized segments and routes. Work will be coordinated with Central Ohio Greenways' (COG) efforts to create major routes into the County from existing trails in Franklin County. This group includes representatives from DCRPC, the County Engineer, Preservation Parks, the Delaware General Health District, Economic Development, MORPC, and the public.

Existing Bikeways

The Ohio to Erie Trail is a 1.8-mile bikeway in the Township that runs along Old 3C Highway through Sunbury, Galena, and Genoa Township, and connects to the 2.2-mile Westerville bikeway.

The regional bikeway plan recommends a number of bikeways along traditional roads in Berkshire Township to create a network that will include the existing Sunbury and Westerville bikeways. The proposed bikeways are indicated in blue on the *Sidewalks and Paths* map.



Sidewalks and Paths

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260)



Clean Ohio Fund

Although there are several grant sources, the Clean Ohio Fund is a state-wide funding program often cited for trails and parks. In 2015, 19 projects were funded, with 16 funded in 2014. Recent projects in Central Ohio include the following:

2015	Delaware County Orange Township	Shared use path and bridge over the Alum Creek Reservoir spillway channel that will link into the Orange Township Trail and the Alum Creek State Park Trail.
2015	Delaware County Orange Township	Phase I of the Bale Kenyon Road Trail starting at the corner of E. Orange Road and Bale-Kenyon Road and ending at the Delaware County improvement project of Bale-Kenyon Road and Lewis Center Road, approximately 2,900 linear feet.
2014	Delaware County	Part of the northernmost section of the Ohio to Erie Trail, 1.6 miles of rural and wooded areas to connect with the Knox County section of the Ohio to Erie Trail.
2014	City of Columbus	Phase II of the Scioto Greenways Project, 1.5 miles of multi-use trail connecting to regional recreational trail systems; Scioto and Olentangy Trail systems.
2014	City of Hilliard	3,686 linear feet of trail from Hoffman Farms Trail south across Scioto Darby Road to Roger A. Reynolds Park.



Suburban street patterns

A development has come to Berkshire Township, it has adopted the suburban design of curvilinear local streets with cul-de-sacs and uniform lot sizes dictated by zoning. Homes sit wide to the street, with a two-car front-load garage, sometimes extending in front of the home. Minimum lot size is typically 90' x 135'. Because all lots in a neighborhood are of similar size, production builders, rather than individual carpenters, typically build one price range of houses per neighborhood and repeat the same cost-efficient building elevation with limited architectural detail. There is no regular length of blocks. Some neighborhoods are not conducive to pedestrians, as there are no sidewalk connections to other neighborhoods. Traffic often exits a neighborhood from one access point, which can overload the intersection. The future vision of the community and design recommendations can influence the design, walkability, variety, and sustainability of development.

Bike/Pedestrian Policy

As the subdivision authority, the Regional Planning Commission seeks connections between subdivisions by often requiring new subdivision streets to connect to vacant adjacent parcels of land. The main benefits to connectivity are shorter trips, greater travel choice, and savings in infrastructure. Township zoning may also provide a policy of neighborhood-to-neighborhood street connections, provided safety and quality of life impacts from the connection are mitigated. As part of a rezoning review, subdivisions that are platted along existing collector streets may also stipulate that bike paths or sidewalks be constructed as part of a regional system.

Other Road-Related Issues

Increase in population yields increased traffic flow on local roads. The following considerations should be made when reviewing rezoning requests:

Patterns of Development

Traffic can be reduced by the design of development and the mix of land uses. Low density (1-acre lots or larger) development generates significant traffic per unit, but the number of units is modest overall. In large developments with densities greater than 1 unit per acre a mix of local convenience commercial uses and a network of sidewalks, trails, and bike paths can reduce auto trips. Consideration may be given to neo-traditional development patterns for densities greater than 1 unit per acre. These may occur near existing village centers or as greenfield development. A combination of a grid street core, with curvilinear edges may allow for the preservation of open space. A typical home in an exclusively residential area generates 10 or more trips



per day while condominiums generate approximately seven per day. A home located in a neighborhood that is designed to be convenient for walking and biking with mixed commercial and service uses can reduce auto trips to as little as 4 trips per home per day.

Streetscapes

Streets are a significant part of the look of a community. Every community needs a streetscape standard. Berkshire Township wants to maintain its rural look, and has done so by not unilaterally requiring curb and gutter streets, although it is preferred at higher densities with smaller lots. For local streets with lot widths less than 100 feet, no through traffic, and less than 1,500 vehicle trips per day, the current standard 20-foot wide street with drainage ditches within a 60-foot right-of-way is acceptable. In an open ditch road, the sidewalk is typically located near the outside edge of the ditch, which can be problematic if not designed properly. For collector and arterial roads, pedestrian and bike traffic should be separated from vehicular traffic. The following is a recommended streetscape for collector or arterial streets. A 5-foot wide asphalt bike path may be

preferable to a sidewalk to maintain the rural character of the road. A bike path may be placed on one side of the street for minor-collector streets. Major collectors and arterials should have a bike path on at least one side of the street plus a sidewalk on the other side.

Alternative Street Designs — The Roundabout

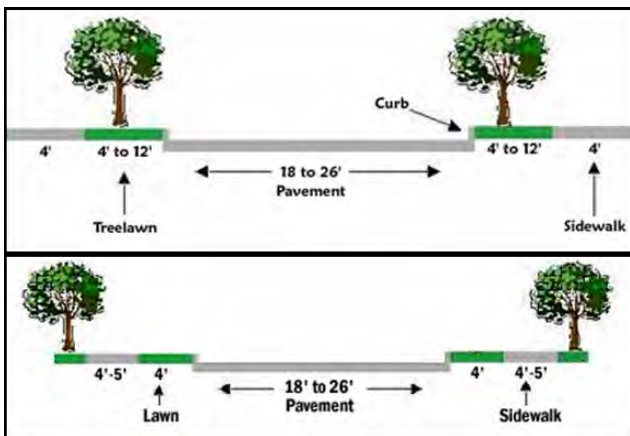
Low Speed Roundabouts have begun to be used as an alternative to the traditional signalized intersection throughout southern Delaware County. Roundabouts have been proven to reduce crashes, flow more traffic than traffic signals, cost less, and require less pavement than signalized intersections. Not all intersections are candidates, but the roundabout is a viable traffic management tool.



Modern, low-speed roundabout; South Section Line Road and Riverside Drive, Concord Township. Pedestrian crosswalks are behind the pause line for traffic. Safe design speed is 11 miles per hour.

Paying for Road Improvements

Ohio planning and zoning legislation does not currently empower townships to charge Impact Fees to offset costs of service expansion (roads, schools, parks, etc.). Generally, road improvements immediately adjacent to



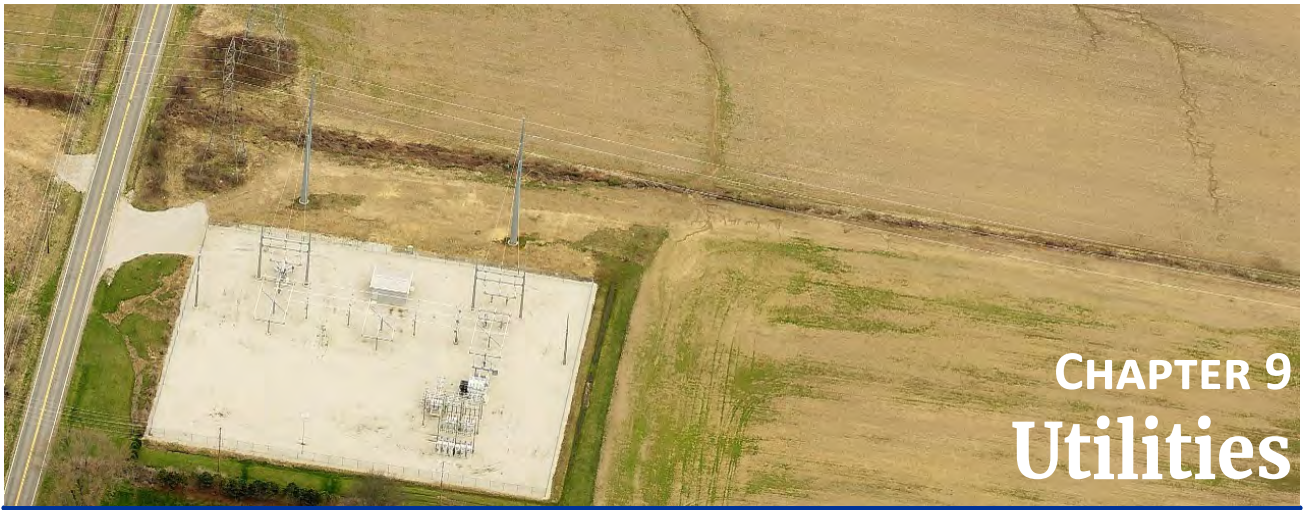
Streetscape examples with trees in the treelawn and outside the right-of-way



the development can be attributable to the project as part of the subdivision and zoning process. If large impact development proposals do not reasonably offer to mitigate their significant off-site impacts, they may impose an undue burden on the township. In such cases the rezoning may be premature. Projects that contribute to regional traffic can be required to contribute to those future improvements.

Transit

The Delaware Area Transportation Authority (DATA) offers an on-call non-scheduled bus service from point to point in the County. A Central Ohio Transit Authority linkage from Crosswoods delivers bus riders to any COTA stop in Franklin County. As the Township grows, new transportation will continue to be studied by transportation-related agencies.



CHAPTER 9 Utilities

General

Additional utility services will be needed as Berkshire Township develops. Water, sanitary sewer, telephone, electric, natural gas, cable television, and high speed internet are desirable utilities in the Delaware County real estate market. Stormwater management is required by Delaware County. When Berkshire Township performed its 2006 Comprehensive Plan update, the utility networks were still expanding, and sewer service was limited to small areas at the interchange and along S. 3 B's and K Road. But infrastructure has been put in place to serve a larger portion of the Township and surrounding areas.

Water and sewer service are generally available, and with them often comes the demand by developers for higher densities. How will the Township respond to this density dilemma while retaining its "rural character?" Are utility constraints also Township growth constraints? The answers lie in this Comprehensive Plan update and corresponding Delaware County plans for future sewers.

Water

The Del-Co Water Company, a cooperatively owned private water company established in 1973, serves most of Berkshire Township with potable water. As the County has grown, Del-Co has expanded its service to provide larger diameter water lines for residential and commercial service as well as fire protection.

Supply

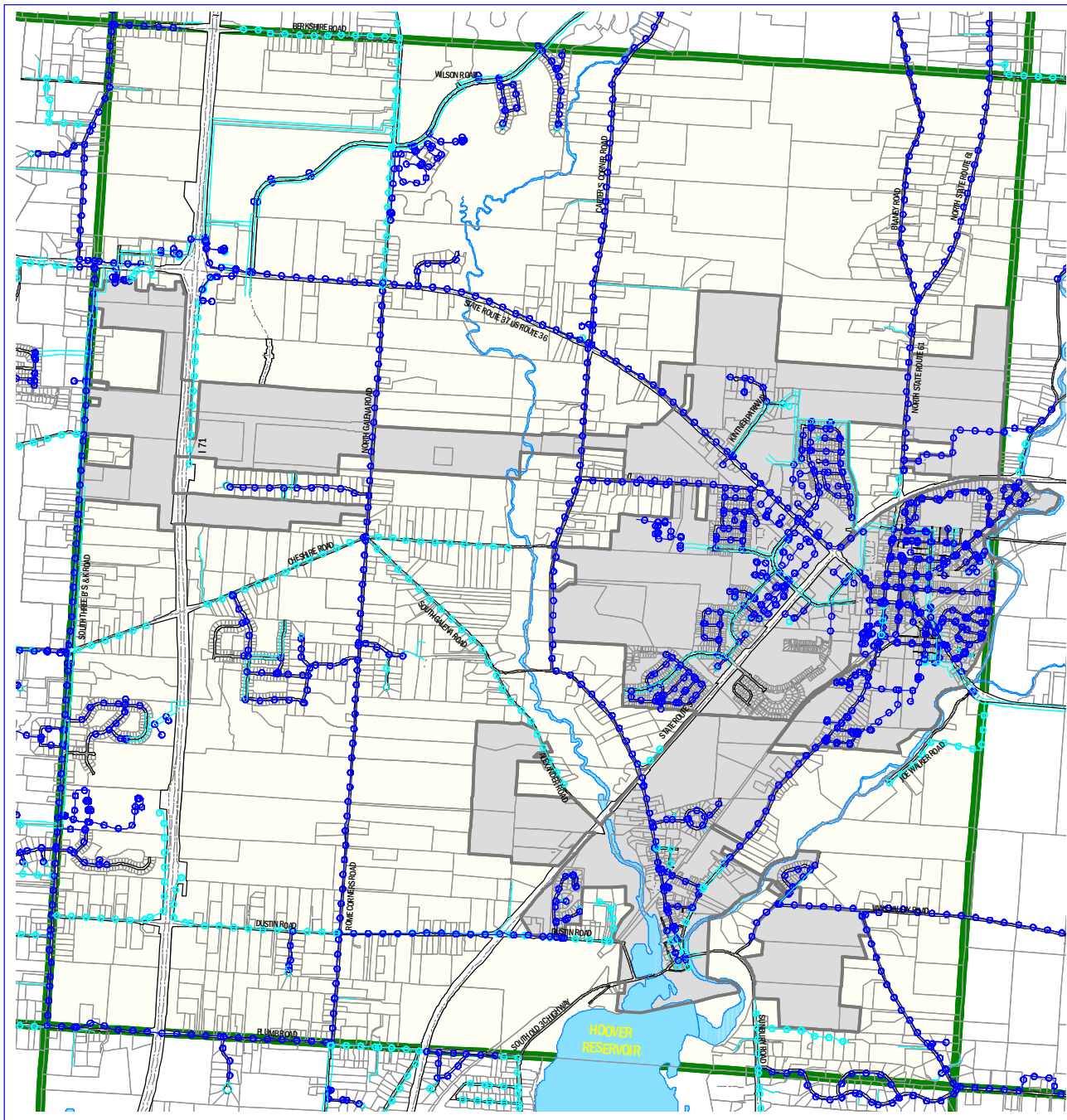
There is generally good water pressure for domestic use and fire protection throughout the Township. Some pockets of lower pressure such as along Ford Road in the northwest area of the Township will receive service improvements in the future upon construction of another elevated storage tank in the Bunty Station and Section Line Roads area.



Del-Co Water Headquarters on S.R. 315, Liberty Township

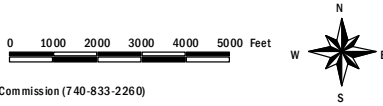
Del-Co Water utilizes water from the Olentangy River, Alum Creek Reservoir, and from the Scioto River utilizing a recently-installed raw water line in Liberty Township. Wells along the Kokosing River in Knox County provide additional supply. The water is pumped to upground reservoirs in Orange Township (800 million-gallon capacity) and Liberty Township (1.6 billion-gallon capacity). Raw water is purified at the Alum Creek, Old State Road, and State Route 315 treatment plants, and then pumped to a network of elevated storage tanks with 12.5 million gallons capacity. The system's peak demand in the summer of 2004 was 18.5 million gallons. The current purification system has the capacity to treat 21.7 million gallons per day (mgd) of raw water.

With these facilities, as well as others in Morrow County, a total of 38 million gallons per day is the long-term pumping and treatment capacity of Del-Co. While they have planned for future growth, such as a potential upground reservoir in Thompson Township, Del-Co does not have unlimited supply options. Potable centralized water is not currently a constraining factor to growth of the Township. There is adequate water capacity for human consumption and population growth in the



Water Lines

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
 Source: DELCO Water Company (8/8/2007)

	Township Boundary		DELCO Waterlines by Pipe Size
	Incorporated Areas		0" - 2" Pipe
	Road Right of Way		3" - 5" Pipe
	Property Lines		6" - 8" Pipe
	Rivers / Lakes		9" - 24" Pipe
			25" - 42" Pipe

Township. The demands for lawn sprinkling systems, however, can quickly tax capacity in dry spells. As a result, Del-Co imposed a year-round, three days per week restriction on lawn watering.

Water Lines

The Del-Co Water Lines map shows the location and diameters of water lines in Berkshire Township. In general, those streets that have water lines of less than 6 inches in diameter will not offer fire hydrants. Fire hydrants are normally a requirement of development densities greater than 1 unit per acre.

Sanitary Sewer

Berkshire Township primarily uses septic systems and leach fields for sewage disposal. Commercial activity around the I-71 and U.S. 36 interchange initially used small package treatment plants to treat their own sewage. Seeing the opportunity for economic development, the Delaware County Commissioners constructed a pump station, extending sewer service to the interchange area. Lines were extended to serve the Simon-Tanger Outlet Mall project. Although that does not exhaust the capacity for the east side of the Interstate, land south of the mall cannot be served by that particular line.

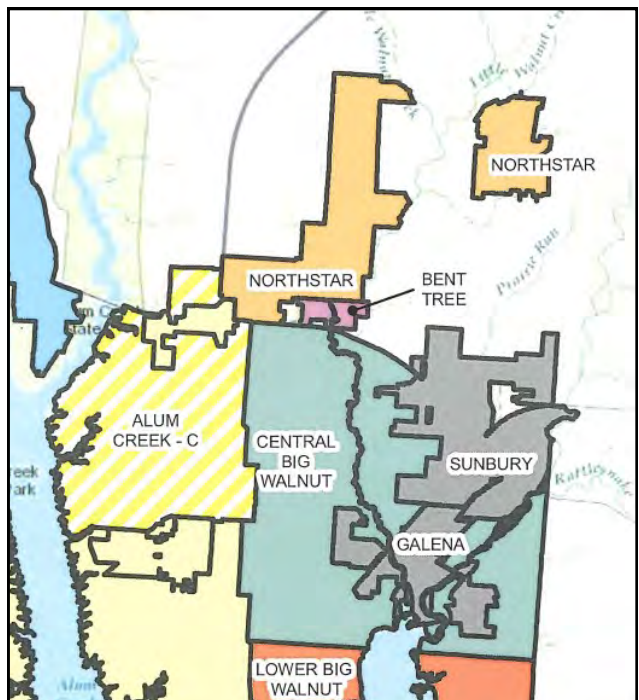
Existing Sanitary Sewer Service and Policies:

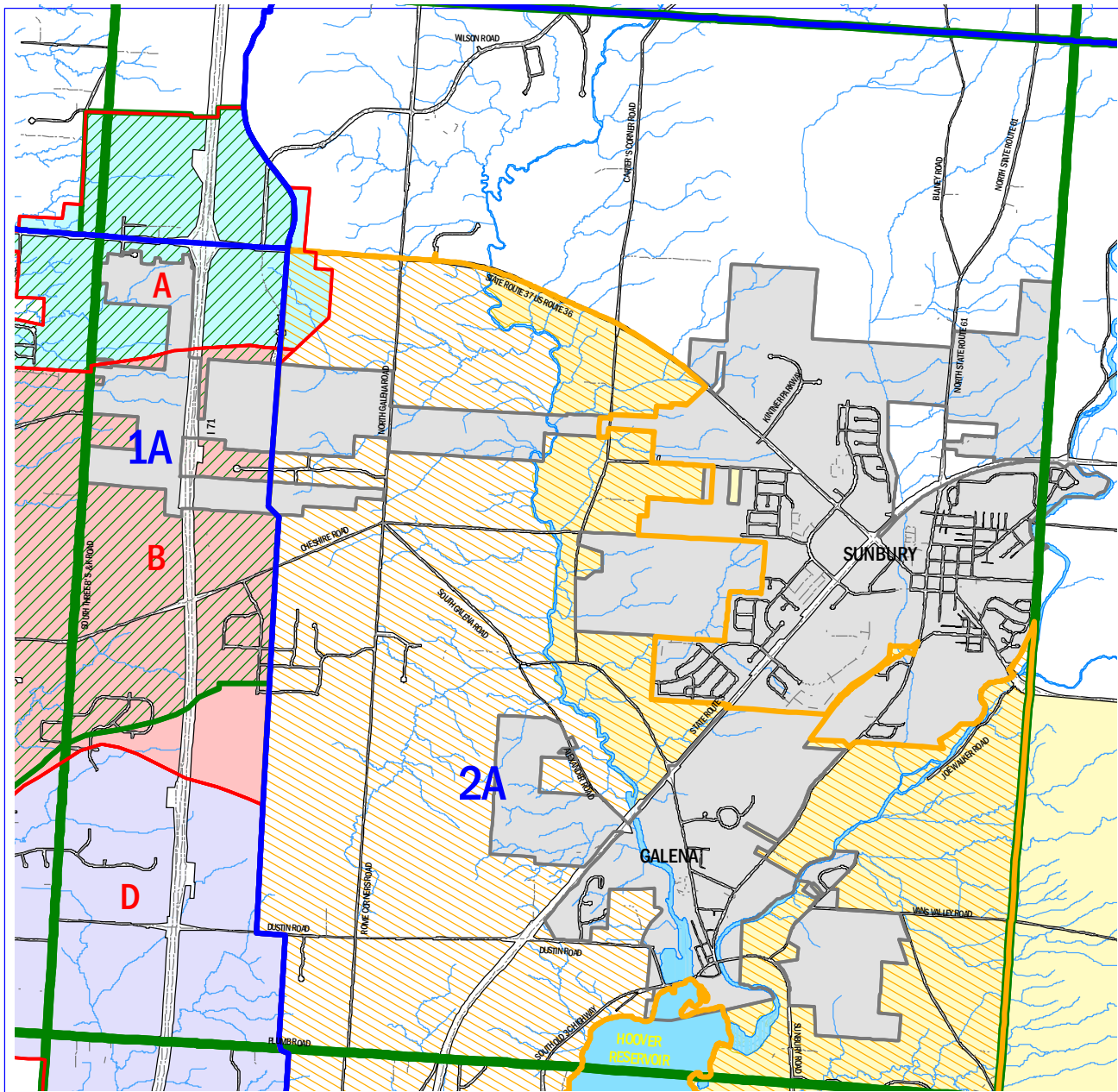
- The Delaware County Sanitary Sewer Department provides sanitary sewer service to a portion of Berkshire Township along U.S. 36 between 3 B’s and K Road on the west to the Speedway Truck Stop on the east. Service is also provided south of the U.S. 36 corridor on both sides of I-71 to the township line. Future sewer service is shown as the Central Big Walnut area.
- There are currently two plants, the Olentangy Environmental Control Center (OECC), located on the West Bank of the Olentangy River at the Franklin County Line and the Alum Creek Wastewater Treatment Plant located between Walker Wood Boulevard and I-71.
- By agreement with Columbus, either Delaware County or Columbus could serve land east of the Hoover Reservoir by discharge to Columbus. The

future sewer contract would serve a portion of Berkshire Township described as South of S.R. 37, east of Little Walnut Creek to the Hoover Reservoir, then east of Hoover Reservoir.

- Delaware County sewage treatment plant capacities are based on the existing sewer sizes. Each of the service areas has an ultimate capacity, based on pipe capacity and treatment plant capacity.
- Based on individual policies and absent a service agreement between entities, municipalities serve areas within their incorporated area and the County serves areas in the unincorporated Township areas.
- Future sewer service. The portion of Berkshire Township in the Big Walnut Service area is identified on the County Sewer Master Plan 2004.

In 2016/2017, the County Commissioners updated the 2004 Facilities Master Plan for the County. The service areas shown below were updated, based on recent development pressure and service area amendments. The image below shows the Service Areas as they were studied in the 2017 Master Plan.





Sewer Service Areas

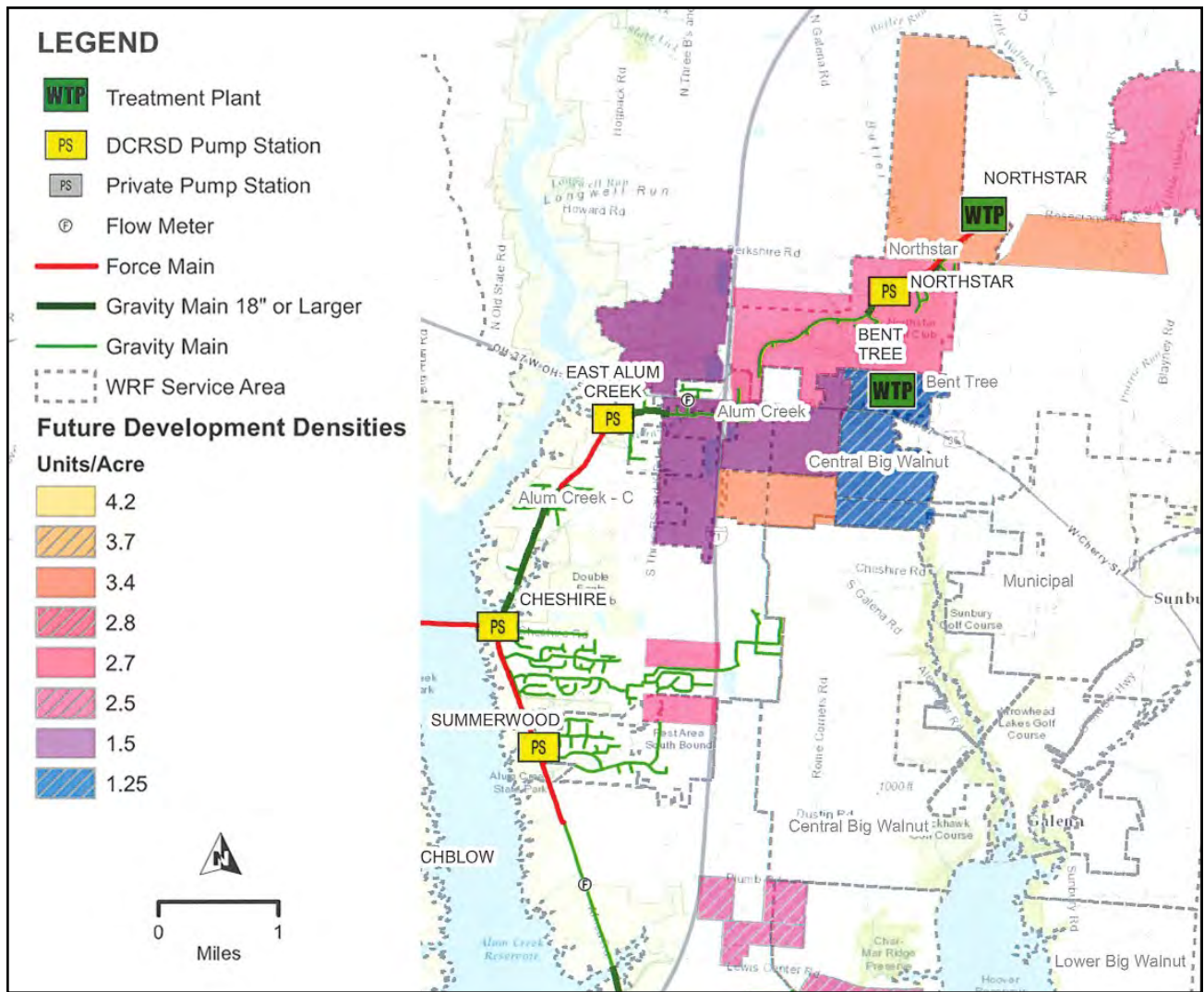
Berkshire Township, Delaware County, Ohio



- Township Boundary
- Incorporated Areas
- Road Right of Way
- Rivers / Lakes
- Streams / Drainage Courses
- Drainage Areas (2020 Sewer Master Plan)
- Future Sewer Service Areas (2020 Sewer Service Master Plan)
- Central Alum Creek Service Area
- Big Walnut Service Area
- Potential Sewer Service Area
- Potential Columbus/Delaware Co. Sewer Service Area @ 4 persons/ acre
- Current County Sewer Service Areas
- Current County Sewer Service Areas
- ZONE A - EAST ALUM CREEK
- ZONE B - CHESHIRE
- ZONE D - ALUM CREEK

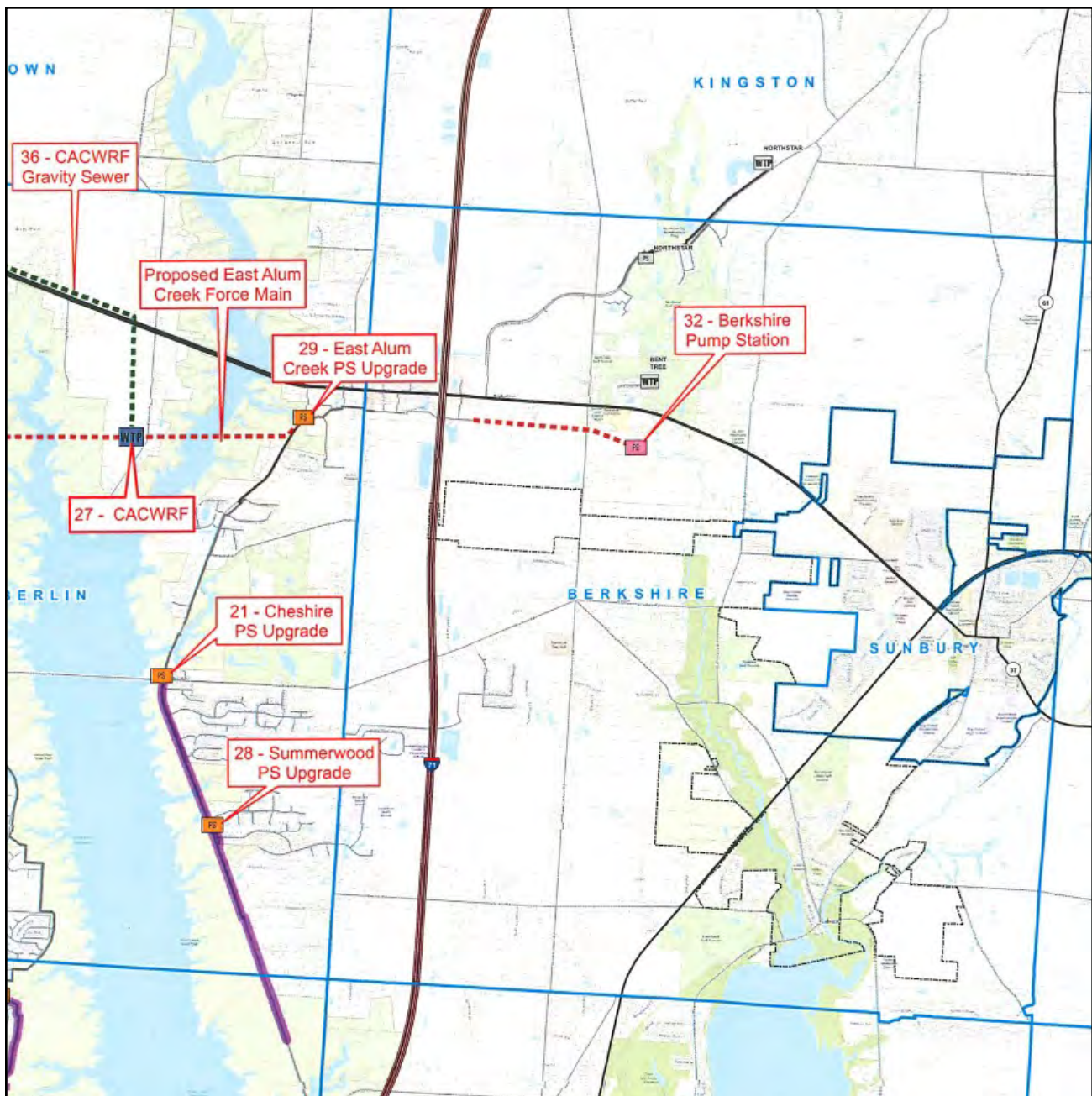
Prepared By: Delaware County Regional Planning Commission (740-833-2260) (9/10/2007)

As part of the study, a revised density map was prepared to anticipate the treatment needs of the general area. The following map and key indicate the future densities used to evaluate the area and determine service needs.



The improvements listed in the table below and the related map are being considered as part of possible future improvements (from east to west):

Project	Location	Purpose
Pump Station and Force Main	South of 36/37, near Bent Tree	Receive gravity flow from west, pump back to existing service near Interstate
Upgrade East Alum Creek Pump Station	Africa Road near 36/37	Additional capacity
Upgrade Cheshire Road Pump Station	Africa Road and Cheshire Road	Additional capacity
Upgrade Summerwood Pump Station	Africa Road at Summerwood Subdivision	Additional capacity
New gravity sewer main along 36/37	Berlin Township between Lackey Old State Road and Dunham Road	Serve the 36/37 corridor
New Central Alum Creek Water Reclamation Facility	South of 36/37 between Big Run Road and Dunham Road	Serve general area, take pressure off the Alum Creek plant
New force mains	Between Africa Road and Lackey Old State Road	Serve the Central Alum Creek plant



Policy Implications for Land Use - County Sewer

1. The County Commissioners sewer user policy is “first come, first served.” The County sanitary engineer does not police the densities of land uses using the sewer.
2. It is up to the township to determine the density of population by zoning. If the township zones land in sewer service areas for higher densities than the average density based upon residual sewer capacity, there may be “holes” in the sewer service area without sewer capacity.
3. There may come a time when there are more

subdivisions approved on paper than there is treatment plant capacity. Since not all subdivisions get built, new subdivisions will continue to be accepted for approval until all treatment plant capacity has been purchased in tap fees. Those who obtain subdivision approval, but do not record their plats and pay their tap fees may be denied access to county sewer if more aggressive developments pay for their taps first.

4. Berkshire Township must use their planning and zoning to carefully allocate their limited sewer capacity.

OEPA Sewer Policy

Building a centralized sewer system traditionally meant placing sewage in a pipe and sending it to a publicly-owned sewage treatment plant that discharged to a running stream. Changes in 1996 led to the introduction of “zero discharge” centralized sewage disposal systems, such as on-site treatment plants that use the treated effluent to irrigate a golf course or other open space. The County now has four such systems; Northstar (Berkshire Twp.), Tartan Fields and Scioto Reserve (Concord Twp.), and Dornoch (Delaware/Liberty Tws.). Based on multiple factors, it is unlikely that the County will allow development to seek such service through the OEPA.

The roughly 350 acres of commercially zoned Northstar project will, over time, provide the tax base needed to provide services required by the residential and commercial portions of Northstar. The Township will need to carefully consider land use impacts, should the capacity granted to the Northstar development be requested for areas other than the original approvals.

Electric

Electric service is provided to Berkshire Township by American Electric Power and by Consolidated Electric Power. These general areas are depicted on the Utilities map. Major electric transmission lines also cross the Township. No structures are permitted within the rights-of-way for these larger transmission lines. The locations of these lines are also shown.

Natural Gas

Berkshire Township is served by Columbia Gas. The service area is shown on the Gas Service Area map.

Telecommunications/Internet Service

Based on private sector marketing information, Berkshire Township is serviced by high-speed Cable broadband, except the area between Carter’s Corner Road and Blayney Road, north of Sunbury, and a small area around I-71 and S.R. 37. It is mostly serviced by DSL broadband, except for the same area north of Sunbury, several small zones along Little Walnut Creek and around Galena, and the southeast corner of the Township outside of Galena. The Township is almost entirely

serviced by Fixed Wireless broadband on the northern half, but mostly not on the southern half. The Township is only serviced by Fiber broadband inside certain sections of two subdivisions in Sunbury: Sunbury Meadows and Sunbury Mills. Most of Berkshire Township is served by Charter Communications, which offers Spectrum internet service. In all, the whole Township, by one broadband technology or another, has access to at least 10 megabytes per second download, 1 megabyte per second upload.

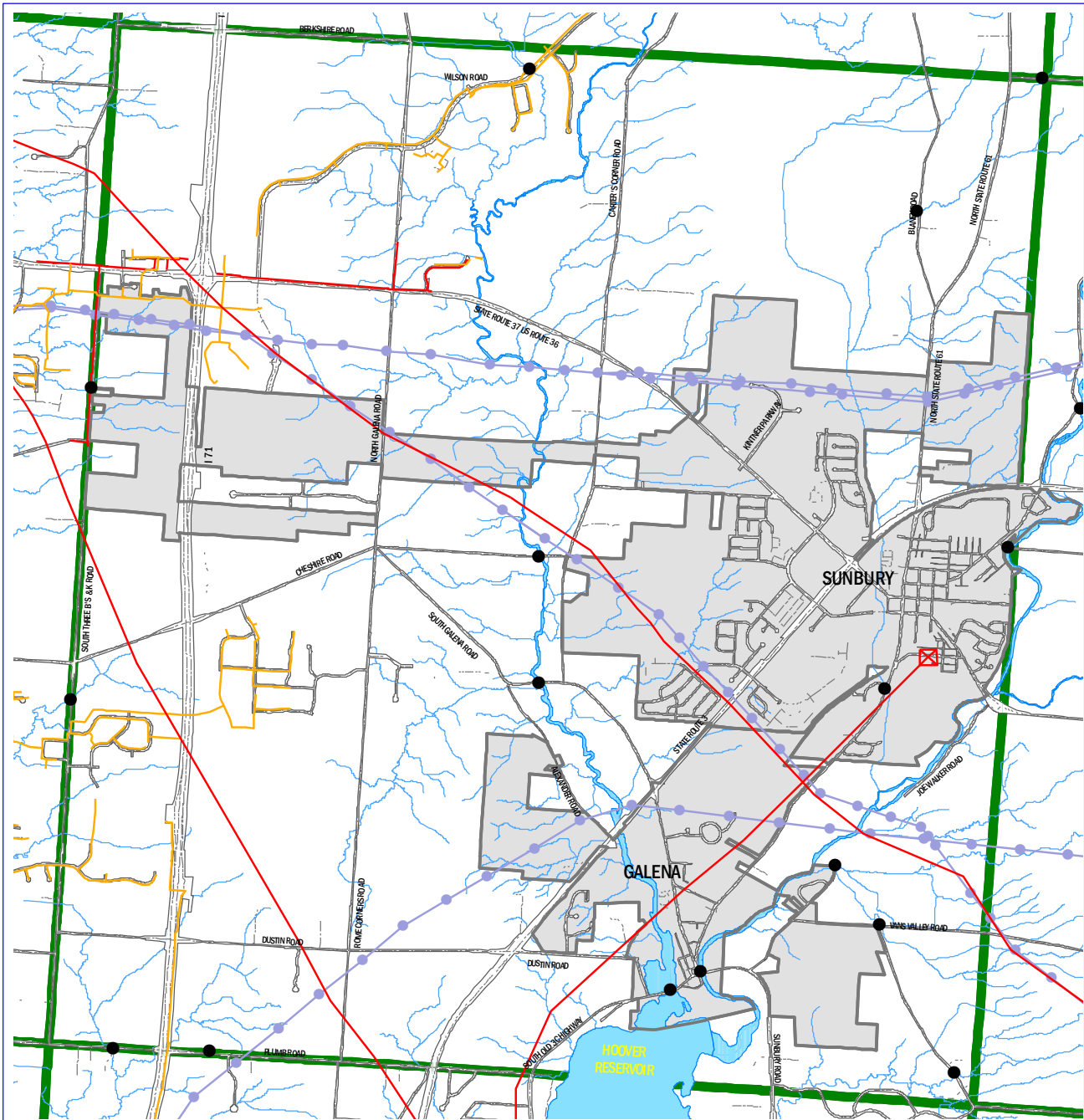
Delaware County has a robust fiber network from the county offices to Worthington including a number of lateral builds off of that main line. This network, intended solely for government use, connects several public agencies with capacity to expand connectivity to other public agencies not yet connected, provided they pay the cost of adding lateral fiber to the main lines. This public limitation is based on the statutory authority of the County and the desire to not compete with the private sector.

Additionally, Enlite Fiber Networks, (part of Consolidated Electric) owns fiber in most of the same locations as the County, as well as many more miles of additional fiber, catering to the private sector. Connect Ohio is an effort led by the State of Ohio to encourage additional infrastructure where needed.

Under current state and federal laws, telecommunications towers are permitted in any non-residentially zoned districts. Under Ohio law, townships can regulate telecommunications towers in areas zoned for residential use if objections are filed by abutting property owners or Township Trustee. Berkshire Township has a set of cell tower regulations that were drafted to implement the federal and state laws regulating telecommunications towers.

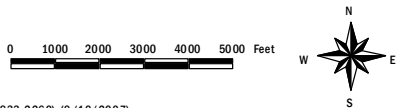
Stormwater Management

Stormwater management is regulated by the Delaware County Engineer’s Office for new subdivisions and road construction. The Delaware Soil & Water District maintains ditches on public maintenance and reviews stormwater plans by agreement with the County Engineer.

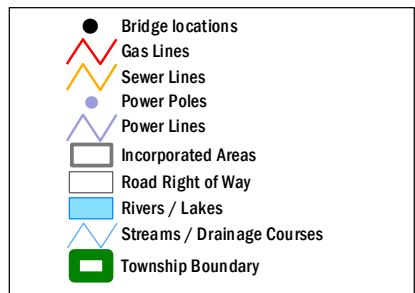


Utilities

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (9/10/2007)





Schools

Berkshire Township lies within two school districts. Approximately 89% of the Township is in the Big Walnut Local School District (most of the areas east of I-71). The district also includes most of Trenton, Berkshire, and nearly half of Kingston, Porter, and Genoa Townships. The remaining 11% of the Township, including all the area west of I-71, is in the Olentangy School District. Olentangy also includes all of Berlin and Orange, most of Liberty, and portions of Concord, Genoa, and Delaware Townships.

Big Walnut Local School District

The Big Walnut Local School District is situated in the eastern half of Delaware County; reaching east into Licking County, north into Morrow County, and south into Franklin County. The district's boundaries cover over 100 square miles and many townships, including parts of Kingston, Porter, Berkshire, Trenton, Genoa, and Harlem Townships in Delaware County. The district also completely includes the Villages of Sunbury and Galena.

Big Walnut Enrollment

Enrollment over the last 10 years had minor fluctuations but has seen steady increases since 2011. The following

table shows the enrollment by year for the last decade. The district recently completed an enrollment projection study with the findings shown in the second table. Based on development and construction activity noted throughout this Comprehensive Plan, the district is poised to see consistent growth of approximately 5% each year.

Figure 19. Overall Enrollment and Demographics

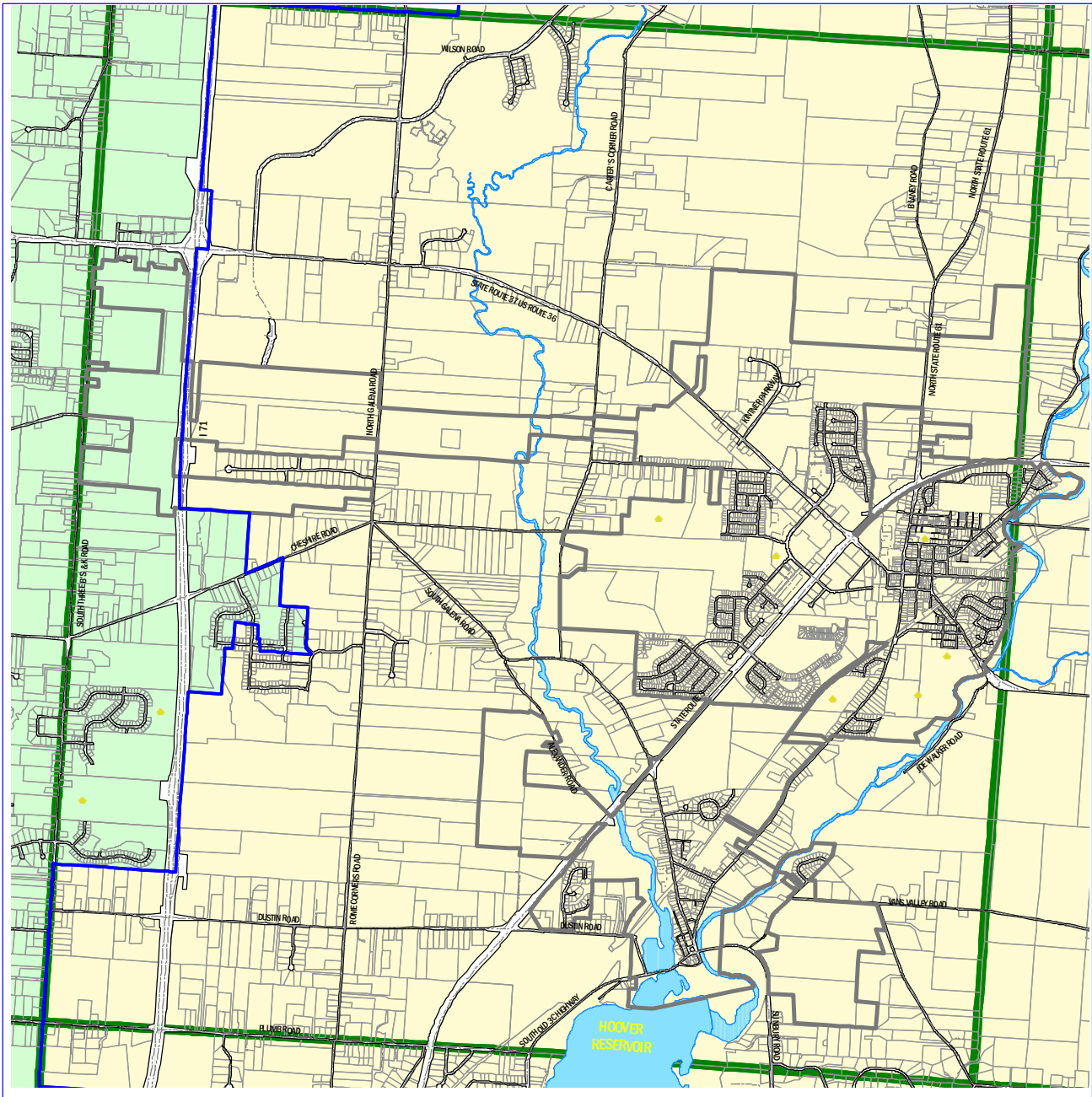
	Enrollment	Percentage
All Students	3,165	
American Indian	10	0.3%
Asian or Pacific Islander	35	1.1%
Black, Non-Hispanic	35	1.1%
Hispanic	79	2.5%
Multiracial	83	2.6%
White, Non-Hispanic	2,924	92.4%
Students with Disabilities	315	9.9%
Economic Disadvantage	548	17.3%
Limited English Profic.	15	0.5%

Source: Ohio Department of Education, 2014-2015

Figure 20. Building Enrollment

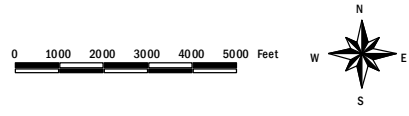
	Big Walnut	General Rosecrans	Hulen Souders	Harrison Street	Big Walnut	Big Walnut	Big Walnut
Grade	Elementary	Elementary	Elementary	Elementary	Intermediate	Middle	High School
Total	310	433	286	264	522	474	878

Source: Ohio Department of Education, 2014-2015



School Districts

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (8/8/2007)

School District Boundary	Property Lines
Township Boundary	School District
Incorporated Areas	Big Walnut School District
School Location	Olentangy School District
Elementary	
Middle	
High	
Road Right of Way	
Rivers / Lakes	

Figure 21. Big Walnut Historical School-Year Enrollment

Grade	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
PS – 4	976	999	1,062	1,153	1,175	1,169	1,213	1,280	1,305	1,387
5 – 6	408	421	421	409	447	449	438	451	500	528
7 – 8	418	450	438	450	447	432	458	485	459	485
9 – 12	930	909	898	942	962	940	950	920	946	970
PS – 12	2,732	2,779	2,819	2,954	3,031	2,990	3,059	3,136	3,210	3,370
Ungraded	0	0	2	2	1	4	4	2	4	5
G. Total	2,732	2,779	2,821	2,956	3,032	2,994	3,063	3,138	3,214	3,375
Change		+1.7%	+1.5%	+4.8%	+2.6%	-1.3%	+2.3%	+2.4%	+2.4%	+5.0%

Source: Ohio Department of Education

Figure 22. Big Walnut Enrollment Projection

Grade	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25
PS – 4	1,506	1,660	1,598	1,688	1,746	1,779	1,852	1,964	2,036	2,114
5 – 6	558	597	638	639	692	772	791	747	784	856
7 – 8	531	573	605	646	691	692	751	837	857	809
9 – 12	980	1,050	1,076	1,161	1,243	1,336	1,417	1,467	1,576	1,673
PS – 12	3,575	3,770	3,917	4,134	4,392	4,579	4,811	5,015	5,253	5,452
Ungraded	5	6	6	6	6	7	7	7	8	8
G. Total	3,580	3,776	3,923	4,140	4,378	4,586	4,818	5,022	5,261	5,460
Change	+6.1%	+5.5%	+3.9%	+5.5%	+5.7%	+4.8%	+5.1%	+4.2%	+4.8%	+3.8%

Source: Future Think, August 2015

The Ohio Department of Education (ODE) performs an annual evaluation of local school districts, based on a Performance Index and a number of Indicators. The following figures illustrate Big Walnut Local Schools' academic ranking compared to the state standards. Big Walnut Local School District received a C in the Performance Index category and an A for Indicators Met.

Figure 23. Performance Index

Student Achievement Level	Percent of Students
Advanced Plus	0.2%
Advanced	13.6%
Accelerated	35.2%
Proficient	29.7%
Basic	15.5%
Limited	5.3%
Untested	0.6%
Total Index = 95.8 out of 120 for a grade of C	

Source: Ohio Department of Education, 2014-2015 Report Cards

Figure 24. Indicators Met

Student Achievement Level	Subject	Indicator
3rd Grade	Mathematics	75.1%
	Reading	91.0%
4th Grade	Mathematics	72.7%
	Reading	73.0%
	Social Studies	80.6%
5th Grade	Mathematics	78.7%
	Reading	74.3%
	Science	67.0%
6th Grade	Mathematics	78.7%
	Reading	77.3%
	Social Studies	73.9%
7th Grade	Mathematics	82.8%
	Reading	81.4%
8th Grade	Mathematics	66.7%
	Reading	76.3%
	Science	80.4%

Source: Ohio Department of Education, 2014-2015 Report Cards

Figure 25. Indicators Met, continued

Student Achievement Level	Subject	Indicator
OGT, 10th Graders	Mathematics	92.2%
	Reading	92.2%
	Science	88.2%
	Social Studies	92.2%
	Writing	89.4%
OGT, 11th Graders	Mathematics	98.6%
	Reading	97.6%
	Science	96.2%
	Social Studies	97.6%
	Writing	98.6%
High School	Algebra I	75.1%
	English I	75.8%
	Geometry	98.0%
	Government	95.5%
	History	74.1%
	Physical Science	79.3%
Total Indicators Met = 32 out of 33 for a grade of A		

Source: Ohio Department of Education, 2014-2015 Report Cards

Big Walnut Current Facilities

The district maintains seven academic facilities. **Big Walnut High School** is located at 555 S. Old 3C Road, **Big Walnut Middle School** is located at 777 Cheshire Road, and **Big Walnut Intermediate School** is located at 105 Baughman Street. There are four elementary buildings in the Big Walnut Local School District:

- **Big Walnut Elementary** located at 940 S. Old 3C Road, Sunbury
- **Hylan Soulders Elementary** located at 4121 Miller Paul Road, Galena
- **General Rosecrans Elementary** located at 301 South



Miller Drive, Sunbury

- **Harrison Street Elementary** located at 70 Harrison Street, Sunbury

There is also a Land Lab with a pond, orchard, grassland, amphitheater, and observation deck as part of the Big Walnut Elementary campus.

The district also maintains three non-academic facilities: the **Bus Garage** located at 117 N. Kintner Parkway, Sunbury; a **Maintenance Garage** and **Administrative Offices** are located at 105 Baughman Street.

Funding for Big Walnut Local Schools

The Big Walnut Local School District reported a 2014 total revenue of \$33.8 million, including \$22.5 million in local revenue and \$8 million in state revenue. Total instructional and non-classroom expenses was \$31.8 million (does not include non-operating district expenditures, adult education, etc.).

Figure 26. District Expenditures Per Pupil

Area	Total Amount	Per Student (x/3,165)
Instruction	\$18,541,290	
Pupil Support	\$1,489,691	
Staff Support	\$885,782	
Total Instruction	\$20,916,763	\$6,609
General Administration	\$954,568	
School Administration	\$2,242,473	
Operation and Maint.	\$2,821,374	
Transportation	\$2,455,805	
Other Support	\$1,337,799	
Food Service	\$1,046,310	
Total Non-Classroom	\$10,858,329	\$3,431

Source: Ohio Department of Education, 2014-2015

Figure 27. District Revenues Per Pupil

Area	Total Amount	Per Student (x/3,576)
Local Revenue	\$22,518,938	\$6,298
State Revenue	\$8,061,774	\$2,255
Federal Revenue	\$993,879	\$278
Other Non-Tax	\$2,236,961	\$626
Revenue Total	\$33,811,553	\$9,455

Source: Ohio Department of Education, 2014-2015

Olentangy Local School District

The Olentangy Local School District has experienced tremendous growth reflecting the rapid development in southern Delaware County. During the 2006/07 school year, the district had an enrollment of 11,960 students. In 2015/16, this figure almost doubled to 19,036. This is the equivalent of adding a new elementary school every 1.3 years. New elementary schools in the district are designed for 650 students.

Olentangy Enrollment

The district does not expect demand to stall and is projecting continued increases in enrollment.

Each high school facility in the district is designed with a capacity of 1,600 students. Middle schools facilitate 900 students each and elementary schools 650. Olentangy currently maintains three high schools, five middle schools, and 15 elementary schools. A fourth high

Figure 28. Overall Enrollment and Demographics

	Enrollment	Percentage
All Students	19,034	
American Indian	33	0.2%
Asian or Pacific Islander	2,040	10.7%
Black, Non-Hispanic	730	3.8%
Hispanic	561	2.9%
Multiracial	779	4.1%
White, Non-Hispanic	14,891	78.2%
Students with Disabilities	2,178	11.4%
Economic Disadvantage	1,185	6.2%
Limited English Profic.	288	1.5%

Source: Ohio Department of Education, 2015-2016

school, which will serve Berkshire students, is well under way on Berlin Station Road.

Figure 29. Building Enrollment*

	Grade	Total
Alum Creek	Elementary	567
Arrowhead	Elementary	477
Cheshire	Elementary	656
Freedom Trail	Elementary	573
Glen Oak	Elementary	600
Heritage	Elementary	600
Indian Springs	Elementary	591
Johnnycake Corners	Elementary	603
Liberty Tree	Elementary	571
Oak Creek	Elementary	620
Olentangy Meadows	Elementary	660
Scioto Ridge	Elementary	472
Tyler Run	Elementary	577
Walnut Creek	Elementary	599
Wyandot Run	Elementary	579
Berkshire	Middle	1,002
Hyatts	Middle	902
Olentangy Liberty	Middle	810
Olentangy Orange	Middle	947
Olentangy Shanahan	Middle	1,178
Berlin (future)	High School	N/A
Olentangy	High School	1,691
Olentangy Liberty	High School	2,036
Orange	High School	1,725

Source: Ohio Department of Education, 2015-2016

*Bolded schools serve Berkshire Township.

Figure 30. Olentangy Historical School-Year Enrollment

	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
Elementary	5,994	6,490	7,181	7,713	8,135	8,873	8,628	8,614	8,578	8,800	8,745
Middle	2,456	2,668	2,848	3,045	3,290	3,520	3,942	4,157	4,396	4,597	4,839
High School	2,508	2,802	3,036	3,359	3,665	3,871	4,185	4,478	4,723	5,059	5,452
Total	10,958	11,960	13,065	14,117	15,090	16,264	16,762	17,249	17,697	18,456	19,036

Source: Ohio Department of Education

Delaware Area Career Center (DACC) and Columbus State

Delaware City and County boards of education established the Joint Vocational School in 1974 as a career/technical school to offer specific career training to Delaware County residents. The center, now called the Delaware Area Career Center, provides career training and academic instruction to over 650 area High School juniors and seniors who desire skilled employment immediately upon high school graduation. The DACC is combining programs into one campus at 4565 Columbus Pike, Delaware, Ohio 43015 (740) 548-0708.

In 2008, Columbus State began building a Delaware County campus at 5100 Cornerstone Drive in the Park at Greif and U.S. 23. The 80,000 square foot building opened in the autumn of 2010 and offers four Associate Degree programs.

Effect of Land Use Planning on School Planning

When schools become overcrowded due to rapid growth, there may be a call for growth controls, or limitations on residential building permits (moratoriums). A series of 1970s cases regarding growth rate limitations, the most famous of which is *Golden v. Ramapo* (409 US 1003, 93 S. Ct. 440 34 L. Ed. 2d 294 (1972)), suggested that communities could control growth to allow new infrastructure to be built at a reasonable, attainable rate. Where upheld, moratoriums have been temporary, based on a critical shortage of a basic community service.

Cities and villages in Ohio have home rule authority which “provides the flexibility to experiment with different types of planning programs to respond to the issues of rapid growth” (Meck and Pearlman).

Historic Sites

There are no sites in Berkshire Township listed on the National Register of Historic Places. The Archeological/Historic and Cemetery Map indicates possible archeological sites and some historic sites in municipalities. These sites are mapped by the State of Ohio OCAP data available from the Ohio Division of Natural Resources. The DCRPC has no information regarding any materials found at any of these sites.

Community Facilities

Libraries

The Village of Sunbury is home to the Community Library. This 14,000 square foot library located at 44 Burrer Drive provides services to individuals within the

Big Walnut Local School District’s boundaries. In addition to the 100,000 items in the local collection, 65,000 e-books and 15,000 audiobooks, the library is a member of the Consortium of Ohio Libraries, giving area residents seamless access to thousands of materials from around Ohio. The library also provides access to electronic content including e-books and research databases. With recent growth in the area, the library announced plans for a 2,000 square foot addition in 2016. Construction includes renovation of the entry, new meeting space, study areas, and a drive-through pickup/drop-off area. Additional parking will be built and a new access from Burrer Drive will improve access to the library. The facility operates with a \$1.3 million budget funded by real estate taxes, intergovernmental transfers, fees, and donations.



Hospitals

There are no hospitals located within the Township. Grady Memorial Hospital is located on Central Avenue in the City of Delaware. Some services have relocated to the future site of the Grady campus at the northeast corner of U.S. 23 and OhioHealth Boulevard. Grady competes with northern Franklin County Hospitals such as Riverside Methodist Hospital, Olentangy River Road in Columbus, and St. Ann’s in Westerville. Medical uses would be well suited for areas near the I-71 Interchange.

Fire Protection/Emergency Medical Services

Fire protection is provided by the B.S.T.&G. Joint Fire District. Established in 1953, the District provides fire protection to the Villages of Sunbury and Galena, Berkshire Township, and Trenton Township. The station is located at 350 West Cherry Street, near the intersection of State Route 3 and 36/37. The department currently has 32 fire fighters which include a full-time Fire Chief, two part-time Deputy Chiefs, three full-time Fire Lieutenants, one full-time Fire Prevention Lieutenant, three full-time fire fighters, and 23 part-time fire fighters. The department maintains a staff on station to respond 24 hours a day, every day with an up to date

fleet of equipment to serve the community's needs. The District continues to monitor the development in and around the area to provide a timely and professional response to our residents.



Emergency Medical Services - B.S.T.&G. has partnered with Delaware County Emergency Medical Services to provide rapid and professional response to our residents' needs. Due to the growth of the District, Delaware County has been able to respond to the needs of the public by providing additional stations strategically located in and around the district. The Village of Sunbury is primarily served by Delaware County Medic 2 located at 283 W Granville Street.



For more information on B.S.T.&G. Fire District please contact us at 740-965-3841 or visit our website at www.bstgfiredistrict.org. Information regarding Delaware County EMS can be obtained at www.delcoems.org.

Police

Berkshire Township is policed by the Delaware County Sheriff's Office, (DCSO) which is headquartered in Delaware on S.R. 42. In 2016 the department was budgeted for 76 deputies, 60 corrections officers, and 70 various support staffs.

Sheriff's Complaints

Berkshire Township represented 7.5% of the Sheriff's recorded incidents in 2016, but represented only 2.8% of the County population. It should be noted that Genoa Township and the Cities of Delaware, Dublin, Columbus, Westerville, and Powell provide their own police protection.

Figure 31. Most Prevalent Crimes or Incidents

Crime/Incident	Percentage
Delaware County	
Traffic Stops	38%
Theft/Larceny	10%
Domestic	8%
Auto Accident - Non Injury	6%
Berkshire Township	
Theft/Larceny	28%
Suspicious Person/Vehicle	18%
Domestic	11%
Theft/Larceny in Progress	7%

Source: Delaware County Sheriff's Office 2016 Annual Report

Post Office

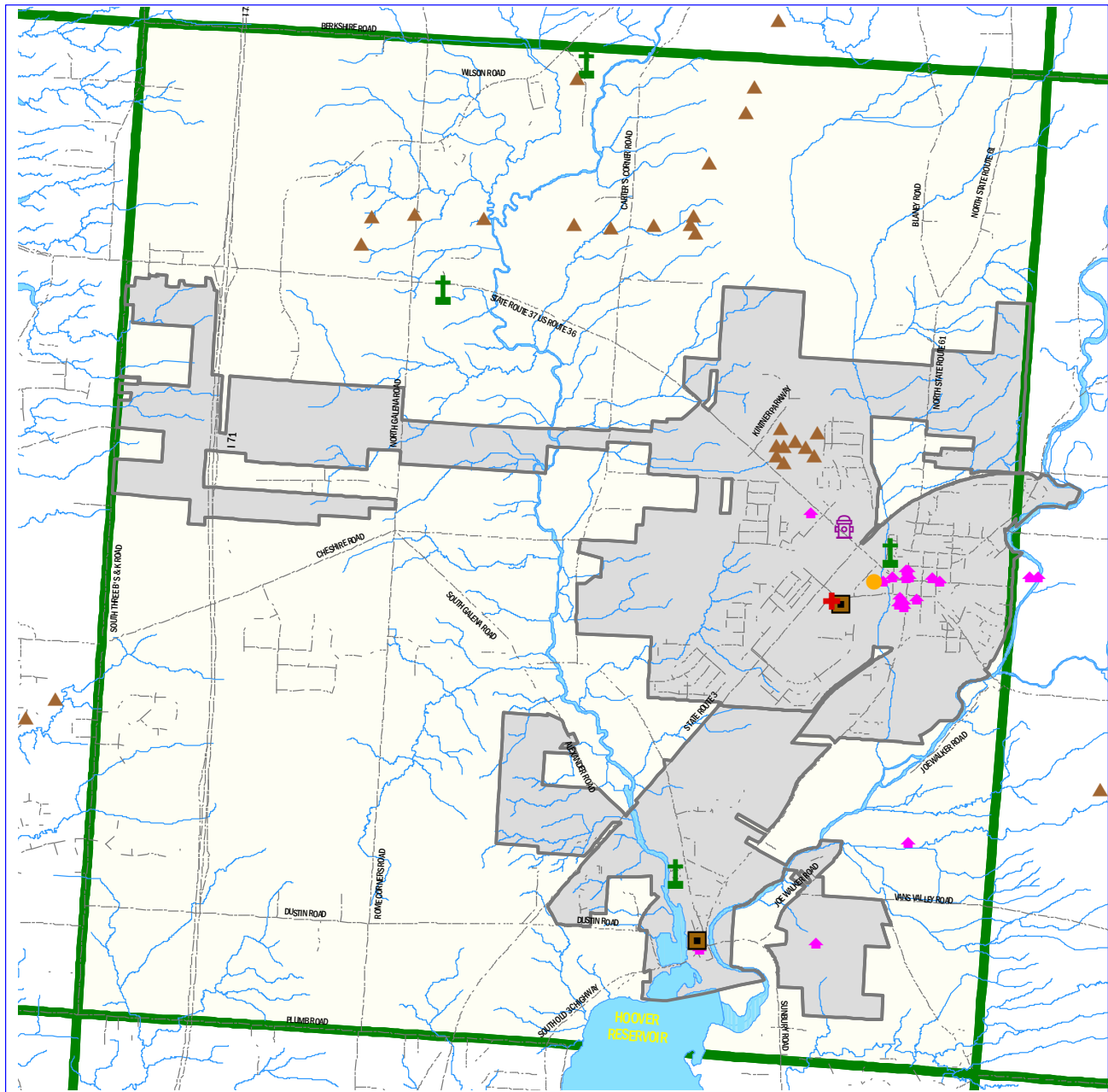
The Sunbury Post Office is located at 65 E. Granville Street, in the Village of Sunbury. The post office supplies delivery to addresses in the 43021 and 43074 zip codes. The 43021 district includes six routes (13 to 18) with a total of 2,371 locations. The 43074 district includes eight routes (1 to 8) with a total of 3,597 locations. The Post Office has a total of 5,968 delivery locations.



Other Township Facilities

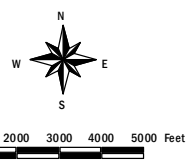
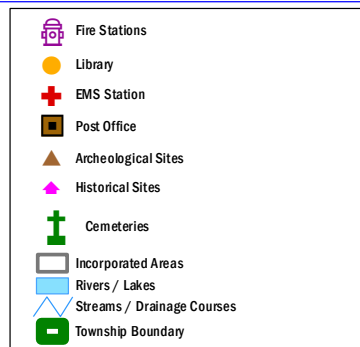
For several decades, the Township operated out of a Township Hall at 201 N. Galena Road, modernized throughout the 1990s with additions constructed for

offices of the Fiscal Officer, Trustees, and Zoning Officer. The Trustees bought an 18.22-acre property at 1454 Rome Corners Road in 2004, building a new township hall, offices, and service facility in 2011/2012. The property includes an unpaved walking path, salt-storage facility, and space for recreation.



Community Facilities and Historical Features

Berkshire Township, Delaware County, Ohio



Prepared By: Delaware County Regional Planning Commission (740-833-2260) (07/11/17)



Introduction

The Ohio Revised Code acknowledges the importance of open space and recreation in both the zoning and subdivision enabling legislation. ORC 519.02 states that the trustees may regulate by [zoning] resolution “sizes of yards, courts, and other open spaces...the uses of land for...recreation.” ORC 711 states that “a county or regional planning commission shall adopt general rules [subdivision regulations]... to secure and provide for... adequate and convenient open spaces for...recreation, light, air, and for the avoidance of congestion of population.”

The importance of open space and recreation has long been recognized. In the 1850s the City Beautiful Movement advocated public parks as retreats from the congestion and overcrowding of city life. New York’s Central Park (1856, Frederick Law Olmstead, Sr.) is the best known American example. Many desirable communities in America have a significant park and recreation system as one of their building blocks.

The Subdivision and Site Design Handbook (David Listokin and Carole Walker, 1989, Rutgers, State University of New Jersey, Center for Urban Policy Research) is considered a planner’s bible for many accepted standards in subdivision review. In their chapter on open space and recreation, they relate the following critical functions of open space. These are services that society would have to pay for otherwise. Natural open space provides these services for free:

- Preserves ecologically important natural environments
- Provides attractive views and visual relief from developed areas
- Provides sunlight and air

- Buffers other land uses
- Separates areas and controls densities
- Functions as a drainage detention area
- Serves as a wildlife preserve
- Provides opportunities for recreational activities
- Increases project amenity
- Helps create quality developments with lasting value

The economic benefits of open space cannot be understated. Undeveloped land demands fewer community services and requires less infrastructure than suburban-style development. There is an old adage that says “cows do not send their children to school,” which emphasizes the fact that farms and other types of open lands generate more in property taxes than the services they demand. And given the evidence that single-family housing rarely “pays its own way” through additional property tax revenues, open space becomes an important part of a local government’s economic outlook. (Source: *The Economic Benefits of Parks and Open Space*, TPL, 1999)

Open Space Defined

Listokin and Walker define open space as: “Essentially unimproved land or water, or land that is relatively free of buildings or other physical structures, except for outdoor recreational facilities. In practice, this means that open space does not have streets, drives, parking lots, or pipeline or power easements on it, nor do walkways, schools, clubhouses, and indoor recreational facilities count as open space. Private spaces such as rear yards or patios not available for general use are not included in the definition either.”

“Open space is usually classified as either developed or undeveloped. Developed open space is designed for

recreational uses, both active and passive, whereas undeveloped open space preserves a site's natural amenities."

Land Area Guidelines

The National Recreation and Park Association (NRPA) has developed a set of standards for local developed open space. Although these standards have been promoted as goals, they are not universally applicable. Recreational needs vary from community to community, and desires for recreation vary also. (*Listokin and Walker NRPA model is found at the end of this chapter.*)

Listokin and Walker note that: "Ideally, the [NRPA] national standards should stand the test in communities of all sizes. However, the reality often makes it difficult or inadvisable to apply national standards without question in specific locales. The uniqueness of every community, due to differing geographical, cultural, climatic, and socioeconomic characteristics, makes it imperative that every community develop its own standards for recreation, parks, and open space."

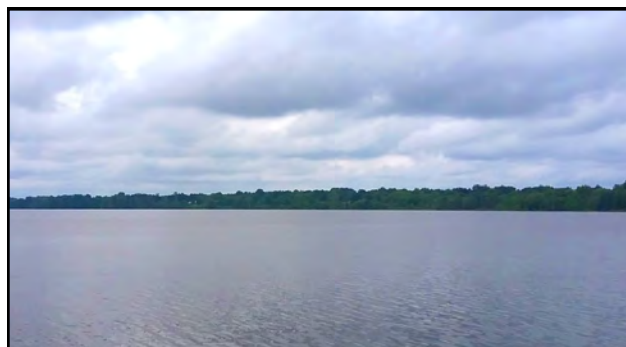
Location of Open Space Parcels

The authors note what has been the subject of many debates in the developing parts of the County, namely that: "Open space parcels should be easily accessible by development residents. In smaller developments, one large, centrally located parcel may suffice; but a large development may require several parcels, equitably distributed. Linking open space parcels is a good strategy, because it enlarges the area available for recreation. Parcels containing noise generators, such as basketball courts or playgrounds, should be sited to minimize disturbance to residents. The authors suggest that "No general standard can specify the amount of open space that should remain undeveloped: a determination will depend on the particular development site."

Existing Parkland within the Township

Alum Creek State Park is a regional park that serves all of Delaware County. Hoover Reservoir extends into Berkshire Township, with boating and fishing access to the lake. The availability of these two recreation areas may satisfy some of Berkshire Township's requirement for passive open space.

Alum Creek State Park comprises 8,874 acres principally within Orange, Berlin, and Brown Townships. Smaller portions of the park are located in Kingston and Genoa Townships. Access to the park is from Africa Road, S. Old State Road, and from U.S. 36.



The lake was created by impoundment of Alum Creek behind an earthen levy and concrete flood control dam built by the U.S. Army Corps of Engineers from 1970-73. The dam is 93 feet high and 10,500 feet long between the levies. The minimum outflow of the dam is 60 gallons per second, with a maximum outflow of 12,216 gallons per second. The lake has a depth range of 65-78 feet.

Today, Alum Creek Lake serves five purposes:

- Flood control
- Water supply (40 million gallons per day)
- Fish and wildlife enhancement
- Water Quality
- Recreation

Recreational opportunities at Alum Creek are shown on the U.S. Corps of Engineers Map, and may be itemized as follows:

- **Land (entire park):** 5,213 acres, Hiking Trails – 9.5 miles, Bridal Trails- 50 miles, Mountain Bike Trails-7 miles
- **Campground:** 297 sites, 5 rent-a-camp sites, 5 rent-an-RV sites
- **Lake:** 3,387 acres, Boat Launching Ramps-5, Unlimited horsepower for boats, Swimming Beach- 3,000 feet (largest inland beach in Ohio's state park system), Easement-239 acres, Drainage Basin- 123.4 square miles

Park personnel estimate that 4,000,000 annual visitors use the park. While the park serves a regional function, it is also serving as a de facto township park.

Future Recreational Needs

As Berkshire Township grows it may wish to use the NRPA model, which surveys the service area population to determine demand for different activities. Demand is then converted to facilities needs and then to land

requirements.

Undeveloped Open Space - Regional and Township: The large amounts of undeveloped open space along Big Walnut Creek and the presence of Alum Creek State Park and Hoover Reservoir should help fulfill the need for undeveloped (passive) open space and a portion of developed (active) open space on a township-wide basis. They do not replace the need for neighborhood parks and township-wide parks with athletic fields for organized sports.

Undeveloped Open Space – Neighborhood: The open space requirement for new Planned Residential Developments should be used to provide centrally located undeveloped and developed open space within residential neighborhoods of suburban densities (generally greater than 1 unit per acre). These would be either mini parks of 1 acre or less within a ¼ mile radius of all portions of such neighborhoods, or 15-acre joint neighborhood parks that provide athletic fields for neighborhoods within a ½ mile radius. The open space requirement in the PRD zones may be inadequate unless undevelopable land (slopes greater than 20%, power line easements, and stormwater detention basins) is either excluded or reduced in its contribution to the open space requirement.

Developed Open Space – Township-wide: The Township should provide active recreational areas for its ultimate population. Use the NRPA Standards as a guide.

Recommendations at Build-Out

- Overall active recreational area required - NRPA recommends 6.25-10.5 acres /1,000 population. Use the lower ratio because of the existence of Alum Creek State Park, Hoover Reservoir, and Big Walnut Creek.
- Establish mini parks of 1 acre or less within neighborhoods, serving the population within a ¼ mile radius (these should be developer dedications as part of the PRD zoning).
- Establish neighborhood parks of 15 acres, with field games, play ground apparatus, serving the population within a ¼ to ½ mile radius.
- Establish a community park of 25-50 acres (when built out) with an athletic complex, large swimming pool, and recreational fields.

Within these parks consider the following facilities: tennis courts, basketball courts, volleyball courts, baseball fields (this may be reduced according to the popularity of baseball versus soccer), softball fields, football fields, field hockey field, soccer fields (this number may rise according to the popularity of soccer versus baseball), ¼ mile running track, Swimming Pool (normally should be large enough to accommodate 1000 people; with Alum Creek beach, make large enough to accommodate 200 people).

Delaware County voters approved a ballot initiative for a parks levy in November 1999. Preservation Parks now receives a 0.4 mills levy, which is expected to generate about \$900,000 per year for parks. Ten percent of that money is set aside for townships and municipalities to develop parks. Berkshire Township can apply for a share of this money.

Greenways

An inexpensive way to provide undeveloped open space is to assure the linkage of neighborhoods by greenways, or corridors of natural or man-made landscaped paths, and trails. These can be placed easily along drainage ways, creeks, sewer easements, and portions of the land that cannot be otherwise developed. These paths can maintain undisturbed wildlife habitat or create new habitat through plantings and creative use of stormwater retention and detention facilities. These areas of developments are often afterthoughts in the design and planning process. They should be viewed as opportunities to improve the value of the development and link developments.



NRPA Recreational Standards

Excerpted from *The Subdivision and Site Plan Handbook*, David Listokin and Carole Walker, copyright 1989, Rutgers, State University of New Jersey, Center for Urban Policy Research, New Brunswick, New Jersey.

Figure 32. NRPA Recommended Standards for Local Developed Open Space

Component	Use	Service Area	Desirable Size	Acres / 1,000 Population	Desirable Site Characteristics
LOCAL / CLOSE-TO-HOME SPACE					
Mini-Park	Specialized facilities that serve a concentrated or limited population or specific group such as tots or senior citizens.	Less than ¼ mile radius	1 acre or less	0.25 to 0.5 acres	Within neighborhoods and in close proximity to apartment complexes, townhouse developments, or housing for the elderly.
Neighborhood Park / Playground	Area for intense recreational activities, such as field games, craft, playground apparatus area, skating, picnicking, wading pools, etc.	¼ to ½ mile radius to serve a population up to 5,000 (a neighborhood)	15+ acres	1.0 to 2.0 acres	Suited for intense development. Easily accessible to neighborhood population – geographically centered with safe walking and bike access. May be developed as a school-park facility
Community Park	Area of diverse environmental quality. May include areas suited for intense recreational facilities, such as athletic complexes, large swimming pools. May be an area of natural quality for outdoor recreation, such as walking, viewing, sitting, picnicking. May be any combination of the above, depending upon site suitability and community need.	Several neighborhoods 1 to 2 mile radius	25 + acres	5.0 to 8.0 acres	May include natural features, such as water bodies, and areas suited for intense development. Easily accessible to neighborhood served.
TOTAL CLOSE-TO-HOME SPACE = 6.25-10.5 acres / 1,000 population					

Source: National Recreation and Park Association, *Recreation, Park and Open Space Standards and Guidelines*, p. 56
©1983 by the National Recreation and Park Association, 3101 Park Center Drive, Alexandria, Virginia 22302

This classification system is intended to serve as a *guide* to planning – not as a blueprint. Sometimes more than one component may occur within the same site, particularly with respect to special uses within a regional park. Planners of park and recreation systems should be careful to provide adequate land for each functional component when this occurs.



Rural Large-Lot Development

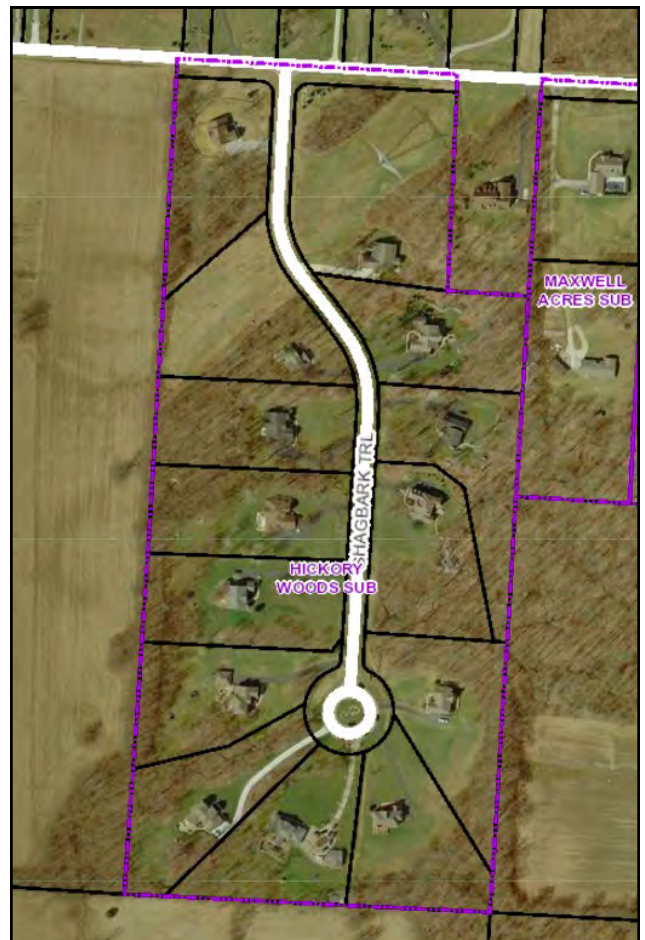
Most residential development has taken place along existing township and county roads. Many of these splits result in lots that are larger than 5 acres and simply recorded with the County with no review process. When land is split resulting in parcels that are smaller than 5 acres, a process called a “No Plat” or “minor” subdivision is required. These NPA subdivisions may be used to create no more than four lots from an original parcel (five including the residue, if smaller than 5 acres), and where there is no creation of new streets or easements

of access. The Ohio Revised Code now allows review of lots up to 20 acres in size.

Large-lot development also occurs on Common Access Drives, or CAD subdivisions, which are three to five lots on a 12-foot wide gravel drive approved by the Delaware County Regional Planning Commission. CAD subdivisions



Lot splits where all lots have frontage on an existing street



Hickory Woods, a conventional subdivision with large lots

follow the same procedure as any other “major” subdivision, including the Sketch Plan, Preliminary Plan, and Final Plat steps. CAD standards are defined by the RPC and include a maximum grade of 10%, passing areas every 350 feet, tree and shrub removal specifications, and an easement width of 60 feet along the CAD. A private maintenance agreement must be recorded with the County as well.

In addition to small CADs, larger subdivisions that include paved private or public streets built to county standards can be developed as long as the lots conform to local zoning. Such larger scale subdivisions follow the same process as Common Access Drive developments. The developer or consulting engineer takes each project through an approval process with the Delaware County Regional Planning Commission staff as well as an engineering process with the oversight of the County Engineering staff.

Large acreage development, surrounded by woods and farm fields, has been generally accepted as helping retain rural character. However, township residents may find that if *all* rural lands were developed for 2- or 5-acre house lots, there would be no interconnecting open space, and the rural character would be destroyed. Development of large lots *everywhere* on township roads would actually lead to “rural sprawl.”

Alternative Development Patterns

PRD Subdivisions

For 30 years, cluster subdivisions, or “Planned Residential Developments,” have been touted as an improved alternative to the conventional subdivision. Berkshire Township’s PR District calls for a density of 1.25 dwelling units per net acre with a 25% open space requirement.

In PRDs, greater design flexibility is obtained by reducing lot size and width. However, the absence of

comprehensive standards for quantity, quality, and configuration of open space has permitted uninspired designs, which are reduced-scale conventional subdivisions.



Killdeer subdivision west of I-71

The typical Delaware County PRD has often resulted in developments that do not fulfill community expectations for:

- **Open Space** - PRD regulations usually include an open space requirement. Environmentally sensitive areas or unbuildable areas (wetlands, steep slopes, floodplains, stormwater detention basins, and utility easements) do not have to be delineated.
- **Useable Open Space** - PRD subdivisions with small (7,200-10,000 square feet) lots have been created without any *useable* common open space. Scioto Reserve has little common or public open space. The golf course is private open space, for members only.
- **Density** - The typical PRD ordinance defines a maximum density based on gross acreage. In townships throughout the County, this can be anywhere from 1 unit per gross acre to 2.2 dwelling units per gross acre or more. When undevelopable land such as powerline easements and road right-of-way are included in the allowable density, it has the effect of creating a much higher “net” density and smaller lot sizes.
- **Design** - Large (300 units or more) Planned Unit Developments need a local pedestrian-oriented design with a possible local commercial and service core, active recreation area, and sidewalks/bike paths.
- **Architectural Standards** - To make higher density cluster subdivisions work, considerable thought needs to be given to the architecture, materials, façades, detailing, colors, and landscape features that will bind the neighborhood into a cohesive unit. Although such criteria are generally required, seldom



Cheshire Woods subdivision

does a land developer, who intends to sell the subdivision to a builder, bother to provide significant criteria. The result is either a jarring hodge-podge of different builders' standard production houses with no continuity of material or architectural syntax, or a blandness that results from a single builder using a limited number of home design options. Without specific standard criteria, the zoning commission must negotiate these details on an individual (and therefore, inconsistent) basis. Cluster housing demands greater advance planning and significant

landscape architecture and architectural design elements.

Harbor Pointe is a Berlin Township planned residential development on 154 acres designed to modern standards of open space and environmental protection. With an overall density of 1.25 units per acre, Harbor Pointe saves sensitive areas, preserves useable open space, and connects neighborhoods with trails. Overall open space is 46 acres.



Looking east at Harbor Pointe, under construction, Meadows of Cheshire on the left, Berlin Township. Note the preserved tree lines and open space at the entrance and distributed throughout the site.

Conservation Subdivisions

Conservation Subdivisions are a form of rural cluster subdivisions where natural features and environmentally sensitive areas are excluded from development and preserved. Homes are clustered in the remaining areas. The term "Conservation Subdivision," as coined by author Randall Arendt (*Conservation Design for Subdivisions*, 1996, Island Press) requires the following elements:

- 50% or more of the buildable land area is designated as undivided permanent open space.
- The overall number of dwellings allowed is the same as would be permitted in a conventional subdivision layout based on an alternative "yield plan."
- Primary Conservation Areas are protected as open space and may be deducted from the total parcel acreage to determine the number of units allowed by zoning on the remaining parts of the site. Primary Conservation Areas are highly sensitive resources

that are normally unusable, such as wetlands, steep slopes, and floodplains.

- Secondary Conservation Areas are preserved to the greatest extent possible. Secondary Conservation Areas are natural resources of lesser value such as woodlands, prime farmland, significant wildlife habitats, historic, archeological, or cultural features, and views into or out from the site.
- Compact house lots are grouped adjacent to the open space.
- Streets are interconnected to avoid dead ends wherever possible.
- Open space is interconnected and accessible by trails or walkways.

The Conservation Subdivision concept can be best described by looking at the following images showing different outcomes based on whether conservation standards were used or not.



Site before development



Typical layout with acreage lots



Identifying conservation areas



End result, same number of houses

Concord Township took the additional step in 2005 when it included the Conservation Subdivision standard in its zoning code. It was adopted pursuant to Section 519.021 (C) of the Ohio Revised Code, which is the “floating cloud” provision. This process overlays the Planned Residential Conservation Subdivision standards across all land zoned FR-1. It is a permitted use with the submission and approval of a Development Plan that meets a number of standards. The basics of these include:

- 10-acre project minimum size;
- Open space requirement of 50%, 15% of which shall be suitable for active recreation purposes;
- Density of 0.75 units per gross acre if sewer is available;
- Additional density to 0.85 units per acre if natural features make up less than 10% of the site and the developer has to create such features. Also, open space may be reduced to 40% in such cases.

New Urbanism - Traditional Neighborhood Development

Traditional Neighborhood Development (TND) is a reaction to conventional suburban sprawl. Andres Duany, Elizabeth Plater-Zyberk, Peter Calthorpe, and others are part of a school of architects and planners (*The New Urbanism, Toward an Architecture of Community, Peter Katz, 1994*) that advocates a return to TND. These leaders, and a growing group of other architects, planners, and developers, make up “The New Urbanism,” a movement based on principles of planning and architecture that work together to create human-scale, walkable communities similar to neighborhoods that were typical in the United States before World War II, such as Delaware’s north end historic district and old Sunbury. Benefits of this type of development include reduced auto trips, more compact infrastructure, more efficient land-consumption, and potentially positive fiscal impact as values per acre tend to be much higher.

The heart of the New Urbanism can be defined by certain elements, according to the founders of the



Clark's Grove, a development with a mixture of lot sizes in Covington, Georgia, is a small-scale TND surrounding a school and park site.



Clark's Grove features small shops with wide sidewalks surrounding a public square.

Congress for the New Urbanism. An authentic neighborhood contains most of these elements:

- The neighborhood has a discernible center. This is often a square or a green, and sometimes a busy or memorable corner. A transit stop would be located at this center.
- Most dwellings are within a five-minute walk of the center, an average of roughly 2,000 feet.
- There is a variety of dwelling types — houses, townhouses, and apartments — so that younger and older people, singles and families, the poor and the wealthy may find places to live.
- At the edge of the neighborhood, there are shops and offices of sufficiently varied types to supply the weekly needs of a household.
- A small ancillary building is permitted within the backyard of each house.
- A school is close enough so that most students can walk from their home.
- There are small playgrounds accessible to every dwelling — not more than a tenth of a mile away.
- Streets form a connected network, which disperses traffic by providing a variety of pedestrian and vehicular routes to any destination.
- The streets are relatively narrow and shaded by rows of trees. This slows traffic, creating an environment suitable for pedestrians and bicyclists.
- Buildings in the neighborhood center are placed close to the street, creating a well-defined outdoor room.
- Parking lots and garage doors rarely front the street. Parking is to the rear of buildings, accessed by alleys.
- Certain prominent sites at the termination of street

vistas or in the neighborhood center are reserved for civic buildings. These provide sites for community meetings, education, and religious or cultural activities.

- The neighborhood is organized to be self-governing. A formal association debates and decides matters of maintenance, security, and physical change. Taxation is the responsibility of the larger community.

These elements combine to form the ideal form of Traditional Neighborhood Development as promoted by the New Urbanists. However, commercial developers are currently incorporating some but not all of these elements in their designs. “Lifestyle Centers” are being promoted as the next generation of the shopping mall. These centers typically include an open-air layout and a mix of specialty stores. One local example of the Lifestyle Center is Easton Town Center Columbus. Easton began with large indoor and outdoor privately-owned retail areas and now has added townhouse residential development across the street. Such “hybrid,” retail-



Streetscape at Easton

intense developments are often criticized because of their immense scale mixed with artificial quaintness. Many lack a true mixture of uses and ownership, and lack public open space and institutional uses. However, many of the historic areas that we think of as more authentic also began as speculative development.

Another example, Rosemary Beach, is a beach-front TND located on the Florida panhandle, designed by Andres Duany and Elizabeth Plater-Zyberk. The following TND graphics are reproduced from Rosemary Beach sales literature.



Images of Rosemary Beach: Site Plan (left), and bird's eye view (right)



Images of Rosemary Beach: Downtown civic buildings and shops (left) and beach house fronting a public green (right)

As of 2016, a new TND called Evans Farm is in various forms of review and progress in Orange and Berlin Townships. The overall plan covers more than 1,100 acres and proposes over 2,000 single-family parcels of varying sizes, more than 500 other types of housing units, two commercial areas, a school site, parks, trails, and recreational features. A smaller-scale town center is a viable option for Liberty Township if a sizeable site with adequate access can be served with sanitary sewer. Such a site could include a small, walkable commercial area surrounded by a core of residential units that would help create a core group of close-by customers.

For Liberty Township to permit a traditional neighborhood design, its zoning code could be amended to provide for additional flexibility and density, unless the new Planned Multi-Family Residence District and current Planned Commercial zoning were creatively designed with the features listed previously.



Orange Township portion of Evans Farm

Best Management Practices

Best Management Practices (BMPs) are visual examples that demonstrate the positive design principles in the public realm. Visuals are used because defining design elements in a text-only format can be limiting, restrictive, and can result in a bland sameness. The following general principles enhance the quality and reflect development goals within commercial and other non-residential areas.

“Conventional” Residential Subdivisions in Sunbury

Conventional developments would require densities at a maximum of 3 units per acre, unless some multi-family is mixed in the overall development. Front setbacks of 30-35', no snout houses (fully projecting front load garages),

Seek narrow residential streets with limited on-street parking. Separate residential uses from all other uses but include pedestrian access. At least 10% open space in the neighborhood, with small “pocket” parks.

Traditional Neighborhood Design Village Developments

Densities at 4-6 units per acre for moderate density villages and town centers with 2-3 story structures. Higher densities for town centers, with minimum front setbacks (0-15'). Houses with 0-foot setback should require masonry construction. Maximum front setback - 15 feet. Lots on streets closest to the “Core” could have the shallowest setbacks, then increase setbacks as you move outward. For example:

Setbacks	- “Core” Downtown: 0' setback - “Center” Residential Blocks 1-3: 15' setback - “Center” Blocks” 4-6: 20' setback - “General” beyond block 7: 30' setback
General Residential standards	Use of privacy walls on side lot lines. Brick, masonry best materials for party walls. Decorative iron fencing, or open picket wood fencing (no stockade, split rail, chain link fencing) in front court yards.
When smaller lots call for alleys	Garages access exclusively off alleys Setback off alley - 15' Alley width 14-20'
Road Design	Vertical curbs, enclosed drainage. Grid streets with an interconnecting pattern. Street widths wide enough for on-street parking, at least on one side. R.O.W. typically 60'. Traffic calming features (center islands with landscaping, eyebrow islands with landscaping), parks at block ends to divert traffic flow.
Housing Styles	Variety of styles and architecture. Highly detailed exteriors. Limited use of vinyl, or requirement for a higher-gauge vinyl siding.
Lot Design	Narrow, deep lots, that lend themselves to “shotgun” style houses with rear loading garages.
Uses	Mixture of residential and commercial as part of a town center, strict architectural controls and elements. At least 10% open space in the neighborhood, with many small “pocket” parks. Open space should be within direct view of at least 50% of all residential lots.

The following images represent how some of these principles can be applied in both a formal town center development, or in any setting where a quality “sense of place” is desired.

Site Furnishings

Given the suburban environment’s preference to the automobile, developments rarely feature the site furniture that helps create a vibrant commercial destination. They can also be integrated into elements that serve to screen parking lots and adjacent uses. A consistency in furnishings can enhance the visual unity of the corridor. Such furnishings include lighting fixtures, trash receptacles, benches, and other usable structures. Furniture should be permanently installed, be vandal-



resistant, have replaceable components, and be easily maintained. It should be of high quality design and “timeless” in style (image on previous page). Seating should be located at logical resting points and situated so they do not block the internal walkway system.

Buildings Form the Space of the Street

Buildings have the potential to create a shared public “room.” The character and scale of these walls determine the character of the room. Continuous building frontage with active uses on a street creates a welcome space that supports pedestrian and economic activity. In typical suburban commercial developments where the building fronts on a vast expanse of paved parking, no such room is created.



Parking is incorporated into the site and street furnishings are pedestrian-oriented.

Building indentations, penetrations, and façade treatments can be used to complement adjacent structures. These features also reduce the monotonous blank walls often seen on “big-box” developments. A series of doors, windows, porches, and other projections in new construction can add value and character to a



Blank walls (left) should include architectural detail (right) although windows and doors are preferred.



Façade treatment (left) is preferred over repetitive elements (right).

commercial development. Continuous ‘strip’ buildings should be discouraged.

Building Height/Appearance

Streets have a more cohesive, pedestrian feel when contiguous buildings are of similar height. The maximum building height is generally 35 feet, or as otherwise limited by the available emergency equipment. Though this would allow building of two stories, most commercial development has been built with only a single story. Creating a pedestrian-oriented development would likely require a mix of uses, where retail would be located on the ground floor with offices or even specific types of residential above.



Roof Forms and Building Materials

Roofs on new structures should generally be pitched or hipped. Building materials may be wood frame, brick, or stone. Roof material should have a shingle look, either as asphalt shingles, slate, tile, or metal.



"In-line" stores or strip centers built with high-quality materials and architectural details

Environmental Sustainability

Mixing uses can result in lower impact to the environment. "Green" buildings can cost less, improve worker productivity, enhance marketing efforts, and help to create a district identity. Structures and parking should respond to the specific building site, be efficient in water and energy use, be constructed of sustainable materials, and create a healthy environment for the occupants. The Leadership in Energy and Environmental Design (LEED) *Reference Guide for New Construction and Major Renovation, Version 2.2*, is a valuable resource for guidance on green building techniques, practices, and standards.

Parking and Access

Where there is limited access to a major road, circulation streets should be created rather than individual entrance drives to parking lots. Secondary streets should also limit access and a coherent network of backage streets is created. Parking and access to parking should be located at limited locations along these secondary streets.

Parking lots should be screened and separated from the public right-of-way. Large expanses of surface parking should be broken up into smaller areas. These may be

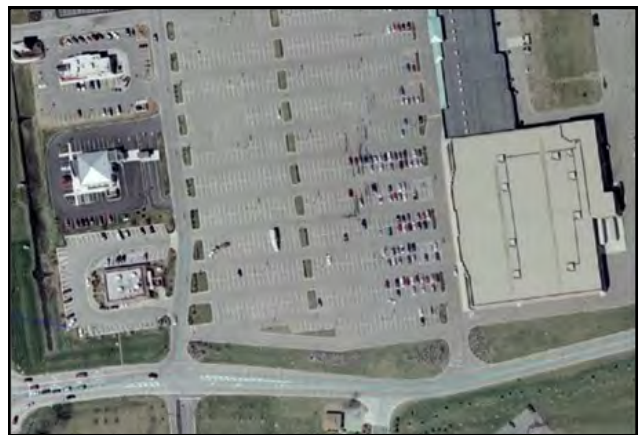


located beside or between buildings. Parking located directly in front of buildings should be minimized where possible. All lots should be landscaped and shading maximized.



When parking is located in a variety of places, buildings can be oriented toward the street and a more pedestrian-oriented streetscape.

Townships will often regulate aspects of commercial parking that have a direct impact on the appearance and quality of its commercial development. The code may include specifications on dimensions, paving, driveways, setbacks, and landscaping. Commercial zoning text can also limit the percentage of the parcel that can be covered with impervious surfaces.



This parking in front of a major retailer seems excessive during all but the busiest shopping days of the year.

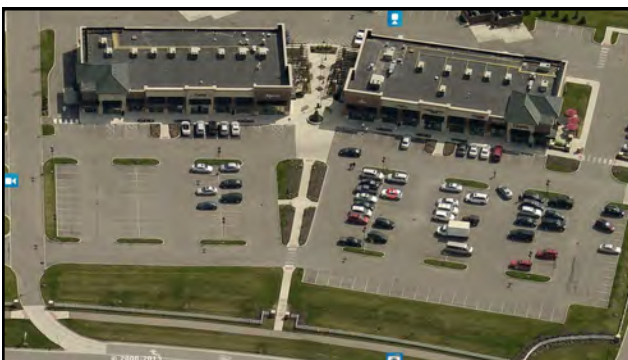
Commercial zoning can require a certain number of parking spaces per square footage of commercial space. In commercial developments with multiple tenants, this can result in an excessive amount of pavement leading to a "sea of asphalt." Retail parking requirements should be somewhere between 4 and 5 spaces per 1,000 feet of gross leasable space. This amount can be reduced in multiple-tenant developments, where different uses demand different peak parking times, and in retail buildings above a certain size threshold (i.e. "big box" stores).

Pedestrian Orientation

Even large, commercial-only areas can be tailored to the pedestrian and create a walkable environment. The first image shows the typical big-box store with inline stores and outlots. Although stores are fronted with a sidewalk, the walkway has no character and merely serves as a covered area between the building and the access driveway. Painted crosswalks are provided, but they serve a utilitarian function.



The second example adds pedestrian elements, providing connections to an existing bikeway along the existing road. That walkway also provides a focal point, ending in a communal feature between the buildings. This area also allows for outdoor dining, a feature which is becoming increasingly popular. This dining area is separated from direct contact with the parking area. Walkways are provided between various buildings on the site as well.



The third image shows an arrangement of buildings around a square, providing green space and a public area. Parking is provided along the storefronts, protecting the walkway from traffic. Sidewalks are wide, providing areas for outdoor dining in front of the buildings. Larger parking areas are provided throughout the site, hidden from the public street while allowing for walkways between buildings.



Service

Service and delivery should be accommodated on side streets or from the rear of buildings. Dumpsters may be grouped for multiple users. All refuse collection areas should be screened from public rights-of-way (below).



Lighting

Building and site lighting is recognized as a necessity for security and visibility, and should be designed to eliminate light trespass and minimize light pollution. The best lighting schemes will maximize uniformity and eliminate glare. Lighting for pedestrians is an important consideration and should be designed to maximize visibility and comfort. These considerations can decrease initial costs, have marked value in life-cycle costs, and create a more attractive and comfortable nighttime environment.

Creating a hierarchy of lighting standards is another way to unify image and identity. Lighting used to illuminate parking areas, the street, or signage should be indirect and shielded, avoiding off-site spillage of light into other properties. The amount of light that is cast upon adjacent development is often regulated by township zoning codes. Sign codes can also stipulate that signs be internally lit, or that external lighting point down from above the sign and not on adjacent property. Light fixtures should be designed as a cohesive part of the other site elements (image on next page). This will

include various lighting levels for vehicles, pedestrian circulation, signage, and special accents.



Signage

Each community must address sign control in a way that is appropriate to that community. Any regulation based on the police power must advance some public interest related to public health, safety, and morals. Although there are legal limitations to the extent of regulations (i.e. political signs and content in general), townships in Ohio commonly regulate the number of signs allowed, their location, their height, their size, and the materials used in their construction. Signs codes provide broad categories that determine what type of permitting is required, based on the type of the sign. Some signs are permitted with no permit required. These typically include “For Sale” signs, political signs, certain temporary signs, signs approved as part of planned districts, and farm signs. Although no permit is required, the size, number, and placement of these signs may be regulated.

Another type of sign defined in the code is one requiring a permit. This category generally includes billboards or off-premise signs, and on-site commercial, industrial, and office display signs. A sign code will also include a list of prohibited signs, which are usually based on the construction of the signs. Prohibited signs often include portable sign devices, sandwich boards, revolving or animated signs, and wall-painted signs. Finally, a sign code will define provisions for signs that already exist but do not conform to the standards when a code is adopted. Such provisions describe which “non-conforming” signs must be removed and which can

continue. Typically, such signs cannot be improved or changed and, if a particular percentage of the sign is ever destroyed, the sign must be replaced in a way that conforms to the standards. If changes are made to a sign, other than routine maintenance, it should be brought into compliance with current regulations.

The scale of signage should be designed with pedestrians in mind. Signs on awnings, in windows, and projecting from the face of the building can help create an interesting pedestrian environment. Traffic signage should have a consistent look and placement, where possible.



Natural-colored materials should be used for the base of monument signs (above). Variation of signage themes based on sign type or location should be encouraged (below). Signs should be of high quality and ‘timeless’ in style to avoid becoming outdated. Signs should be limited to one per lot or one per multiple lots if devoted to one specific use or user. Graphics should be simple to encourage readability and increase identification. If a ground sign is to be used, the monument-style is mandated. No sign should interfere with the safe movement of pedestrians and vehicles.



Accessibility

Standard concrete walks should be 6 feet wide, where sufficient right-of-way exists. Along secondary streets, the walk should be located 4 feet from the back of curb. Handicap-accessible curb ramps should be used at all access drives, public streets, and private streets and shared easements that function as public streets.

All major intersections should include painted crosswalks to alert drivers to the pedestrian crossing. Change of pavement (i.e., brick and concrete) should be considered for pedestrian crossings at major intersections.

Landscaping and Buffering

Township zoning codes often include provisions for landscaping standards and buffering between incompatible uses, or may require establishment of tree cover or other foliage as may be necessary to achieve the purpose of the open space standards. Such buffering usually includes a setback distance but will often go farther by requiring mounding, opaque fencing, or a defined spacing of trees. Zoning codes, such as the model code developed by the RPC, defines landscaping requirements in the Planned Commercial and Office zoning district in the following way:

“All yards, front, side and rear, shall be landscaped, and all organized open spaces or non-residential areas shall be landscaped and shall meet the landscaping requirements of this resolution, unless a variation from these standards is specifically approved as part of the final Development Plan. A landscape plan showing the caliper, height, numbers, name and placement of all material, prepared by a licensed landscape architect shall be approved as a part of the final Development Plan.”

Landscaping should be designed to provide shade for pedestrians and generally create a comfortable pedestrian environment in commercial portions of the corridor. Impervious surfaces should also be shaded to mitigate heat island effects. Continuous trees are encouraged to augment the public landscape plan. There are many environmental, as well as psychological benefits to including a tree planting plan. Trees can enhance values, reduce traffic speeds, increase levels of comfort, and unify the look of an area. Correct placement and choice of species can eliminate ongoing maintenance issues.

Large shade trees should avoid conflicts with structures and reinforce the streetscape (assuming they do not conflict with emergency access and utility placement).

Small ornamental trees should be used as accent plants



A parking lot (left) is screened from the sidewalk and landscaping blends with the streetscape.

and frame views to special architectural features. Avoid placing ornamental trees in locations that would block the view from the street to the structure and impair visibility for auto operators.

Plant materials should be native to the area when possible.

Screen parking lots with a minimum 4-foot high continuous evergreen or deciduous hedge, low earth mounding, or stone wall. Hedge size at installation should be at least 30" in height. A creative combination of these elements is encouraged to avoid visual monotony.

Planting, mounding, and fencing should be incorporated at the rear of commercial areas that are adjacent to residential areas. Screened planting should be 75% opacity at installation during full foliage.

Guidance for minimum standard plant sizes at installation:

Shade Trees – 3" Caliper, 12'-14' height

Ornamental Trees - 8'-10' height

Evergreen and Deciduous Shrubs – 24" height

If landscaping is used as screening for trash receptacles, it should have a minimum opaqueness of 80% during full foliage. The height of a screen wall should be at least 6 feet.

Residential Garage Placement

One issue that often arises in Planned Residential reviews is streetscape. Sidewalks, street trees, and structure setbacks all contribute to the perception of a neighborhood's value. One factor that can impact the streetscape of a subdivision is the placement of the garage. On large lots with at least 90 feet of frontage, most garages are side-load or do not make up a large percentage of a house's front elevation. As lots become smaller and frontage decreases, such as in TNDs and some condominium developments, garages take up more and more of the frontage. In extreme cases, the garage projects fully in front of the house. Such residential structures have been termed "snout houses." The result is a streetscape that is not "friendly" to the pedestrian or driver, tending to devalue the neighborhood as a whole. Planned District regulations can require that garage protrusions be limited or that garages be flush with the front wall of the house or set back behind the front wall of the house. In TNDs and village centers, where lots may be 70 feet wide or smaller, garages can be accessed from a rear alley.



Examples of snout houses; two-story houses on 75-foot frontage (top) and single-story houses on 50-foot frontage

Conclusion – Best Management Practices

Some of these Development Plan issues are zoning-related and may go beyond the overall recommendations of land use and density usually emphasized in a Comprehensive Land Use Plan. However, recommendations related to these issues may be included in this Plan for review by the Zoning Commission in future changes in the Zoning Resolution.

Farmland Preservation

With about 36% of Berkshire Township land still in farming (Figure 13), agricultural preservation is an issue. The Delaware County Commissioners appointed a Farmland Preservation Task Force in 1998 which noted, as a goal, to "Support and encourage any township that seeks to protect its agricultural industry through zoning codes."

Purchase of Agricultural Easements

Purchase of agricultural conservation easements (PACE), also known as Purchase of Development Rights (PDR), is now legal under Ohio law. The Ohio Department of Agriculture-Office of Farmland Preservation is currently drafting rules in anticipation that Ohio will be able to offer matching funds to local entities that have set up a program to retain and protect farmland. The plan also recommends that the County provide redevelopment incentives for cities and villages with existing urban services to reduce cost of new services and unnecessary conversion of farmland.

Smart Growth

Since 1997, Smart Growth has been a topic for planners nationwide. The American Planning Association defines Smart Growth as "a collection of planning, regulatory, and development practices that use land resources more efficiently through compact building forms, in-fill development and moderation in street and parking standards." For APA, one of the purposes of Smart Growth "is to reduce the outward spread of urbanization, protect sensitive lands and in the process create true neighborhoods with a sense of community."

Smart Growth encourages the location of stores, offices, residences, schools, and related public facilities within walking distance of each other in compact neighborhoods. The popularity of smart growth has captured the interest of the press as well, though some criticism has come from developers who see it as government controlling the market. Smart growth incorporates some of the concepts of conservation subdivisions in rural areas and TNDs in urban areas.

Which Development Pattern(s) for Berkshire?

Berkshire Township should consider the following patterns in its future land use.

- Identify critical resource areas that should be given primary or secondary conservation area status, and consider allowing both conventional large-lot and Conservation Subdivisions in the FR-1 District.
- Consider using Conservation Subdivisions to preserve

open space and/or farmland.

- Consider allowing higher density Conservation Subdivisions in areas where annexation is a possibility.
- Consider village-center development adjacent to existing villages, and also allow for new walkable centers in areas planned for eventual sewer service

(RPC has a model code for such development).

- Commercial development should group buildings to share parking and access to arterial streets.
- Consider mixed uses of commercial and residential as part of a large-scale planned unit development that creates a sense of community rather than strip the commercial along arterial roads.

Design Element Examples



Single-Family Homes

- Architectural detail
- Front porches
- Minimized pavement
- Sidewalks



Single-Detached Condominium

- Variety of details and colors
- Smaller "lot" usually handled as a condominium
- Common open space maintained by an association
- Sidewalks





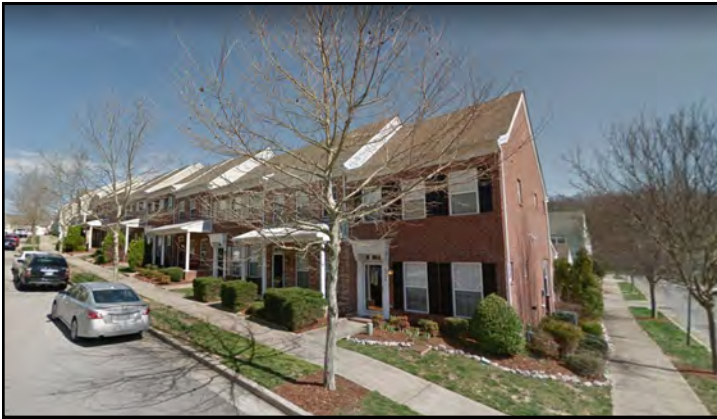
Two-Story Attached Condos

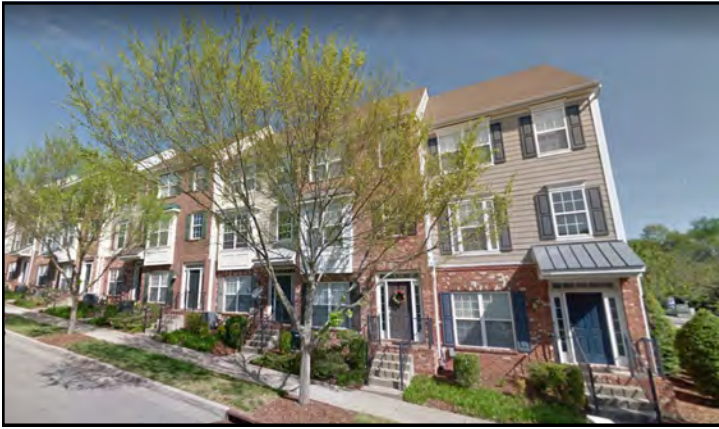
- Natural materials
- Street trees and sidewalks
- On-street parking
- Alternating façades



Two-Story Townhouse Condos

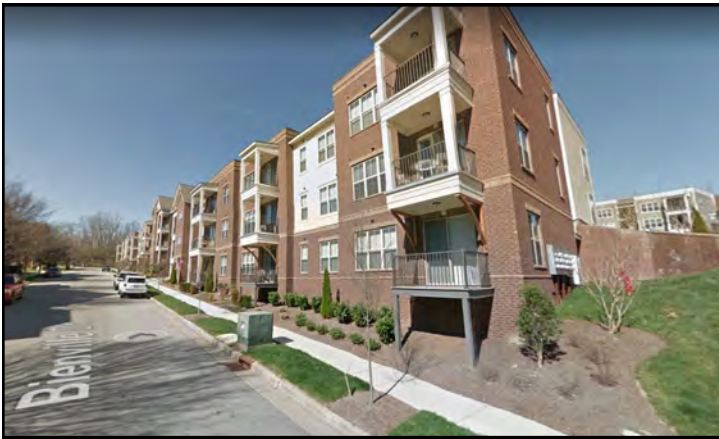
- Natural materials
- Street trees and sidewalks
- On-street parking
- Alternating façades





Three-Story Townhouse

- Natural materials
- Street trees and sidewalks
- On-street parking
- Alternating façades styles
- Condominium management



Three-Story Apartments

- Parking to the rear
- Natural materials
- Street trees and sidewalks
- On-street parking
- Main entrances at breezeway between street and parking



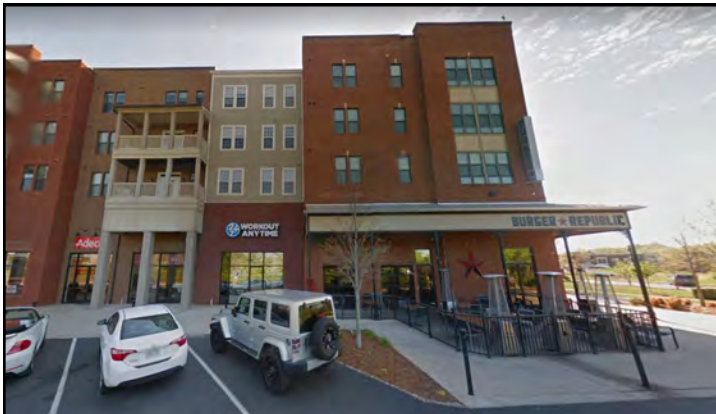
Four-Story Apartments

- Parking to the rear
- Natural materials
- Articulated corners
- Sidewalks with street trees and landscaping
- On-street parking
- Main entrances at breezeway between street and parking



Free-Standing Commercial and In-Line Stores

- Parking to the rear with on-street parking, possibly angled
- Traditional architectural detail
- Natural materials
- Sidewalks with street trees and landscaping
- Main entrances at breezeway between street and parking
- Second floor offices or storage use, possible residential units



Mixed-Use Residential over Commercial

- Parking to the rear with on-street parking, possibly angled
- Natural materials
- Sidewalks with street trees
- Outdoor spaces at specific locations
- Upper-floor offices or storage and residential units



Mixed-Use Site

- Commercial and mix of uses at the center
- Radiating residential units
- Open space pocket parks
- Parking internal to block and to rear of units
- All uses connected with walking paths and sidewalks

Some photos in this section are from Google Streetview

CHAPTER 13

Goals and Objectives

With each of the Comprehensive Plan revisions since 1989, residents and Zoning Commission members have reviewed the following general goals and objectives.

Natural Resources
Goals
<ol style="list-style-type: none"> 1. Preserve the rural character of Berkshire Township as expressed in its openness, green areas, farms, natural resources (floodplains, wetlands, slopes greater than 20%, ravines, creeks, and rivers). 2. Retain wildlife cover and corridors, where feasible. 3. Preserve the rural “look” along township roads via fencing and landscaping. 4. Retain historic and agricultural structures, where feasible. 5. Preserve scenic views, where feasible, as open space within Planned Residential Developments. 6. Preserve a high degree of environmental quality. 7. Link Planned Developments with green spaces and paths. 8. Conserve surface and ground water quality around Big and Little Walnut Creeks and the Hoover Reservoir.
Objectives
<ol style="list-style-type: none"> 1. Require the linkage of subdivisions by streets, bike paths, or greenway trails so neighborhoods are pedestrian-oriented. Create a landscape detail for greenway trails. 2. Retain wooded greenways along ravines, waterways, and project perimeters. 3. Amend the zoning resolution to increase the dedication of useable open space in PRDs. 4. Amend the zoning resolution to identify and protect floodplains, jurisdictional wetlands, and steep slopes. 5. Permit Conservation subdivisions in all residential zones. 6. Support amendment of county subdivision regulations to include Conservation Subdivision criteria. 7. Support amendment of county subdivision regulations to protect 100-year floodplains. 8. Set landscape and architectural design standards for subdivisions. Stipulate centralized green spaces envisioned. 9. Create a rural landscape detail for planned developments that front on township roads. 10. Amend the zoning text to require the appropriate landscaping buffer detail between residential and non-residential land uses. Retain natural vegetation and use existing topography as buffers. 11. Prohibit on-stream stormwater detention as open space in planned development tributary to the Hoover Reservoir. 12. Retain natural ravines and their vegetation as filter strips for surface water. 13. Use 1.95-acre to 5-acre lot sizes in areas of environmental sensitivity where on-site sewage disposal systems could potentially pollute the surface and ground water, especially in proximity to the Hoover Reservoir.

Agriculture
Goals
<ol style="list-style-type: none"> 1. Provide an opportunity for agriculture to continue through flexible/creative zoning. 2. Retain very low residential density in agricultural areas.

Agriculture (continued)
Objectives
<ol style="list-style-type: none"> 1. Leave 5-acre lots as the minimum requirement, but encourage conservation subdivisions in Agricultural Zones at the same density. 2. Encourage “Farm Village” zoning as a form of conservation subdivisions. 3. Preserve farmland by voluntary transfer (sale) of development rights from farmland to adjacent farm villages or conservation subdivisions in return for a permanent easement for open space and/or agriculture on the remaining adjacent farmland. 4. Use the Land Evaluation Site Assessment (LESA) system to evaluate lands are worthy of farmland preservation in Agricultural Zones. 5. Identify potential lands for Purchase of Agricultural Conservation Easements (PACE). 6. Apply for state or federal funding for purchase of agricultural easements. 7. Consider a Farm Residential district with 1.95-acre lot sizes in transitional farm areas that are not expected to receive county sewer service. Encourage “density-neutral” conservation subdivisions.

Residential Development
Goals
<ol style="list-style-type: none"> 1. Relate land use and density to land suitability, utility availability, and existing land use. 2. Be guided by the carrying capacity of infrastructure (sewer, water, fire protection, roads, etc.). 3. Provide for rural residential areas where agriculture is transitioning to large lot residential, and where no central sewer is available. 4. Provide for suburban residential housing districts where central water, sewer, fire protection, adequate roads, and other suburban services can be economically provided. 5. Retain a primarily single-family residential housing mix, but permit a diversity of housing types. 6. Avoid inappropriate sprawl. 7. Protect local real estate values.
Objectives
<ol style="list-style-type: none"> 1. Utilize single-family densities of at least 1 unit per acre in platted subdivision projects where there is no centralized sanitary sewer provided. Use larger 1.95-acre lot sizes for single sites where no sewer is anticipated. 2. Use the width of roads, the capacity of water and sewer systems, and the soil characteristics to limit development to the carrying capacity of the infrastructure, using the densities and land uses on the Comprehensive Plan recommended land use map as a guide. 3. Encourage conservation subdivisions as density-neutral uses in all residential districts. 4. Avoid development of uses or densities that cannot be serviced by currently available or imminently planned infrastructure, unless such development mitigates its unplanned infrastructure impacts. 5. Amend the PRD text to be a density-neutral zoning overlay. Emulate the densities from the Comprehensive Plan. 6. Permit single-family housing in standard subdivisions with 20,000 square foot lots with centralized sanitary sewer and water, adequate fire protection, and road access. 7. Permit multi-family units as part of Planned Residential Developments, approved per the Development Plan. 8. Maintain the area east of I-71 and west of Galena Road along the U.S. 36 corridor as a possible suburban residential heart of the Township, subject to provision of centralized water and sewer.

Commercial and Industrial Development

Goals

1. Encourage commercial and light industrial development in planned districts to broaden the jobs and tax base, and to prevent property taxes from rising faster than the growth in the township tax base.
2. Provide for dense landscape buffering between commercial/industrial and residential uses.
3. Encourage commercial, office, and light industrial development in the I-71/U.S. 36 Interchange area.
4. Encourage a community shopping center (grocery store, drugstore, etc.) at the I-71/U.S. 36 interchange.
5. Provide for transitional land uses and dense landscape buffering between incompatible land uses.

Objectives

1. Encourage expansion of the Planned Commercial and Industrial districts along U.S. 36 and at the I-71 Interchange.
2. Create development guidelines for planned commercial development.
3. Consider a possible Traditional Neighborhood Development with mixed commercial and residential uses as a node along the U.S. 36 corridor.

Recreation

Goals

1. Provide passive and active recreational areas as the Township grows.
2. Establish a parks program for the Township.
3. Link planned residential neighborhoods with green spaces and walking paths.

Objectives

1. Acquire 25-50 acres of land for a future Township park with active recreation (playing fields for organized sports).
2. Create a series of mini-parks (less than 1 acre) with ¼ mile spacing as part of Planned Residential Developments where densities are 1-2 units per acre. Create a series of neighborhood parks of 15 acres with active recreation with ½ mile spacing in PRD neighborhoods.

Township Services

Goals

1. Recognize and maintain only those services needed for a predominantly rural/low density community.
2. Expand Township services at a rate to ensure public health and safety, and to discourage premature development.
3. Acquire suitable land for the Township's future needs.

Objectives

1. Acquire new sites for Township facilities, including fire, police, road maintenance, etc.
2. Determine the services the Township can provide as a suburban community with a sense of rural character.
3. Work with elected officials to increase services as needed, but not in a way to compete with urban development, so as to retain a rural community.
4. Use the Comprehensive Plan as the guideline in zoning.

Planning and Zoning
Goals
<ol style="list-style-type: none"> 1. Determine and implement an appropriate land use mix. 2. Coordinate central sewer extensions to appropriate suburban core areas. 3. Implement and maintain the Land Use Plan. 4. Enforce zoning regulations.
Objectives
<ol style="list-style-type: none"> 1. Revise the zoning text and map in accordance with the Comprehensive Plan. 2. Develop policies for service provision that relate to the Comprehensive Plan. 3. Provide for 5-year updates and revisions to the Plan. 4. Provide for competitive wages, benefits, and training for zoning staff.

Transportation
Goals
<ol style="list-style-type: none"> 1. Avoid congestion on local, county, and state roads. 2. Cooperate with ODOT on removing/preventing unnecessary commercial curb cuts on U.S. 36 from 3 B's and K Road to Galena Road. 3. Retain the narrow township roads where possible as part of the rural character. 4. Improve the road network without destroying the rural character. 5. Seek developer mitigation of their road impacts of their developments to extent permitted by Ohio law.
Objectives
<ol style="list-style-type: none"> 1. Require commercial parallel access roads and connections between planned commercial developments. 2. Assure new Fourwinds Drive is built and extended to Sherman Road as part of the commercial development of the MTB, Medellin, and Green lands between 3 B's and K and I-71. 3. Restrict unlimited left turns across traffic on U.S. 36. Coordinate signals at new locations shown by * symbol on the Comprehensive Plan map. 4. Avoid new signals on U.S. 36 unless there is at least ½ mile separation. 5. Adopt the appropriate ODOT Access Management recommendations; work with ODOT to prevent the deterioration of U.S. 36. 6. Encourage construction of new roads on the Comprehensive Plan as part of new developments.

Citizen Participation
Goals
<ol style="list-style-type: none"> 1. Ensure significant and diverse citizen input into the planning process.
Objectives
<ol style="list-style-type: none"> 1. Use the 12-member steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan. 2. Advertise open informational meetings to discuss and review the recommendations of the Plan prior to public hearings. 3. Publish and mail a synopsis of the Plan to every household in Berkshire Township. 4. Encourage active citizen participation in future Comprehensive Plan updates.

CHAPTER 14

Recommendations

Intent of the Berkshire Township Comprehensive Plan

The 2017 Berkshire Township Comprehensive Plan (Update) is the sum of all the chapters and appendices. Chapter 14 is to be read in conjunction with the Comprehensive Land Use Plan (see individual Sub Area maps and overall Comprehensive Land Use Plan Map).

Sub Area 1

Boundaries: West: Berlin Township; East: I-71; North: Kingston Township; South: U.S. 36

Land Area: 416.15 acres

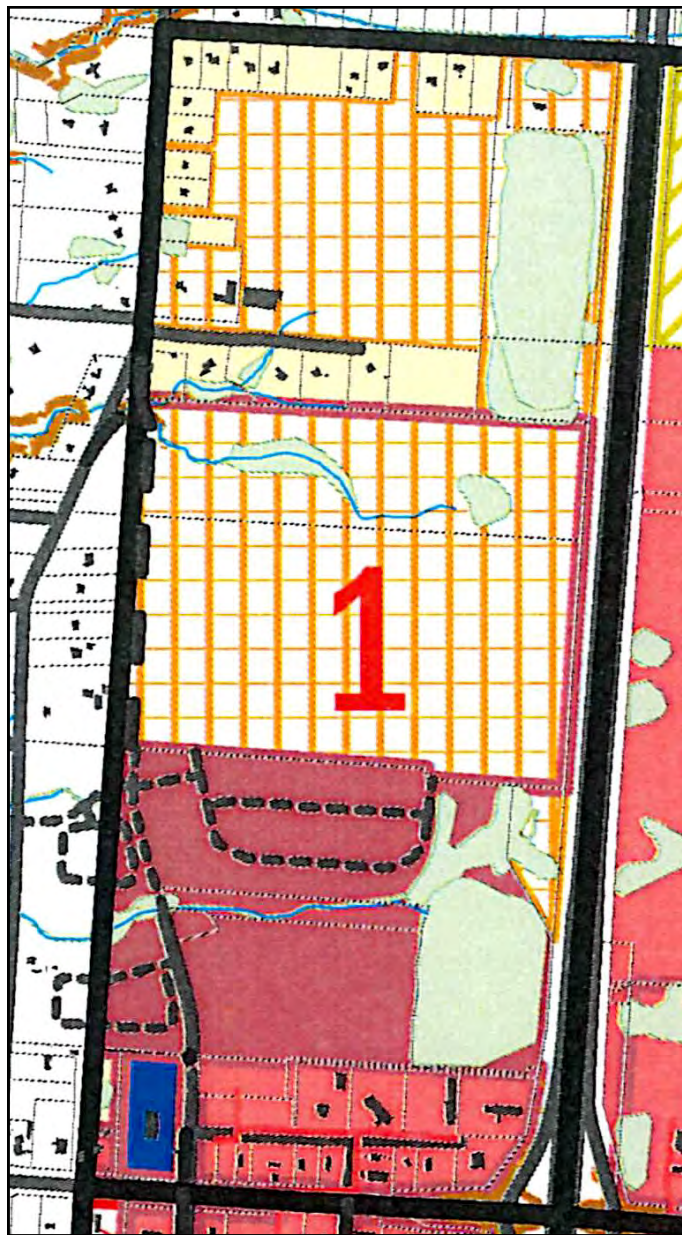
General Facts and Findings

This area has access to 36/37 and I-71. It is generally flat, with soils mostly suitable for development. Approximately 40 acres along U.S. 36 have been zoned for either Planned Commercial or Planned Institutional. An additional 212 acres are subject to the PMUD overlay. Of this, 111 acres are currently an active residential subdivision known as Northlake Woods, with 95 single-family lots, 300 apartment units, and additional condos that cross the border into Berlin Township. The I-71 Interchange is viewed as the commercial/industrial core to provide tax revenues.

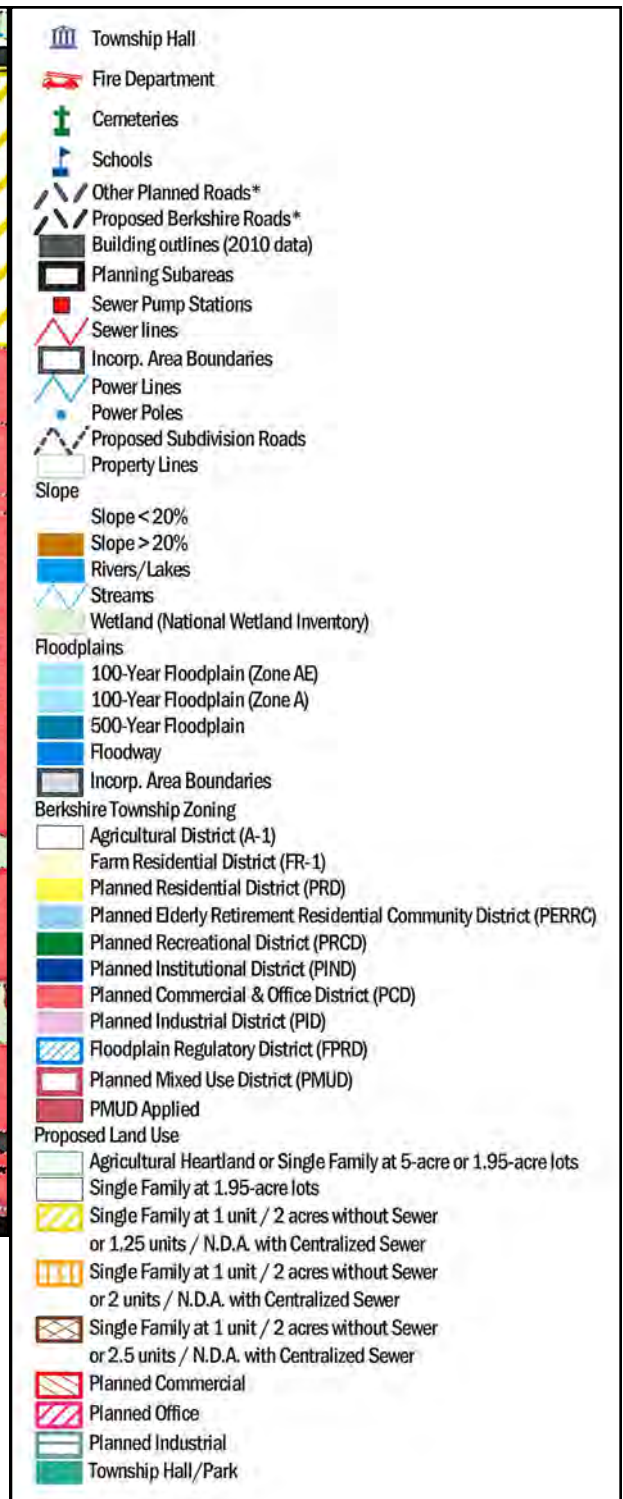
Del-Co water is available. Sanitary sewer is available to an area equivalent to the PMUD boundary. Sewage from this drainage area flows to the Alum Creek lift station behind Jerry Greer RV sales in Berlin Township and is pumped through a force main down Africa Road to Sherman Road where it runs by gravity to Cheshire, where it is again pumped under the Alum Creek reservoir.

Recommendations

1. Continue planned commercial development of the U.S. 36 frontage to a depth of approximately 700 feet north of U.S. 36, provided that:
 - a) Parcels have limited access to U.S. 36 and are linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least $\frac{1}{4}$ mile spaced ($\frac{1}{2}$ mile preferred), as approved by ODOT. Most access points should be right-in/right-out only, since a non-traversable median in U.S. 36 may someday be necessary.
 - b) Only low level, downward-cast lighting should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory in Delaware.
 - c) To avoid sign clutter, ground signs should be the only commercial sign type permitted along U.S. 36. Billboards and pole signs should be prohibited.
 - d) Very tall, 100-foot pole signs that draw highway-oriented commercial traffic from the interstate exit should be discouraged in favor of advertising signs on ODOT exit service boards on the interstate. If such signs are allowed, they should be in strict compliance with the Berkshire Township sign regulations with minimum spacing and a maximum distance from the interstate.
 - e) A Berkshire Township architectural and sign syntax should be developed.
 - f) Extensive landscaping should be required in parking lots to avoid a "sea of asphalt" and to reduce runoff and temperatures. Use landscaping to divide parking areas by using islands at reasonable spacing, at ends of rows, and along U.S. 36 frontage. A standard landscape detail should be adopted.
2. Developers will extend Fourwinds Drive to access the project as noted in the introduction. This road is currently in design and will reconnect to N. 3 B's and K Road as referenced on previous plans.
 3. The lands currently zoned FR-1 along the north end of 3 B's and K Road and the south side of Berkshire Road are recommended for single-family development at a 1.95-acre lot size, or larger as dictated by the area required for septic systems.
 4. The remainder of Sub Area 1 is recommended for single-family development at 85,000 square foot (1.95 acre) lot size without sanitary sewer service. If public centralized sanitary sewer is provided to this remainder of Sub Area 1 during the planning period, the Plan recommends single-family residential use at up to 2 dwelling units per net developable acre.
 5. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning.



Detail of Sub Area 1



Sub Area 2

Boundaries: West: I-71; North: Berkshire Road (Kingston Township); East: Galena Road; South: U.S. 36/S.R. 37

Land Area: 786.73 acres

General Facts and Findings

This area has access to U.S. 36 and I-71. The I-71 Interchange is the commercial/industrial core to provide tax revenues. The western portion of Sub Area 2 is generally flat, with mostly suitable soils for development. A deep ravine divides the eastern portion of the sub area. There are older single-family residences on Galena Road and Berkshire Road that have been zoned for FR-1 1-acre zoning.

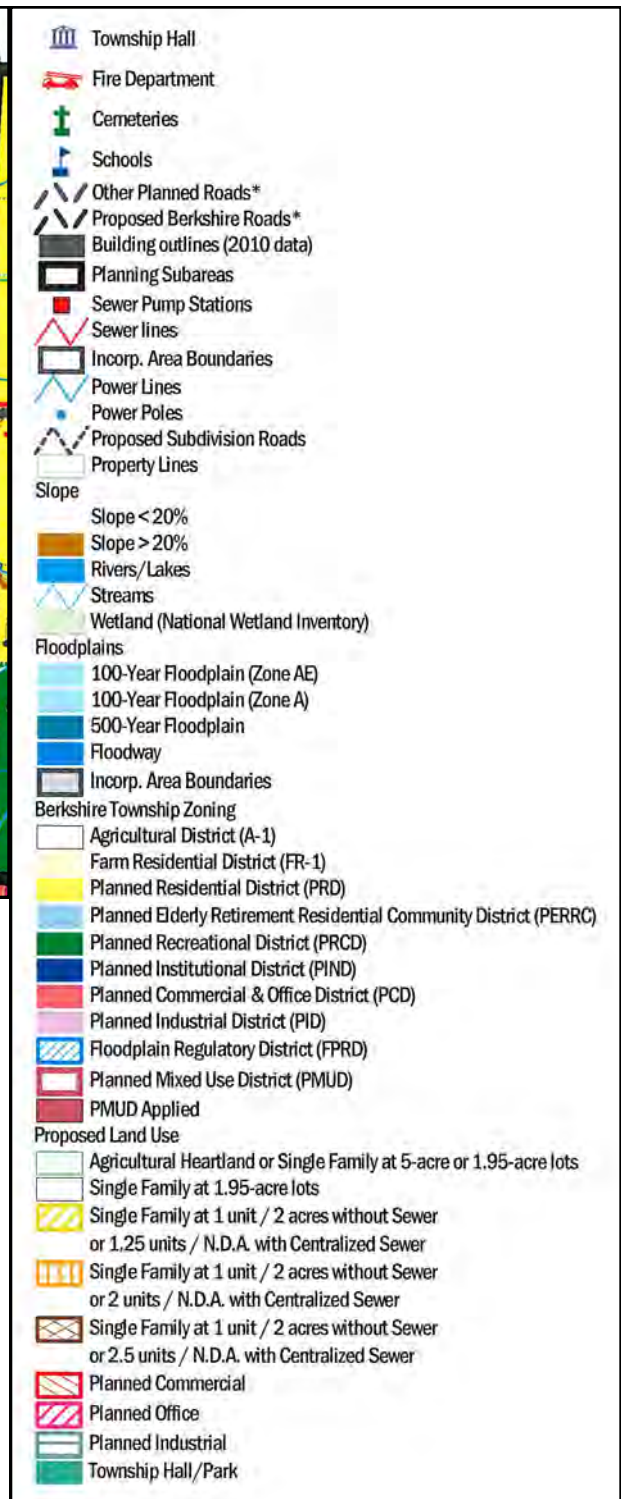
Public water is available. The Northstar development includes a central wastewater treatment facility with land application, to be owned and maintained by the County. The large mixed-use golf course community spans two townships (Berkshire and Kingston) and includes a total of 1,700 acres. Within Sub Area 2, approximately 450 acres of the development is zoned Planned Commercial behind the U.S. 36 frontage lots. Wilson Road has been constructed from U.S. 36 heading north, turning east, and connecting to Galena Road, then to a relocated southerly alignment of Wilson Road.

Recommendations

1. Continue planned commercial development of the frontage lands north of U.S. 36, east of I-71, provided that:
 - a) Parcels have limited access to U.S. 36 and are linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced (½ mile preferred), in accordance with the ODOT Access Management Plan. Most access points should be right-in/right-out only, as a non-traversable median may someday be needed.
 - b) Only low level, downward-cast lighting should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory in Delaware.
 - c) To avoid sign clutter, ground signs should be the only sign type permitted along U.S. 36. Billboard and pole signs should be prohibited.
 - d) Very tall, 100-foot pole signs that draw highway-oriented commercial traffic from the interstate exit should be discouraged in favor of advertising signs on ODOT exit service boards on the interstate. If pole signs are allowed, they should include minimum spacing and a maximum distance from the interstate.
 - e) A Berkshire Township architectural and sign syntax should be developed.
 - f) Extensive landscaping should be required in parking lots to avoid a “sea of asphalt.” Use landscaping to divide parking areas by using islands at reasonable spacing, at ends of rows, and along U.S. 36 frontage.
 - g) For large developments with densities greater than 1 unit per net developable acre, there should be consideration for a mix of uses and a network of sidewalks, trails, and bike paths to avoid induced auto trips.
2. The remainder of Sub Area 2 is recommended for single-family development at 85,000 square foot (1.95 acre) lot size without sanitary sewer service. If public centralized sanitary sewer is provided to this remainder of Sub Area 2 during the planning period, the Plan recommends single-family residential use at up to 1.25 dwelling units per net developable acre, or as regulated by the PMUD Overlay, where applicable. Frontage lots on Berkshire Road and N. Galena Road that have already been zoned FR-1 are recommended for development at a 1-acre to 1.95-acre lot size, depending on the size needed for septic systems.
 3. Conceptual “Proposed Roads” shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 2



Sub Area 3

Boundaries: North: Kingston Township; South: U.S 36/ S.R. 37; East: Carter’s Corner Road; West: N. Galena Road

Land Area: 970.63 acres

General Facts and Findings

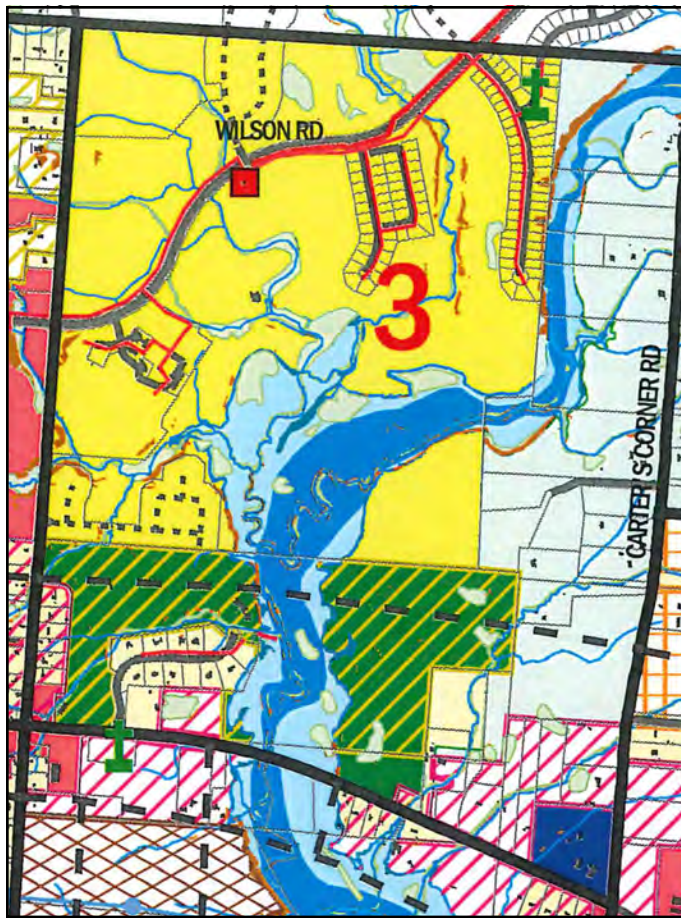
The Little Walnut Creek and its wide floodplain divide the sub area. Significant wetland areas lie along the creek banks. Ravines feed the creek. These environmentally sensitive areas need protection from development impacts, since the Little Walnut is a tributary to Hoover Reservoir, the largest drinking water reservoir for Columbus. Some soils in low-lying areas are prime agricultural. Access to the area is currently via N. Galena and Carter Corner Roads, which are narrow two-lane township roads. U.S. 36/S.R. 37 could also provide access, but there is very little remaining frontage onto U.S. 36 since the Bent Tree golf course, a public 18-hole course, occupies most of the north side U.S. 36. The northeast corner of N. Galena Road and U.S. 36 has been zoned commercial. Other frontage along N. Galena Road has been zoned for six single-family lots. A dozen lots internal to Bent Tree have also been zoned FR-1. A small sewage treatment plant maintained by the County sanitary engineer serves these lots and the golf course clubhouse.

The Northstar development includes a central wastewater treatment facility with land application, to be owned and maintained by the County. The large mixed-use golf course community spans two townships (Berkshire and Kingston) and includes a total of 1,700

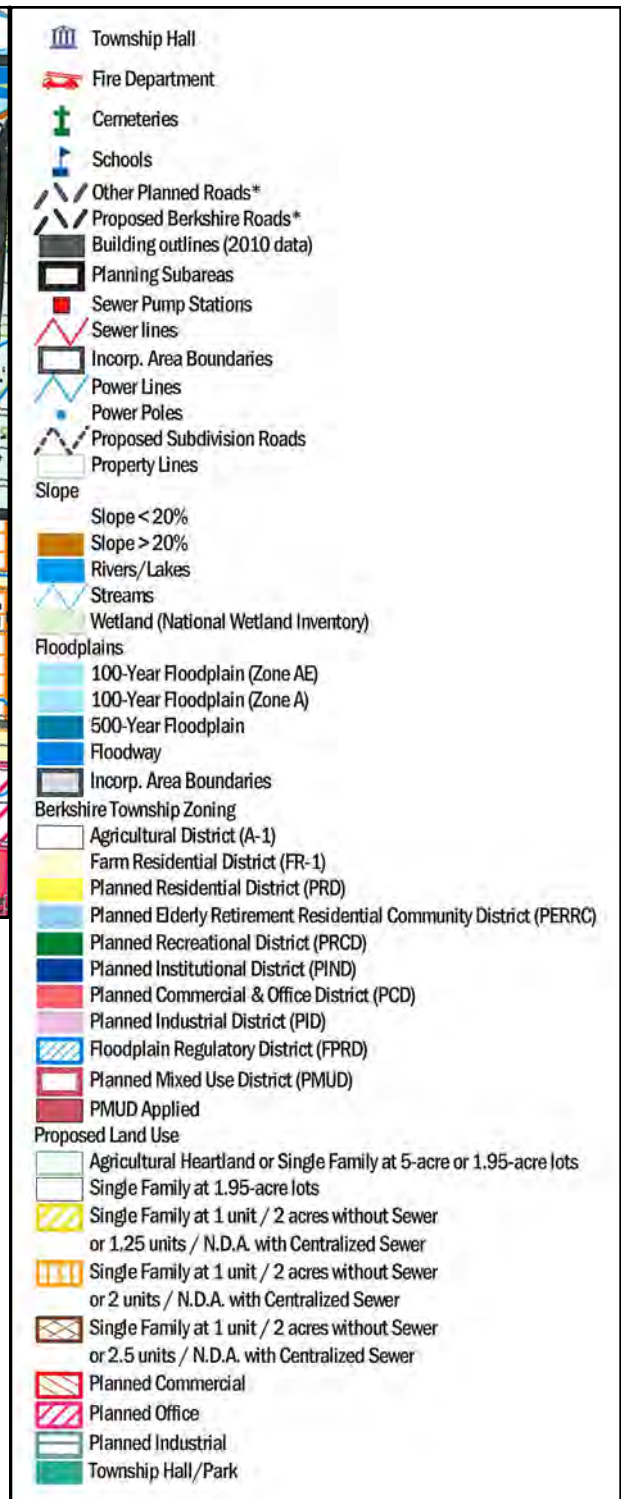
acres. Within Sub Area 3, approximately 454 acres of the development is zoned Planned Residential behind the Bent Tree Golf Course and along Galena Road. Northstar includes single-family and multi-family residential at a density of 1.25 units per net developable acre.

Recommendations

1. Encourage Bent Tree golf course to remain as its present use. If it redevelops, allow a density of 1.25 dwelling units per net developable acre, preserving the floodplain and any tributaries in open space.
2. Undeveloped pockets of road frontage on the north side of U.S. 36 may be developed as professional office uses, with access management controls to prevent congestion on 36/37. If sewer is needed, investigate if additional or redirected capacity exists in the Northstar treatment plant.
3. For lots fronting on Carter’s Corner Road, lands should be used for agricultural purposes and related residential uses at a minimum lot size of 1.95 acres. Open Space Developments or Conservation Subdivisions should be encouraged at the underlying density of this agricultural district.
4. Protect the 100-year floodplain by prohibiting new structure development within it.
5. Conceptual “Proposed Roads” shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 3



Sub Area 4

Boundaries: North: Kingston Township; South: Various property lines generally less than 1 mile south of the Kingston Township line; East: Trenton Township; West: Carter's Corner Road

Land Area: 1,183.70 acres

General Facts and Findings

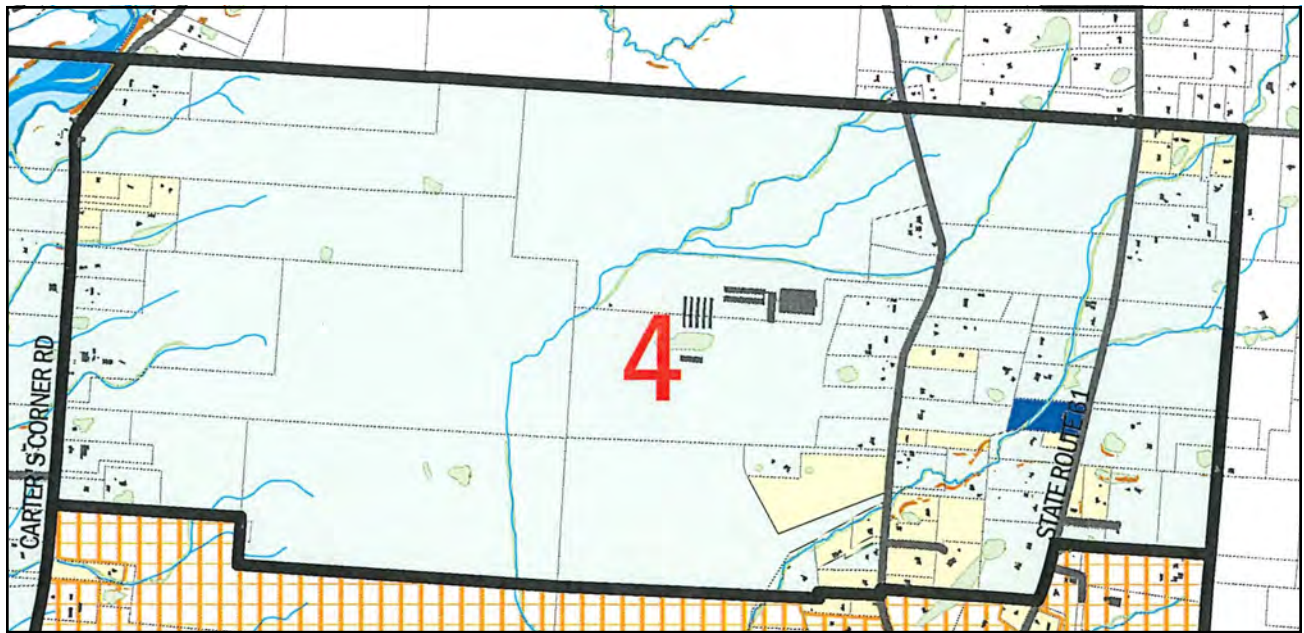
This sub area is characterized by some of the most rugged topography in the Township. Elevation changes from 930 to 1,030 feet, with many ravine-like veins crisscrossing and draining the area to the Big Walnut Creek on the east and the Little Walnut Creek on the west. The low-lying lands along Butler Run (tributary to Big Walnut Creek) are some of the most fertile soils in

the Township. With the exception of a few dozen large lot single-family residences this area is primarily agricultural. Many of the soils are not suited for septic systems.

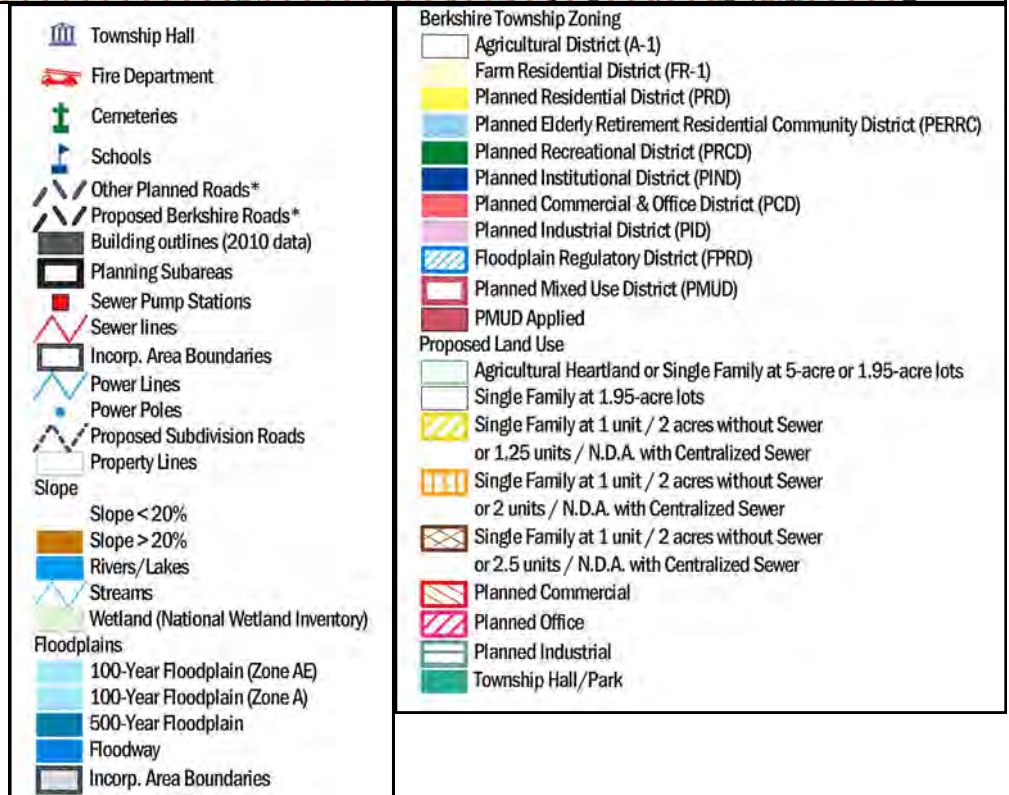
Del-Co water is available. There is no county sanitary sewer service and none proposed during the next 10 years.

Recommendations

1. All lands should be used for agricultural purposes and related residential uses at a minimum lot size of 1.95 acres. To save farmland, Open Space Developments or Conservation Subdivisions should be encouraged at the underlying density of this agricultural district.



Detail of Sub Area 4



Sub Area 5

Boundaries: North: U.S. 36; West: Berlin Township (3 B's and K Road); East: I-71; South: Cheshire Road

Land Area: 370.59 acres

General Facts and Findings

This area is part of the county sewer planning areas which have limited access.

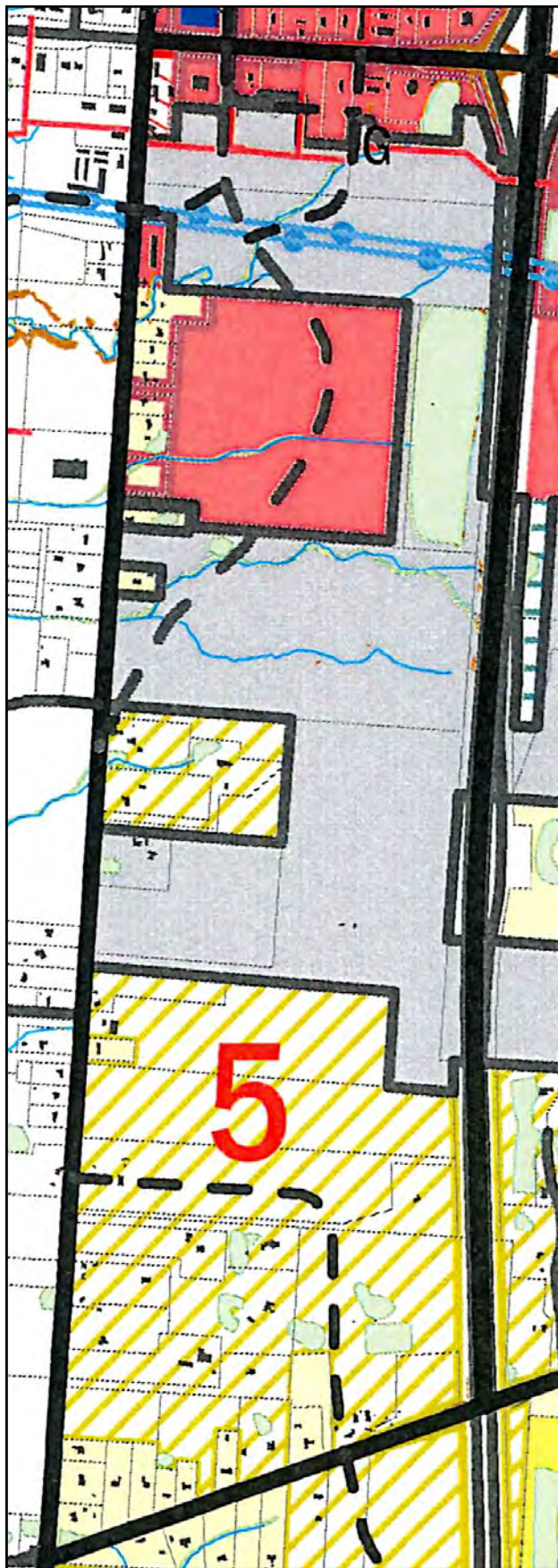
This area has access to U.S. 36 and I-71. It is generally flat, with mostly suitable soils for development. Public water is available. The northern portion of this sub area is considered part of the economic development area around the I-71 Interchange to foster tax revenues.

Much of the sub area is still farmland, still in fairly large tracts, some of which is investor held, indicating that farming may be a temporary use. Soils are moderately high yielding for agricultural use. There is a group of single-family homes on 3 B's and K and Cheshire Roads that sits on large lots of 1 or more acres. The northern half of this sub area is also subject to standards found in the PMUD overlay.

Cheshire Road is an east-west minor arterial road that runs from U.S. 23 in Liberty Township and crosses the causeway of Alum Creek Reservoir to 36/37 on the east. Because Cheshire Road crosses the reservoir and also has an I-71 overpass, it will carry larger amounts of through-traffic as the region grows.

Recommendations

1. Lands already zoned Planned Commercial within 1,800 feet south of 36/37 should be developed with highway-oriented commercial uses that pay significant property taxes and generate sales taxes. These could be restaurants, office parks, highway service uses such as gas stations, or even regional commercial uses such as major grocery stores and big box retailers. Lands between the Sunbury areas (Medellin) are encouraged to conform to the PMUD standards with an approved Development Plan. Given the impact and visibility of the interchange road network, office and highway-related retail may be appropriate, but PMUD development could include a maximum number of 300 multi-family units.
2. Fourwinds Drive should be extended south by developers from the existing stub in accordance with the preferred alignment of the interchange modification and related roads. Development should provide buffers adjacent to the homes on 3 B's and K Road. These homes are expected to stay in residential use during the planning period.
3. Parcels with access to U.S. 36 should be linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced, as approved by ODOT. Most access points should be right-in/right-out only, since a non-traversable median in U.S. 36 may someday be necessary.
4. Only low level, downward-cast lighting should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory in Delaware.
5. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.
6. To avoid sign clutter, ground signs should be the only commercial sign type permitted along U.S. 36. Billboard and pole signs should be prohibited.
7. Very tall, 100-foot pole signs that draw highway oriented commercial traffic from the interstate exit should be discouraged in favor of advertising signs on ODOT exit service boards on the interstate. If such signs are allowed, they should have minimum spacing and a maximum distance from the interstate.
8. A Berkshire Township architectural and sign syntax should be developed.
9. Extensive landscaping should be required in parking lots to avoid a "sea of asphalt" and reduce runoff and temperatures. Use landscaping to divide parking areas with islands at reasonable spacing, at ends of rows, and along U.S. 36 frontage. A standard landscape detail should be adopted.
10. Land fronting along 3 B's and K Road is recommended for residential use on 1.95-acre or larger lots according to soils conditions for septic systems.
11. The remainder of the lands in Sub Area 5 (from Sherman Road on the north to Cheshire Road on the south, between 3 B's and K and I-71) are recommended for single-family development at 1.95-acre lot sizes without sanitary sewer service. If public centralized sanitary sewer is provided to this sub area, the Plan recommends single-family residential use at up to 1.25 dwelling units per net developable acre, or as regulated by the PMUD Overlay, where applicable.
12. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning.



- Township Hall
- Fire Department
- Cemeteries
- Schools
- Other Planned Roads*
- Proposed Berkshire Roads*
- Building outlines (2010 data)
- Planning Subareas
- Sewer Pump Stations
- Sewer lines
- Incorp. Area Boundaries
- Power Lines
- Power Poles
- Proposed Subdivision Roads
- Property Lines
- Slope**
- Slope < 20%
- Slope > 20%
- Rivers/Lakes
- Streams
- Wetland (National Wetland Inventory)
- Floodplains**
- 100-Year Floodplain (Zone AE)
- 100-Year Floodplain (Zone A)
- 500-Year Floodplain
- Floodway
- Incorp. Area Boundaries
- Berkshire Township Zoning**
- Agricultural District (A-1)
- Farm Residential District (FR-1)
- Planned Residential District (PRD)
- Planned Elderly Retirement Residential Community District (PERRC)
- Planned Recreational District (PRCD)
- Planned Institutional District (PIND)
- Planned Commercial & Office District (PCD)
- Planned Industrial District (PID)
- Floodplain Regulatory District (FPRD)
- Planned Mixed Use District (PMUD)
- PMUD Applied
- Proposed Land Use**
- Agricultural Heartland or Single Family at 5-acre or 1.95-acre lots
- Single Family at 1.95-acre lots
- Single Family at 1 unit / 2 acres without Sewer or 1.25 units / N.D.A. with Centralized Sewer
- Single Family at 1 unit / 2 acres without Sewer or 2 units / N.D.A. with Centralized Sewer
- Single Family at 1 unit / 2 acres without Sewer or 2.5 units / N.D.A. with Centralized Sewer
- Planned Commercial
- Planned Office
- Planned Industrial
- Township Hall/Park

Detail of Sub Area 5

Sub Area 6

Boundaries: North: U.S. 36/S.R. 37; South Cheshire Road; East: South Galena Road; West: I-71

Land Area: 631.04 acres

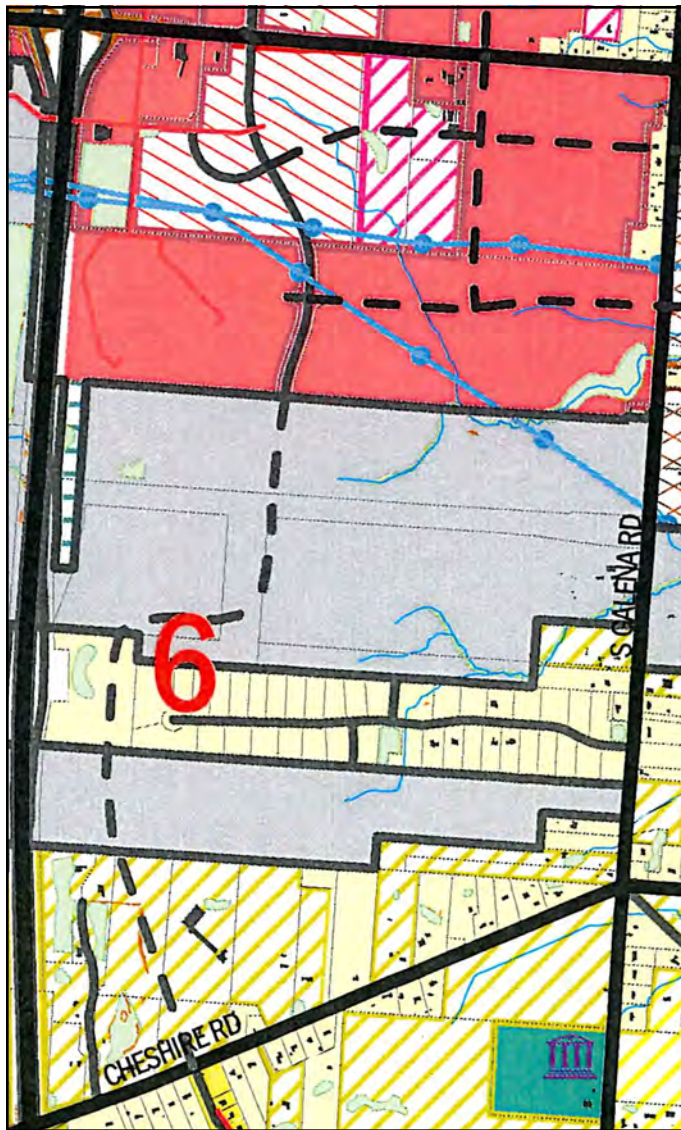
General Facts and Findings

This area is generally flat, with soils that are mostly suitable for development. These soils also are moderately high yielding croplands. Recent annexations to the Village of Sunbury and the preferred general location of the interchange improvement, as well as development of the Simon-Tanger Outlet Mall and South Wilson Road have opened the area to development. The northern part of the sub area is subject to the PMUD standards, with an approved Development Plan. Much of the area is already zoned Planned Commercial and Office.

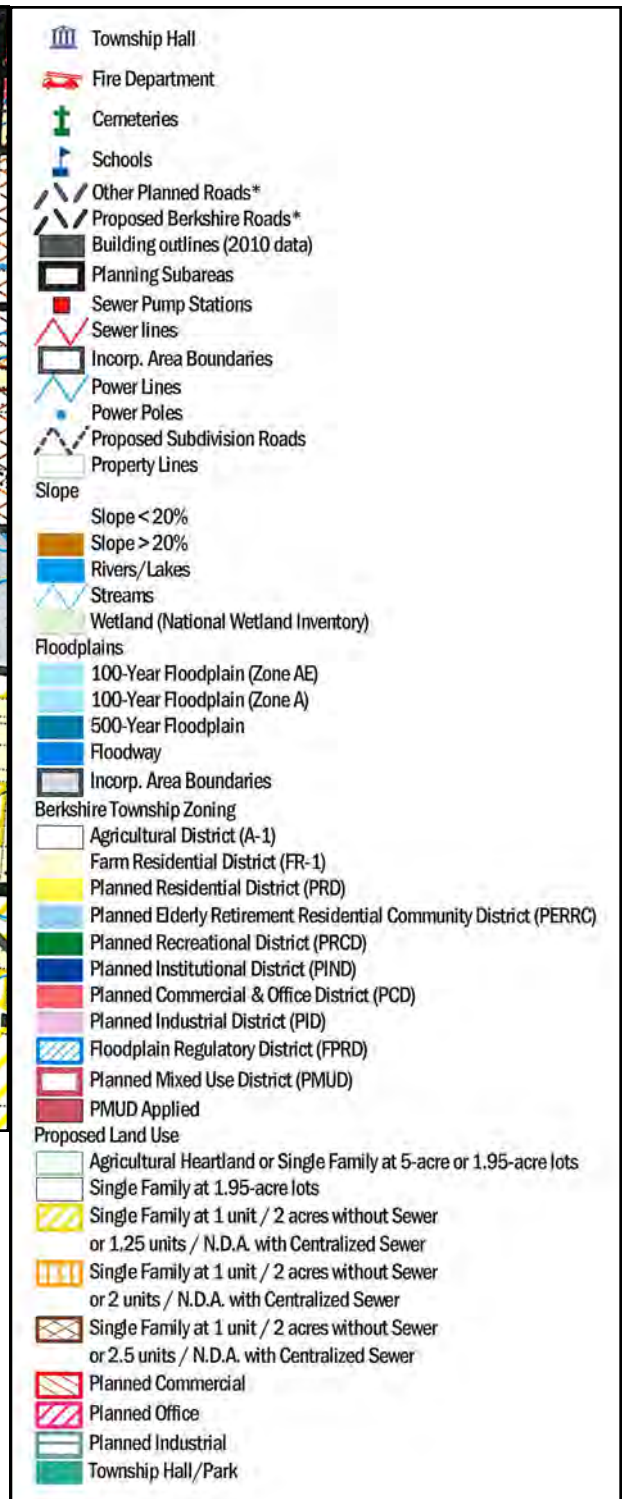
The principal limiting factor is the lack of public sanitary sewer. The current county sanitary sewer service area divides the sub area into east and west halves. The east half has no current sanitary sewer service. Sewer capacity to the west half is limited and will likely require an additional crossing of the Interstate property based on natural drainage. Land uses and existing development will affect how much capacity may be available when the land develops.

Recommendations

1. Lands already zoned Planned Commercial south of 36/37 should be developed with highway oriented commercial uses that pay significant property taxes and generate large sales taxes. These could be restaurants, office parks, highway service uses such as gas stations, or even regional commercial uses such as major grocery stores and big box retailers. Land is recommended to utilize the PMUD standards rather than the existing Planned Commercial zoning.
2. If the PMUD is used, multi-family units could be designed as part of a mixed-use town center design, if public water and public centralized sanitary sewer can be provided.
3. Berkshire Township should coordinate with the Village of Sunbury and the County Engineer to ensure Wilson Road is extended.
4. A road should be extended east from the intersection of South Wilson Road and Mall Road to provide access to the eastern portion of the sub area. A north-south arterial or collector road should be planned between Wilson Road and S. Galena Road. Direct access to 36/37 at that point will be right-in/right-out only, based on current ODOT Access Management Standards.
5. Parcels with access to U.S. 36 should be linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced, as approved by ODOT. Most access points should be right-in/right-out only, since a non-traversable median in U.S. 36 may someday be necessary.
6. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.
7. Only low level, downward-cast lighting should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory.
8. To avoid sign clutter, ground signs should be the only commercial sign type permitted along U.S. 36. Billboard and pole signs should be prohibited.
9. Very tall, 100-foot pole signs that draw highway oriented commercial traffic from the interstate exit should be discouraged in favor of advertising signs on ODOT exit service boards on the interstate. If such signs are allowed, they should have minimum spacing and a maximum distance from the interstate.
10. A Berkshire Township architectural and sign syntax should be developed.
11. Extensive landscaping should be required in parking lots to avoid a "sea of asphalt" and reduce runoff and temperatures. Use landscaping to divide parking areas with islands at reasonable spacing, at ends of rows, and along U.S. 36 frontage. A standard landscape detail should be adopted.
12. The portion of the subarea closest to Cheshire Road is recommended for single-family development at 1.95-acre lot size without sanitary sewer service. If public centralized sanitary sewer is provided, the Plan recommends single-family residential use at up to 1.25 dwelling units per net developable acre, or as regulated by the PMUD Overlay, where applicable. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning for these lands.



Detail of Sub Area 6



Sub Area 7

Boundaries: North: U.S. 36/S.R. 37; South Cheshire Road; East: Domigan Road; West: S. Galena Road

Land Area: 701.09 acres

General Facts and Findings

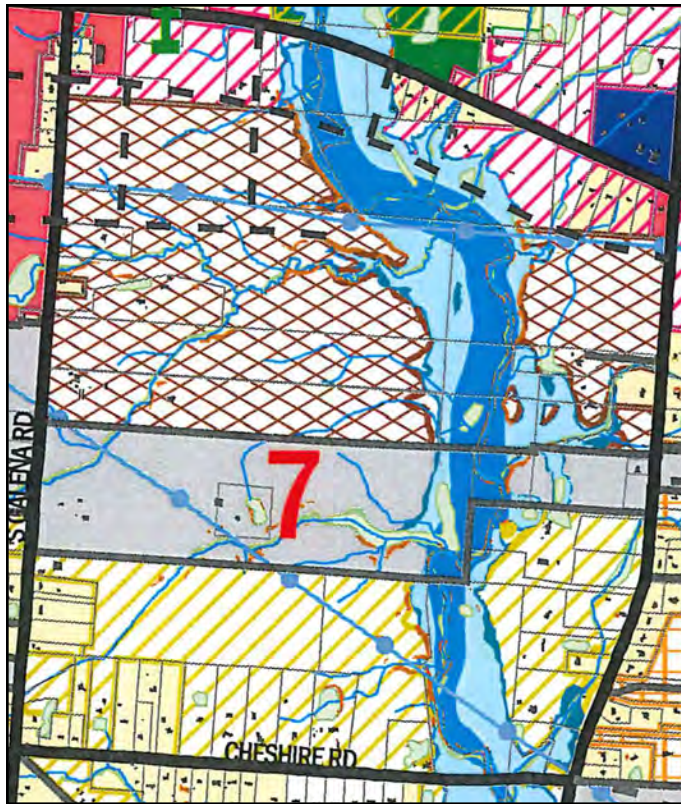
This area's dominant feature is the Little Walnut Creek and its wide floodplain. The sub area is veined with ravines and steep topography leading to the creek. Soils are moderately high yielding for agriculture uses. Some soils may be suitable for septic systems subject to on-site investigation of conditions. Two major high-tension power lines cross the sub area. There is no county sanitary sewer service to this area, but the County Sewer Master Plan indicates a potential lift station and force main to serve existing and proposed commercial areas along 36/37, which could open the area to new development. The southwest corner of 36/37 and Domigan Road has been zoned commercial but is still used as a residence.

Recommendations

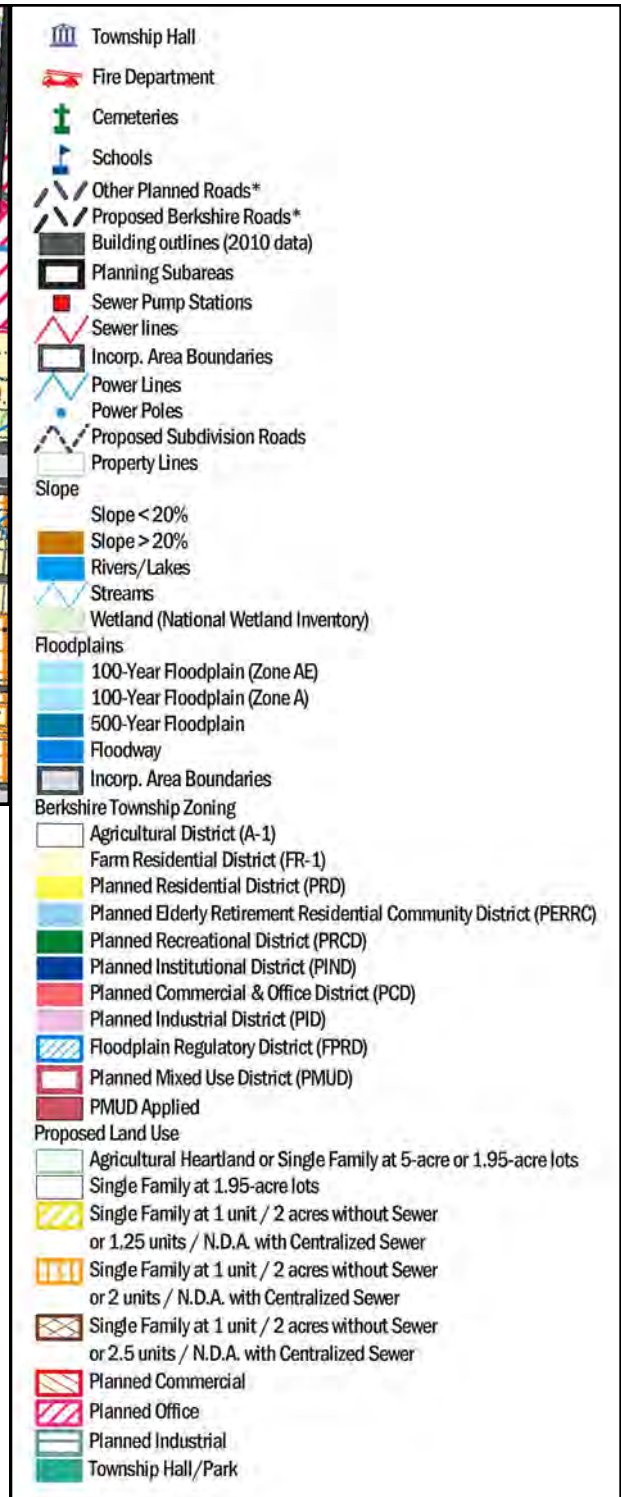
1. The frontage lots along the south side of 36/37 are recommended for eventual conversion to small professional offices. For new construction, access management will be key. For existing residences that convert to offices, driveways should be joined to reduce curb cuts whenever possible.
2. Parcels with access to U.S. 36 should be linked with

parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ½ mile spaced, as approved by ODOT. Most access points should be right-in/right-out only.

3. Only low level, downward-cast commercial lighting for offices should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory.
4. To avoid sign clutter, ground signs should be the only commercial sign type permitted along U.S. 36. Billboard and pole signs are prohibited.
5. The remainder of Sub Area 7 is recommended for single-family development at a 1-acre lot size for residential or agricultural uses without sewer. With sewer north of Sunbury at a density of 2.5 units per net developable acre and south of Sunbury at 1.25 units per net developable acre.
6. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning.
7. Protect the 100-year floodplain by prohibiting new residential structures within it.
8. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 7



Sub Area 8

Boundaries: North: Various property lines generally less than 1 mile south of the Kingston Township line; South: Genoa Township; East: Trenton Township; West: Domigan Road and the centerline of Alum Creek south of South Galena Road

Land Area: 3026.15 acres (excluding Sunbury and Galena)

General Facts and Findings

The dominant physical feature of this area is the confluence of the Little and Big Walnut Creeks and their wide floodplains at the Hoover Reservoir. The Villages of Sunbury and Galena also occupy much of this area. Both villages can offer some limited sanitary sewer service, which is not available in the Township. No county sewer service is immediately planned in this sub area; therefore, in-fill areas may desire to annex in order to obtain services.

One tract of 10 acres on the south side of U.S. 36 has been zoned planned commercial for Sunbury Storage. This is the kind of office or light commercial use that benefits from high profile placement on U.S. 36 but does not need urban services such as sewer.

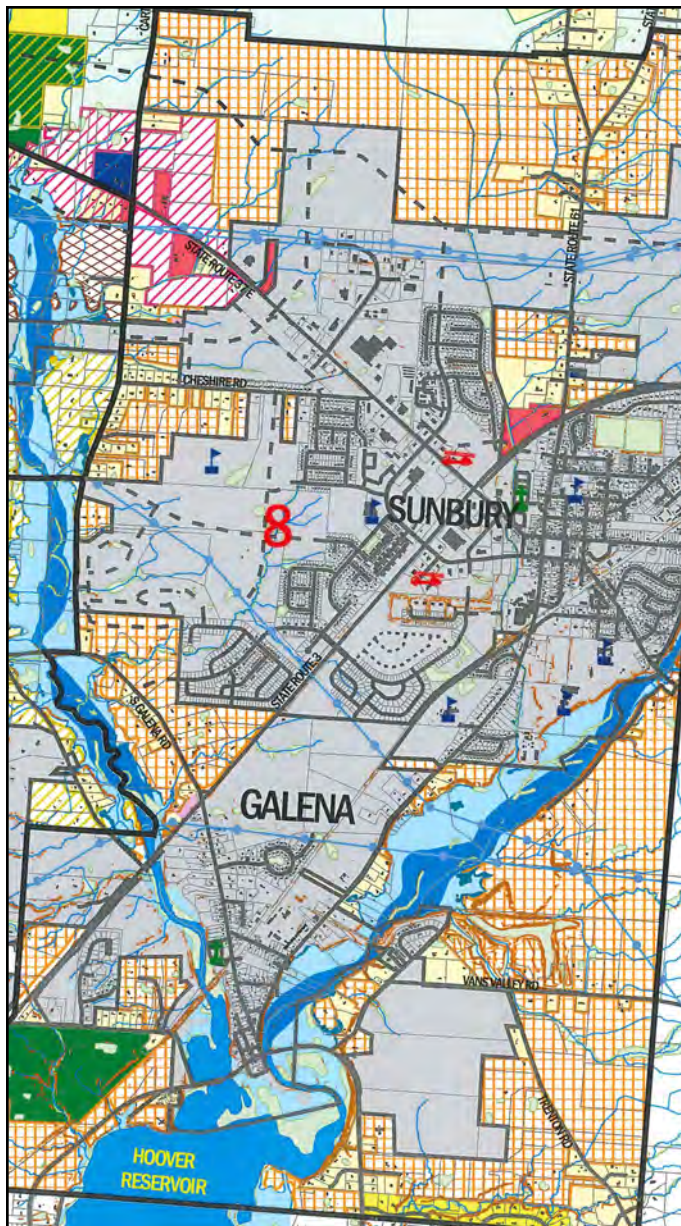
Lands east of the Big Walnut Creek are varied with sometimes-rugged topography including woods and a golf course. Soils are only moderate yielding for agriculture, due in part to steep topography on some tracts.

Recommendations

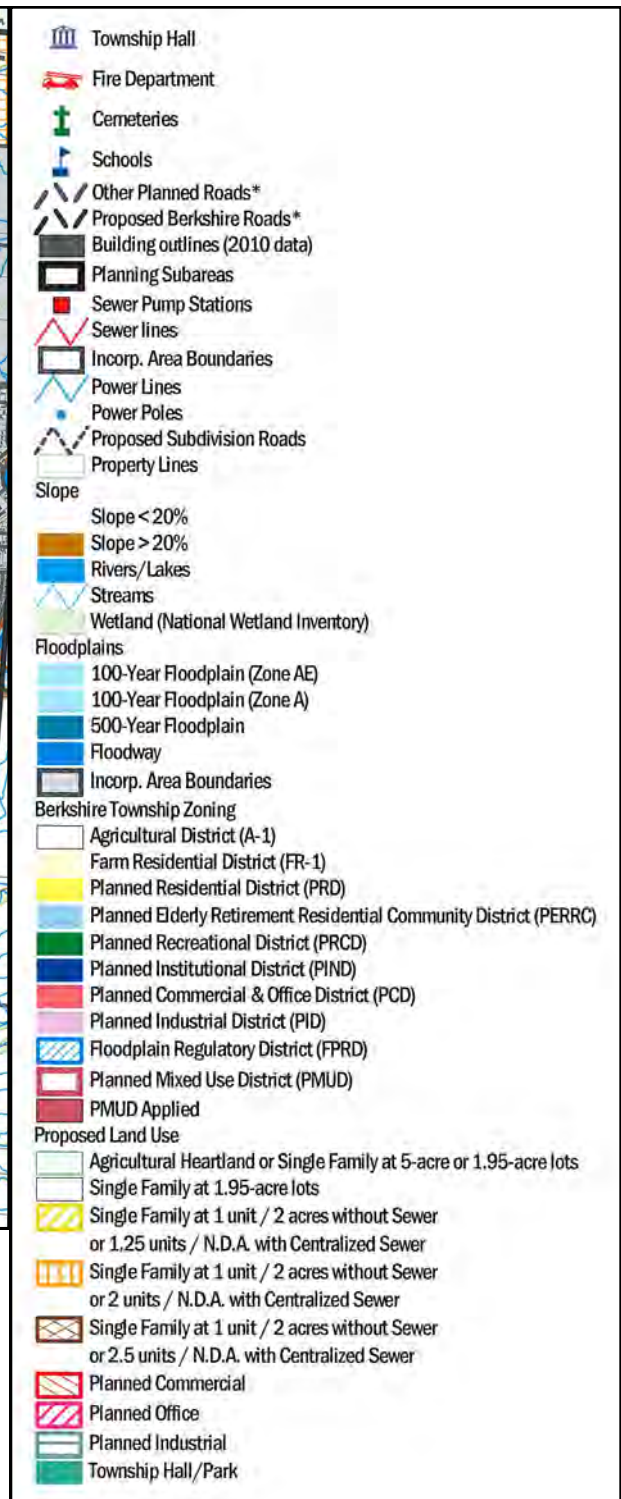
1. The frontage lots along the north and south sides of 36/37 are recommended for eventual conversion to professional offices. For new construction access management will be a key. For existing residences

that convert to offices, driveways should be joined to reduce curb cuts whenever possible.

2. Parcels with access to U.S. 36 should be linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced, as approved by ODOT. Most access points should be right-in/right-out only.
3. Only low level, downward-cast commercial lighting for offices should be allowed to prevent a halo effect on the night sky in deference to the Perkins Observatory.
4. To avoid sign clutter, ground signs should be the only commercial sign type permitted along U.S. 36. Billboard and pole signs are prohibited.
5. The remainder of Sub Area 8 is recommended for single-family development at 1-acre lot size without sanitary sewer service. If public centralized sanitary sewer is provided to this remainder of the sub area during the planning period, the Plan recommends single-family residential use at up to 2 dwelling units per net developable acre.
6. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning.
7. Protect the 100-year floodplain by prohibiting new residential structures within it.
8. Encourage Blackhawk Golf Course to continue in its current use.
9. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 8



Sub Area 9

Boundaries: North Cheshire Road; South: Genoa Township; East: Rome Corners Road; West: Berlin Township

Land Area: 2,167.22 acres

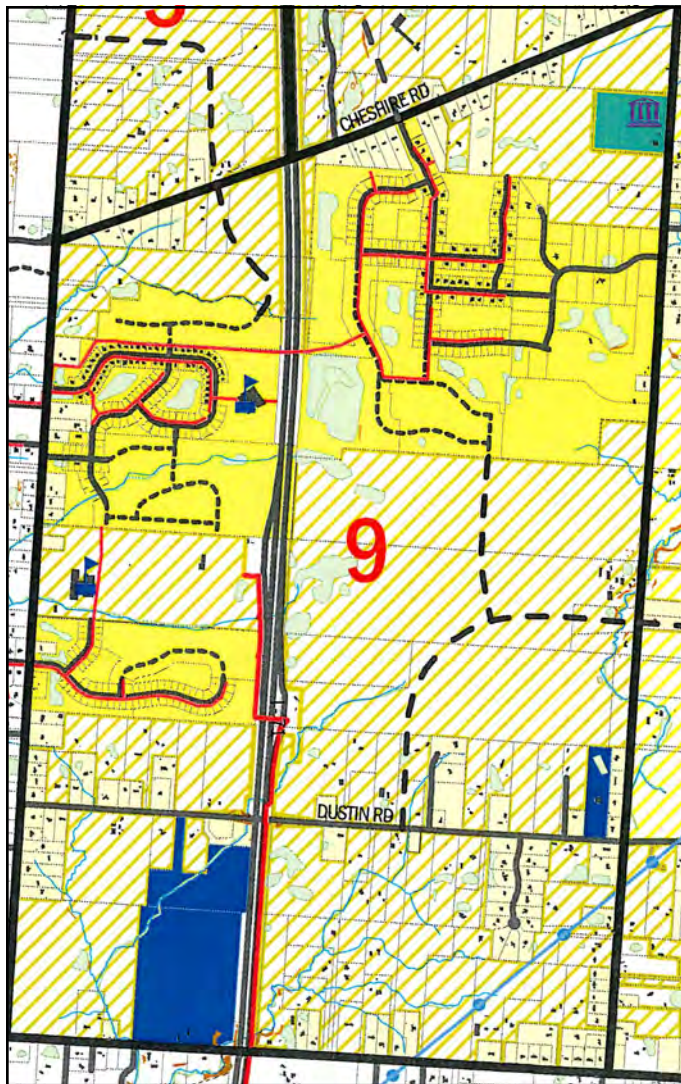
General Facts and Findings

These lands are quite flat and lie east and west of I-71. The soils may be acceptable for septic systems depending on site-specific conditions. Soils are moderately high yielding for agricultural use. This area still has many large tracts in active agriculture. Del-Co water is available, but county sanitary sewer is currently available to a limited area along 3 B's and K Road.

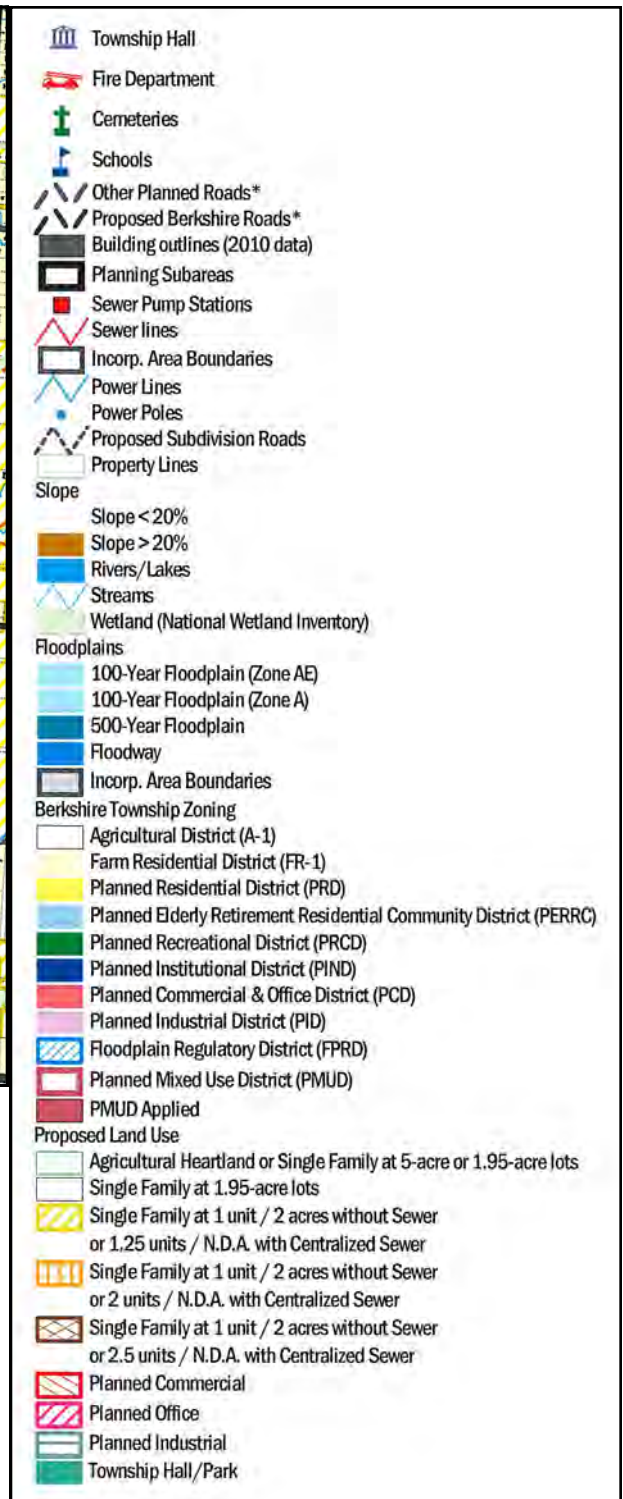
Most of the tracts in the southern portion of Sub Area 9 have been carved into 1-acre to 10-acre mini farms or residential lots. An 80-acre Planned Institutional zoning for a church west of I-71 appears to dominate the area, but in reality its impact will be very slight to the sub area, should it develop.

Recommendations

1. Encourage continued development of active park facilities on lands around the Township Hall (trails, baseball, soccer fields, etc.). Seek a trail connection to the Cheshire Woods/Cheshire Woods Estates development via Adlington Drive.
2. Undeveloped land in Sub Area 9 is recommended for continued agricultural use as long as property owners are interested in farming. When property owners are no longer interested in farming, the Plan recommends single-family development at a 1.95-acre lot size without sanitary sewer service. If public centralized sanitary sewer is provided to the sub area during the planning period, the Plan recommends single-family residential use at up to 1.25 dwelling units per net developable acre.
3. Encourage Open Space Developments and Conservation Subdivisions at the density of the underlying zoning.
4. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 9



Sub Area 10

Boundaries: North: Cheshire Road; South: Genoa Township; East: Little Walnut Creek, Domigan Road; West: Rome Corners Road

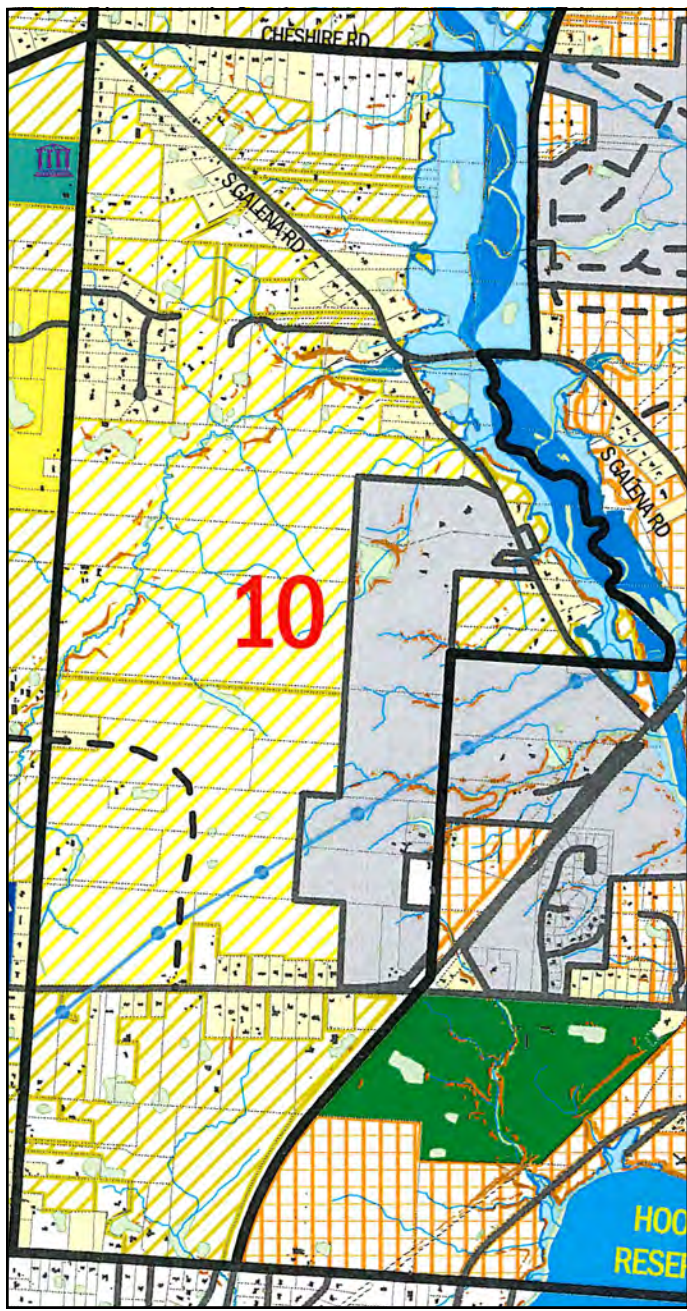
Land Area: 1,388.54 acres

General Facts and Findings

This area is characterized by rugged topography with many ravines leading to the reservoir, which is the dominant feature. The northern most extreme has been almost entirely subdivided into large lots along exiting road frontage. There are still large tracts in the center and south of the sub area. Soils are generally suitable for septic systems. Soils give moderate yields for agriculture. Del-Co water is available, but no county sanitary sewer is immediately planned. The area has had some 1-acre zonings for residential use but is still very low density.

Recommendations

1. Retain agriculture or single-family development at a 1.95-acre minimum lot size without sanitary sewer service. If public centralized sanitary sewer is provided to this sub area during the planning period, the Plan recommends Open Space Developments and Conservation Subdivisions at the density of the underlying zoning (1.95-acre lot size).
2. Undeveloped land in Sub Area 10 is recommended for continued agricultural use as long as property owners are interested in farming. When property owners are no longer interested in farming, the Plan recommends single-family development at a 1.95-acre lot size without sanitary sewer service. If public centralized sanitary sewer is provided to the sub area during the planning period, the Plan recommends single-family residential use at up to 1.25 dwelling units per net developable acre.
3. Protect the 100-year floodplain by prohibiting new residential structures within it.
4. Conceptual "Proposed Roads" shown on the map should be included and discussed as Development Plans are submitted for approval. Such roads provide connections between projects and serve to reduce the burden of additional traffic on existing roads.



Detail of Sub Area 10

- Township Hall
- Fire Department
- Cemeteries
- Schools
- Other Planned Roads*
- Proposed Berkshire Roads*
- Building outlines (2010 data)
- Planning Subareas
- Sewer Pump Stations
- Sewer lines
- Incorp. Area Boundaries
- Power Lines
- Power Poles
- Proposed Subdivision Roads
- Property Lines
- Slope**
 - Slope < 20%
 - Slope > 20%
 - Rivers/Lakes
 - Streams
 - Wetland (National Wetland Inventory)
- Floodplains**
 - 100-Year Floodplain (Zone AE)
 - 100-Year Floodplain (Zone A)
 - 500-Year Floodplain
 - Floodway
 - Incorp. Area Boundaries
- Berkshire Township Zoning**
 - Agricultural District (A-1)
 - Farm Residential District (FR-1)
 - Planned Residential District (PRD)
 - Planned Elderly Retirement Residential Community District (PERRC)
 - Planned Recreational District (PRCD)
 - Planned Institutional District (PIND)
 - Planned Commercial & Office District (PCD)
 - Planned Industrial District (PID)
 - Floodplain Regulatory District (FPRD)
 - Planned Mixed Use District (PMUD)
 - PMUD Applied
- Proposed Land Use**
 - Agricultural Heartland or Single Family at 5-acre or 1.95-acre lots
 - Single Family at 1.95-acre lots
 - Single Family at 1 unit / 2 acres without Sewer or 1.25 units / N.D.A. with Centralized Sewer
 - Single Family at 1 unit / 2 acres without Sewer or 2 units / N.D.A. with Centralized Sewer
 - Single Family at 1 unit / 2 acres without Sewer or 2.5 units / N.D.A. with Centralized Sewer
 - Planned Commercial
 - Planned Office
 - Planned Industrial
 - Township Hall/Park

Future Berkshire Township Population at Build-Out

The 2017 projected population of Berkshire Township is 3,310. The future population at build-out depends largely on how much public, centralized sanitary sewer service there is in the Township. Some areas of the Plan call for 1.95-acre lot size without sanitary sewer or approximately 1.25 dwelling units per net developable acre with sewer. Other Sub Areas indicate development at 2 units per acre and 2.5 units per acre, as well as specific unit counts around the Interchange. Under a full build-out scenario, the Township population could eventually be 20,936.

The character of the Township will continue to reveal itself as the Plan is implemented. As time passes and new factors influence the validity of its vision, the Township will have to revisit its Plan and its vision to consider whether changes need to be made.

Berkshire Township Build-Out Analysis by Sub Area

Planning Sub Area	1	2	3	4	5	6	7	8	9	10	Total
Gross Acreage (excluding incorporated areas)	416.15	786.73	970.63	1,183.70	370.59	631.04	701.08	3,026.15	2,167.22	1,388.54	11,641.83
*Estimated Current Housing Units (to 6/2017)	18	40	89	51	31	68	46	249	447	156	1,195
Population Index	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	
Estimated Current Population (6/2017) - A	50	111	247	141	86	188	127	690	1,238	432	3,310
Recorded Vacant Lots (SF)	-	1	63	2	2	2	-	19	72	5	166
Proposed Residential Lots (SF+MF)	90	-	519	-	-	-	-	6	265	-	880
Rezoned SF Lots (no proposed plats)	-	2	-	9	-	39	-	4	25	-	79
Total Housing Units Increased (SF+MF)	90	3	582	11	2	41	-	29	362	5	1,125
Population Increased - B	249	8	1,612	30	6	114	-	80	1,003	14	3,116
Net Developable Acreage (NDA)	162.82	272.03	126.28	773.50	174.21	247.24	396.80	1,075.05	676.39	622.25	4,526.57
HU Increased after NDA overlay with Density	302	140	26	156	154	50	858	2,017	767	768	5,238
New Population Increase - C	837	388	72	432	427	139	2,377	5,587	2,125	2,127	14,509
Total Build-Out Population (A+B+C)	1,136	507	1,931	604	518	440	2,504	6,357	4,366	2,573	20,936

Gross Acreage for Incorporated Areas: Sunbury: 3050.83; Galena: 1085.52

NOTES:

*Based on Delaware County Auditor's GIS Office address point data dated 6/30/2017

CHAPTER 15

Implementation

Recommended Zoning Amendments

1. Adopt access management policies for all township roads, make a condition of Development Plan approval for Planned Developments, and curb cut permits from township road superintendent.
2. Require traffic studies for any use that generates more than 100 new trips per day, or as determined by the proposed Delaware County Traffic Impact Standards. Require developer to mitigate his traffic impact as necessary. Establish a level of service (LOS) C as the desired level of service.
3. Use the Comprehensive Plan as the guide where new roads need to be built, and negotiate their provision as part of development of new super blocks of land.

Secure the right-of-way as part of the subdivision plat or by acquisition.

4. Adopt NRPA standards for recreational areas and secure the donation and/or construction of useable open space by developers of major new residential subdivisions (30 homes or more).
5. Require linkage of new neighborhoods with trails and by greenways along natural streams. Add greenway criteria to the zoning resolution, count its area as open space. Adopt a standard for the make-up of trails.

Non Zoning-Related Actions

1. Acquire 50 acres of land for a future township park.

APPENDIX A

Activity / Facility	Recommended Space Requirements	Recommended Size and Dimensions	Recommended orientation	No. of units per Population	Service Radius	Location Notes
Badminton	1620 sq. ft.	Singles - 17' x 44' Doubles – 20' x 44' with 5' unobstructed are on all sides	Long axis north-south	1 per 5000	¼ - ½ mile	Usually in school, recreation center, or church facility. Safe walking or bike access
Basketball Youth High School Collegiate	2400-3036 sq. ft. 5040-7280 sq. ft. 5600-7980 sq. ft.	40'-50' x 84' 50' x 84' 50' x 94' with 5' unobstructed space on all sides	Long axis north-south	1 per 5000	¼ - ½ mile	Same as badminton. Outdoor courts in neighborhood and community parks, plus active recreation areas in other park settings
Handball (3-4 wall)	800 sq. ft. for 4-wall, 1000 sq.ft. for 3-wall	20' x 40' – minimum of 10' to rear of 3-wall court. Minimum 20' overhead clearance	Long axis north-south. Front wall at north end	1 per 20,000	15-30 minute travel time	4-wall usually indoor as part of multi-purpose facility. 3-wall usually outdoor in park or school setting
Ice Hockey	22,00 sq. ft. including support area	Rink 85' x 200' (minimum 85' x 185') Additional 5000 sq. ft. support area	Long axis north-south if indoor	Indoor - 1 per 100,000 Outdoor - depends on climate	½ - 1 hour travel time	Climate important consideration affecting no. of units. Best as part of multi-purpose facility
Tennis	Minimum of 7,200 sq. ft. single court (2 acres for complex)	36' x 78' 12' clearance on both sides 21' clearance on both ends	Long axis north-south	1 court per 2000	¼ - ½ mile	Best in batteries of 2-4. Located in neighborhood/ community park or adjacent to school site
Volleyball	Minimum of 4,000 sq. ft.	30' x 60'. Minimum 6' clearance on all sides	Long axis north-south	1 court per 5,000	¼ - ½ mile	Same as other court activities (e.g. badminton, basketball, etc.)
Baseball Official Little League	3.0 – 3.85 acre minimum 1.2 acre minimum	Baselines-90' Pitching distance-60 ½' Foul lines-min. 320' Center field – 400'+ Baselines-60' Pitching distance – 46' Foul lines – 200' Center field – 200'-250'	Locate home plate so pitcher throwing across sun and batter not facing it. Line from home plate through pitcher's mound run east-north-east	1 per 5000 Lighted – 1 per 30,000	¼ - ½ mile	Part of neighborhood complex. Lighted fields part of community complex
Field Hockey	Minimum 1.5 acres	180' x 300' with a minimum of 10' clearance on all sides	Fall season - long axis northwest to southeast For longer periods, north to south	1 per 20,000	15-30 minute travel time	Usually part of baseball, football, soccer complex in community park or adjacent to high school
Football	Minimum 1.5 acres	160' x 360' with a minimum of 6' clearance on all sides.	Same as field hockey	1 per 20,000	15-30 minute travel time	Same as field hockey
Soccer	1.7 to 2.1 acres	195' to 225' x 330' to 360' with a minimum clearance on all sides.	Same as field hockey	1 per 10,000	1-2 miles	Number of units depends on popularity. Youth soccer on smaller fields adjacent to schools or neighborhood parks.

Activity / Facility	Recommended Space Requirements	Recommended Size and Dimensions	Recommended orientation	No. of units per Population	Service Radius	Location Notes
Swimming Pools	Varies size of pool and amenities. Usually ½ to 2 A site	Teaching - minimum of 25 yards x 45' even depth of 3 to 4 feet. Competitive - minimum of 25m x 16m. Minimum of 27 sq. ft. of water surface per swimmer. Ratios of 2:1 deck vs. water.	None - although care must be taken in siting of lifeguard stations in relation to afternoon sun.	1 per 20,000 (Pools should accommodate 3 to 5% of total population at a time.)	15 to 30 minutes travel time	Pools for general community use should be planned for teaching, competitive, and recreational purposes with enough depth (3.4m) to accommodate 1m and 3m diving boards. Located in community park or school site.
Beach Areas	N/A	Beach area should have 50 sq. ft. of land and 50 sq. ft. of water per user. Turnover rate is 3. There should be 3.4 A supporting land per A of beach.	N/A	N/A	N/A	Should have sand bottom with slope a maximum of 5% (flat preferable). Boating areas completely segregated from swimming areas.
Golf - Driving Range	13.5 acres for minimum of 25 tees	900' x 680' wide. Add 12' width for each additional tee	Long axis south-west. Northeast with golfer driving toward north-east.	1 per 50,000	30 minutes travel time	Part of golf course complex. As a separate unit, may be privately operated.
¼ Mile Running Track	4.3 acres	Overall width – 276' Length – 600.02' Track width for 8 to 4 lanes is 32'.	Long axis in sector from north to south to north-west-south-east with finish line at northerly end	1 per 20,000	15-30 minutes travel time	Usually part of high school or in community park complex in combination with football, soccer, etc.
Softball	1.5 to 2.0 acres	Baselines – 60' Pitching distance – 46' min. 40' – women Fast pitch field radius from plate – 225' between foul lines. Slow pitch – 275' (men) 250' (women)	Same as baseball	1 per 5,000 (if also used for youth baseball)	¼ - ½ mile	Slight difference in dimension for 16" slow pitch. May also be used for youth baseball.
Multiple Recreation Court (baseball, volleyball, tennis)	9,840 sq. ft.	120' x 80'	Long axis of courts with <i>primary</i> use is north-south	1 per 10,000	1-2 miles	
Trails	N/A	Well defined head maximum 10' width, maximum average grade 5%, not to exceed 15%. Capacity rural trails – 40 hikers/day/mile. Urban trails – 90 hikers/day/mile.	N/A	1 system per region	N/A	
Archery Range	Minimum 0.55 acres	300' length x minimum 10' wide between targets. Roped clear space on sides of range minimum of 30', clear space behind targets minimum of 90' x 45' with bunker.	Archer facing north + or - 45°	1 per 50,000	30 minutes travel time	Part of a regional / metro park complex

Activity / Facility	Recommended Space Requirements	Recommended Size and Dimensions	Recommended orientation	No. of units per Population	Service Radius	Location Notes
Combination Skeet and Trap Field (8 station)	Minimum 30 acres	All walks and structures occur within an area approximately 130' wide by 115' deep. Minimum cleared area is contained within two superimposed segments with 100-yard radii (4 areas). Shot-fall danger zone is contained within two superimposed segments with 300-yard radii (36 acres)	Center line of length runs northeast-south-west with shooter facing northeast.	1 per 50,000	30 minutes travel time	Part of a regional / metro park complex
Golf Par 3 (18 hole) 9 Hole standard 18 hole standard	50-60 A Minimum 50 A Minimum 110 A	Average length –vary 600-2700 yards Average length – 2250 yards Average length – 6500 yards	Majority of holes on north-south axis	1/25,000 1/50,000	¼ to 1 hour travel time	9 hole course can accommodate 350 people/day. 18 hole course can accommodate 500-550 people/day. Course may be located in community or district park, but should not be over 20 miles from population center.

APPENDIX B

