

Berlin Township

Comprehensive Land Use Plan



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Delaware County
Regional Planning Commission

Adopted

Date

Background information in this Comprehensive Plan was compiled and presented between May 2021 and February 2022. Data was current as of the date it was presented, or as noted, although some tables have been updated throughout the process.

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Executive Summary

Berlin Township was the fourth-fastest growing township from 1990-2000, and the third fastest from 2000-2010 in percentage of growth in the fastest growing county in Ohio. After a 67% growth rate from 1990-2000, the rate jumped to 96% for 2000-2010. The decade 2010 to 2020 saw a growth rate of 19.7%. However, based on activity within the last two years, DCRPC projects the township grew another 7.3% between 2020 and 2022.

Berlin's neighbor to the south, Orange Township, has grown at a decade rate of 229% in the 1990s, 78% in the 2000s, and 28% in the 2010s. This growth wave is pushing north along the sanitary sewer line on South Old State Road, changing agriculture into suburban residential development.

Berlin Township 2022 – Land Use Facts and Issues:

1. Developers have annexed 8.15% of the Township (or 1,366 acres) has been annexed into the City of Delaware.
2. Population grew from 1,978 in 1990 to 3,315 in 2000 for an increase of 67%. Population grew to 6,496 in 2010 for an increase of 96% and to 7,774 in 2020 for an increase of 19.7%.
3. From 2000 to 2010 there were 758 new house lots zoned, 415 new multi-family units zoned, and 231 new acres of commercial and industrial ground zoned.
4. Since 2010, there have been 3,698 new single-family lots zoned, 306 multi-family units zoned (all single-family condos), and 354 acres of commercial and industrial ground zoned.
5. The year 2016 represented a large part of this change, with 1,234 future single-family lots and 314 acres of commercial in Evans Farm and 425 lots in the adjacent "Peachblow Land" rezoning.
6. The current housing mix indicates that Single-Family lots represent 92% of the housing units while Multi-Family represents 8% (including single-detached condos).
7. There is a 13-year supply of house lots in the subdivision process in the County.
8. The township saw 2,625 acres rezoned since 2010. The only area with large tracts of agriculture are along US 36/SR 37.
9. Traffic continues to be a significant problem, at certain locations during certain times of the day. Various road improvements have been completed recently, including roundabouts at Glenn Road/Berlin Station, Cheshire Road/Lackey Old State, Cheshire Road/Piatt Road, Cheshire Road/3 Bs K, and Piatt Road/Berlin Station; the Piatt Road extension; a segment of North Road at Peachblow, the Four Winds Drive relocation, and various widenings at Africa, Cheshire, and Gregory Roads.
10. There is a commitment to and interest in more open space, environmental protection, and recreational amenities.

11. Berlin Township has significant natural beauty in its ravines and other natural land around the Alum Creek Reservoir. These natural features need to be protected.
12. There are 3,147 housing units within the boundaries of Berlin Township. Of the total, 2,895 or 92%, are single family homes and 252 are multi-family housing units (including single-family detached condos).
13. Economic conditions are comparatively good in Berlin Township and Delaware County. The current county unemployment rate in the county is 2.4%, with the state of Ohio at 3.6%. As of August, 2022, the Columbus housing market is ranked tenth in the nation based on the number of days it take to sell a home. Median income in the county (2020) is the state's highest at \$104,322 for household income and \$122,435 for family. Intel announced plans to construct semiconductor chip plants in New Albany, which promises to usher in thousands of jobs with an average salary of \$135,000, plus thousands more indirect jobs in surrounding areas.
14. The Polaris area has been a huge job and traffic generator. It has boosted Delaware County and the city of Columbus but continues to impact Berlin Township with school-related growth and increased traffic.
15. In late 2020, the Berlin Business Park was zoned through two overlays, impacting just under 1,900 acres in the northern part of Berlin Township. The overlay will provide a variety of limited uses, depending on location, including light industrial, professional, search, office, commercial, and multi-family uses. Delaware County is moving forward with a sanitary sewer pump station near Lackey Old State and Del-Co is planning on constructing a water tower at the same location.
16. Township collector roads were built in the 1800s for farm-to-market use and are often too narrow for today's traffic. Some township collector roads have been widened and some key intersections have been improved, and narrow roads are considered part of the scenic character, as long as they are safe.
17. U.S. 23 is a major four-lane highway that is losing its ability to move through-traffic as it becomes a commercial frontage road. Access management principles that limit curb cuts can help prevent the deterioration of this important highway.
18. ODOT's Access Management Plan for U.S. 36/S.R. 37 continues to guide future planning for the location of backage roads and signalized intersections.
19. There is adequate potable water supplied by the Del-Co Water Company, but summertime lawn watering taxes its ability to maintain treatment and pressure. A year-round alternate-day watering ban was instituted in July 1999 and continues to be in effect.
20. Except for a few locations where topography is a limiting factor, sanitary sewer service will eventually be available for the entire township. Sewer design densities are typically between 1.5 and 1.85 housing units per acre.

21. The Olentangy School system is adding approximately 1,000 new students every year. Regular levies are being passed for operations and new construction, but the pace of growth is an ongoing concern for the district. Olentangy maintains an excellent academic record for student proficiency test scores. Since the previous plan, Cheshire Elementary was completed on Gregory Road, Olentangy Berlin High School was completed on Berlin Station Road, and Berlin Middle School was completed just north of Cheshire Elementary. In addition, Shale Meadows Elementary was completed on North Road at Peachblow, and Berkshire Middle School was completed just east, in Berkshire Township on 3 Bs and K Road. Only two of these schools was referenced as future facilities in the previous plan.
22. A future school site is located on Sweeney Road and Berlin Station Road. Future development proposals and the transportation network should consider these future facilities in their planning.
23. The Village of Cheshire represents an opportunity for economic growth, attracting visitors to the state park and becoming an identifiable center of the township.
24. There is some township parkland at the new fire station, and Alum Creek State Park provides passive open space and recreation. There is a need for active recreation such as baseball and soccer fields, as well as other recreational activities that should be determined by ongoing work of the township's parks committee.
25. There is a desire to see more trails and bikeways both for recreational purposes and for alternative transportation. A specific goal is the placement of a path along Piatt and Cheshire Roads, although any improvements to existing roads and all new subdivisions should consider sidewalks and bike/pedestrian facilities.

Chapter 1

Introduction

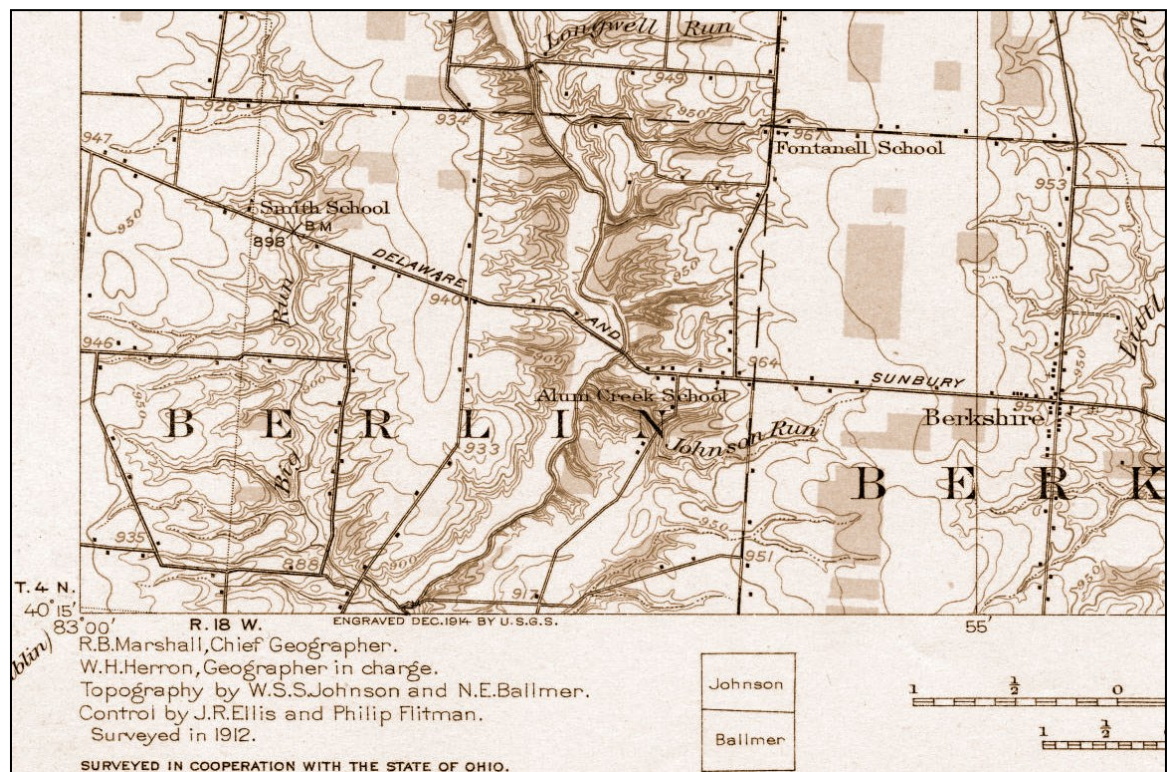
Berlin Township

- A brief history adapted from "History of Delaware County and Ohio," 1880

Beginnings

Township 4, Range 18, of the United States Military Survey, was divided between the townships of Berkshire, Delaware and Liberty from 1806 to 1820. In 1806, Sections 1 and 4 were, with the rest of Berkshire Township, as it then was, erected into a township. This was the shape of Berlin when the first settlers came here. Col. Byxbe owned Section 1 of the fourth township in Range 18, a fact which probably accounts for the strange division of townships when Berkshire was laid off, and it was not until January 8, 1820, that Berlin Township was erected, taking sections from Berkshire, Delaware, and Liberty Townships. The township has two centralized communities, the one about Cheshire, a small hamlet on Alum Creek, and Berlin Station, on the railway.

The first purchaser of land was Joseph Constant, of Peekskill, NY, paying two dollars per acre, and receiving a deed signed by John Adams. In the Berlin settlement there were some who bought as much as 1,000 acres of land, others 250 and 100 acres of hind, but all were on the same level of social equality. There was a novelty at first which dispelled discontent, and, later, the pressing duties of the settlement gave it no place. All wore the same kind of home-made clothing, made in the cabin from the flax of their own growing.



At the end of the first decade of Berlin's history there were about forty families in the township. About twenty of these had come from Waterbury, Conn., and settled on the Constant purchase in the southeast part of the township.

The first school in this township was taught by Joseph Eaton, in a cabin which stood west of Alum Creek, and a half or three-quarters of a mile north of the old Baptist meeting-house. The second was taught by Lucy Caulkins, in a cabin near where the block-house stood, about 1810. The children of that day were not different from those of to-day. Full of mischief, they watched the teacher's eye, and were on furtive mischief bent at all times.

- Adapted from "History of Delaware County and Ohio," 1880

Why Plan?

City and community planning in the United States is a fairly recent effort, with a foundation in the City Beautiful movement at the turn of the 20th Century. At that time, open space was seen as a deliverance from the stuffy, overcrowded, and disease-filled tenements of American cities in the late 1800s. The City Beautiful movement used parks and public open spaces as centerpieces of the future city, oases of respite from the typical hustle and bustle.

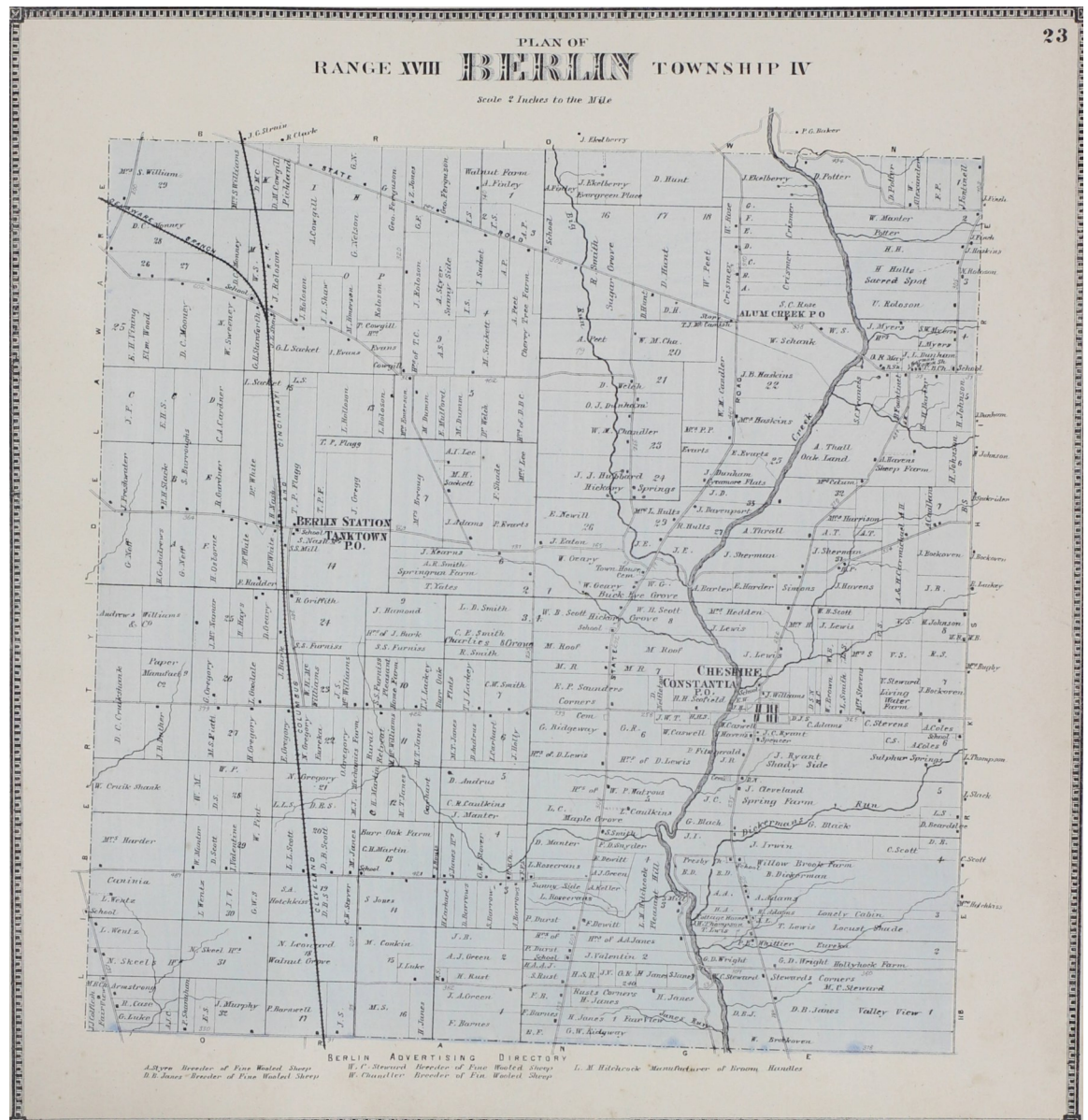
The intent of the city planning movement was to plan for the future. In some communities, there was a plan, which was the basis for the zoning map and resolution. However, in most communities, zoning itself was seen to be the plan. Zoning was tested immediately and found to be an appropriate legislative power.

Ohio has never taken the additional step to *require* land use planning as a mandatory underpinning of zoning or other land use controls. It is recommended by the American Planning Association, and the American Institute of Certified Planners. It is suggested by the Ohio Revised Code (ORC), and it is bolstered by Ohio and United States Supreme Court cases that a comprehensive plan strengthens a community's police power to zone and control its growth.

How Planning Relates to Zoning and the Community Vision

By Ohio law (Ohio Revised Code 519.05) it is the duty of the zoning commission to submit a plan, both text and maps, to the Trustees to control land use and as a basis for zoning.

The Berlin Township Zoning Commission convened on March 10, 2009 for the purpose of updating the 1999 Berlin Township Land Use Plan. That plan was adopted in 2010. In early 2022, the Zoning Commission convened for the purposes of updating the 2010 plan to conform to recent change in the Township. These changes included significant residential development and rezonings, as well as the creation of the Berlin Business Park.



Source: "The Atlas of Delaware County, Ohio" by F.W. Beers, 1866

Updating the Comprehensive Plan

The Berlin Township Zoning Commission convened on March 8, 2022 for the purpose of beginning an update to its 2010 Comprehensive Land Use Plan. By Ohio law (ORC 519.05) it is the duty of the Zoning Commission to submit a plan, both text and maps, to the Trustees to control land use and as a basis for zoning.

The Berlin Township Comprehensive Land Use Plan (update) is intended to:

1. Review recent changes in land use, population, utility services, roads, and boundaries;
2. Review recent changes in economic, legislative, judicial, and regulatory conditions;

3. Review previous goals and policies; judge whether they are still representative of the community's values and vision of its future, and if the goals and policies conform to current federal and state land use legislation and court decisions;
4. Amend goals and objectives for future growth;
5. Create a revised text and map for the recommended land use on a site-specific basis to guide future growth;
6. Recommend amendments to local zoning, and development policies to assure that the Township will be what it has envisioned.

The Comprehensive Plan is policies, goals, and a recommended land use map for the future development of the Township. After the adoption of the Comprehensive Plan, the Township could amend their zoning code, as needed, to implement its recommendations.

The Comprehensive Land Use plan is intended to be the township's vision for the next five to ten years. It is based upon economic and environmental conditions, availability of utilities, adequacy of roads, and the values of the township regarding density of housing and the look of the community when completely developed. It makes site-specific land use recommendations for each parcel in the township. It is subject to review and possible amendment whenever requested by a landowner, or as part of a potential rezoning.

How Digital Information Affects the Township's Ability to Plan

The Delaware County Auditor maintains a Geographic Information System (GIS) for the primary purpose of accurately mapping tax parcels. DCRPC maintains various layers to add to this system. The system is a very accurate computer-mapping format offering tabular and graphic real estate data about each of more than 90,000 tax parcels. It has a cadastral (property line) layer and topography layer. In addition, the office has created soil maps and digital ortho imagery with structure outlines.

Maps can be created with accuracy to a scale of 1 inch = 100 feet. Planners may view each parcel individually at any scale. This allows the DCRPC to make a Comprehensive Land Use Plan that is site-specific. Parcel data provided by the County Auditor forms the foundation of the GIS system. The software used is ArcMap and ArcInfo by ESRI.

Chapter 2A

Population & Demographics

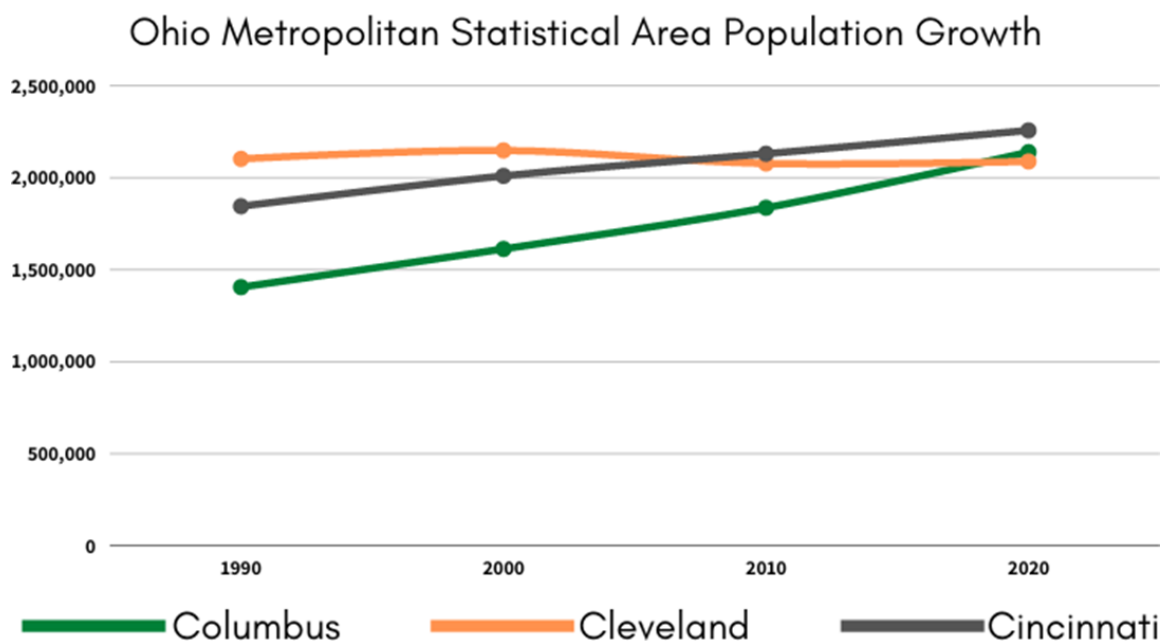
Delaware County

Regional Population

The Columbus Metropolitan Statistical Area (MSA) is the fastest growing MSA in the state of Ohio. Over the last 30 years, the Columbus MSA has added over 733,000 people; a 50% increase in population since 1990. Comparatively, Cleveland has lost about half a percent, while Cincinnati has gained just over 22%. This difference is most notable when looking at the population changes between the 2010 and 2020 decennial census, where Columbus gained 16.4% of its population (302,390 people) compared to Cleveland's 0.5% growth (11,011 people) and Cincinnati's 5.9% growth (126,733 people).

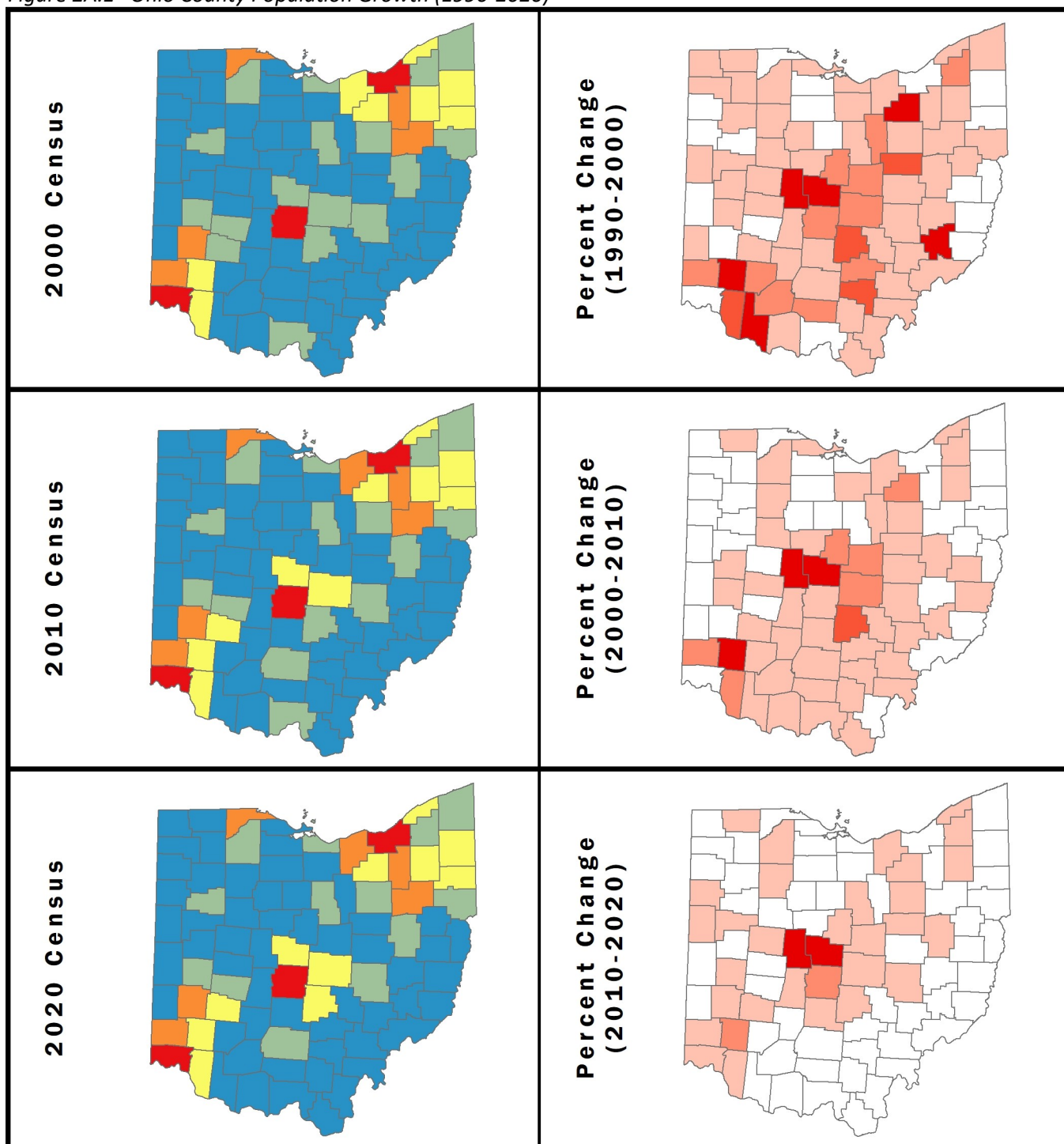
During those three periods of change (1990 to 2000, 2000 to 2010, and 2010 to 2020), Delaware County was the fastest growing, by percentage of population, in the State of Ohio. In 1990, Delaware County had a population of 66,929, and has increased to 214,124 people in 2020; an increase of 219%.

Figure 2A.1 Central Ohio Growth Rates (2010-2018)



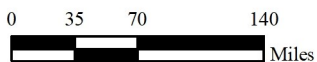
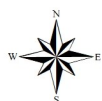
*ACS 5-Year Estimates: Total Population, Age & Sex

Figure 2A.1 Ohio County Population Growth (1990-2020)

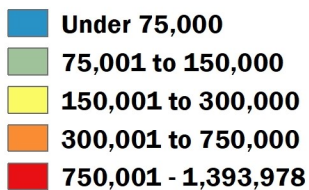


Population Growth (1990-2020)

Delaware County



Population



Percent Growth



Prepared by: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org (3/5/2021)

Figure 2A.3 Population Growth in Central Ohio Relative to Fastest Growing Ohio Counties (2000-2018)

County	2010 Population	2020 Population	Difference/ Percent Change	Rank
By Volume				
Franklin County	1,163,414	1,323,807	160,393	1
Delaware County	174,214	214,124	39,910	2
Warren County	212,693	242,337	29,644	3
Hamilton County	802,374	830,639	28,265	4
Butler County	368,130	390,357	22,227	5
By Percent Change				
Delaware County	174,214	214,124	22.9%	1
Union County	52,300	62,784	20.0%	2
Warren County	212,693	242,337	13.9%	3
Franklin County	1,163,414	1,323,807	13.8%	4
Fairfield County	146,156	158,921	8.7%	5

**Source: 2010 and 2020 Decennial Census*

Figure 2A.4 Central Ohio Intra-Migration (2015-2019)

Central Ohio Migration Patterns		Destination								
		Delaware County	Fairfield County	Franklin County	Licking County	Madison County	Pickaway County	Union County	Gross Out Migration	Net Out Migration
Origin	Delaware County	-	310	4,662	278	48	16	480	5,794	-
	Fairfield County	281	-	2,488	1,140	0	150	13	4,072	-
	Franklin County	6,478	4,110	-	4,133	1,175	1,723	1,688	19,307	4,671
	Licking County	271	362	3,080	-	120	57	41	3,931	-
	Madison County	4	90	477	0	-	222	153	946	-
	Pickaway County	13	570	1,333	13	371	-	16	2,316	132
	Union County	315	0	1,102	0	111	16	-	1,544	-
	Gross In Migration	7,362	5,442	13,142	5,564	1,825	2,184	2,391	37,910	-
	Net In Migration	1,568	1,370	-	1,633	879	-	847	-	-

Similarly, in the last ten years, Delaware County and Franklin County were the only two counties to be in the top 5 Ohio counties for growth in both volume and percentage of population in 2010, while both Union County and Fairfield County—other Central Ohio counties—were also in the top 5 Ohio counties in growth by percent change. These factors all indicate that Central Ohio is continuing to grow and add population, and should continue to do so in the future.

Migration Patterns & Demographics

Migration patterns between 2015 and 2019 show that Delaware County is the primary destination for residents moving out of Franklin County with about 34% of people moving out of Columbus—but staying in Central Ohio – choosing Delaware County as their new home. In fact, of all Central Ohioans choosing to relocate to Delaware County, 88% (6,478 people) are relocating from Franklin County.

In 2000, the three most common age groups were 35 to 39 years, 40 to 44 years, and 45 to 49 years; constituting a combined 27.4% of Delaware County’s population. By 2010, the primary demographic changed slightly. The 35 to 39 years and 40 to 44 years age ranges remained two of the three most common, however, the 5 to 9 year age range increased to 9% of the population, becoming the third most prevalent. These age ranges all remained relatively constant, with the 40 to 44 years age cohort shifting to 45 to 49 years.

The fluctuation in age ranges could be related to the intra-migration patterns seen in Table 2A.3. Residents of Central Ohio with children are relocating to Delaware County schools.

Figure 2A.5 Central Ohio Inter-migration (2015-2019)

Area A	Area B	Migration from B to A	Migration from A to B	Net Migration Between A & B	Gross Migration Between A & B
State of Ohio	All Other States + PR	201,348	206,132	-4,784	407,480
	Foreign	41,985	n/a	n/a	n/a
	Totals	243,333	206,132	-4,784	407,480
Central Ohio	Ohio	77,606	71,210	6,396	148,816
	All Other States + PR	37,506	38,254	-748	75,760
	Foreign	11,433	n/a	n/a	n/a
	Totals	126,545	109,464	5,648	224,576
Delaware County	Ohio	9,971	8,968	1,003	18,939
	All Other States + PR	3,740	3,254	486	6,994
	Foreign	1089	n/a	n/a	n/a
	Totals	14,800	12,222	1,489	25,933
<p>*"n/a" represent estimates that are not available because data is not collected from other countries</p> <p>**Central Ohio consists of Delaware, Fairfield, Franklin, Licking, Madison, Pickaway, and Union Counties</p> <p>Source: U.S. Census Bureau, 2015-2019 American Community Survey</p>					

Though younger adults in early professional careers are most likely living in more urban areas until they're either ready to start a family, or their children become school-aged.

This rationale is supported when looking at the migration patterns of both Delaware and Franklin Counties. Franklin County has seen a net migration outward of 4,671 people, while Delaware County has seen an net migration inward of 1,568 people.

Figure 2A.6 Age and Sex of Delaware County Residents (2000-2018)

	2000*			2010*			2019**			Difference (2000-2019)		
	Total	M	F	Total	M	F	Total	M	F	Total	M	F
Under 5 years	7.9%	8.2%	7.5%	7.5%	7.7%	7.2%	5.8%	5.9%	5.6%	-2.1%	-2.3%	-1.9%
5 to 9 years	8.3%	8.6%	7.9%	9.0%	9.3%	8.7%	8.7%	8.4%	7.2%	-0.5%	-0.2%	-0.7%
10 to 14 years	7.6%	7.9%	7.3%	8.1%	8.4%	7.8%	7.7%	7.6%	7.8%	0.1%	-0.3%	0.5%
15 to 19 years	7.1%	7.4%	6.7%	6.7%	7.0%	6.3%	7.6%	8.1%	7.1%	0.5%	0.7%	0.4%
20 to 24 years	5.0%	5.0%	5.1%	4.1%	4.1%	4.1%	4.9%	5.2%	4.7%	-0.1%	0.2%	-0.4%
25 to 29 years	5.9%	5.7%	6.1%	4.5%	4.4%	4.7%	4.1%	3.6%	4.5%	-1.8%	-2.1%	-1.6%
30 to 34 years	7.7%	7.5%	8.0%	6.4%	6.1%	6.7%	5.5%	5.2%	5.8%	-2.2%	-2.3%	-2.2%
35 to 39 years	9.7%	9.5%	9.9%	8.5%	8.4%	8.6%	7.8%	7.4%	8.3%	-1.9%	-2.1%	-1.6%
40 to 44 years	9.3%	9.3%	9.3%	8.7%	8.7%	8.7%	7.6%	8.2%	7.0%	-1.7%	-1.1%	-2.3%
45 to 49 years	8.4%	8.6%	8.2%	8.4%	8.5%	8.3%	8.0%	8.5%	7.6%	-0.4%	-0.1%	-0.6%
50 to 54 years	6.9%	7.0%	6.7%	7.3%	7.3%	7.4%	6.9%	7.1%	6.8%	0.0%	0.1%	0.1%
55 to 59 years	4.7%	4.7%	4.7%	6.3%	6.3%	6.2%	6.5%	6.9%	6.1%	1.8%	2.2%	1.4%
60 to 64 years	3.4%	3.4%	3.3%	5.1%	5.1%	5.1%	5.7%	5.2%	6.2%	2.3%	1.8%	2.9%
65 to 69 years	2.6%	2.5%	2.6%	3.4%	3.2%	3.5%	5.0%	4.5%	5.4%	2.4%	2.0%	2.8%
70 to 74 years	2.2%	2.0%	2.4%	2.3%	2.2%	2.4%	3.8%	3.6%	4.0%	1.6%	1.6%	1.6%
75 to 79 years	1.6%	1.3%	1.9%	1.6%	1.5%	1.8%	2.8%	2.9%	2.7%	1.2%	1.6%	0.8%
80 to 84 years	1.0%	0.7%	1.2%	1.2%	1.0%	1.4%	1.0%	0.9%	1.0%	0.0%	0.2%	-0.2%
85+ years	0.8%	0.4%	1.1%	1.0%	0.6%	1.2%	1.5%	0.8%	2.2%	0.7%	0.4%	1.1%
Pop. (#)	109,989	54,435	55,554	174,214	85,925	88,289	209,177	104,139	105,038	87,019	43,069	43,950
Pop. (%)	-	49.5%	50.5%	-	49.3%	50.7%	-	49.8%	50.2%	-	0.0%	0.0%
Median Age	35.3	34.8	35.7	37.4	36.9	37.9	39.1	39	39.2	3.8	4.2	3.5

*Age Groups and Sex: 2000 & 2010 Census Summary File 1

**Age by Sex: 2019 American Community Survey 5-year Estimate (2020 Census Data not yet released for this data)

From a diversity standpoint, Delaware County is becoming a more diverse county. In 2000 Delaware County was 94.2% White, which dropped to 89.7% in 2010. According to the 2020 Decennial Census, Delaware County is now 66.81% white, with the largest increases occurring in Black, Asian, and Multi-Racial populations. From an ethnicity perspective, Hispanic or Latino populations increased 432% in 2020 from 2000; from 1,109 people to 5,903.

Population Projections

The Ohio Department of Development (ODOD) also publishes population projections for the counties in Ohio. Map 2A.2 demonstrates the data that the ODOD published and illustrates the consistent large increases in population that Delaware County is forecasted to see in to 2040. Delaware County has the highest percent increase in population when compared to 2020 with a 31.8% increase in population projected. Of the 11 counties that are projected to see increases above 7.5%, 7 counties (the entire Central Ohio region) are among them; including the top 4.

The Delaware County Regional Planning Commission conducts population projections for the individual townships and municipalities that makeup the County. See Chapter 2B for more information.

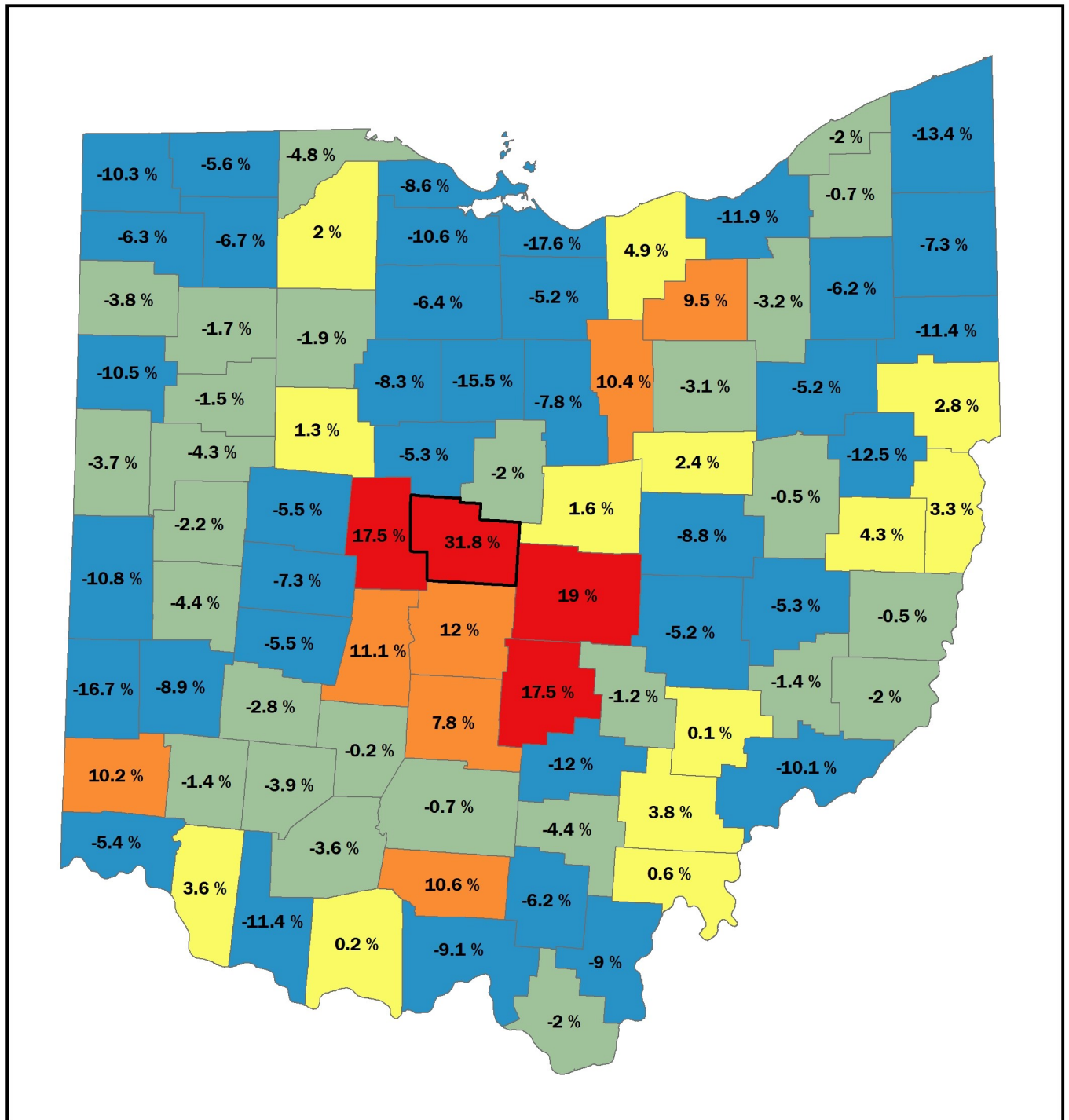
Population Growth Summary

Delaware County is repeatedly the fastest growing county in Ohio, and that growth is projected to continue. Simultaneously, the County is becoming more diverse, increasing the varied needs by the County's population. Future development pressures will largely be dependent on the availability of water and sewer service and/or whether annexations consume land to achieve the desired land uses if the Townships can not accommodate. Subsequently, if utilities are not available, developers may seek annexation in order to obtain the infrastructure needed for their development.

Figure 2A.7 Delaware County Demographic Diversity (2000-2020)

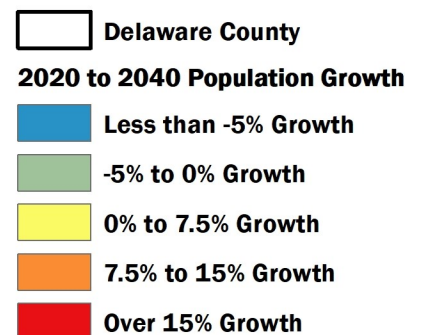
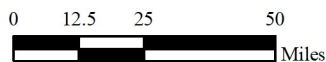
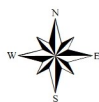
	2000*		2010*		2020**		2000-2020	
	Total	Percent	Total	Percent	Total	Percent	Difference	Percent
Total Population	109,989	-	174,214	-	214,124	-	104,135	-
White	103,663	94.20%	156,328	89.70%	173,231	80.90%	69,568	66.81%
Black or African American	2,774	2.50%	5,837	3.40%	7,840	3.66%	5,066	4.86%
American Indian and Alaska Native	157	0.10%	252	0.10%	324	0.15%	167	0.16%
Asian	1,690	1.50%	7,436	4.30%	18,216	8.51%	16,526	15.87%
Native Hawaiian and Other Pacific Islander	38	0.00%	51	0.00%	75	0.04%	37	0.04%
Other	416	0.40%	1,097	0.60%	2,460	1.15%	2,044	1.96%
Two or More	1,251	1.10%	3,213	1.80%	11,978	5.59%	10,727	10.30%
Hispanic or Latino	1,109	1.00%	3,669	2.10%	7,012	3.27%	5,903	5.67%
*Race and Hispanic or Latino: 2000 and 2010 Census Summary File 1								
**Race: 2020 Decennial Census								

Figure 2A.8 Ohio Department of Development Projected Population Growth to 2040



Population Growth (2040)

Delaware County



Prepared by: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org (3/5/2021)

The next table shows the population projections calculated by the DCRPC for all communities in Delaware County. The projections may change drastically based upon major developments. The maximum build-out population is a

Table 2A.6. Township Population Projections (by DCRPC Housing Unit Meth-

	2000 US CENSUS	2010 US CENSUS	2015	2018	2020*	2025*	2030*	Maximum Build-out**
Berkshire	1,946	2,428	2,923	3,490	3,770	4,654	5,479	20,936
Berlin	3,315	6,496	7,140	7,627	7,795	8,547	9,249	23,537
Brown	1,290	1,416	1,471	1,508	1,528	1,595	1,657	17,645
Concord	4,088	9,294	10,547	10,902	11,267	12,144	12,963	40,049
Delaware	1,559	1,964	2,061	2,093	2,123	2,194	2,259	15,014
Genoa	11,293	23,090	25,195	25,979	26,496	28,027	28,454	28,454
Harlem	3,762	3,953	4,134	4,345	4,428	4,749	5,050	29,069
Kingston	1,603	2,156	2,256	2,309	2,339	2,431	2,516	26,994
Liberty	9,182	14,581	16,246	17,319	17,890	19,763	21,511	29,900
Marlboro	227	281	290	293	295	302	308	5,499
Orange	12,464	23,762	27,084	29,369	30,507	34,374	37,038	37,038
Oxford	854	987	1,008	1,016	1,023	1,040	1,057	14,291
Porter	1,696	1,923	2,052	2,146	2,200	2,361	2,512	25,000
Radnor	1,335	1,540	1,598	1,643	1,665	1,746	1,821	20,404
Scioto	2,122	2,350	2,459	2,582	2,628	2,820	2,999	25,588
Thompson	558	684	712	725	733	756	778	13,771
Trenton	2,137	2,190	2,241	2,286	2,309	2,384	2,454	11,684
Troy	2,021	2,115	2,157	2,198	2,225	2,297	2,365	13,737
Total Twps	61,450	101,210	111,572	117,830	121,221	132,184	140,470	

Table 2A.7. Municipal Population Projections

	2000 US CENSUS	2010 US CENSUS	2016	2017	2020*	2025*	2030*	Maximum Build-out**
Delaware	25,243	34,753	38,495	39,842	40,990	43,478	45,459	106,061
Galena	305	653	781	825	868	953	1,021	1,500
Sunbury	2,630	4,389	5,093	5,421	5,663	6,202	6,632	11,638
Shawnee Hills	419	681	779	813	847	918	974	1,290
Powell	6,247	11,500	13,411	14,420	14,983	15,605	15,605	15,605
Ashley	1,216	1,330	1,344	1,349	1,353	1,360	1,367	4,705
Ostrander	405	643	862	970	1,055	1,087	1,087	1,087
Dublin	4,283	4,018	4,031	4,115	4,195	4,354	4,407	4,407
Westerville	5,900	7,792	9,076	9,651	10,152	10,650	10,650	10,650
Columbus	1,891	7,245	12,244	12,963	13,380	14,191	14,191	14,191
Total Municipalities	48,539	73,004	86,116	90,369	93,486	98,798	101,393	

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

Chapter 2B

Population & Demographics

Berlin Township

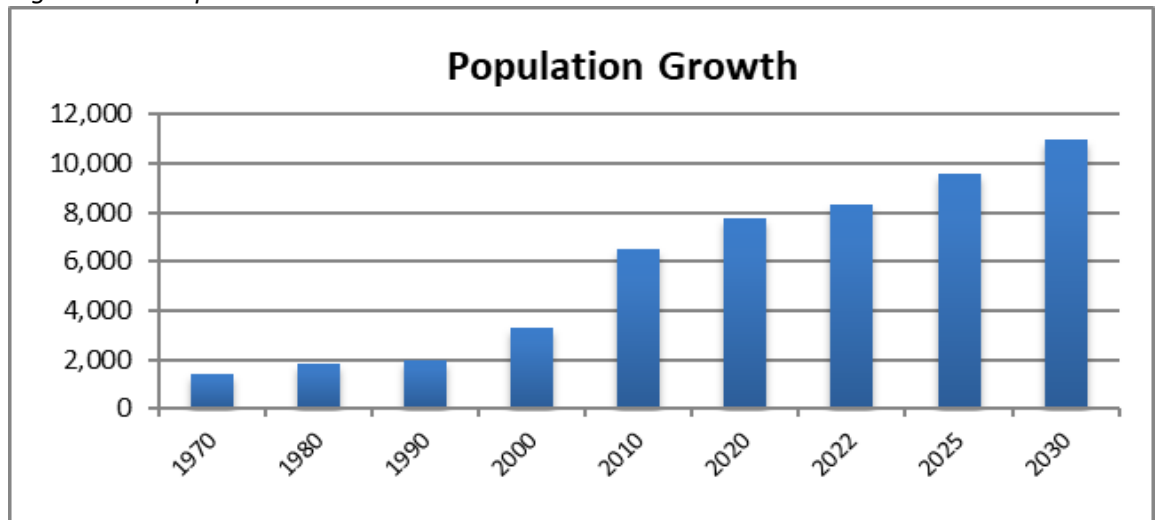


Township Population

The U.S. Census shows certain other profiles of Berlin Township's population. The picture is of an affluent, educated, mostly white population, two-thirds of whom are 18 or older.

Berlin Township's population was determined to be 7,774 by the Census Bureau in 2020. This represents an increase of 1,278 people since 2010, when the population was 6,496. While the increase between 2000 and 2010 was 96%, the increase between 2010 and 2020 was only a 20% increase. With the current number of residential units "in the pipeline" in Berlin Township, increases this decade are proposed to be significant. The DCRPC is projecting a 42% increase in population by 2030.

Figure 2B.1 Population Growth



Demographic Profile

The most common age cohorts in the township were the age groups of 35 to 44 years (1,256) and 45 to 54 years (1,599). These groups constituted 37.5% of the population. The size of these age groups represents a typical trend in growing communities. These cohorts likely represent a general demographic of young families their second, or "move-up" home. These families are also likely choosing the area based on the Olentangy School District. Planning and zoning decisions will determine if and how these trends continue or change.

These age categories can also be expressed in the commonly referenced “generation” identity. In this grouping, Generation Z is the largest group, born between 1999 and 2016 (ages 6-23) make up the largest group, representing children and older kids probably still living with parents. The next largest group is Generation X, born between 1965 and 1980 (ages 42-57) again suggesting a cohort looking at the school district and a group that more likely afford to live in an affluent, growing area.

The township is predominately white; accounting for almost 84% of the population. While all ethnic groups have grown during the 2010 and 2020 Census, the percentage of growth has been the greatest in African Americans and Asians. However, African Americans represent 3% while Asians represent 4%.

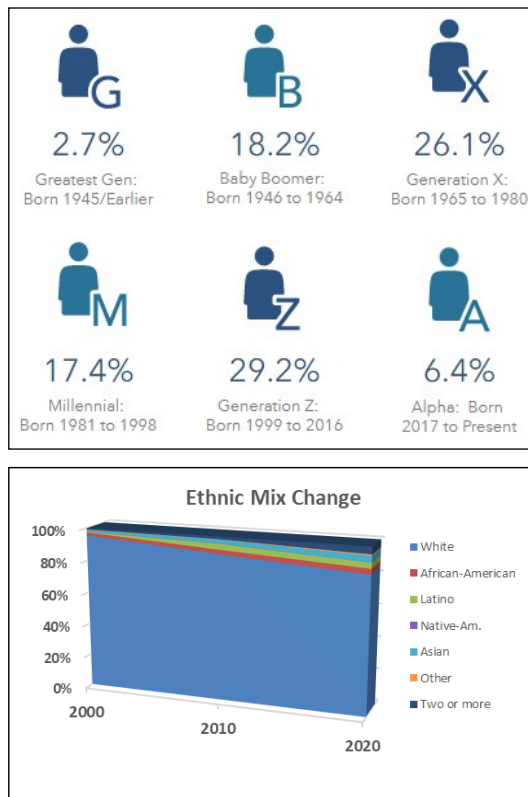


Figure 2B.2 U.S. Census Demographic Profile

U.S. Census Population Category	2010 Township Population	2020 Township Population
Total Township population	6,496 persons	7,774 persons
White	5,813	6,534
African American	170	259
Latino	233	268
American Indian	11	6
Asian	153	302
Pacific Islander	5	3
Other	8	50
Two or More	103	352
5-yr estimates, 2019		
Med. household income	\$151,034	
Unemployment	2.8%	
Male population	47.9%	
Female population	52.1%	
Median age	38.8	
Bachelor's degree	37.5%	
Graduate or prof. degree	19.9%	
Average household size	3.21	
Average family size		

Source: U.S. Census Bureau 2019 ACS 5-Year Estimates

Residents of the township are relatively affluent overall with a median household income of \$151,034. Only Liberty Township is higher, at \$152,384. By comparison, Delaware County as a whole had a median household income of \$104,332. The township's Median Household Income is also well above the Median Household Income for the State of Ohio (\$54,533) and the Columbus Metropolitan Area (\$62,898).

This affluent level of income is reflected in the education of residents. Again, according to the American Community Survey, 37.5% have at least a Bachelor's degree with just under 20% maintaining a Graduate or Professional degree. Genoa and Concord are higher, each at about 45% Bachelor's.

As with most of Central Ohio, the unemployment rate is very low at 2.8%.

Chapter 3A

Development and Change

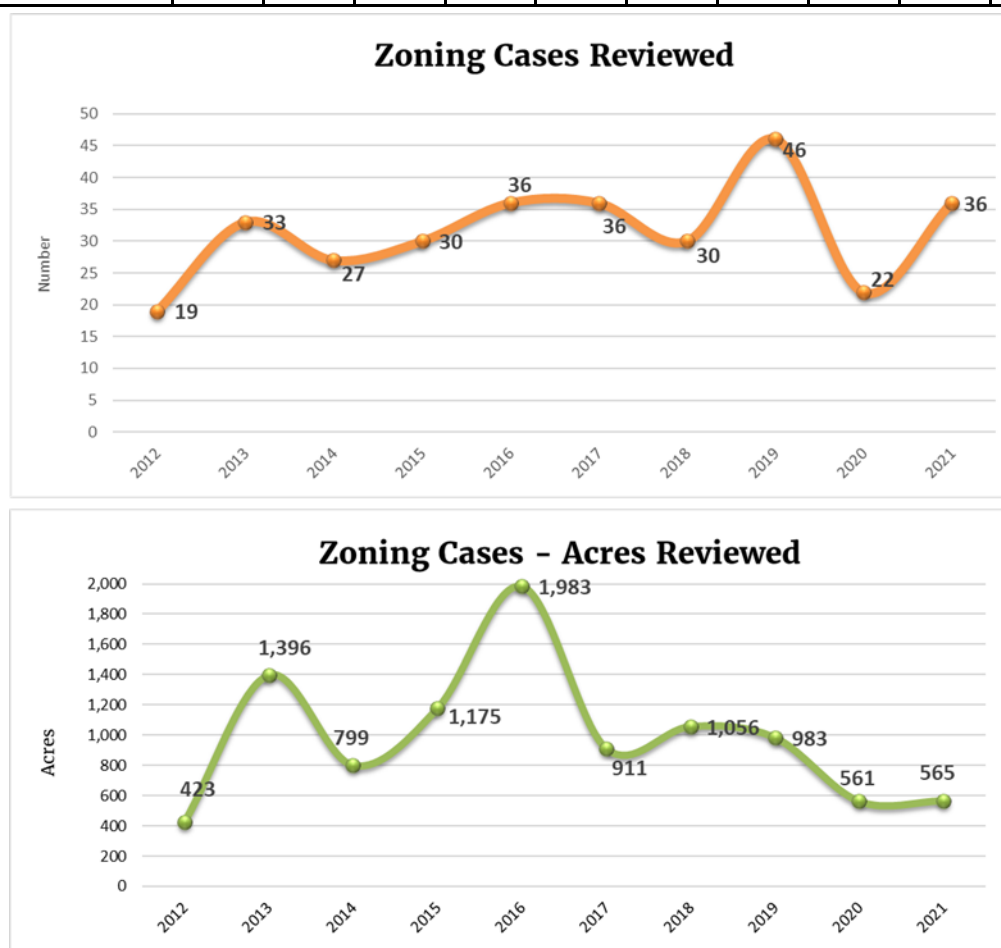
Delaware County

Much has been said about the growth rate of Delaware County over the last three 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.

Development typically starts with the rezoning process, unless a proposed development intends to use existing zoning. Rezoning activity throughout the townships in Delaware County has been strong in the last three decades. Within the last 10 years, zoning acres reviewed peaked at just under 2,000 acres in 2016, then reducing to a range of 550-1000 acres per year since.

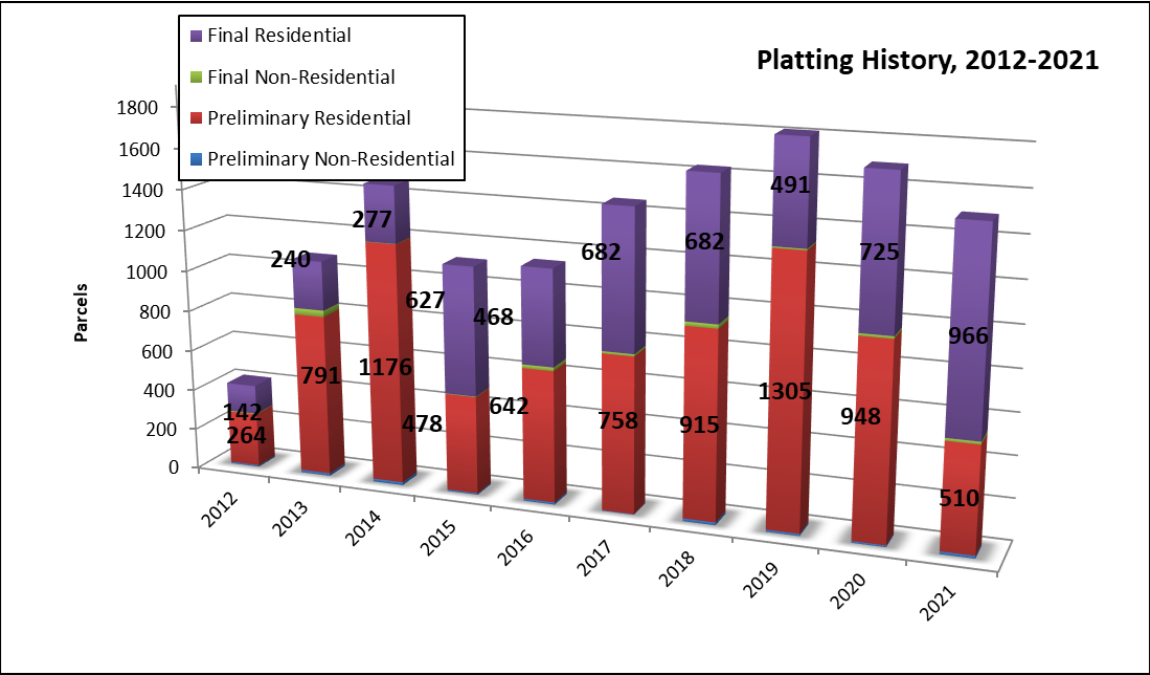
Figure 3A.1. Zoning Cases Reviewed

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
# of individual cases	19	33	27	30	36	36	30	46	22	36
Total acreage	423	1,396	799	1,175	1,983	911	1,056	983	561	565



This zoning activity eventually leads to the subdivision platting process. Each year, lots make their way through the subdivision process. First, lots receive a Preliminary approval before work can be started. Eventually, the platting process creates the individual parcels and open space. The following graphic indicates the number of lots reviewed by RPC throughout each year.

Figure 3A.2. Platting History 2012-2021



The following table 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 had been decreasing until 2015, when several new subdivision started through the process. The DCRPC estimates that there is still a 14-year supply of lots in the development process.

Figure 3A.3 Development Pipeline

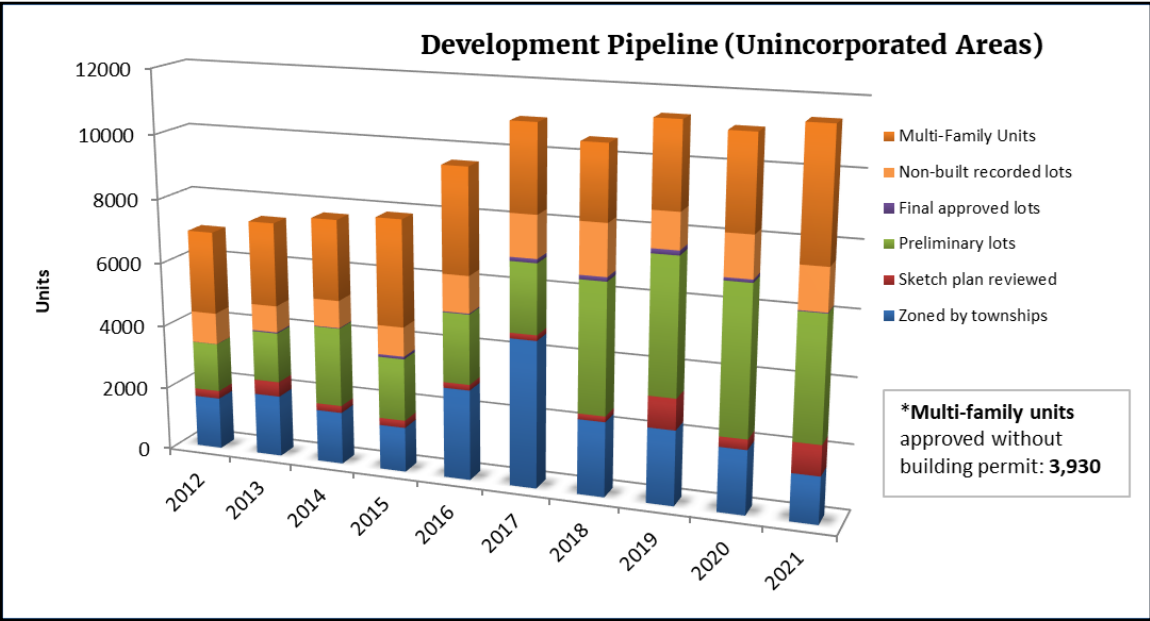
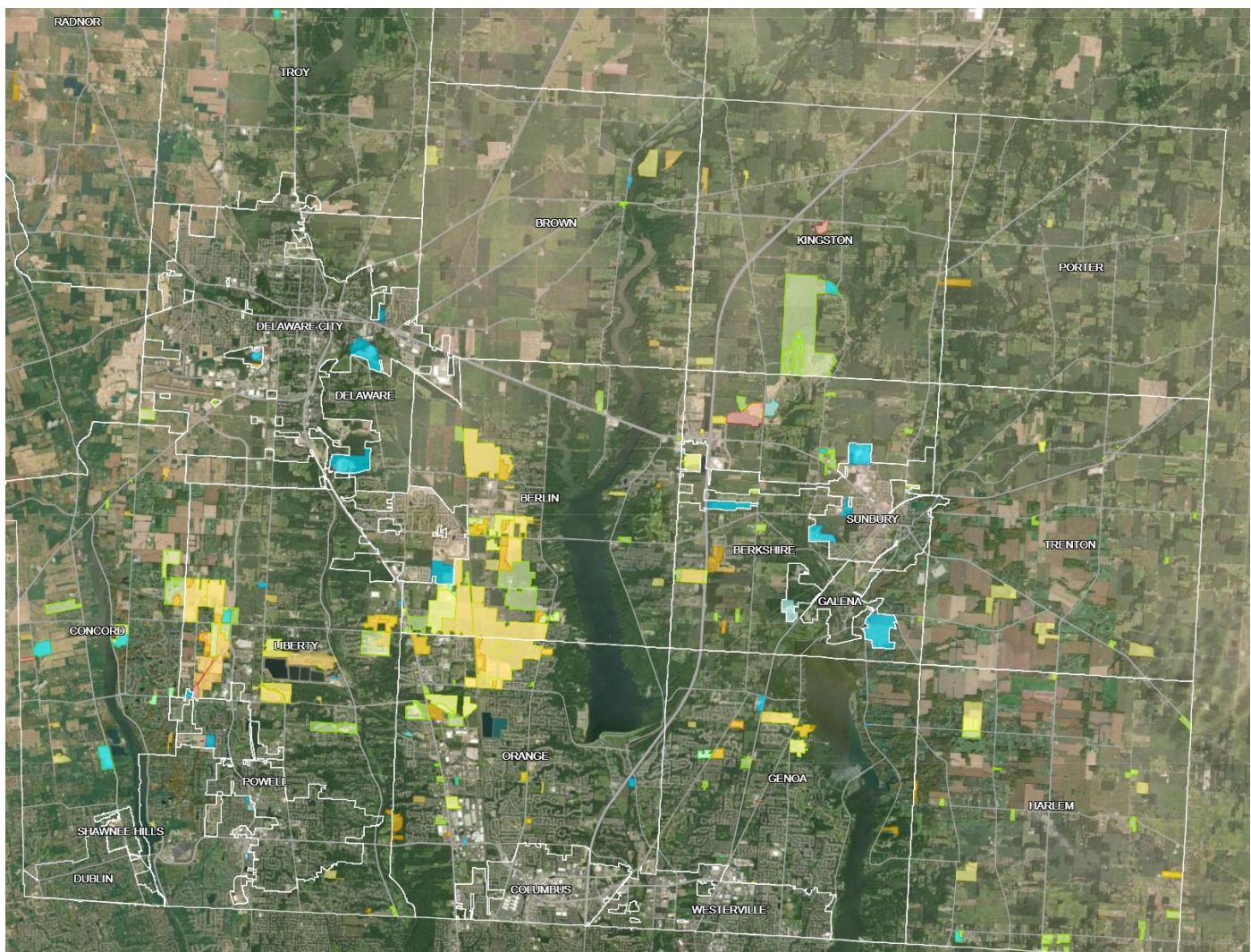


Figure 3A.4. Numbers of lots in various stages of the Development Pipeline

Development Process	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Zoning approved	1,626	1,925	1,636	1,401	2,816	4,558	2,317	2,312	1,978	1,453
Sketch Plan reviewed	247	464	220	228	176	171	176	958	315	929
Preliminary approved	1,523	1,563	2,454	1,934	2,161	2,153	4,030	4,190	4,568	3,800
Final Plat approved	7	36	19	83	29	124	131	146	95	25
Non-built, recorded lots	979	825	849	907	1,138	1,299	1,576	1,101	1,273	1,289
Total Lots in Pipeline	4,382	4,813	5,178	4,553	6,320	8,305	8,230	8,707	8,229	7,496
Multi-Family Units	2,569	2,591	2,492	3,299	3,244	2,671	2,284	2,585	2,852	3,930

Figure 3A.5. Location of Development Activity



The image above indicates all active projects within unincorporated areas as of 2/25/22. Green indicates zoning projects that are not yet subdivisions. Yellow indicated areas with active Preliminary Plans. Darker yellow is currently being reviewed for platting and blue is a category showing other projects, such as multi-family or commercial sites or municipal projects.

Figure 3A.6 Historical County Building Permits

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Berkshire	26	38	45	91	55	84	269	66	284	234
Berlin	26	19	28	24	50	73	62	108	125	210
Brown	4	3	6	3	6	3	4	10	6	15
Concord	83	67	32	39	31	70	185	107	212	162
Delaware	6	7	1	7	4	2	20	9	6	18
Genoa	116	110	39	66	109	77	74	46	48	45
Harlem	9	21	13	22	29	44	38	23	38	48
Kingston	1	9	5	7	10	9	33	24	26	18
Liberty	115	133	89	104	117	178	137	99	474	573
Marlboro	0	0	2	0	0	1	4	0	0	2
Orange	181	214	209	213	358	205	119	56	222	282
Oxford	1	1	1	1	1	0	7	3	2	3
Porter	5	13	10	13	11	13	15	14	10	12
Radnor	3	6	6	2	5	10	3	3	4	12
Scioto	7	8	9	9	21	22	11	33	16	50
Thompson	2	1	0	2	1	2	1	0	4	7
Trenton	3	4	4	5	9	5	11	19	14	20
Troy	5	1	3	8	7	2	4	6	2	12
Total Twps	593	655	502	616	824	800	997	626	1,493	1,723

Figure 3A.7 Historical Municipality Building Permits

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Delaware	204	313	259	186	306	246	587	646	454	506
Galena	11	4	6	7	5	10	4	63	87	120
Sunbury	34	73	36	36	31	95	91	59	34	56
Shawnee Hills	1	10	10	5	11	3	1	3	1	4
Powell	58	95	110	66	388	73	59	35	59	98
Ashley	1	1	0	0	0	1	0	0	0	0
Ostrander	10	23	12	12	7	31	25	10	29	34
Dublin*	0	0	2	0	9	18	9	5	4	7
Westerville*	89	10	121	111	136	65	0	101	16	1
Columbus*	277	921	255	560	379	0	10	557	1	2
Total Municipalities	685	1,450	811	983	1,272	542	786	1,479	685	828

*Portions within Delaware County

Figure 3A.8 Permits for Larger Jurisdictions

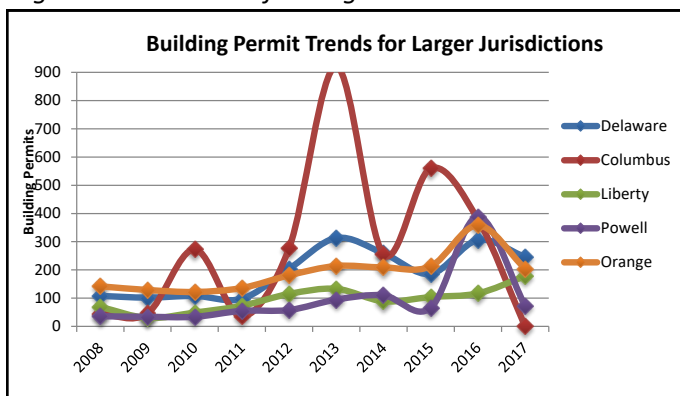
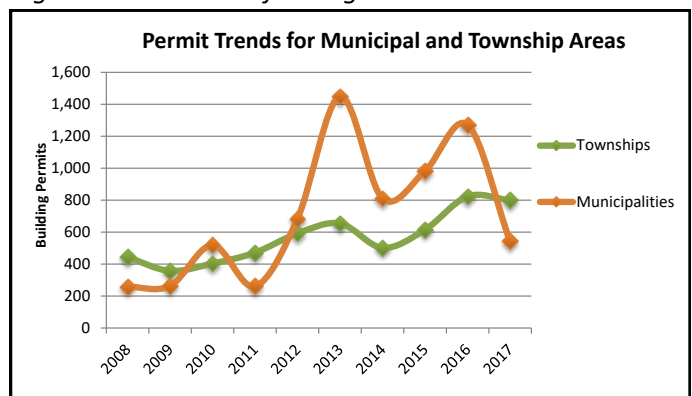


Figure 3A.9 Permits for Larger Jurisdictions



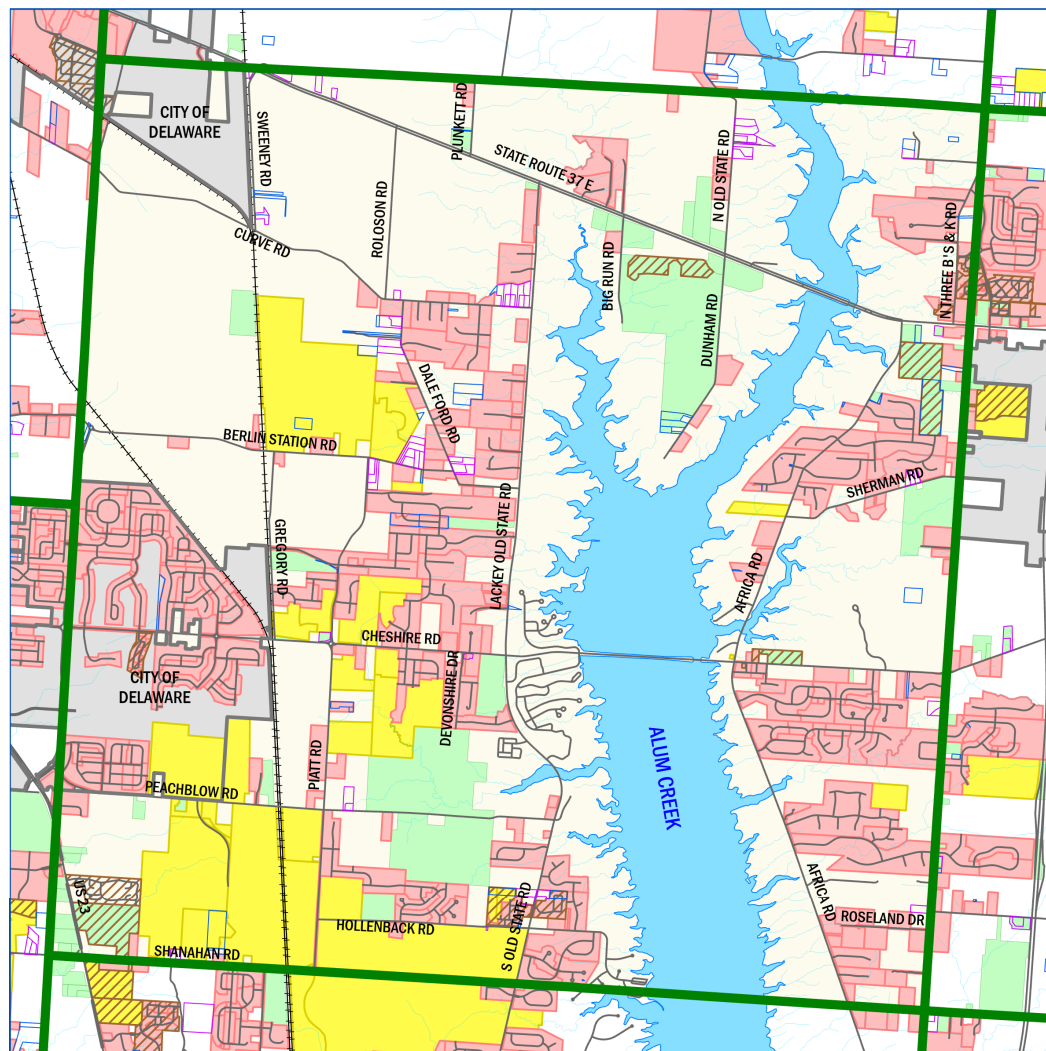
Chapter 3B

Development and Change

Berlin Township

Berlin Township Development Activity

Platting activity for new subdivisions is an indicator of future growth, as it precedes building permits. Figure 3B.1 below illustrates the amount of subdivision activity in Berlin Township over the last two decades, by number of lots and acreage platted during five-year periods.



Development Pattern

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- | | |
|----------------------------|-----------------------|
| Township Boundary | Lot Transfer |
| Incorporated Area | Multi Family |
| Railroad | Recorded Subdivision |
| Rivers / Lakes | Proposed Subdivisions |
| Streams / Drainage Courses | Rezoning Subdivision |
| Lot Split | |

Figure 3B.2 Zoning Reviews Since 2000

RPC Date	Applicant	Type	Acreage	From	To	SF Lots	MF Lots	Twp. Status
12/28/2000	Charles Day & Bradley Walker	C	8.22	FR-1	PCD			Approved
6/28/2001	JD Partnership/T&R Prop.	SR	40.60	FR-1	PRD	68		Approved
6/28/2001	T&R Prop./Ron Sabatino	SR	61.36	FR-1	PRD	117		Approved
1/31/2002	Schumacher Homes	C	3.67	PCD	PCD			Approved
9/26/2002	Alum Creek Storage	C	19.07	PCD	PCD			Approved
12/19/2002	Humane Soc. Delaware	C	6.43	NCD	PCD			Approved
3/27/2003	New Era Homes	C	1.13	PCD	PCD			Withdrawn
5/29/2003	M/I Shottenstein	SR	51.31	FR-1	R-2	79		Approved
7/30/2003	Archie Foor Jr.	C	7.50	FR-1	PCD			Approved
4/29/2004	James Property/Ron Sabatino	SR	40.71	FR-1	PRD	34		Approved
5/27/2004	Peter Hill	C	10.69	PCD	PCD			Approved
7/29/2004	Land Five Ltd	C	1.87	NCD	PCD			Approved
8/26/2004	The Keethler Company	SR	66.43	FR-1	PRD	56		Approved
10/28/2004	American Heritage Homes	C	2.99	NCD	PCD			Approved
3/31/2005	Frank Biancone & Land Five	MR	55.89	FR-1/NCD	PCD		188	Approved
4/28/2005	Fox Haven Farms	C	21.66	FR-1/NCD	PCD			Approved
4/28/2005	Fox Haven Farms	MR	26.86	FR-1	PCD		120	Approved
4/28/2005	Fox Haven Farms	SR	222.07	FR-1	R-2/PRD	245		Approved
10/27/2005	Delaware Route 23 Dev.	C	3.17	FR-1	PID			Approved
11/17/2005	James Dietz, Trustee	C/MR	37.12	FR-1	PCD		80	Approved
2/23/2006	Crownover Farms	SR	87.82	FR-1	R-2/PRD	94		Withdrawn
4/26/2006	Nancy Zaiser	C	0.56	NCD	OCPUD			Approved
4/26/2006	Wayne Homes	C	2.10	PCD	PCD			Approved
5/25/2006	Mark Joseph Ciminello	MR	9.49	FR-1	PCD		27	Approved
4/26/2007	Dominion/Glenmead	SR	89.40	FR-1	R-2/PRD	65		Approved
2/28/2008	P&D Builders	C	3.51	PCD	PCD			Approved
5/29/2008	Byers Realty Inc.	C	5.64	FR-1/PCD	PID			Approved
5/29/2008	John Stambaugh	C	5.37	FR-1	PID			Approved
1/30/2012	B&N 2005/Greenery	C/MR	37.1	PCD/FR-1	TPUD		116	Approved
1/15/2013	Turbo Group	C	2.47	NCD	PCD			Approved
8/15/2013	Crownover/Brookview Manor	SR	87.843	FR-1	R-2/PRD	106		Approved
12/9/2013	Larry Nelson/Maple Glen	SR	28.9	FR-1	R-4/PRD	29		Approved
5/19/2014	Old Harbor Estates	SR	15.38	FR-1	R-3/PRD	24		Approved
10/20/2014	James Prop./Sycamore Trail	SR	21.34	FR-1	R-2/PRD	20		Approved
6/15/2015	Wilson Inv./Johnnycake	SR	21.78	FR-1	R-2/PRD	23		Approved
6/23/2016	Evans Farm Land Dev.	SR/C	607.12	FR-1	PRD	1234		Approved
6/23/2016	Evans Farm Land Dev.	SR/C	314.21	FR-1	PCD			Approved
9/19/2016	Metro Development	SR	23.838	FR-1	R-3/PRD	30		Approved
9/19/2016	Metro/Eaststone	SR	74.624	FR-1	R-2/PRD	57		Approved
9/19/2016	Metro/Westfield	SR	45.397	FR-1	R-3/PRD	63		Approved
11/8/2016	Homewood/Howard Farms	SR	141.38	FR-1	R-4/PRD	175		Approved
11/8/2016	Metro/Westfield Ext.	SR	10.104	FR-1	R-3/PRD	12		Approved
12/5/2016	M/I Homes/The Pines	SR	160.285	FR-1	R-2/PRD	191		Approved
12/5/2016	Brookdoc/Northlake Woods	MR	19.93	FR-1/PCD	TPUD		50	Approved
2/10/2017	John Wicks/Berlin Manor	SR	81.48	FR-1	R-2/PRD	89		Approved
3/17/2017	Boatman Inc.	I	24.312	NCD/FR-1	PID			Ref/App

Note: SF=Single-Family, MF=Multi-Family

RPC Date	Applicant	Type	Acreage	From	To	SF Lots	MF Lots	Twp. Status
10/18/2017	Timberlake - Liberty	C	3.872	FR-1	PCD			Approved
4/16/2018	Peachblow Land II (Revised)	SR	193.3	FR-1	R-3/PRD	425		Approved
9/27/2018	AAT Properties	C	3.000	FR-1	PCD			Approved
9/27/2018	John Wicks RPDD	MR	46.080	FR-1	TPUD		140	Approved
12/20/2018	Longhill Limited Partnership	SR	301.944	FR-1	R-3/PRD	531		Approved
1/31/2019	Metro—Berlin Meadows	SR	183.810	FR-1	R-3/PRD	384		Approved
1/31/2019	Metro—Berlin Meadows Comm.	C	20.850	FR-1/PID	PCD			Approved
6/27/2019	Westport Homes	SR	22.129	FR-1	R3/PRD	30		Approved
6/27/2019	Evans Farm Land Dev. Co.	SR	42.760	FR-1	R3/PRD	72		Approved
4/30/2020	M/I Homes	SR	62.700	FR-1	R3/PRD	91		Approved
11/19/2020	Celebration Real Estate	I	4.073	FR-1	PID			Approved
1/28/2021	America's Home Place	C	1.263	NCD	PC			Approved
6/24/2021	Buckeye Swim Club	C	10.000	FR-1	PC			Approved
6/24/2021	Maeve Meadows LLC	SR	23.838	R-3/PRD	TPUD	43		Pending
7/29/2021	Berlin Village LLC	SR	54.183	R-2/PRD	R-3/PRD	69		Approved
1/27/2022	OPTEK INC.	MR	11.000	NCD	TPUD		32	Pending

C=Commercial, I=Industrial, SR=Single-Family Residential, MR=Multi-Family Residential

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.

A more simplified No Plat subdivision (NPA), or “lot split,” is another option for creating lots that is illustrative 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 DCRPC 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 2006 to 2017, including the new building lots created.

Subdivision platting and No Plat activity does not account for divisions that result in lots that are greater than 5 acres.

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 Berlin Township Zoning Commission since 2000.

Figure 3B.3 Recorded Single-Family Subdivisions, by date recorded, in Berlin Township (since 2000)

Date Recorded	Subdivision Name	Lots	Built	Acres	Calc Density
1/26/2000	PIATT MEADOWS PH 2	21	21	12.580	1.67
3/31/2000	CHESHIRE COVE SEC 1	31	30	20.250	1.53
8/4/2000	PIATT MEADOWS SEC 2 PH 1	23	23	10.030	2.29
10/25/2000	HARBOR POINTE SEC 1	46	46	26.370	1.74
12/21/2000	ARBORS AT CHESHIRE SUB	21	21	8.440	2.49
1/9/2001	ROESLAND SUB NO 7	3	3	8.760	0.34
2/16/2001	SUMMERWOOD SEC 1	59	59	82.900	0.71
5/24/2001	PIATT MEADOWS SEC 2 PH 2	28	28	11.160	2.51
5/24/2001	PIATT MEADOWS SEC 2 PH 3	24	24	9.740	2.46
6/25/2001	THE MEADOWS AT CHESHIRE SEC 3 PT 3	30	30	16.270	1.84
8/15/2001	WHISPERING CREEK SUB	14	13	24.510	0.57
9/13/2001	WINDING CREEK ESTATES 3	15	15	34.120	0.44
9/27/2001	HARBOR POINTE SEC 2 PH A	23	23	16.380	1.40
11/13/2001	TWIN HICKORY FARM SUB	17	9	62.680	0.27
12/7/2001	SUMMERWOOD SEC 2	12	12	17.000	0.71
1/14/2002	CHESHIRE COVE SEC 2	37	37	23.990	1.54
3/13/2002	HIDDEN MEADOWS AT ALUM CREEK	11	11	25.360	0.43
5/16/2002	HARBOR POINTE SEC 2 PH B	15	15	7.140	2.10
11/15/2002	HARBOR POINTE SEC 3 PH A	35	35	21.510	1.63
5/22/2003	HARBOR POINTE SEC 3 PH B	14	14	6.393	2.19
8/13/2003	DEWEY SUB	3	3	7.640	0.39
10/3/2003	SHERMAN LAKES SUB SEC 2	82	76	15.00	1.13
10/3/2003	HARBOR POINTE SEC 4 PH A	17	17	25.00	1.00
10/3/2003	HARBOR POINTE SEC 4 PH B	25	25	42.81	1.92
10/29/2003	WINDING CREEK ESTATES 4	10	10	15.49	0.65
8/11/2004	HARBOR POINTE SEC 5	14	14	36.59	0.38
8/13/2004	SHERMAN LAKES SUB SEC 1 PH A & B	35	35	18.52	1.89
10/14/2004	OLDFIELD ESTATES	79	79	51.05	1.55
2/22/2005	THE RAVINES OF ALUM CREEK	67	64	38.22	1.76
12/29/2005	SUMMERWOOD EXTENSION	68	68	83.12	0.82
5/9/2007	WAYNE HOMES SUB	1	1	2.099	0.48
12/30/2009	RANBRIDGE RAVINES	10	10	26.930	0.37
7/11/2012	THE ESTATES AT SHERMAN LAKES	39	39	40.709	0.96
6/12/2013	SHERMAN LAKES SEC 2 1615, 1618, 1619	5	5	2.471	2.02
3/10/2015	OLD HARBOR ESTATES SEC 1	41	41	26.270	1.56
10/19/2015	BROOKVIEW MANOR SEC 1	28	27	26.607	1.05
10/3/2016	BROOKVIEW MANOR SEC 2	34	32	34.336	0.99
3/15/2017	GLENMEAD SEC 1 PH A	9	5	25.090	0.36
10/18/2017	THE CORNERS AT JOHNNYCAKE	23	23	21.952	1.05
12/20/2017	GLENMEAD SEC 1 PH B	30	29	19.93	1.50
4/12/2018	OLD HARBOR ESTATES SEC 2	24	19	15.478	1.55
10/19/2018	BERLIN MANOR, SEC 1	34	32	30.13	1.13
11/20/2018	THE PINES, SEC 1, PH A	60	54	48.93	1.23
1/16/2019	SYCAMORE TRAIL	18	8	21.29	0.85
6/12/2019	THE PINES, SEC 1, PH B	35	32	26.92	1.30
7/2/2019	BROOKVIEW MANOR, SEC 3	26	22	29.016	0.90
9/24/2019	HOWARD FARMS SEC 1 PH A	19	12	26.300	0.72
3/18/2020	MAPLE GLEN	14	13	18.900	0.74
4/14/2020	THE PINES, SEC 2	29	1	14.270	2.03
4/20/2020	THE PINES, SEC 3	60	54	69.990	0.86
1/26/2021	PIATT PRESERVE SEC 2	22	22	19.159	1.15
2/19/2021	BERLIN MANOR SEC 3	40	10	46.150	0.87
3/9/2021	HOWARD FARMS, SEC 1, PH B	25	4	13.425	1.86
7/14/2021	PIATT PRESERVE SEC 1 PH A	12	3	10.647	1.13
8/20/2021	PIATT PRESERVE SEC 1 PH B	37	3	20.548	1.80

Date Recorded	Subdivision Name	Lots	Built	Acres	Gross Density
7/16/2021	The Villas at Old Harbor East	50	0	16.237	3.08
7/16/2021	The Villas at Old Harbor West Sec 1	31	0	16.285	1.42
9/17/2021	Glenmead Sec 2	26	0	21.899	1.19

Figure 3B.4 Homes Built by Year Map

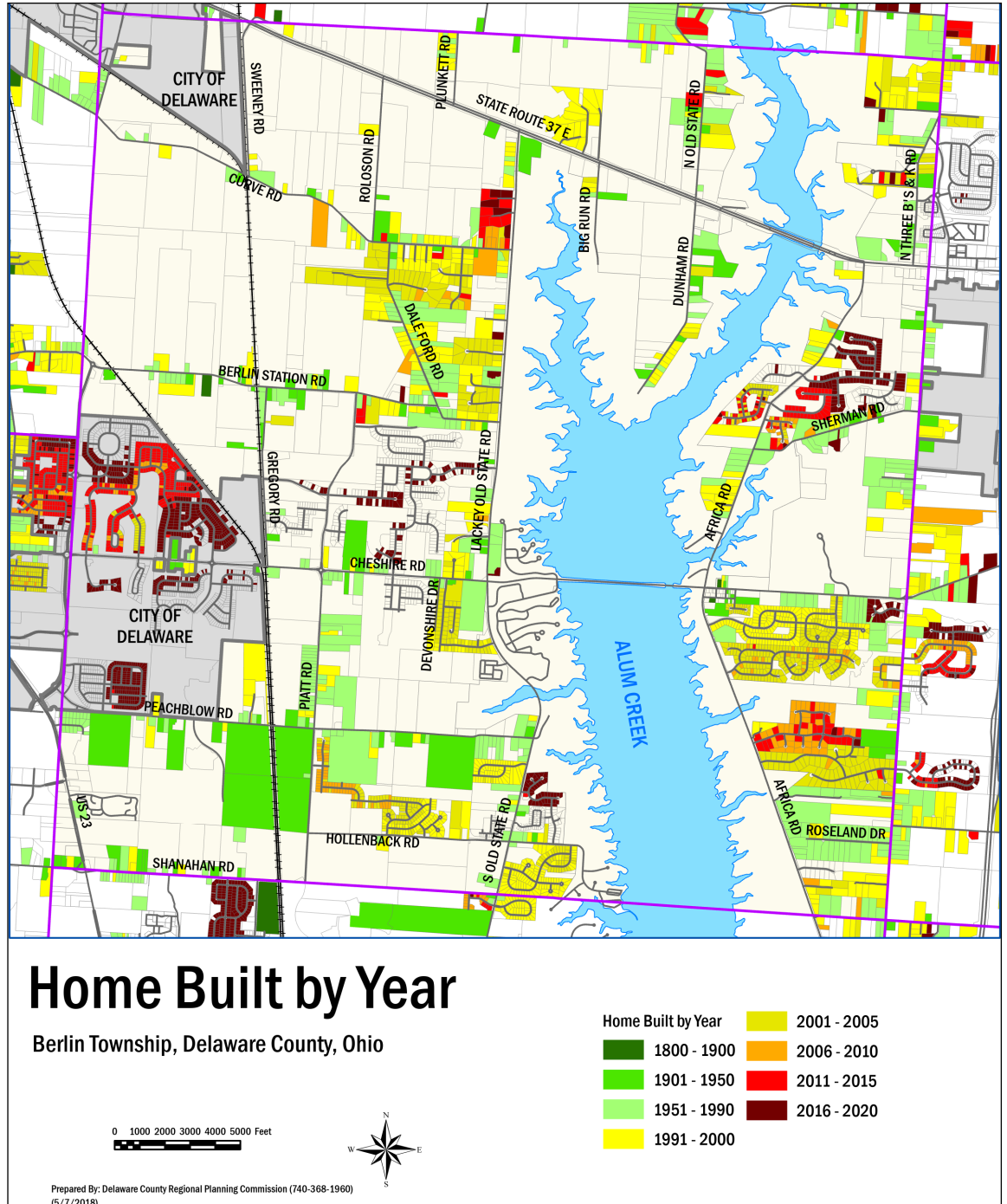


Figure 3B.5 No Plat Lot Splits 2005-2021

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Splits	3	0	2	0	0	1	1	4	0	5	1	2	6
New lots	2	0	1	0	0	1	1	0	0	4	1	0	4

Figure 3B.6 Development pipeline in Berlin Township

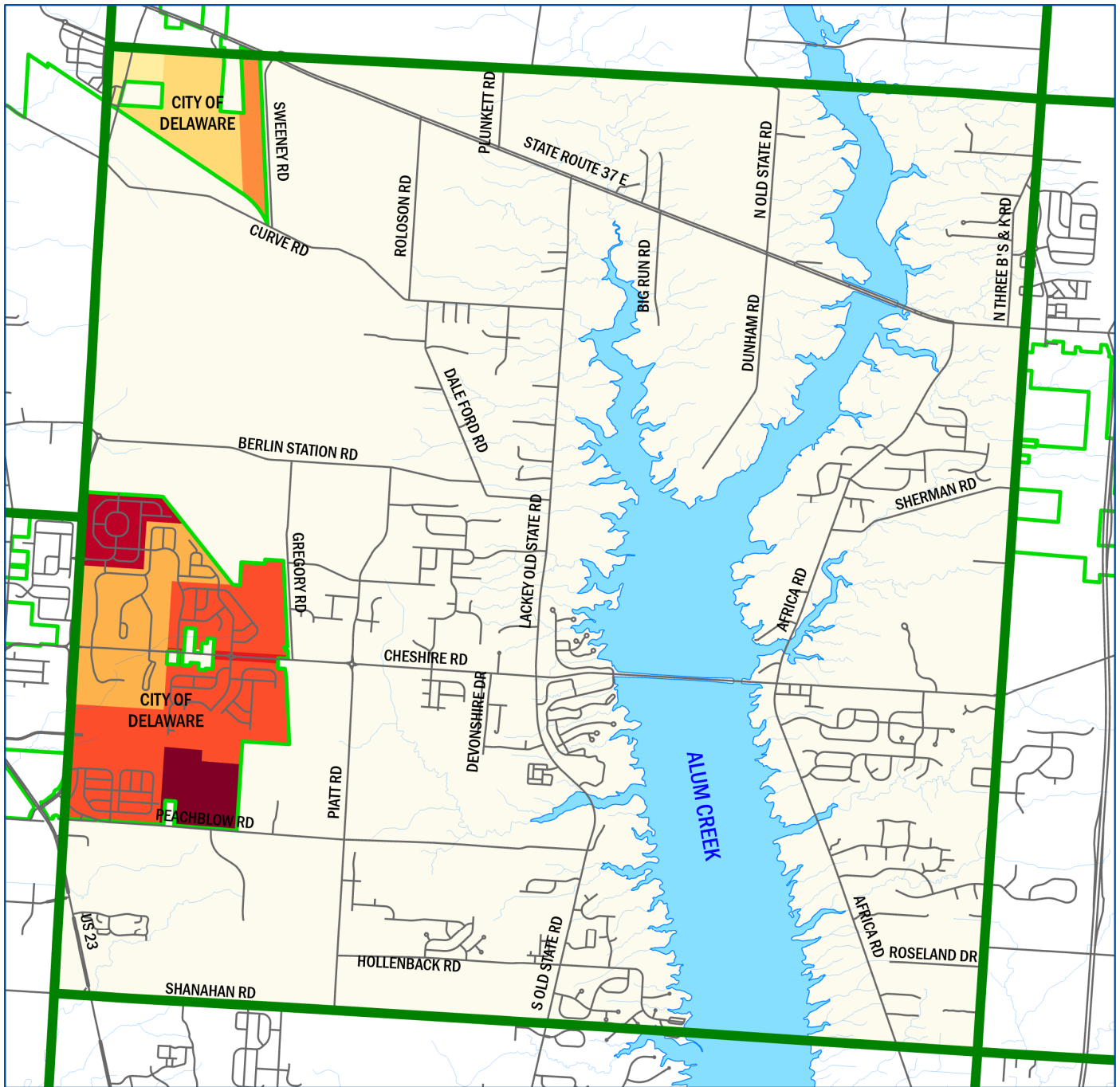


Development Process	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Zoning approved	366	389	301	324	429	2,258	1,012	979	927	539
Sketch Plan reviewed	0	231	77	24	0	14	0	0	205	581
Preliminary approved	0	41	222	193	217	601	1,640	1,319	1,992	2,094
Final Plat approved	0	0	0	0	0	0	53	25	47	0
Non-built, recorded lots	153	141	119	135	162	158	252	193	192	179
Total in Pipeline	519	802	719	676	808	3,031	2,957	2,516	3,363	3,393

Source: DCRPC, 2019

The annexation of unincorporated land into adjacent municipalities presents a set of challenges for a township as utilities like sewer and water start to become available. 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 City of Delaware has increased its municipal boundaries when landowners and developers have requested it. In total the City has annexed 137 acres from the Township. The annexation map also shows how Sunbury has expanded in Berkshire Township to the west side of the Interstate.

Figure 3B.7 Annexation Map



Annexation Map

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

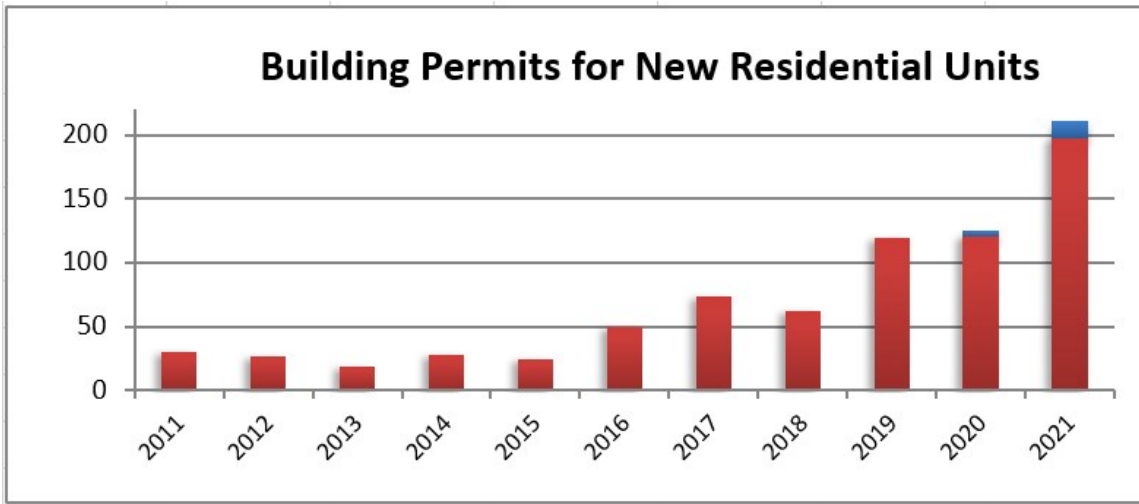


Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

Township Boundary	2006 (571.21 Acres)
Incorporated Areas	2004 (61.22 Acres)
Annexation by Year	
2019 (100.65 Acres)	2003 (309.66 Acres)
2015 (100.65 Acres)	1996 (163.42 Acres)
2012 (13.57 Acres)	1991 (42.41 Acres)

Figure 3B.8 Berlin Township New Residential Building Permits 2011-2021

Yr	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
SF	30	26	19	28	24	50	73	62	119	121	197
MF	0	0	0	0	0	0	0	0	0	4	14



Township Growth Summary

Delaware County continues to be the fastest growing county in Ohio by percentage of growth. The growth rate in Berlin Township has mirrored that of the County as centralized sewer service extended into the Township. The transition from a rural farming community to a suburbanizing community presents new challenges. How well the Township plans for the future growth in the next 5 to 10 years will be a critical factor in shaping the Berlin Township identity.

Chapter 4A

Existing Land Use

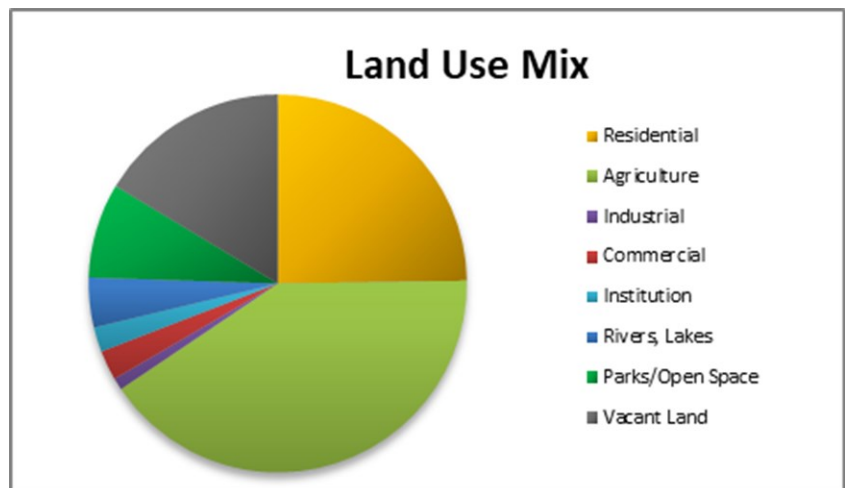
Delaware County

Land Use in Delaware County

The following tables, pie charts, and map shows the land use percentages across Delaware County.

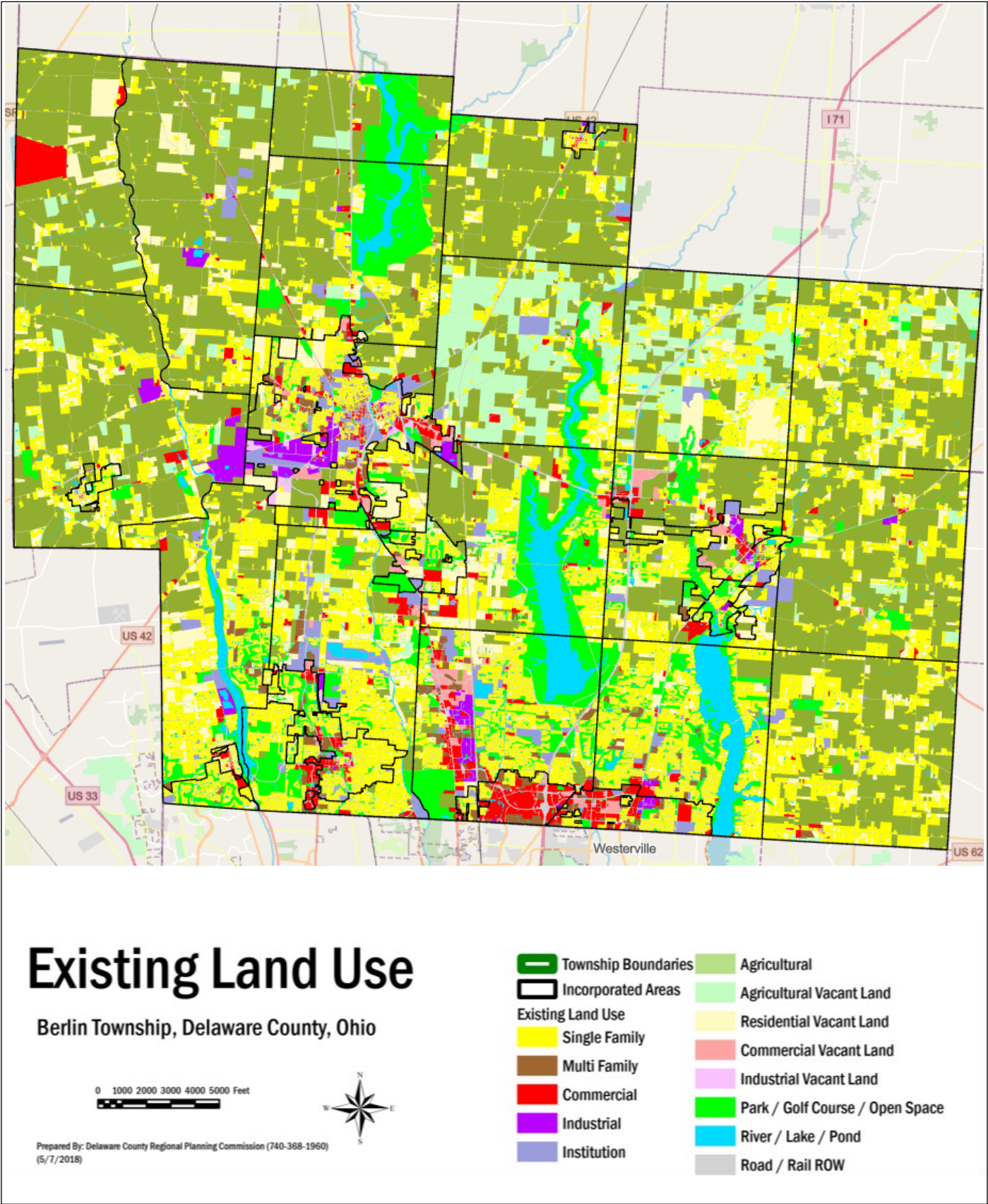
Figure 4A.1. Delaware County Land Use 4/2018

LAND USE	ACREAGE	PERCENTAGE
Residential	69,158	25%
Commercial	7,119	3%
Industrial	2,841	1%
Institution	5,930	2%
Agricultural	113,922	41%
Residential Vacant Land	26,797	10%
Com/Ind Vacant Land	2,590	1%
Agricultural Vacant	16,377	6%
Parks/Open Spaces	22,652	8%
ROW	13,486	(not calculated)
River/Lakes/Ponds	11,845	4%
Total	279,232	100%



The following map shows the Auditor’s land use categorization throughout the entire county.

Map 4A.2. County Land Use map



Chapter 4B

Existing Land Use

Berlin Township

Berlin Township Land Use

The existing land use of Berlin Township, its surrounding jurisdictions, and the area within the township boundary is displayed and by type according to the County Auditor's Geographic Information System (GIS) and tax code.

Figure 4B.1 Comparison of Existing Land Use Acreage 2009-2021

LAND USE TYPE	2009		2021	
Single-Family	3,257.38	19.45%	3,331.93	21.66%
Multi-Family	19.18	0.11%	87.27	0.57%
Commercial	242.13	1.45%	514.22	3.34%
Industrial	11.73	0.07%	11.96	0.08%
Institution	121.55	0.73%	79.16	0.51%
Agricultural	3,912.98	25.08%	3,252.32	21.14%
Residential Vacant Land	2,394.41	14.30%	1,822.87	11.85%
Other Uses Vacant Land	54.92	0.33%	304.30	1.98%
Parks	2,801.9*	16.73%	3,116.96*	20.26%
ROW	685.4	4.09%	812.64	5.28%
Rivers/Lakes/Ponds	2,099	12.53%	2,050.41	13.33%
Total Township	15,600.59	100%	15,384.04	100%
Incorporated Area	1,148.45	6.86%	1,366.35	
Total Acreage	16,750.56			

*Parks include golf course acreage.

Figure 4B.2 Berlin Land Use 12/2021

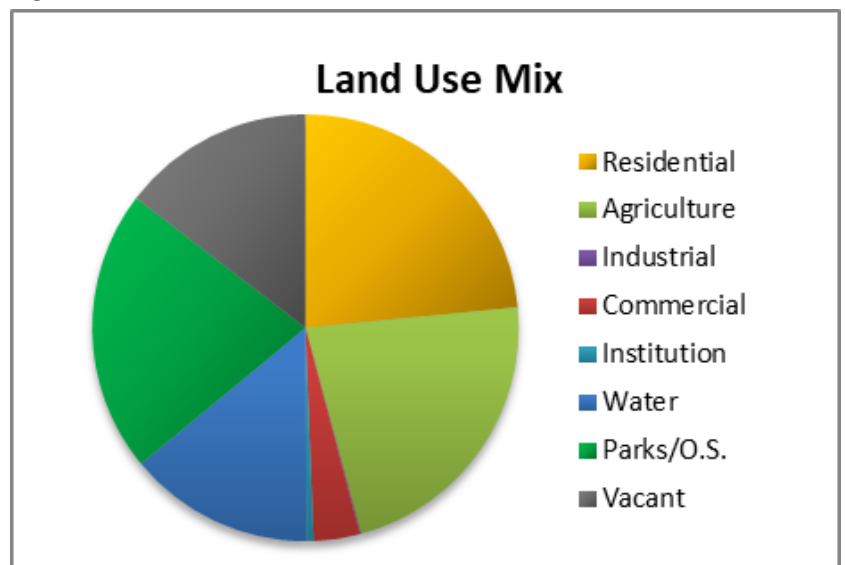


Figure 4B.3 Delaware City Land Use (in Berlin) 12/2018

LAND USE	ACREAGE	PERCENTAGE
Single-Family	128.22	10.13%
Multi-Family	13.17	1.04%
Commercial	109.04	8.62%
Industrial	151.27	11.96%
Institution	0.02	0.002%
Agricultural	167.74	13.26%
Residential Vacant Land	327.47	25.88%
Other Uses Vacant Land	33.97	2.68%
Parks	68.91	5.45%
Golf Course	152.78	12.08%
ROW	94.16	7.44%
Rivers/Lakes/Ponds	18.45	1.46%
Total	1,265.19	100%

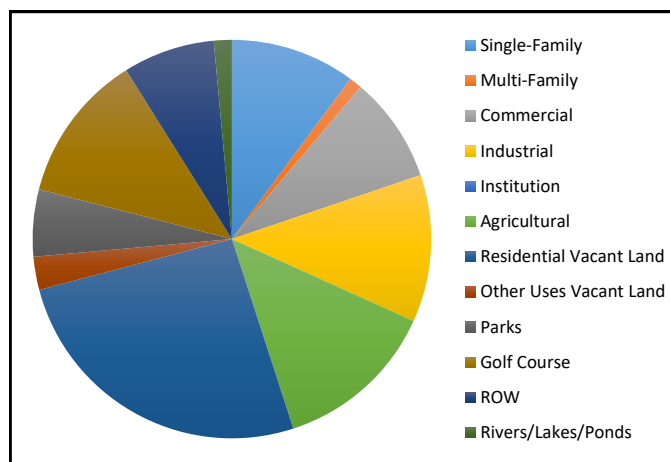


Figure 4B.4 Berlin and Delaware Land Use 12/2018

LAND USE	ACREAGE	PERCENTAGE
Single-Family	3,471.09	20.72%
Multi-Family	47.34	0.28%
Commercial	430.08	2.57%
Industrial	163.27	0.97%
Institution	111.40	0.67%
Agricultural	3,977.26	23.74%
Residential Vacant Land	2,245.52	13.41%
Other Uses Vacant Land	119.01	0.71%
Parks	2,879.74	17.19%
Golf Course	424.86	2.54%
ROW	812.11	4.85%
River/Lakes/Ponds	2,068.91	12.35%
Total	16,750.56	100%

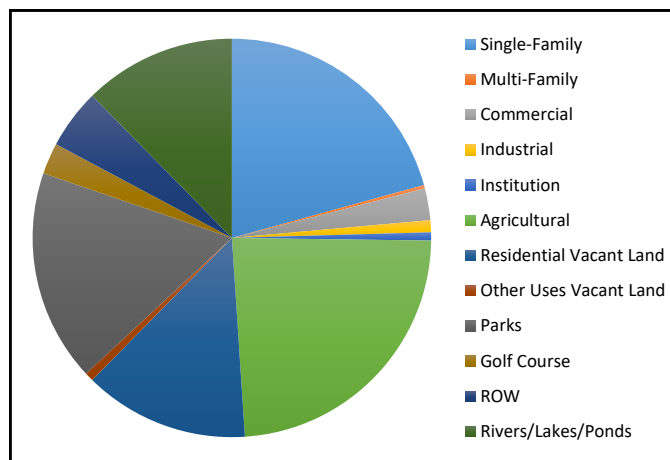
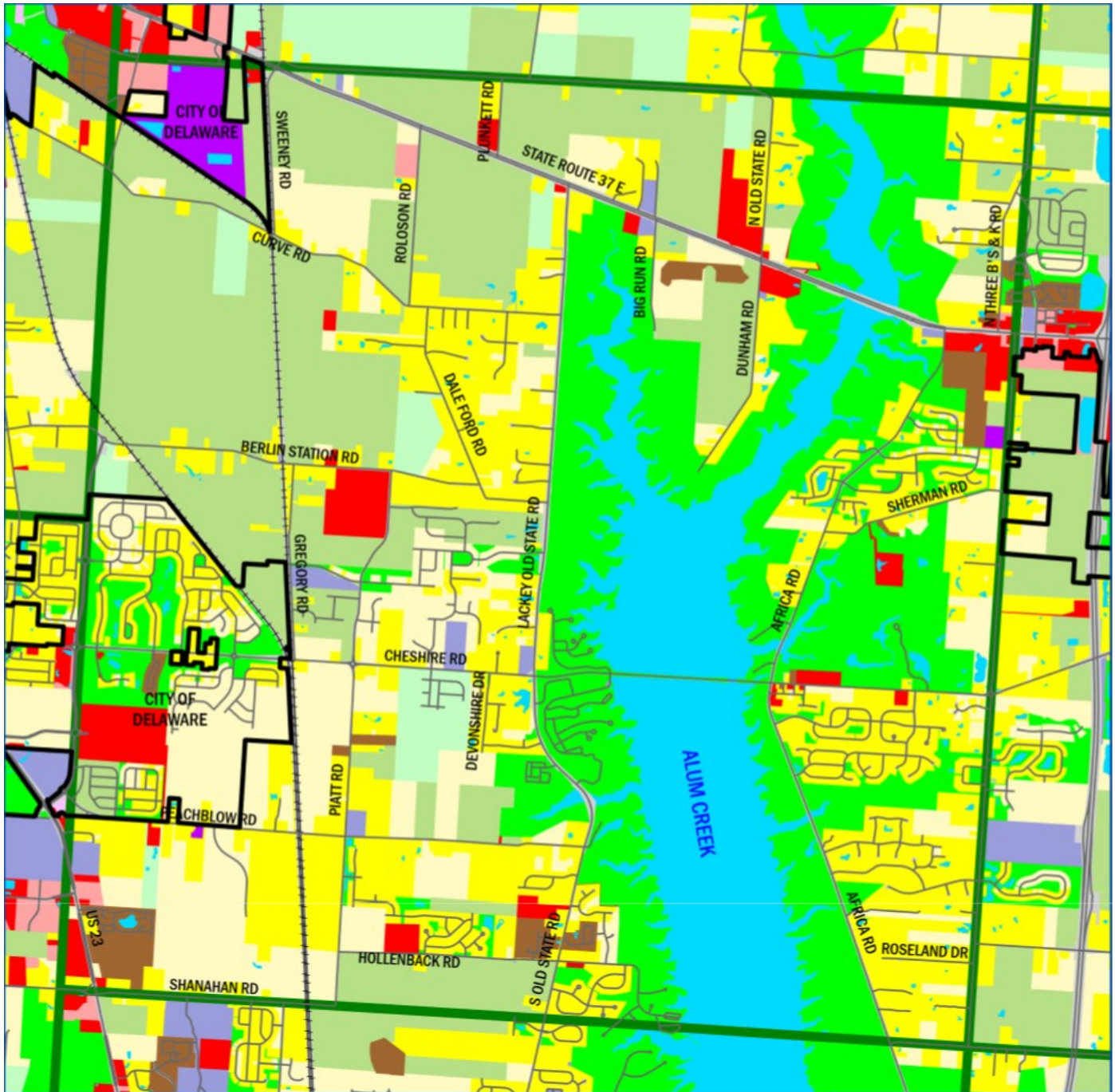


Figure 4B.5 Existing Land Use Map



Existing Land Use

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- | | |
|---------------------|---------------------------------|
| Township Boundaries | Agricultural |
| Incorporated Areas | Agricultural Vacant Land |
| Existing Land Use | Residential Vacant Land |
| Single Family | Commercial Vacant Land |
| Multi Family | Industrial Vacant Land |
| Commercial | Park / Golf Course / Open Space |
| Industrial | River / Lake / Pond |
| Institution | Road / Rail ROW |

Figure 4B.6 Total Acreage Within Each Zoning District

Zoning District	Acreage	% of Total
Farm Residential District (FR-1)	6,583.25	39.30%
Low Density Residential District (R-2)	73.01	0.44%
R-2 with PRD overlay (R-2/PRD)	702.58	4.19%
Multi-Type Residential District (R-3)	4.12	0.02%
R-3 with PRD Overlay District (R-3/PRD)	674.66	4.03%
Multi-Type Residential District (R-4)	0.00	0.00%
R-4 with PRD Overlay District (R-4/PRD)	131.85	0.79%
Planned Residential District (PRD)	1,421.44	8.49%
Neighborhood Commercial District (NCD)	75.76	0.45%
Transitional Planned Unit Development District (TPUD)	74.94	0.45%
Planned Age-Resiricted Residential District (PARRD)	0.00	0.00%
Planned Office District (POD)	5.01	0.03%
Planned Commercial and Office District (PCD)	312.64	1.87%
Old Cheshire Planned Unit Development District Applied (OCPUD Applied)	0.96	0.01%
Industrial District (I)	16.77	0.10%
Planned Industrial District (PID)	36.46	0.22%
Agricultural Conservation District (A-1)	74.09	0.44%
Floodplain Regulatory District (FPRD)	648.05	3.87%
Alum Creek State Park (Zoning Not Applicable)	1,908.23	11.39%
City of Delaware (Zoning Not Applicable)	1,366.35	8.16%
Road ROW/Rail ROW (Zoning Not Applicable)	704.24	4.20%
Lakes/River (Zoning Not Applicable)	1,935.97	11.56%
Total Acreage	16,750.62	100%

Observations on Berlin Township 2021 Land Use:

Agriculture has again decreased in recent years. It is still the largest land use, with 25% of total land area, but is steadily giving way to new development.

100 acres of new residential acreage have been developed since 2009, with another 1,822 acres designated as “residential”, but not developed.

Parks and golf courses and single-family residential development had the largest increases with 3.18% and 2.14%, respectively.

Commercial acreage is 3.34%; 4% is typical of a mature community.

Land in rights-of-way increased from 2009 to 2021 by 127 acres to 5.28%. As roads are widened and built, this number may increase typically to 10-15% at build-out.

As reviewed in a previous chapter, annexed land increased by 218 acres since 2009.

Berlin Township Zoning Districts Map Delaware County, Ohio

Official Zoning Map as amended

Board of Township Trustees

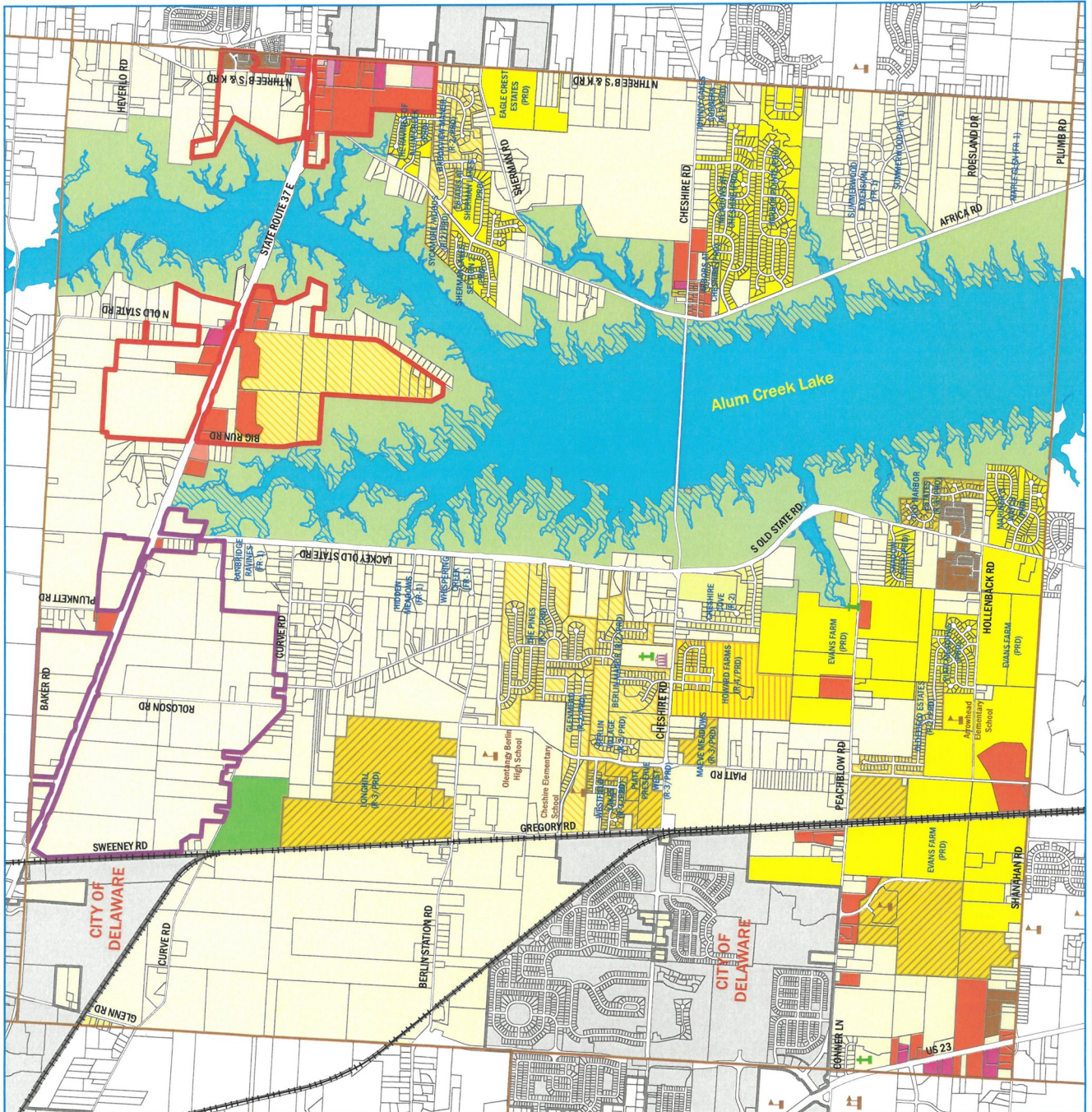
Zoning Inspector
Berlin Township, Delaware County, Ohio

- Township Hall
- Cemeteries
- Existing Schools
- Township Boundary
- Incorporated Area
- Road Right of Way
- Property Lines
- Rivers
- Incorporated Area
- Farm Residential District (R-1)
- Low Density Residential District (R-2)
- R-2 with PRD Overlay (R-2/PRD)
- Multi-Type Residential District (R-3)
- R-3 with PRD Overlay (R-3/PRD)
- Multi-Type Residential District (R-4)
- R-4 with PRD Overlay (R-4/PRD)
- Planned Residential District (PRD)
- Neighborhood Commercial District (NCD)
- Transitional Planned Unit Development (TPUD)
- Planned Office District (POD)
- Planned Commercial and Office District (PCD)
- Old Cheshire Planned Unit Development District (OCPUD)
- OCPUD Overlay Applied
- Industrial District (ID)
- Planned Industrial District (PID)
- Agricultural Conservation District (A-1)
- Floodplain Regulatory District (FPRD)
- Article 15 Berlin Commercial Overlay (BCO)
- Article 19 Berlin Industrial Overlay (BIO)
- US Land



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org

Parcel Information Provided by: The Delaware County Auditor's Office
Further information is available by contacting the Auditor's Office (740-833-2070)
Zoning Information Provided by: Berlin Township (740-545-3477)
Printed: 1/17/2022



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Chapter 5A

Natural Resources

Delaware County



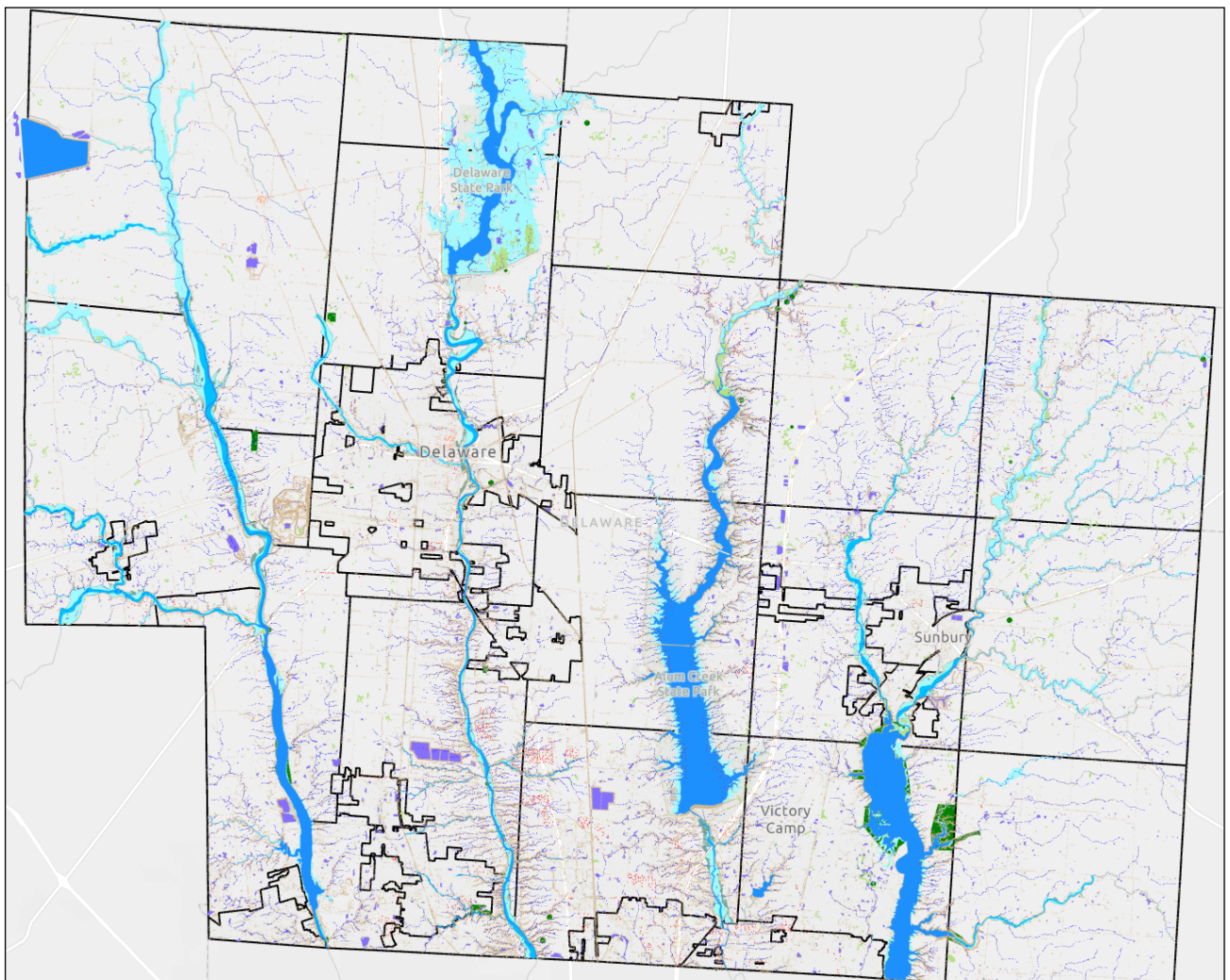
Introduction

Depending on the location, Delaware County has numerous natural resources and features. These include large reservoirs, their connecting creeks, floodplains, wetlands, fertile soils, woods, and abundant wildlife. Other features include steep slopes, wooded ravines, treelines. These resources are displayed on several maps and are generally described below. These resources should be conserved as much as possible while development continues.

Critical Resources

The combined Critical Resources map (below) displays generalized floodplains, water, wetlands, slopes, and historic and archeological sites, all of which are covered in this chapter.

Figure 50.1 County-wide Critical Resources Map



Watersheds

The term “watershed” typically refers to the 10th level of the hydrologic unit classification system (HUC). Sub-watersheds are the 12th level, while sub-basins are the 8th level. Each level feeds into the HUC above it. For example, an HUC level 10 is a subsection of an HUC 8.

From an environmental standpoint, storm water and subsequent pollutants in these sub-watersheds feed into the Rivers for which the watersheds are named. For example, pollutants released or picked up in the Olentangy Watershed will flow into the Olentangy River.

Topography (Elevation)

The topography map indicates the high point and low point of each community, as well as the various changes in elevation.

Slopes Greater than 20%

Generally, slopes greater than 20% follow the streams near reservoirs and other significant tributary streams. Such slopes should be preserved to the greatest extent practicable in an effort to maintain some of the more dynamic topographic profiles in the township for aesthetics and community character. Though expensive to do, houses can be permitted on slopes up to 20%, provided doing so doesn’t negatively impact the environment, waterways, or floodplains.

Floodplains, bodies of water

The National Flood Insurance Program 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 Safety Department, 50 Channing Street, Delaware Ohio.

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 biodiversity, 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, with one hundred year floodplain elevations rising in some areas.

Wetlands

Some wetlands that appear on the map 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.

Prime Agricultural Soils

The Prime Agriculture Soils map shows the location of soils suited for high yields. Agriculture is still an important land use in the county, 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.

The Delaware Soil and Water Conservation District also recommend that farmers who want to help preserve the viability of farming utilize edge buffers on cropland. Some benefits of edge buffers include:

- Filtering surface water runoff to protect against harmful algae blooms;
- Planting in edge buffers can protect against erosion and loss of farmland;
- Buffers resist the accumulation of sediment and debris in water;
- Slows water runoff from storms, preventing excessive flooding, and protecting the topsoils;
- Planted buffers can provide a habitat for predatory insects, insect-eating birds, and pollinators;
- Can aid in the economic production of farms through hay, lumber, fruit trees, and bees for honey; and
- May decrease property tax liabilities for farmers by using a conservation buffer to combat soil erosion. (Check with the Delaware County Auditor's Office for details).

Soil Suitability for Septic Systems

Since sanitary sewer service is not available everywhere in Delaware County, 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.

Historical Sites

The Ohio Historic Preservation Office (OHPO) maintains the state's official record of historic properties listed in the National Register of Historic Places. These properties are recognized for their contribution to the culture of a community.

The OHPO lists the following benefits to listing in the National Register:

- The listing of a building, structure, site, object or district in the National Register of Historic Places accords it a certain prestige, which can raise the property owner's and community's awareness and pride, and
- Income-producing (depreciable) properties which are listed in the National Register individually or as part of a historic district may be aided by tax credits and other funding programs.

A listing on the National Register is sometimes a prerequisite for funding applications for restoration work through various private, nonprofit organizations, such as the National Trust for Historic Preservation.

The OHPO also maintains the Ohio Historic Inventory (OHI), which is a record of buildings and structures which may have architectural or historical significance. The Ohio Historic Inventory form is an important reference for organizing community preservation efforts and is used by state, federal, and local agencies when making land use, transportation, and development decisions.

Land Cover

The Land Cover map shows the land cover categories from the National Land Cover Database (NLCD), as delineated by the United States Geologic Survey (USGS). Using several dates of aerial imagery, the USGS categorizes land cover into one of several different coded classes. The National Land Cover Database data is updated every 5 years and can provide valuable information regarding general changes in land cover that may not be represented well in the Auditor's land use data. For example, a 10-acre parcel with a residence will be classified as residential according to Auditor data, but will not take into account the potential forested areas on the property.

Development or Harvesting of Natural Resources

Deposits of materials that can be mined commercially (i.e. minerals, stone, gravel, oil, and natural gas) are limited in the county both in location and the ability to extract them based on surrounding land uses. Other than current active quarries, 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.

The following chapter will specifically describe features that are unique to the community and include maps.

Chapter 5B

Natural Resources

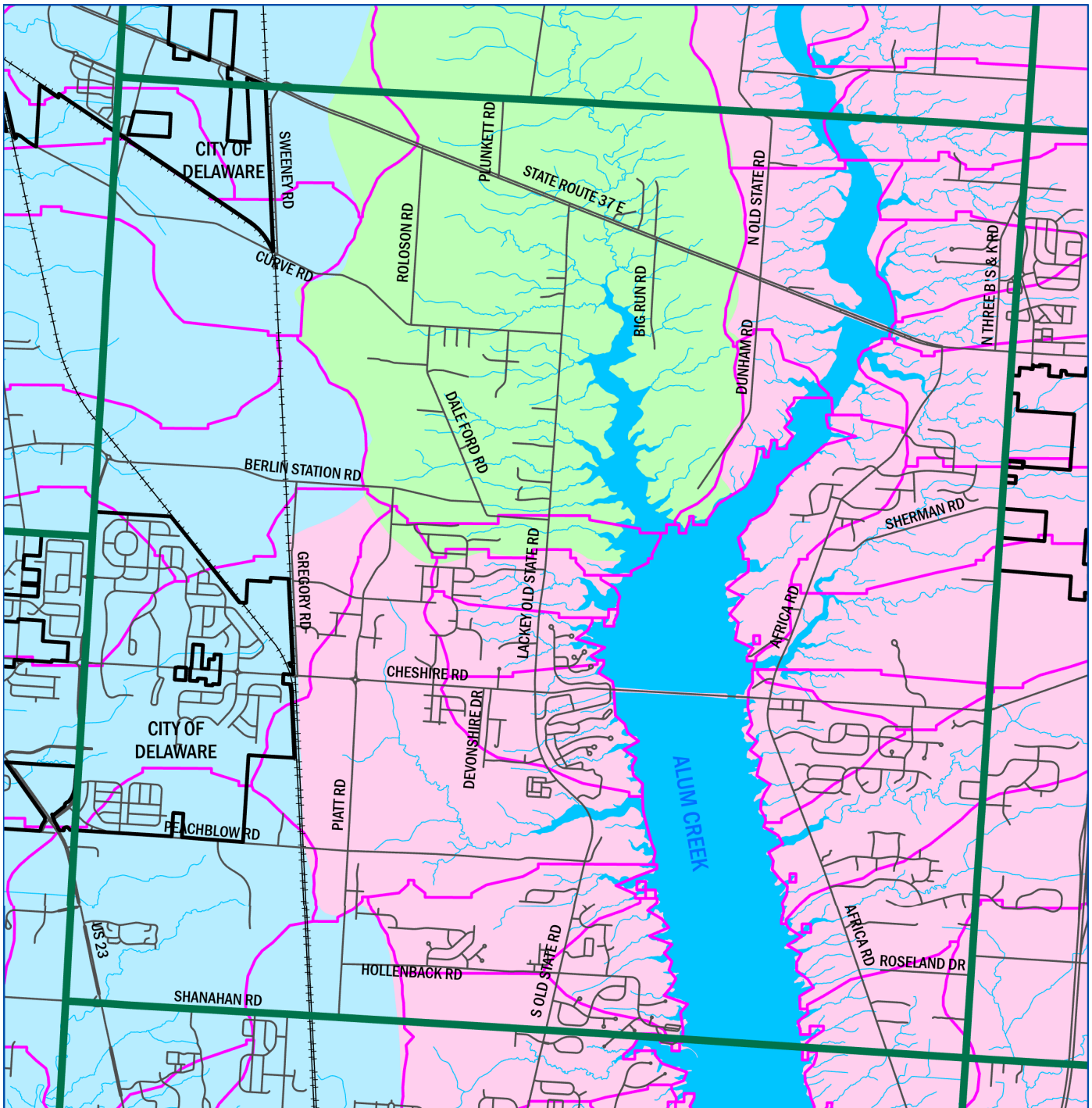
Berlin Township

Introduction

Berlin Township has rugged ravines, creeks, floodplains, wetlands, woods, and abundant wildlife. It also has farmlands with good agricultural soils. Berlin Township has natural beauty in its natural resources. If these resources are not conserved and protected, then the vision of the Township to preserve its rural character will not be achieved and the principal attribute of the Township will be destroyed.

This chapter will identifies the extent of the natural resources in Berlin Township through numerous mapping exhibits. For a general description of these maps, see the Natural Resources information in the county chapter.

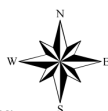




Watersheds

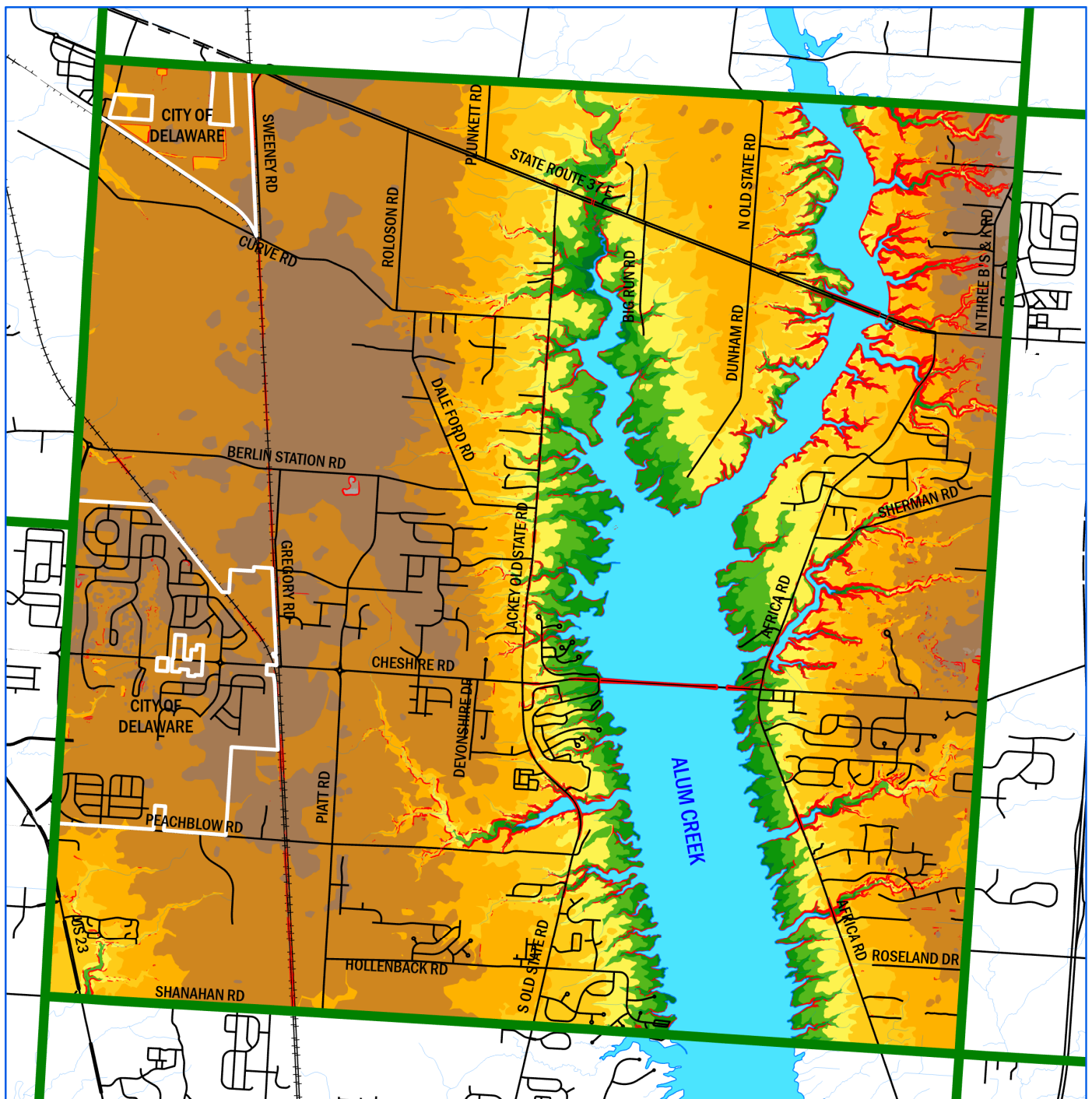
Berlin Township, Delaware County, Ohio

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Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

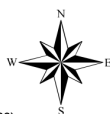
- Township Boundaries
- Detailed Watershed Boundary
- Rivers/Ponds/Lakes
- Streams
- Incorporated Areas
- Alum Creek Watershed
- Big Run
- Olentangy Watershed



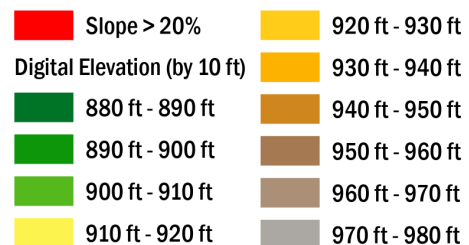
Elevation

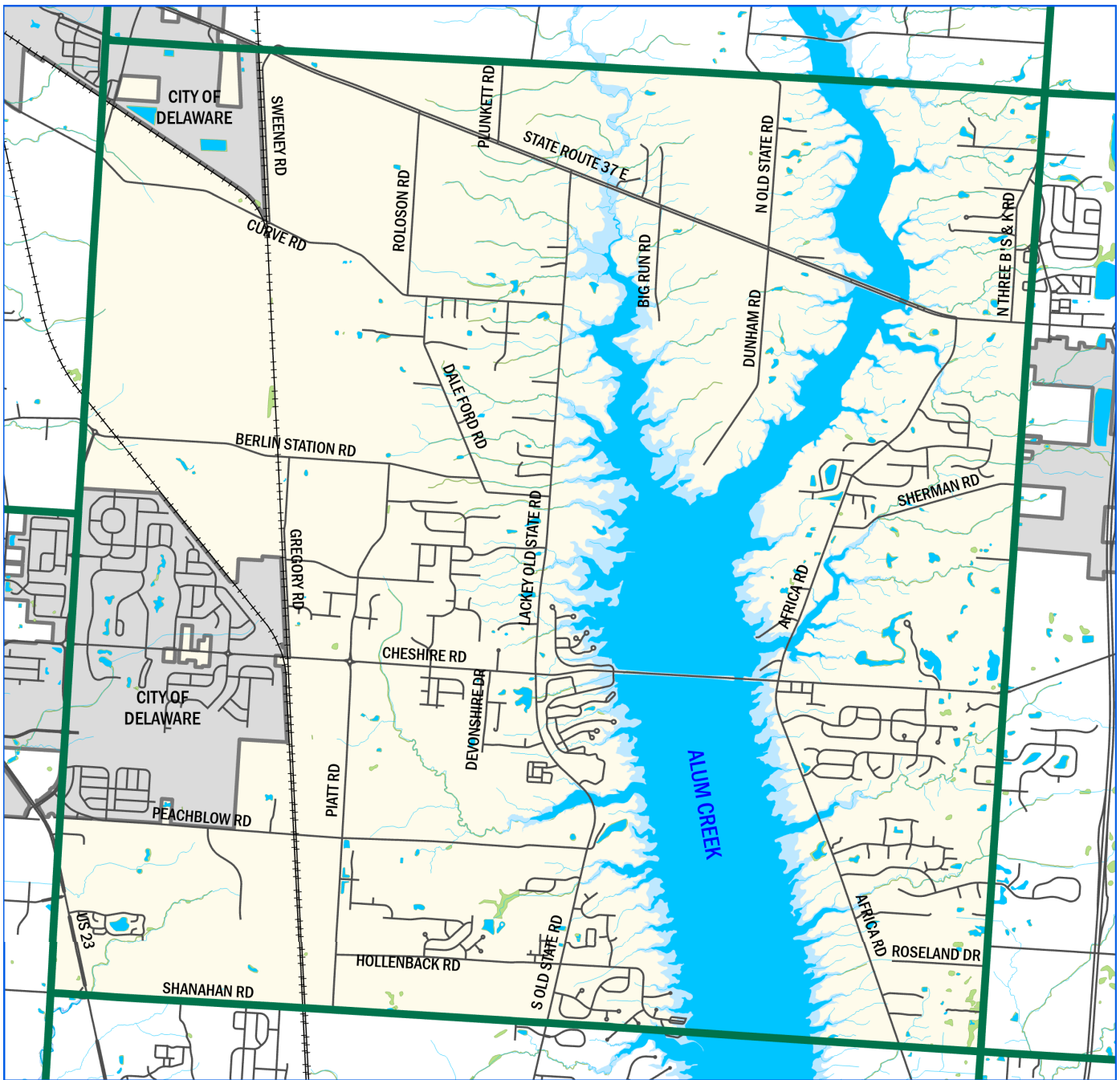
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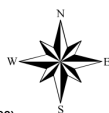




Wetlands

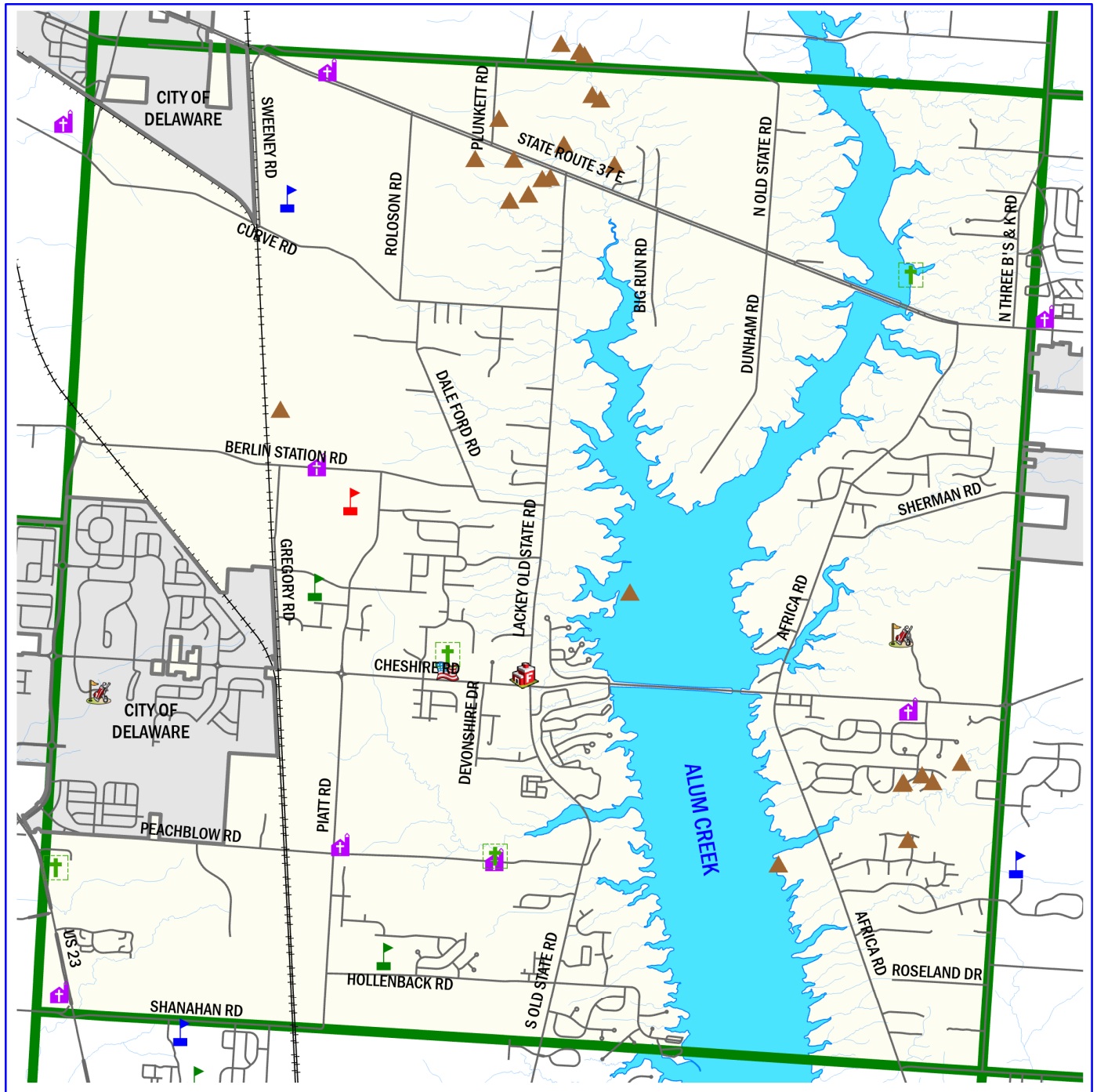
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- Township Boundaries
- Incorporated Areas
- Railroad
- Road Centerlines
- Rivers/Lakes/Streams/Ponds
- Wetland (National Wetland Inventory)
- 100 Year Flood Plains
- 500 Year Flood Plains
- Floodway



Community Facilities

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



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(5/7/2018)

- | | |
|---------------------|---------------------|
| Township Boundaries | MIDDLE SCHOOL |
| Incorporated Areas | Township Hall |
| Rivers/Ponds/Lakes | Cemeteries |
| Streams | Historical Sites |
| Golf Courses | Archeological Sites |
| Churches | Post Office |
| ELEMENTARY SCHOOL | Library |
| HIGH SCHOOL | Fire Stations |

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Chapter 6A

Housing

Delaware County



General

Housing has been the primary index of growth in the County. Planning for a range of housing in a developing community on a county-wide basis 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 feel. 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.

Most unincorporated areas were initially zoned with a minimum lot size of 1-5 acres allowing a single residential use in addition to any other agricultural uses.

Typically, landowners who gain access to centralized sanitary sewer may apply for Planned Residence 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. Some include a provision for certain multi-family uses and some townships have specific zoning regulations for multi-family uses.

Existing housing stock

Most township plans started with a house-to-house windshield study, finding that anywhere from 85% to 95% of the housing stock was either new/well maintained or in need of normal repair. It is assumed that all structures since that point are in comparable shape.

Future Housing

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). The 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.

Workforce, or Affordable Housing

“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. The U.S. Department of Housing and Urban Development 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.

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.



Chapter 6B

Housing

Berlin Township

Existing Housing Stock

The Total Market Value of homes is an indicator of the quality of the Township's housing stock. The map on page 30 and table in Figure X represent the value as defined by the County Auditor.

The Township may someday wish to adopt a property maintenance code to assure the constant maintenance of its housing stock, so as to require a safe level of maintenance and retain property values and stable neighborhoods.

Housing Types

The map on the following page uses address points and building permit data. To summarize the map, the Township has 2,182 single-family units and 239 multi-family units. PRD subdivisions still outnumber all other single-family units, whether platted or unplatted.

Housing Needs

Berlin Township has been the fifth-largest provider of new housing in Delaware County townships for the years 1998 to 2017, ranked by building permit issuance. The Township has provided 6.44% of the total new housing in unincorporated Delaware County in the last 20 years.

Future Housing

With sufficient authority and information, a community might anticipate what services it can provide, anticipate its share of the future population of the area, and allocate the proper distribution of housing types. Few communities attempt such an analysis, leaving the housing mix up to the market and the traditional power of zoning, which is seldom so analytical. In a

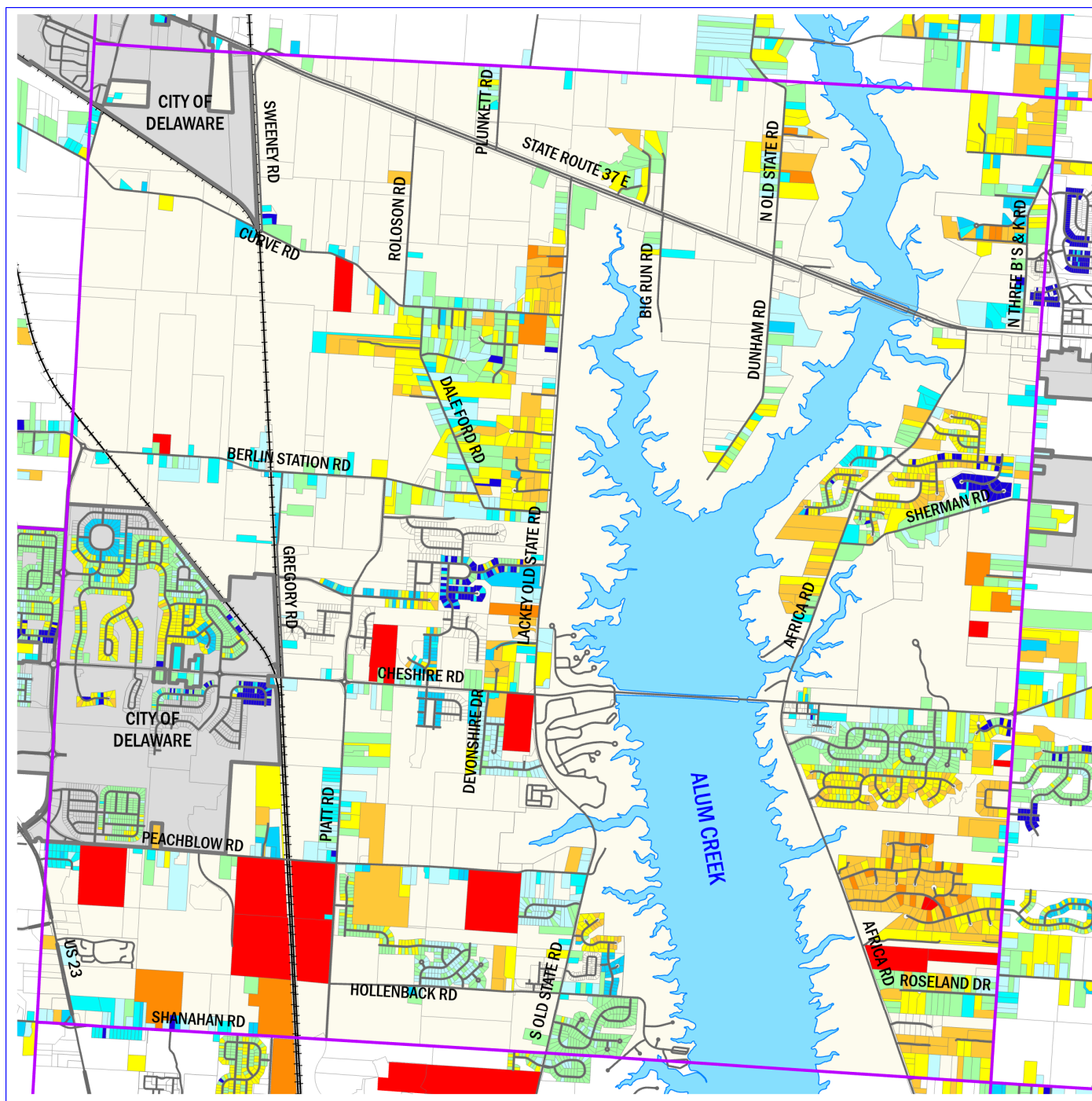
Figure 6B.1 Single-Family Home Market Value Summary

Market Value	Units	% of Total
\$0 - \$80,000	2	0.09%
\$80,001 - \$150,000	79	3.72%
\$150,001 - \$225,000	254	11.96%
\$225,001 - \$300,000	623	29.35%
\$300,001 - \$400,000	571	26.90%
\$400,001 - \$500,000	341	16.06%
\$500,001 - \$750,000	219	10.32%
\$750,001 - \$1,000,000	22	1.04%
\$1,000,001 and up	12	0.57%
Total	2,123	100%

Figure 6B.2 Housing Types (Existing Structures)

Housing Type	Units	% of Single-Family
FR-1 along traditional roads	403	18.5%
FR-1 Subdivisions	573	26.3%
R-2 Subdivisions	71	3.3%
R-3 Subdivisions	3	0.14%
PRD north of Cheshire	250	11.5%
PRD south of Cheshire	882	40.4%
Total Single-Family	2,182	
Total Multi-Family	239	

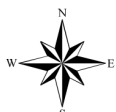
Figure 6B.3 Home Value Map



Home Value Map

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



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(5/7/2018)

Home Value by Market Total Value

0 - 80000

80001 - 150000

150001 - 225000

225001 - 300000

300001 - 400000

400001 - 500000

500001 - 750000

750001 - 1000000

1000001 - 4000000

Data Not Available

high-growth area such as Delaware County, it is impossible to anticipate what the County's share of the state's population should be and to distribute that amount among the townships, village and cities. Furthermore, this is not a centralized economy, but a free market economy.

A pragmatic approach to housing distribution in Delaware County is to:

- Determine what the community wants to look like when it is all built out (vision);

- What services it can reasonably provide;

- What its reasonable and fair share of the mix of population would be;

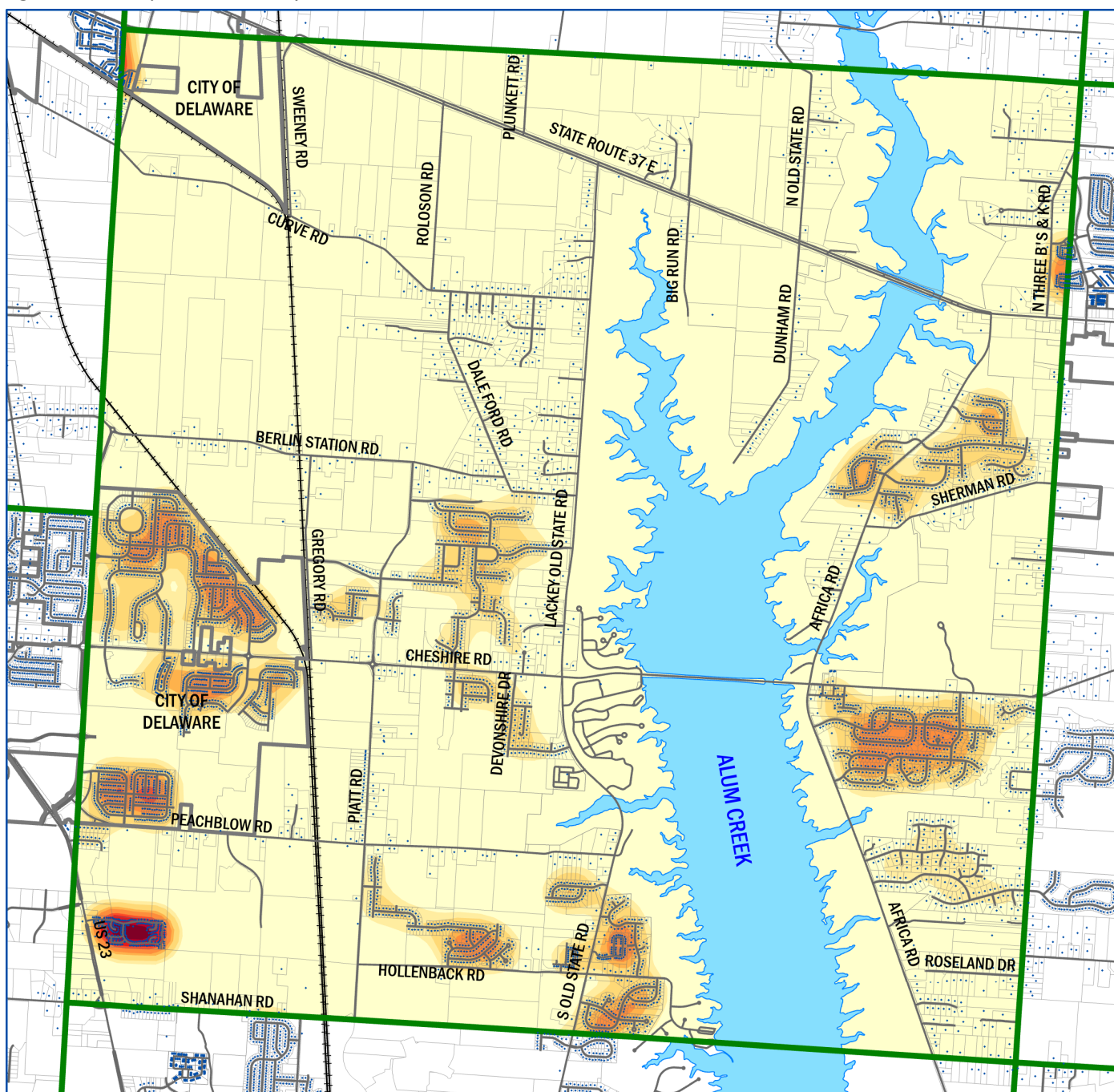
- Determine how to zone for its fair share of housing in a legally defensible way.

Housing Policies

The Township should continually evaluate its housing mix as new developments are proposed. Housing density is limited by sewer capacity, the services the Township can legally and economically provide, and the Township's desire to maintain a sense of rural character. As developing communities begin sharing the leadership in county housing share, they must also share the diversity of housing types offered, and this means all townships.

Townships should not be expected to show large percentages of their future land use mix in multi-family housing. However, in areas where there is access to major road networks and centralized sanitary sewer and water, in transition to commercial uses, or as part of large planned developments, multi-family housing can occur in the townships. Berlin Township will likely receive multi-family housing requests as part of larger planned developments. Delaware, Columbus, and Westerville are building higher density multi-family; therefore they will have the economic and service clout to provide the larger share of the multi-family market.

Figure 6B.4 Population Density



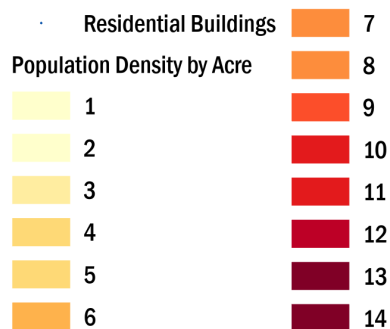
Population Density

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



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(5/7/2018)



Chapter 7A

Economic Conditions

Delaware County

Introduction

Delaware County has a broad-based economy. No one sector drives the economy, which protects the County from sharp up and down spikes. Delaware County's overall employment by sector very closely mirrors the state of Ohio's. Unlike some counties that are largely single-industry driven (auto manufacturing, agriculture, etc.), Delaware County has a healthy mix of many diverse employment sectors as shown in Figure 7A.1.



Commercial development at I-71 in Berkshire Township

Figure 7A.1. Establishments, Employment, and Wages by Sector, Delaware County (2016)

Industrial Sector	Number of Establishments	Average Annual Employment	Total Wages
Private Sector	4,898	77,525	\$4,067,147,734
Goods-Producing	572	9,558	\$572,083,879
<i>Natural Resources</i>	30	312	\$11,759,044
<i>Construction</i>	387	3,177	\$177,672,782
<i>Manufacturing</i>	155	6,069	\$382,652,053
Service-Producing	4,326	67,967	\$3,495,063,855
<i>Trade, Transportation, and Utilities</i>	1,031	16,682	\$589,820,187
<i>Information</i>	76	621	\$46,651,137
<i>Financial Services</i>	525	6,540	\$536,544,491
<i>Professional and Business Services</i>	1,175	19,779	\$1,638,484,206
<i>Education and Health Services</i>	554	8,415	\$350,940,093
<i>Leisure and Hospitality</i>	515	13,376	\$255,248,481
<i>Other Services</i>	438	2,540	\$76,991,571
<i>Unclassified</i>	12	14	\$383,689
Federal Government		230	\$13,404,169
State Government		357	\$21,593,984
Local Government		7,056	\$352,778,235

Source: Ohio Development Department

The Ohio Department of Development showed that between 2011 and 2016, all sectors saw an increase both in the number of employees, except for Information, which saw -40.2% employment. The areas with the greatest increases were Construction (34.7% employment, -1.8% establishment), Other Services (33.5% employment, 23.7% establishment), and Education and Health Services (27.4% employment, 28.8% establishment). Generally, the Service sector saw a 13.5% employee growth, the Goods sector saw a 18.2% growth and the Local Government sector saw a 4.9% growth in employees.

Figure 7A.2. Top 13 Major Employers, Delaware County (2017)

Employer	Employment Sector	# of Employees
JP Morgan Chase	Finance	10,700
Kroger Company	Retail/Warehouse	2,249
Olentangy Local School District	School System	2,203
Delaware County	Government	1,159
Ohio Health (Grady Memorial Hospital)	Hospital/Medical Services	1,108
PCM/Sarcom, Inc.	IT Solutions	1,001
Meijer Limited Partnership	Retail	746
Exel, Inc.	Motor Freight Transportation	660
Delaware City School District	School System	632
American Showa, Inc.	Manufacturing	600
Central Ohio Primary Care Physicians, Inc.	Hospital/Medical Services	
Ohio Wesleyan University	Private Liberal Arts University	
WalMart Real Estate Business Trust	Retail	

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 Zone

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



Simon Tanger Mall in Berkshire Township

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 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.



Commercial development along 36/37 in Berkshire Twp.

Delaware County Finance Authority (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 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 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, an Authority can accomplish 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 ORC 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 NCA 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 NCA 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.

An NCA may do many things as defined in the ORC. 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 NCAs have been established in Delaware County. The Liberty/Powell CA was established to help fund improvements in and around Golf Village. The Concord/Scioto NCA was created to accompany the development of the Lower Scioto Wastewater Treatment Plant.

Community Reinvestment Area

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

Figure 7A.3 Top 13 Major Employers, Delaware County (2017)

TIF Name	Terms	Value, Tax Year 2021	2nd Half 2021 net
Genoa	30 years/	\$12,188,450	\$63,359
Olentangy Crossing (Orange)	30 years/100% for roads and US 23	\$11,493,800	\$112,826
Slate Ridge (Orange)	20 years/75%	\$6,488,320	\$148,654
Columbus Outlets (Berkshire)	10 years/75% for public improvements around dev.	\$27,547,040	\$713,902
Creekside (Orange)	20 Years/75% for internal roads	\$2,394,900	\$79,582
Evans (SE Residential) (Berlin/Orange)	20 years/75% for road and sewer	\$7,587,430	\$0
Northwest Berkshire Twp I	10 years/75% for Four Winds Drive extension	\$5,889,520	\$216,481
Slate Ridge II (Orange)	20 years/75% for roads and sanitary	\$8,442,680	\$125,086
Evans Farm (Commercial) (Orange)	20 years/75% for roads and sewer	N/A	\$0
Orange Road (Orange)	10 years/75% for railroad underpass and related	\$252,570	\$8,592
OSU Medical/Home Road (Liberty)	10 years/75% for roads and sanitary	\$2,183,320	
Home High (Orange)	18 years/75% for roads and utility improvements	N/A	\$0
Berlin Business Park	20 years/75% for roads including interchange and sewer	N/A	\$0
Kilbourne (Brown)	10 years/75% for roads and utility improvements	N/A	\$0

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 used to retire the debt of an improvement tied to the project.

A county negotiating committee meets with a potential business and discusses if the TIF program can be utilized for the proposed project. 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. The TIF would have to be supported by the local jurisdiction, the applicable school district, local fire district, and county representatives.

Joint Economic Development Districts

Joint Economic Development Districts (JEDD) 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 District

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 and reallocate property taxes to develop and support activities that grow the economy. The Economic Development Department analyzes each request individually. The Department engages 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 basis of the credit lies in the state income tax withholding per new employee. 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 works with businesses interested in this program and puts 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 various publications through the decades.

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 and determined by the County Engineer.

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.

Chapter 7B

Economic Conditions

Berlin Township



Berlin Township Economy

Berlin Township has the possibility for a balance of residential, commercial, and industrial tax and job base in its local economy. Although the Township is currently mostly residential, there are lands along U.S. 23 and U.S. 36 that represent future commercial and industrial development corridors.

Figure 7B.1 Township Property Valuation

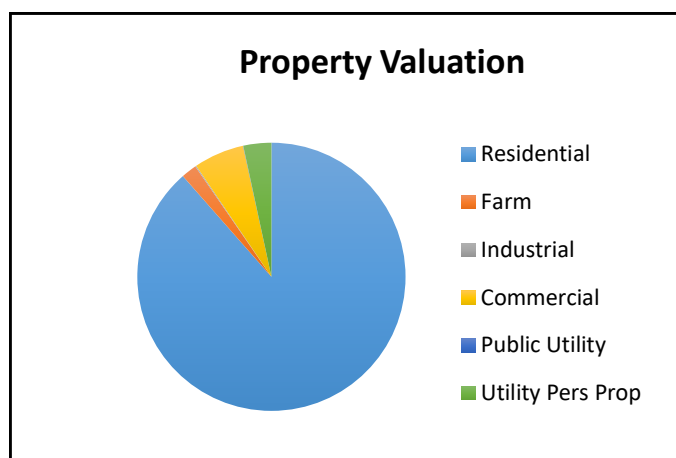
Rates of Taxation and Revenues

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 2018, Berlin Township's residential property was valued at \$263,374,360, fifth behind Orange (\$1.07 billion), Genoa (\$1.03 billion), Liberty (\$906 million), and Concord (\$504 million). The City of Delaware's residential value is \$602 million. The Township has seen steady growth in its residential land value. Berlin's Farm value is \$5,554,270.

The Township's commercial, industrial, and utility uses (including personal property) are valued in seventh place among the County's townships at \$28,593,110. For comparison, the value of the same land uses in Orange Township is \$260,663,540. Trenton's is third at \$80 million and Concord's is eighth at \$20 million. Delaware City's non-residential land is valued at \$216 million.

Adding farm uses, utilities, and personal tangible value, the total valuation for Berlin Township is \$297,521,740. This represents 5.4% of the county/township total \$5,473,466,170.

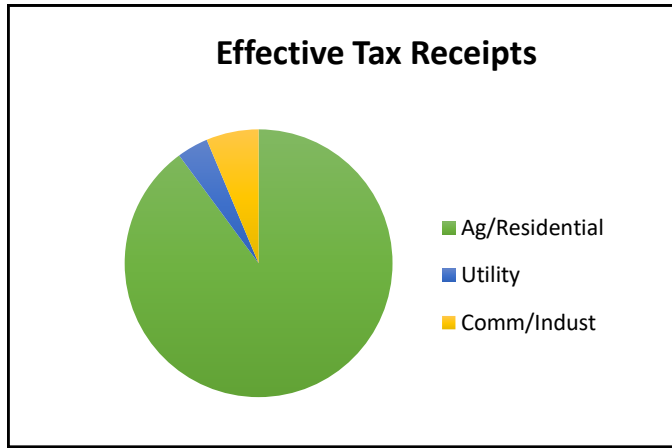


Residential	\$263,374,360	88.5%
Farm	\$5,554,270	1.9%
Industrial	\$388,370	0.1%
Commercial	\$18,065,960	6.1%
Public Utility	\$113,210	0.04%
Util Pers Prop	\$10,025,570	3.4%
Total	\$297,521,740	

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”).

Figure 7B.2 Effective Tax Receipts



Agricultural/ Residential	Commercial/ Industrial	Utility	Total
\$2,113,601	\$148,840	\$88,861	\$2,351,302
89.9%	6.3%	3.8%	

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.

Berlin Township is located entirely within Olentangy Local School District. The Township’s **2021 effective** tax rates include the following, based on the Auditor’s online property report function:

Figure 7B.3 Millage per Agency

	School	DACC	Health	Pres Parks	Library	Twp.	Corp.	County	Mental Health	911
Township, Olentangy	75.8	2.9	0.6	1.6	1	8.9	-	6.5	1.0	0.7
Delaware Olentangy	84.3	3.2	0.546	0.823	1	7.68	1.05	8.09	0.875	0.555

Difference between Residential and Commercial receipts

The left figures on the following page are taken from a sample properties within the unincorporated portion of Berlin Township in the Olentangy district.

Residential—The total market value of this example is \$260,900 [4404 Marilyn Dr], which is higher than the overall County average but typical for a recently-built suburban neighborhood.

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

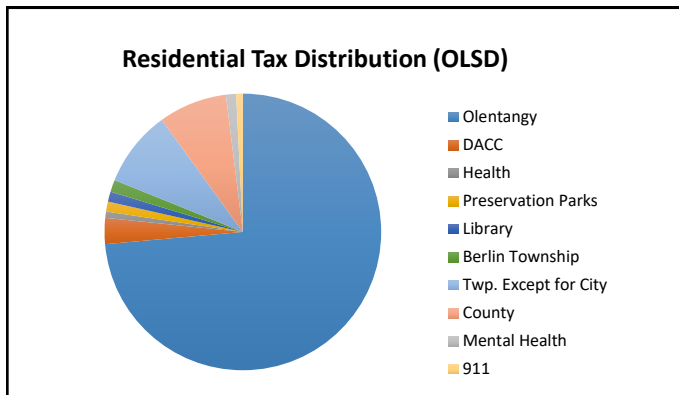
any costs to the school district. Tax rates within townships are different based on the school district boundaries, at rates slightly above the residential rate.

The figure at right is taken from a large single-use commercial property within the unincorporated portion of Berlin Township in the Olentangy district. The total market value is \$2,143,400 [5450 Columbus Pike].

School District	Ag/Res Effective	Com/Ind Effective
Berlin Twp., Olentangy	72.1899	77.1413
City of Delaware	72.1899	77.1413

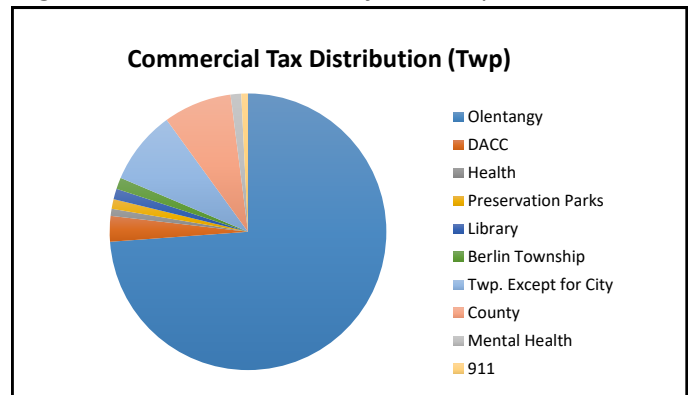
**No figures in any of the preceding tables take into consideration drainage maintenance fees or the effects of TIFs and impacts from other tools listed later.*

Figure 7B.4 Tax Distribution for a Sample Residence



Olentangy	\$4,364.85
DACC	\$180.50
Health	\$43.60
Preservation Parks	\$69.16
Library	\$69.71
Berlin Township	\$83.90
Twp. Except for City	\$528.38
County	\$475.22
Mental Health	\$69.91
911	\$46.24
TOTAL	\$5,931.47

Figure 7B.5 Tax Distribution for a Sample Business



Olentangy	\$43,150.91
DACC	\$1,748.54
Health	\$482.70
Preservation Parks	\$657.48
Library	\$721.94
Berlin Township	\$787.70
Twp. Except for City	\$5,037.46
County	\$4,666.10
Mental Health	\$722.97
911	\$456.92
TOTAL	\$58,432.72

Effect on Growth and the Community Vision

Delaware County's unemployment rate is comparatively low. Its poverty rate is low. It has a varied economy, which has been growing. Of all the economic factors reviewed, there is only one that may be of concern related to business recruitment, and that has been the low unemployment rate. When the local labor force is tapped out, business expansion goes elsewhere. When business bypasses a geographic area, this can be a precursor of a declining real estate (housing) demand.

1. When **too much housing** is created in advance of a softening demand curve and very low unemployment rate, a glut of housing product can build up and cause real estate price deflation. Such American "boom-bust" real estate cycles have occurred in many places, such as California, the Northwest (Seattle, Washington), and New England. Although the County has experienced a cycle in new housing activity, real estate price fluctuations have not been referred to as "boom-bust" in Central Ohio.
2. The **housing pipeline** numbers suggests that a glut of supply existed when the economy and credit issues became problematic. It is very difficult to interpret this trend, or to call the moment when oversupply occurs. As discussed in Chapter 3, looking at the five-year average lot absorption rate for the townships in Delaware County, the number of residential units in the development pipeline represent a twelve-year supply. In a more typical economy, a three-year supply is considered healthy.
3. The Delaware County **housing market** remains stronger than the central Ohio housing market. To understand this phenomenon, we looked at recently released census figures, which show that the United States, Ohio, and Central Ohio continue to grow slightly, while Delaware County has grown significantly.

Chapter 8A

Roads and Transportation

Delaware County



General

Many of Delaware County's main roads were laid out in the 19th Century. As areas develop, the function of these original roads change. As traffic counts increase, roadway improvements and new roads will be needed.

Every unincorporated community's transportation system is a composite of roadways maintained by different entities. Federal and state roads are maintained by Ohio Department of Transportation (ODOT), District 6; The Delaware County Engineer maintains county roads; individual townships maintain township roads; homeowner associations maintain private subdivision roads; and CADs are private roads serving two to five lots, maintained by the lot owners.

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.

Some roads may fall into multiple classifications. Some roads may exceed the ADT related to their classification.

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.

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. ADT typically ranges from 1,500 to 3,500 vehicles, with AM peak hour traffic about 7-8% and PM peak hour of 10%.

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.

Traffic Counts

Traffic counts indicate the ADT in both directions on a road. These counts can be used to determine if the LOS is acceptable or unacceptable. LOS A is considered ideal, LOS F is failure. The LOS depends on traffic counts, number of lanes of road in each direction, and width of lanes, including shoulders. Traffic counts are also used to determine functional classification.

The Mid-Ohio Regional Planning Commission (MORPC) is the Metropolitan Planning Organization (MPO) for Central Ohio. It acts on behalf of Delaware County in certain transportation planning functions and is a funnel for federal funds. MORPC maintains a database of traffic counts for the Central Ohio region.

Access Management

Access management is the practice of limiting curb cuts to major roads to prevent conflicting turning movements and maintain safe traffic flow. In July 2010 ODOT 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, or 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, 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.
- 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.

For example, the following recommended policies were part of the 36/37 Access Management Study.

- Closure of all access drives (non-signalized) as the current use changes and new drive permits are required
- Closure of median crossings as the drives they serve are closed
- Dedication of right-of-way for future expansion along 36/37 as opportunities present themselves
- Construction of access road(s) as necessary to provide access to 36/37 at a minimum setback of 650' from highway
- Conversion of one intersection to right-in/right-out access by closure of median opening and construction of right turn deceleration lanes on 36/37

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 ORC Section 711.10. See township chapter for projects in the area.

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 (MTP) 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.

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



Multi-use path near the Tanger Outlets

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 the Delaware County Trail Committee (DCTC), which produced the Delaware County Trail System Master Plan, adopted by the Commissioners in November 2017. Improvements would be coordinated with Central Ohio Greenways’ (COG) efforts to create major routes from existing trails in other counties. This group includes representatives from DCRPC, the County Engineer, Preservation Parks, the Delaware General Health District, Economic Development, MORPC, and the public.

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.

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:

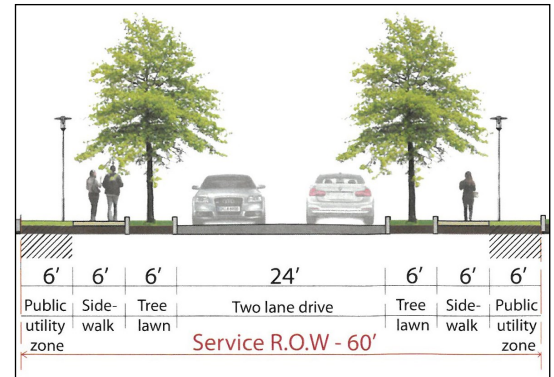
Patterns of Development

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. Neo-traditional development patterns may be encouraged near existing village centers or as greenfield development. A combination of a grid street core, with curvilinear edges can 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. 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,



Streetscape example with trees in the tree lawn.

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.

Complete Streets

Complete Streets accommodate the need for an integrated, connected street network that serves all of its users, including motorists, bicyclists, pedestrians and transit riders of all ages and abilities. As the subdivision authority, the DCRPC 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 on 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.

In addition to having a sidewalk requirement for all new streets, townships should create a policy for existing roads as they change from local to collector status. Minor collector streets within platted subdivisions should also be considered for traffic calming devices. Major collectors should consider the construction of bike paths on both sides of the street when traffic warrants it. Subdivisions that are platted along existing collector streets may stipulate that bike paths or sidewalks be constructed as part of a township or regional system.

Alternative Street Designs - The Roundabout

Low Speed Roundabouts have begun to be used as an alternative to the traditional signalized intersection throughout 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 the development can be attributable to the project as part of the subdivision and zoning process. Projects that contribute to regional traffic can be required to contribute to those future improvements.

Transit

The Delaware County Transit offers an on-call non-scheduled bus service from point to point in the County. As the County grows, new transportation will continue to be studied by transportation-related agencies.



DATA offers an on-call non-scheduled bus service from point to point in the County. By calling 740-363-3355 at least by noon of the business day prior, a pickup and destination can be scheduled if a vehicle is available. DATA requires a window of 15 minutes prior to the scheduled pickup time and 15 minutes after the schedule pickup time. Demand response service is limited. Policies may change—current information can be found at www.ridedata.com.

Chapter 8B Roads and Transportation

Berlin Township



General

The Township is crisscrossed with county and township roads, which were laid out for farm-to-market usage. These roads are changing function as the area develops to a suburbanizing community. There will be needed roadway improvements. For the moment, the roads are not overtaxed and traffic flow is good within the Township.

As noted in Figure X, Berlin Township roads are maintained by various authorities: federal and state roads are maintained by Ohio Department of Transportation (ODOT), District 6; The Delaware County Engineer maintains county roads; Berlin Township maintains township roads; Homeowner associations maintain private subdivision roads; CADs are private roads serving 2-5 lots, maintained by the lot owners.

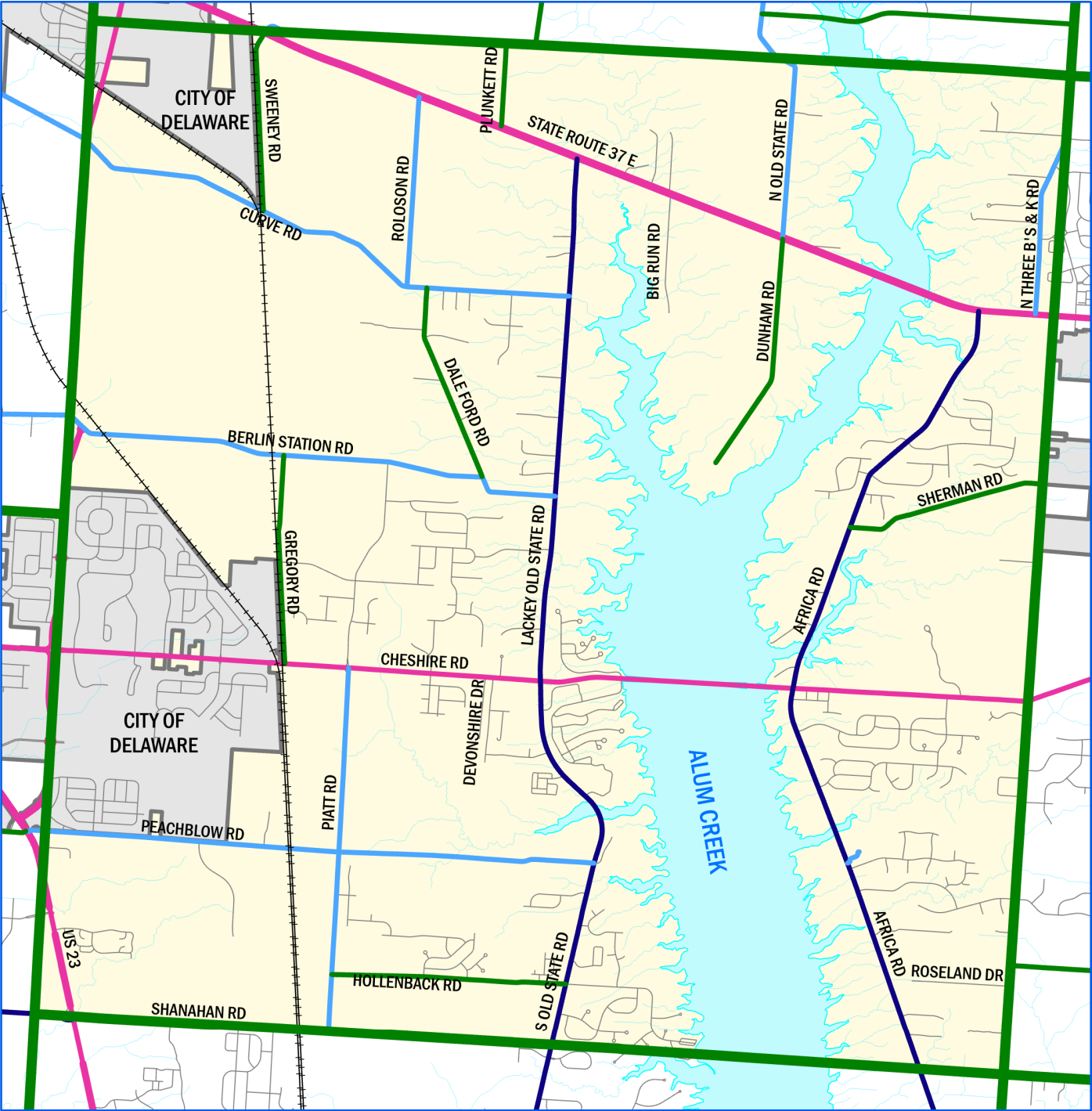
Road carrying capacity is determined by the width of the paved surface and the number of lanes. The speed of the road is generally determined by such factors as road width, pavement conditions, curve radii, topography, number of driveways, and cross traffic movements. Future land development will lower the Level of Service (LOS) of county roads. Upgrades will be needed to keep pace with the increased traffic counts.

Federal and State Roads

U.S. 23 – Berlin Township has approximately 4,000 feet of U.S. 23 passing through its extreme southwest corner. This is a four-lane divided highway with limited access. Most of the driveways established at the time of access rights purchase were single-family homes or farmlands. It is possible to upgrade to commercial use, but commercial access rights must be purchased from ODOT based upon the commercial market value of the property.

U.S. 23 is the major north-south federal and state highway from Detroit/Toledo to Columbus and Portsmouth, Ohio. This road is heavily traveled with trucks carrying interstate commerce and passenger vehicles. Commercial development along U.S. 23 is beginning to adversely affect its ability to carry interstate traffic.

Figure 8B.1 Road Classifications Map



Road Classifications

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- Township Boundaries
- Road Centerlines
- Railroad
- Rivers/Ponds/Lakes
- Road Classifications
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Freeway

The U.S. 23 corridor offers an important commercial tax base to Berlin Township. Any transition of frontage lots to commercial or industrial use should be subservient to maintenance of through traffic. If commercial development is desirable, it must be a part of a planned network of limited access points, signals placed no more frequently than ½ mile spacing, and with parallel access roads.

When The Park at Greif was zoned in 1998, along with the current Byers Kia site, both entities had to reserve easements for a future parallel access road across their lands for linkage of commercial properties on the west side of U.S. 23. A Memorandum of Understanding was created on the east side of U.S. 23 to establish these corridors and access points. Access management practices should continue to be used along all of U.S. 23.

U.S. 36/S.R. 37 – Berlin Township contains 4.3 miles of 36/37, from Delaware on the west to the interchange area of I-71. This is a four-lane divided highway, with mostly agricultural land use. Commercial uses exist near the I-71 interchange. This road is well traveled by northbound interstate trucks connecting from U.S. 23 to I-71. U.S. 36 is also the northern gateway to Alum Creek State Park. Traffic flow is currently smooth, with a LOS that is probably A or B. Pavement condition is very good; with left turn storage lanes for cross turning movements.

Strip commercial development with multiple unlimited access points would inhibit this highway's ability to function. Proper access management practices should be used to preserve the function of this road as a main federal highway.

Interstate 71 – Although I-71 does not enter Berlin Township, its location ½ mile east of the Township boundary along 36/37 has an impact on traffic within the Township and future traffic generation and land use. The I-71 interchange area extends into Berlin Township. Future commercial development will occur in the Township to service the interchange.

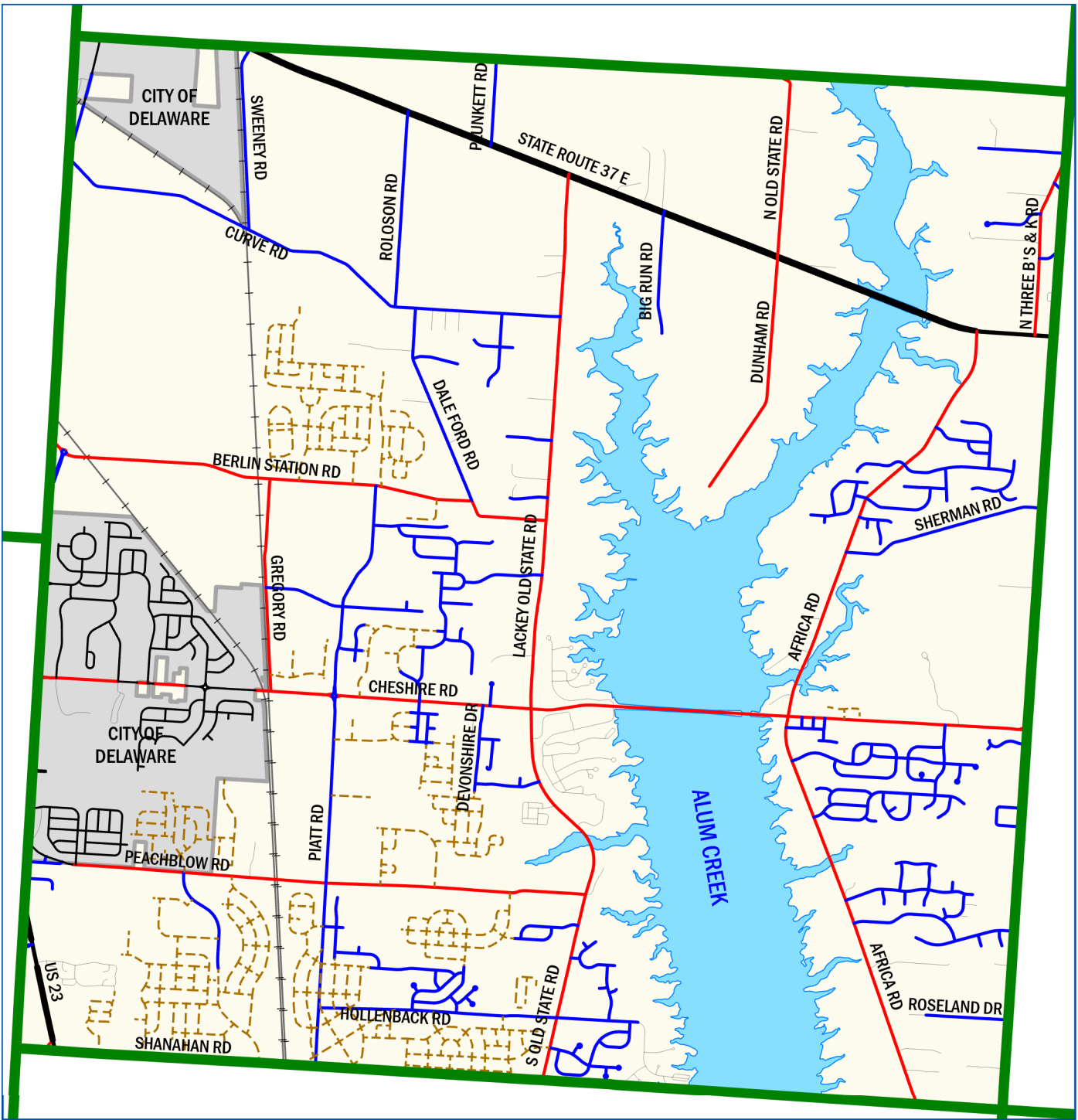
County Roads

The Delaware County Engineer maintains nine county roads in Berlin Township. Future development will lower the LOS of local farm-to-market roads. Under current Ohio law, upgrades cannot be required of a land developer for roads that do not abut his or her particular development. The community, county, or state is responsible for off-site impact costs. If large-impact development proposals do not offer to mitigate their adjacent traffic impacts, the Township may consider the rezoning premature.

Township Roads

The Township maintains collector roads and public subdivision streets. Collector roads include Curve, Sweeney, Roloson, Piatt, and Dale Ford, and can vary in width from 16 feet to 26 feet. More modern subdivision streets, such as West Bay Circle, Park Point, and Parkshore are 32 feet in width.

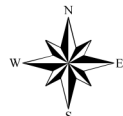
Figure 8B.2 Roads Map



Roads

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- | | |
|----------------------------|----------------|
| Township Boundary | State Highways |
| Proposed Subdivision Roads | County Roads |
| Rivers / Lakes | Township Roads |
| Incorporated Area | City Roads |
| Road Classification | Other Roads |
| US Highway | |

Functional Classifications

Arterial roads are defined in the County chapter.

Major arterial roads in Berlin Township: U.S. 36/S.R. 37, U.S. 23, S.3 B's & K, and Cheshire.

Minor arterial roads in Berlin Township: Lackey Old State, S. Old State, and Africa.

Collector roads are defined in the County chapter.

Major collector roads in Berlin Township: Berlin Station, Curve, N. Old State, N. 3 B's & K, Peachblow, Piatt, Roloson, Shanahan, and Sweeney.

Minor collector roads in Berlin Township: Dale-Ford, Dunham, Gregory, Hollenback, Plunkett, and Sherman.

Local Streets are defined in the County chapter.

Examples: Big Run, Roesland, and Devonshire.

Future Roads – The Thoroughfare Plan

The Thoroughfare Plan process is defined in the County chapter. The Thoroughfare plan recommends several improvements in Berlin Township:

Piatt to Roloson Connection (County Network Alt. K)

This is a proposed road that forms a north-south connection between Roloson, Berlin Station, and Piatt Roads. The Berlin Station to Piatt connection has become more vital with the addition of two future school sites that will be accessed via this road. Also, the southern terminus of Piatt is planned for extension south through Orange Township to Lewis Center Road.

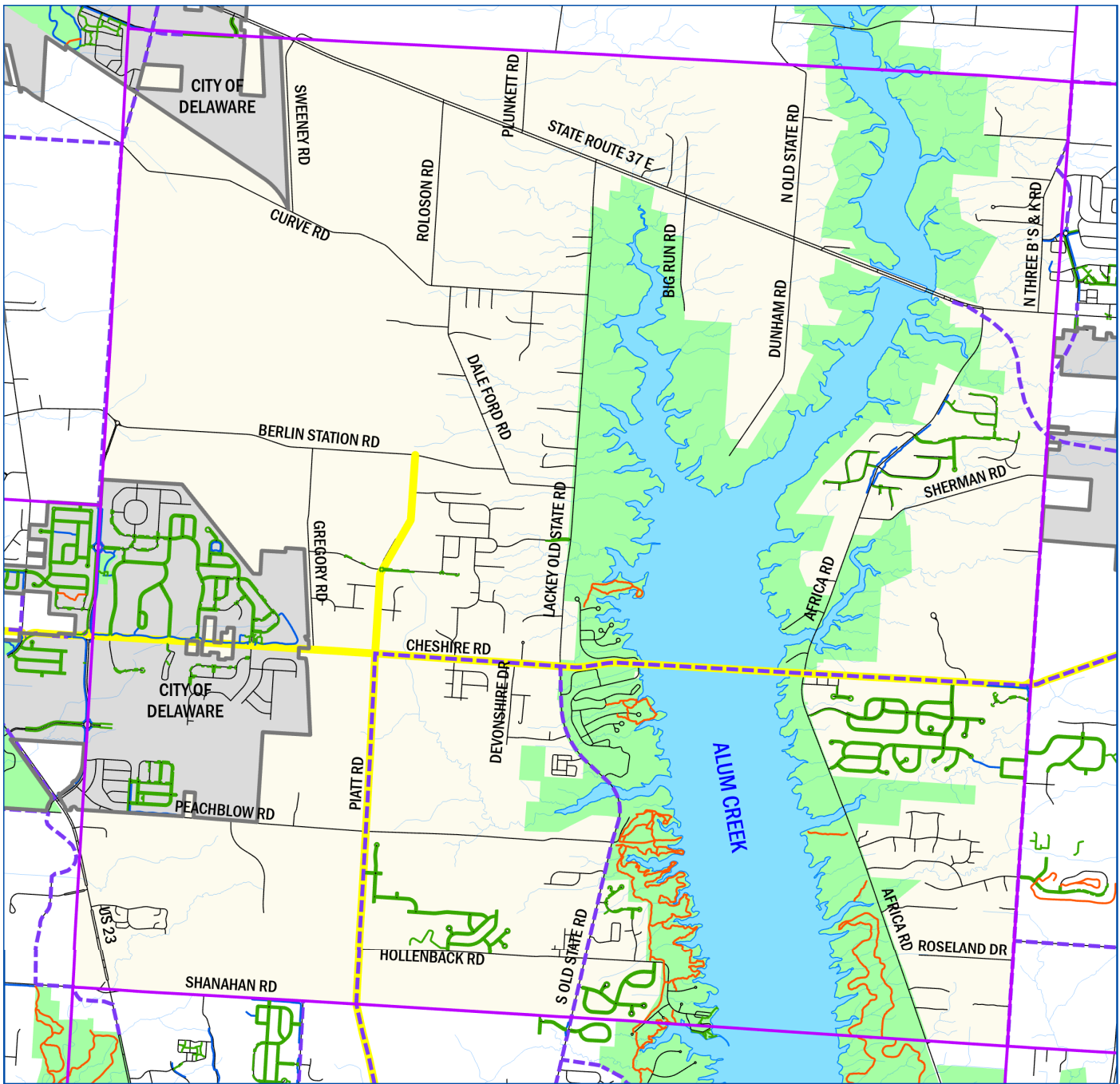
Shanahan Road Extension (County Network Alt. Z)

This project extends Shanahan from its terminus at Piatt Road to the east until it intersects with South Old State Road. This road will be incorporated into subdivision projects and will be developer-driven.

Glenn Road Extension (City Network Alternative 3)

This is a major planned connection between U.S. 23 and 36/37. The alignment has been refined by the City of Delaware staff and portions of this connection are in place. The intersection improvements at Peachblow Road, U.S. 23, and Winter Road is the Glenn Road southern terminus.

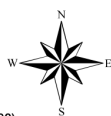
Figure 8B.3 Bikeways and Sidewalks



Bikeways and Sidewalks

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- Township Boundary
- Incorporated Area
- Roads
- Rivers / Lakes
- Streams / Drainage Courses
- Parks
- Bikeway Local Plans
- Trail Committee Corridors
- Existing Sidewalk
- Sidewalks
- Unpaved Trails
- Multi-Use Paths

Veterans Parkway (City Network Alternative 16)

This is a major project that would extend an arterial road from U.S. 23 from its intersection with U.S. 42 to the east through Delaware Township to Glenn Road at the edge of Berlin Township. The city is currently studying alignments.

The Thoroughfare Plan also recommended several “build-out” modification recommendations:

Cheshire Road: upgrade to 3-lane, U.S. 23 to Piatt Road;

Cheshire Road: upgrade to 4-lane, Piatt to Africa;

S. Old State Road: upgrade to 3-lane, Lewis Center to Cheshire;

Africa Road: upgrade to 3-lane, Lewis Center to Cheshire

Delaware County Engineer Projects

Construction (2022-2023):

Piatt-Roloson Road Extension (north of Berlin Station)

Bikeways

Sidewalks exist in limited locations in several subdivisions, and multi-use paths exist along Glenn Parkway, part of Cheshire Road, and part of Africa Road.



Recommended Bikeways

The regional bikeway plan recommends a number of off-road and on-road bikeways along traditional roads in Berlin Township to create a network that will connect Delaware, Sunbury, and Orange Township. The proposed routes are indicated in blue on the Sidewalks and Paths map.

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Chapter 9A

Utilities

Delaware County

General

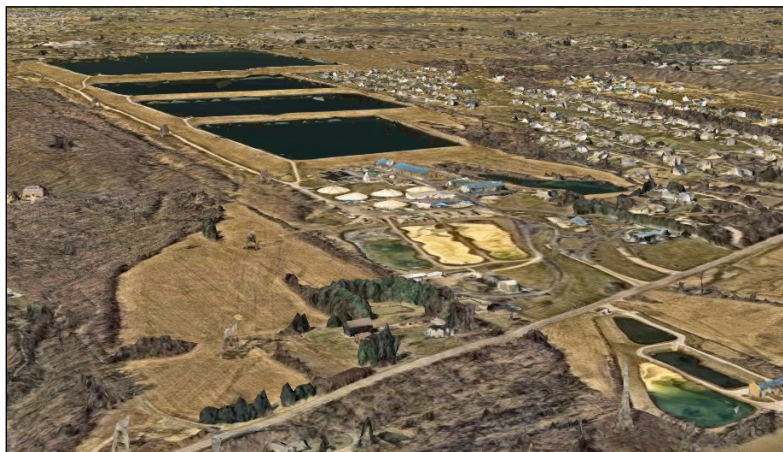
Water, sanitary sewer, telephone, electric, natural gas, cable television, and high speed internet are desirable utilities in the Delaware County real estate market. As a county with multiple jurisdictions, utilities are managed by separate entities. Delaware County provides sanitary sewer to much of the southern half of the county. Municipalities can also provide sewer to unincorporated areas, but typically only as with contractual conditions. Del-Co water provides water service throughout most of the unincorporated areas, as well as in some villages. Stormwater management is required by Delaware County.

Water

The Del-Co Water Company, a cooperatively owned private water company established in 1973, serves most of Brown 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 County. Del-Co Water utilizes water from the Olentangy River, Alum Creek Reservoir, and from the Scioto River utilizing a raw water line in Liberty Township. Wells along the Kokosing River in



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

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.

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. Although planning for future growth, such as a new 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 Township. The demands for lawn sprinkling systems, however, can quickly tax capacity in dry spells. As a result, Del-Co has a year-round, three days per week restriction on lawn watering.

Water Lines

The Utilities map shows the location and diameters of water lines Delaware County. 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 new development.

Sanitary Sewer

Until lands have access to public sanitary sewer, they must use septic systems and leach fields for sewage disposal. In 2016/2017, the County Commissioners updated the 2004 Facilities Master Plan for the County. The service areas shown in Figure 23 were updated based on recent development pressure and service area amendments.

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.

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.

Chapter 9B

Utilities

Berlin Township

Sanitary Sewer Service

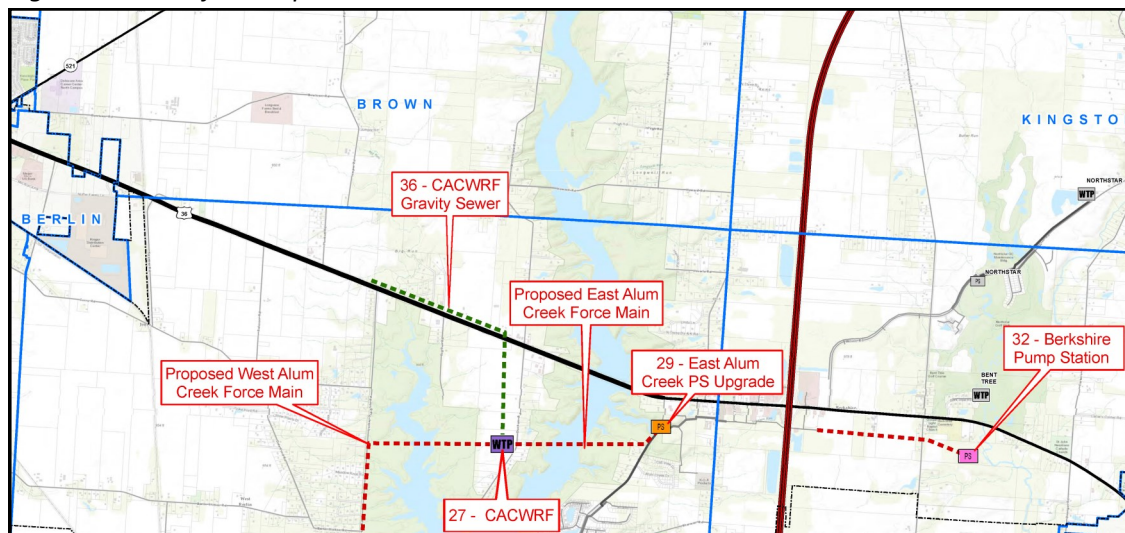
The improvements listed in Figure 24 and shown in Figure 25 are being considered as part of possible future improvements that will impact Berlin Township. The County acknowledges the need for well-designed development along the 36/37 Corridor and the positive impact on the tax base such development could have. After many years of discussion and planning, the Commissioners are moving forward with plans to build a new treatment plant south of 36/37 between Big Run and Dunham Roads. In the short term, a pump station near Lackey Old State Road and 36/37 is being designed.

When built, the plant will relieve capacity concerns at the Alum Creek facility by taking in effluent from the interchange area in Berkshire and Berlin Townships as well as approved developments north of Cheshire Road in Berlin Township. It will also allow development of the 36/37 corridor east of the City of Delaware's service area. The new county service area could extend northward beyond Bowtown Road, from the railroad at the intersection of Baker and 36/37 to a line not quite as far east as N. Old State Road.

Figure 9B.1 Project Table

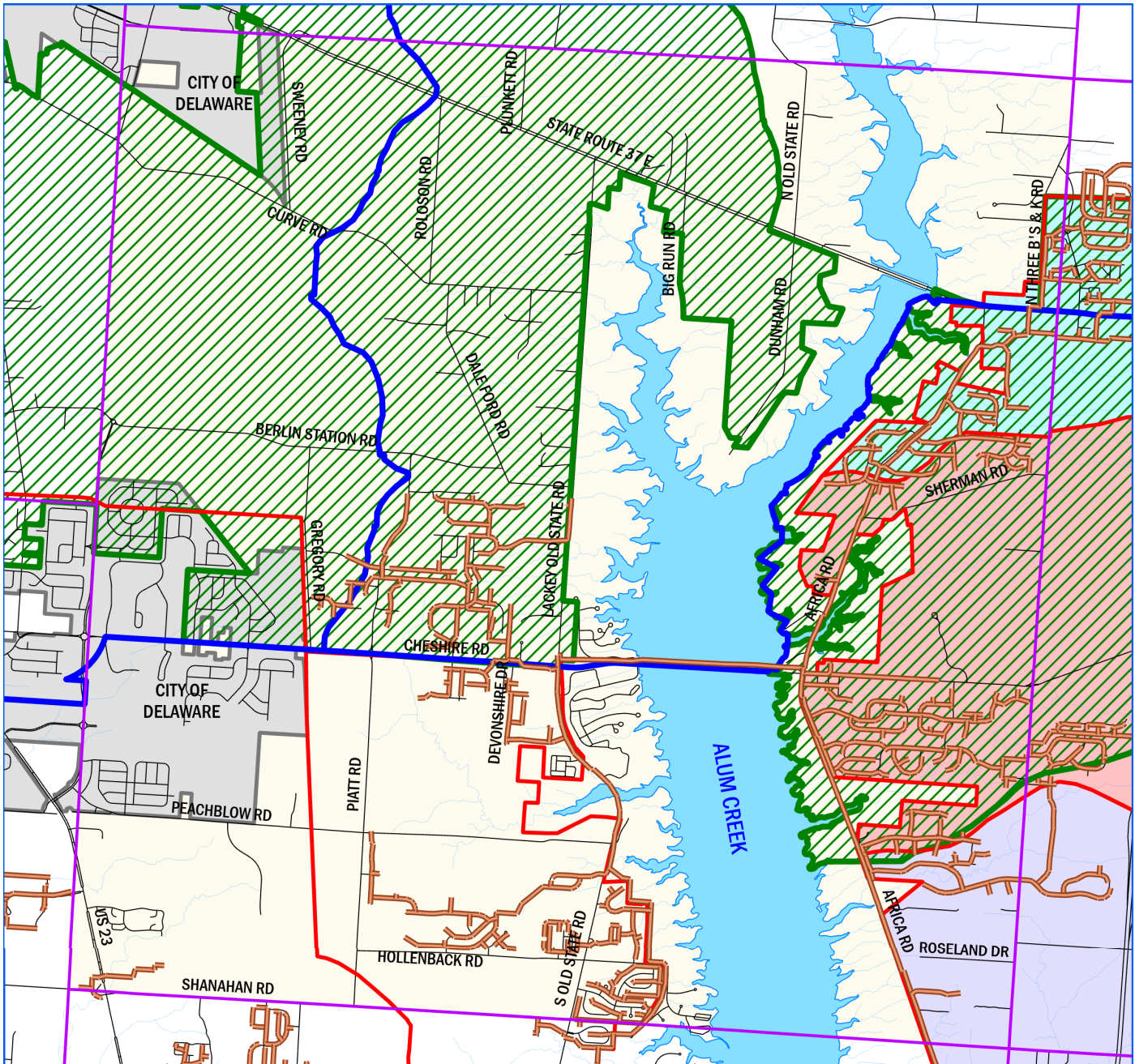
Project	Location	Purpose
Pump Station and Force Main (32)	South of 36/37, near Bent Tree	Receive gravity flow from west, pump back to existing service near Interstate
Upgrade East Alum Creek Pump Station (29)	Africa Road near 36/37	Additional capacity
Upgrade Cheshire Road Pump Station	Africa Road and Cheshire Road	Additional capacity
New gravity sewer main along 36/37 (36)	Berlin Township between Lackey Old State Road and Dunham Road	Serve the 36/37 corridor
New Central Alum Creek Water Reclamation Facility (27)	South of 36/37 between Big Run Road and Dunham Road	Serve general area, take pressure off the Alum Creek plant

Figure 9B.2 Project Map



Source: Sanitary Sewer Master Plan (2017)

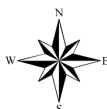
Figure 9B.3 Sewer Service Map



Sewer Service

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- Sewer Lines
- ▮ Drainage Areas (2020 Sewer Master Plan)
- Potential Columbus/Delaware Co. Sewer Service Area @ 4 persons/acre
- Current County Sewer Service Areas
- Future Sewer Service Areas (2020 Sewer Service Master Plan)
 - Central Alum Creek Service Area
 - Big Walnut Service Area
- Current County Sewer Service Areas
 - ZONE A - EAST ALUM CREEK
 - ZONE B - CHESHIRE
 - ZONE D - ALUM CREEK

Natural Gas

Berlin Township is served by Columbia Gas and Ohio River Product.

Telecommunications/Internet Service

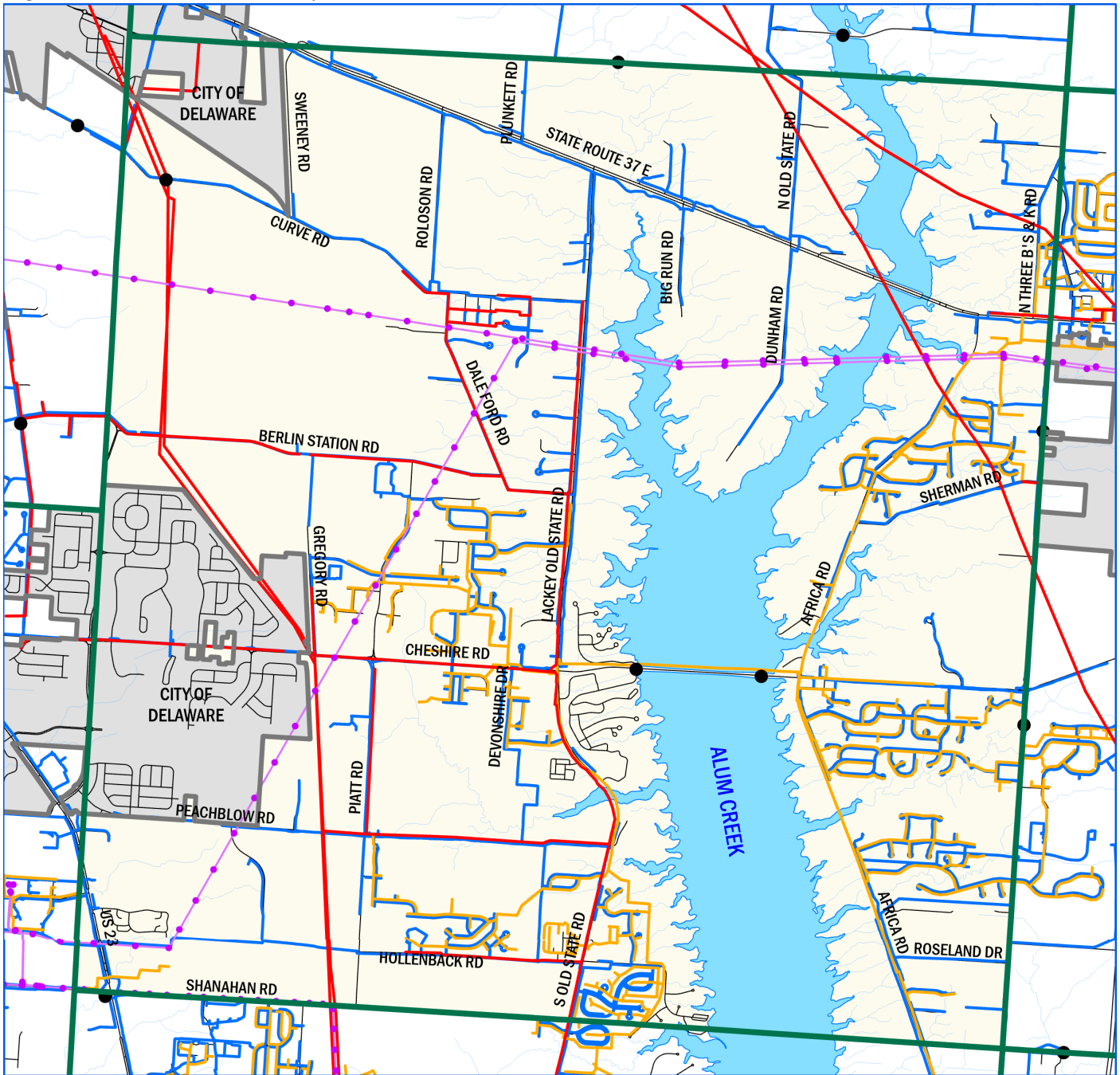
Based on private sector marketing information, the southern half of Berlin Township is generally serviced by high-speed Cable broadband. Similarly, the southern half of the Township is generally serviced by DSL broadband, along with the area surrounding Kilbourne. The Township is entirely serviced by Fixed Wireless broadband, almost all of which is served by NexGenAccess. 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 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. Brown Township has a set of cell tower regulations that were drafted to implement the federal and state laws regulating telecommunications towers.

Figure 9B.4 Utilities Service Map



Utilities Service

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- ▬ Township Boundary
- Incorporated Areas
- Bridge locations
- Power Poles
- Power Lines
- Gas Lines

- Sewer Lines
- DELCO Waterlines
- Road Centerlines
- Rivers / Lakes
- Streams / Drainage Courses

Chapter 10A

Community Facilities

Delaware County



General

Community Facilities can include a number of items that create quality of life in a community. These facilities are usually public, but may represent other features that bring value to the community, such as historic sites. Based upon the complexity of local government, ownership and responsibility of these facilities can include township, county, municipal, and other organizations. This chapter is by no means exhaustive.

Schools (post K-12)

Delaware Area Career Center (DACC)

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 North campus is located at 1610 S.R. 521, Delaware. The DACC is combining programs into one campus at 4565 Columbus Pike, Delaware, Ohio 43015 (740) 548-0708.

Columbus State

In 2008, Columbus State built 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

(This section applies to local public schools) 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* (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).

Since townships do not have the authority in Ohio to control their growth by moratoriums, and they do not have the authority to impose impact fees, their only recourse to overly rapid growth is to monitor critical facilities in making zoning decisions. While a decision cannot be based on any one facility, a township can consider a totality of factors when making a decision to rezone property.

Libraries

County residents can obtain a library card at any of the following libraries.

The Delaware County District Library has its downtown library at 84 E. Winter Street, Delaware, and branch libraries in the City of Powell at 460 S. Liberty Street, the Village of Ostrander at 75 N. 4th Street, and Orange Township at 7171 Gooding Boulevard. The District Library employs 98 people, or 68.75 full-time equivalents. Its annual budget is approximately \$6.7 million, which is used for staff salaries and materials, maintenance, and operating expenses. 66% of the budget comes from a local property tax, 30% is generated from state income tax through the Public Library Fund, and the remaining 4% comes from grants, donations, investment earnings, and fees.

There are 126,000 residents in the Delaware District Library service area and 71,000 registered borrowers (borrowers can be outside of the district). The Library’s service district comprises all of Delaware City, Olentangy Local, and Buckeye Valley Local School Districts (except the portion in Oxford Township), and portions of Centerburg, Elgin Local, Dublin, and Johnstown-Monroe Local School District that are in Delaware County. Currently, the District has 327,000 print volumes. The Library also offers millions of additional materials through digital resources and resource sharing programs like the Central Library Consortium and SearchOhio.

Ohio Wesleyan University, Beeghley Library is located at 43 University Avenue, Delaware and extends borrowing privileges to all residents of Delaware County.

Ashley Wornstaff Library is located at 302 E. High Street, Ashley.

Hospitals

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, along 36/37, and along Sawmill Parkway.

Chapter 10B

Community Facilities

Berlin Township



General

As noted in the county version of this chapter, Community Facilities can include a number of items that create quality of life in a community. These facilities are usually public, but may represent other features that bring value to the community, such as historic sites. Based upon the complexity of local government, ownership and responsibility of these facilities can include township, county, municipal, and other organizations. This chapter is by no means exhaustive.

Historic Sites

The data in Figure 11.3 indicates that there are no Berlin Township sites on the National Register of Historic Places. However, that does not indicate that there are no historic places in the township. The map indicates a number of structures which, based on the Auditor's data, were built in 1910 or earlier.

The unincorporated village of Cheshire was platted in 1858. It has a collection of older structures, some of which may be appropriate for preservation and restoration. Changes could also be made to the existing Old Cheshire PUD overlay to ensure that any redevelopment meets a number of architectural goals and standards.

There are several other scattered sites throughout the township where individual structures are of an age and quality that might qualify for historical designation, if not on a state level, perhaps at a local level.

Several "ghost towns" have been "located" in the township, based on research by Larry Durica. Alum Creek was a town which is mostly underwater. A former church can be seen on the east side of the reservoir at 36/37. Berlin Station was a railroad town at the Conrail tracks with a

grocery store, sawmill, wagon-maker’s shop, church and a schoolhouse. The grocery was in business until 1940. Berlin was a “paper” town that was never developed on 36/37 near Baker Road and Sweeney Road. Gregory was a railroad town at Cheshire and the tracks. Jacktown was located at Africa Road south of Cheshire but is probably now under the reservoir. Other crossroads communities include Jones, Rust Corners, Saunder’s Corners and Stewards Corners.

Cemeteries

A small number of cemeteries exists in the township. The size, ownership and type vary:

Figure 10B.1 Cemeteries

Site	Location	Detail
Fairview Memorial Park	U.S. 23, south of Peachblow Road	
Berlin Township Cemetery	3271 Cheshire Road	Owned by Township Trustees
Peachblow Church Cemetery	3247 Peachblow Road	Township Trustees (Historic)
Myers Cemetery	West of 225 N. 3 Bs and K Road	Historic

Source: Ohio Historical Society GIS data

Fire Protection

The Berlin Township Fire Department operates from a new facility located at 2708 Lackey Old State Road at the intersection of Cheshire Road. The Fire Department includes one full-time chief, one full-time firefighter, one part-time assistant chief, one part-time fire prevention officer and 21 part-time firefighters. Firefighters are trained in a variety of areas including Fire, EMS, Hazmat, Fire Inspection and Fire Investigation.



The Fire Station – corner of Lackey Old State and Cheshire Roads.

Delaware County EMS Medic 10 is housed in the Berlin Township Fire Station 390 and began 24-hour EMS coverage in 2006.

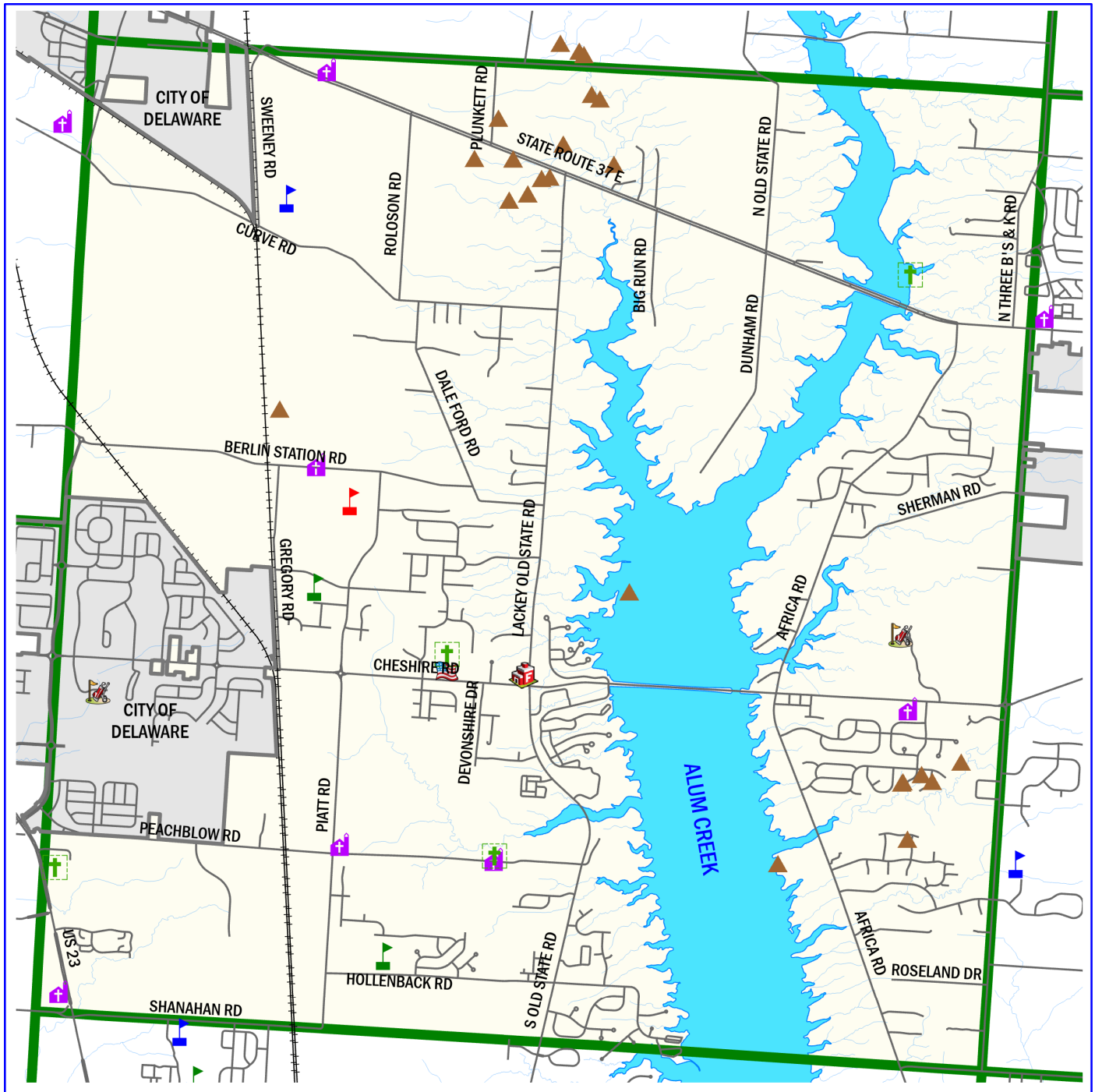
The Department’s apparatus includes one Tanker/Pumper, one Engine/Rescue, one Grass/Utility Truck and a Rescue Boat. More specifically, the Fire Department has the following equipment for emergency responses:

- Command Vehicle – 2011 Ford Excursion with 9-1-1 complaint communication equipment
- Engine 391 – 2005 E-One Fire Engine
- Engine/Tanker 392 – 1995 E-One
- Grassfighter 391 – 2003 F-350 4x4 250 gpm. 150-gallon water tank



Boat 392, a 2008 Carolina Skiff

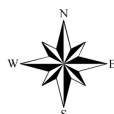
Figure 10B.2 Community Facilities



Community Facilities

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- Township Boundaries
- Incorporated Areas
- Rivers/Ponds/Lakes
- Streams
- Golf Courses
- Churches
- ELEMENTARY SCHOOL
- HIGH SCHOOL
- MIDDLE SCHOOL
- Township Hall
- Cemeteries
- Historical Sites
- Archeological Sites
- Post Office
- Library
- Fire Stations

- Boat 391 – Zodiac
- Boat 392 – 2008 Carolina Skiff
- Utility 391 – 2003 Dodge Durango
- Delaware County EMS Medic 10 – 1999 F-350 Horton Ambulance

The Department has a number of goals pertaining to future development. Many goals have to do with improvements in water pressure and delivery, such as installation of new water mains, increasing fire hydrants, looping existing lines, additional water towers and pumping stations and encouraging dry hydrants in areas where there is not an adequate supply of water. Other goals include requiring sprinklers in multi-family buildings and encouraging sprinklers in single-family dwellings. Staff goals include increasing the staffing level to provide on-duty firefighters 24 hours a day, seven days a week. Finally, the chief would like to see the Zoning Code include regulations that are not in the Ohio Fire Code but are allowed to be instituted by the authority having jurisdiction.

Police

Berlin Township is policed by the Delaware County Sheriff's Office, (DCSO) with headquarters in the City of Delaware on North Sandusky Street, with enforcement services headquartered on State Route 42. The Patrol Division provides law enforcement to all jurisdictions within Delaware County. Patrols offer investigation of criminal offenses, crime prevention, and traffic enforcement. DCSO also has a division for detective services, support services, youth education and specialty units.

Figure 10B.3 Sheriff's Complaints for Berlin Township

	2017	2018	2019
Traffic Stop	147	355	276
Domestic	35	36	28
Theft/Larceny & In Progress	12	16	25
Harassment/Threats	9	10	17
Theft Of Identity	16	14	11
Suicide Attempt	13	18	18
Juvenile-Unruly/Runaway	10	16	15
Breaking & Entering	10	18	13
Vandalism	6	9	6
Mental Health Crisis	5	4	11
Burglary & In Progress	5	1	6
Theft Of Credit Card/Number	5	7	1
Vandalism To Vehicle	2	1	2
Theft From Vehicle	5	5	7
Sex Offense	5	3	5
Suspicious Person/Vehicle	11	10	13
Stolen Vehicle	3	2	1
Drug / Narcotic	2	3	2
Animal Call	4	8	1
Rape	1	0	0
Fight	1	0	1
Drunk	1	2	0
D.O.A	2	2	7
Suspicious Activity	3	4	2
Suicide	0	2	1
Missing Person	2	2	2
Loud Disturbance	3	0	0
Forgery/Bad Check	2	2	4
Assault	3	5	0
TOTAL	323	555	475

Township crime has been flat overall, at least between 2018 and 2019. The Table at right shows the breakdown of incidents by year, according to the 2018 Delaware County Sheriff's Office Annual Report.

Each jurisdiction's rate of incidents is relatively consistent, with no patterns between population sizes and rates of incidents. For example, the most populated Township, Orange Township, has a rate of 13.79 persons per incident. Marlboro Township, on the other hand, is one of the least populated Townships and has a rate of 7.9 persons per incident. This metric is one to keep track of as the Township grows, or as growth occurs in the area.

Township Facilities

The Township Hall is located at 3271 Cheshire Road and, until recently, shared the building with the Township Fire Department. The building includes several offices and a sufficient public meeting area. With the growth of the township the facilities will eventually need to be expanded. See Figure 11.5 for a map that combines Township Facilities along with the Fire Station and Schools.



Berlin Township Hall

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Chapter 10C

Major Delaware County School Districts

Big Walnut School District

The Big Walnut Local School District is situated in the southeastern part of Delaware County, with its boundaries all being east of I-71. The district's boundaries fall either completely or partially in several Townships: Genoa, Harlem, Berkshire, Trenton, Kingston, and Porter. The district also completely includes the Villages of Sunbury and Galena.

Big Walnut Enrollment

Enrollment over the last 10 years has slightly increased. The school district saw a massive increase of 37.13% in 2013-2014, only to be followed by a 27.66% decrease in 2017-2018 before tapering off then somewhat increasing to its current number.

Figure 26. Overall Enrollment and Demographics

Demographic	Enrollment	Percentage
All Students	3,831	
American Indian	-	-
Asian or Pacific Islander	54	1.4%
Black, Non-Hispanic	48	1.2%
Hispanic	146	3.8%
Multiracial	142	3.7%
White, Non-Hispanic	3,437	89.7%
Students with Disabilities	395	10.3%
Economic Disadvantage	641	16.7%
Limited English Proficiency	51	1.3%

Source: Ohio Department of Education, 2020-2021

Figure 28. Historical School-Year Enrollment

Grade	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Pre-K – 4	1,213	1,485	1,530	1,574	1,616	1,568	1,530	1,574	1,616	1,568
5 – 8	1,058	1,120	2,358	2,458	2,521	2,479	1,130	1,149	1,212	1,196
9 – 12	950	920	946	933	941	963	964	1,030	1,060	1,121
Pre-K – 12	3,221	3,525	4,834	4,965	5,078	5,010	3,624	3,753	3,888	3,885
Ungraded	<10	<10	<10	<10	<10	<10	0	0	<10	0
G. Total	3,221	3,525	4,834	4,965	5,078	5,010	3,624	3,753	3,888	3,885
Change		+9.44%	+37.13%	+2.71%	+2.26%	-1.34%	-27.66%	+3.56%	+3.60%	-0.08%

Source: Ohio Department of Education, September 2021

Big Walnut continued

Student and Teacher Performance Metrics

The Ohio Department of Education performs an annual evaluation of local school districts based on a Performance Index and a number of Indicators. Due to the COVID-19 pandemic, the full indicators for each grade 2019-2020 were unavailable. The following figures illustrate the Big Walnut Local Schools' academic rankings by component. Big Walnut Local Schools' grades were across the board, with the strongest components being in "Progress" and "Graduation Rate", and the weakest components being in "Prepared For Success."

In addition to the Student Performance Grades, the Ohio Department of Education does a profile on the educators for the district. The educators for Big Walnut Local Schools are relatively experienced, and are on the higher end when compared to some of the other school districts (specifically, Buckeye Valley School District, Delaware City Schools, and Olentangy Local School District) in Delaware County. However, the salary, attendance rate, and percentage of educators with a Masters' Degree is at median-to-above-average compared with the other school districts.

District Financial Information

The Big Walnut District reported a 2021 total revenue of approximately \$48.4 million, including approximately \$33.8 million in local revenue and approximately \$10.4 million in state revenue. For the District Spending Per Pupil, the total was approximately \$30.9 thousand, with the highest categories being Operating Spending Per Pupil, and State and Local Funds.

Figure ##. Performance Grades

Component	Grade
Achievement	C
Graduation Rate	A
Progress	A
Gap Closing	B
Improving At-Risk K-3 Readers	C
Prepared for Success	D

Source: Ohio Department of Education, 2018-2019

Figure ##. Educator Information

Informational Metric	Value
Attendance Rate (%)	94
Salary (Average)	69,345
Years of Experience (Average)	13
w/ a Bachelors' Degree (%)	99.6
w/ a Masters' Degree (%)	64.2

Source: Ohio Department of Education, 2020-2021

Figure ##. Source of Funds

Source	District	State Total
Local	\$33,759,990	\$10,445,025,000
State	\$10,364,328	\$10,766,602,000
Federal	\$2,221,272	\$2,390,865,000
Other	\$2,018,571	\$1,703,394,600
Rev. Total	\$48,364,161	\$25,305,886,600

Source: Ohio Department of Education, 2020-2021

Figure ##. District Spending Per Pupil

Category	Spending per Pupil
Operating Spending Per Pupil	\$10,292
Classroom Instruction	\$6,962
Non-Classroom Spending	\$3,329
Federal Funds	\$307
State and Local Funds	\$9,984
Total	\$30,874

Source: Ohio Department of Education, 2020-2021

Buckeye Valley School District

The Buckeye Valley School District is situated in the northern and western parts of Delaware County, reaching north into Morrow County and west into Union County. The district's boundaries cover over 200 square miles and include all of Oxford, Marlboro, and Radnor, most of Scioto and Concord, and about half of Kingston, Troy, and Thompson Townships. The district also completely includes the Villages of Ashley and Ostrander. All data contained herein was obtained from the Ohio Department of Education's data for the 2020/21 school year, unless otherwise noted.

Enrollment

Enrollment over the last 10 years has declined overall. Between the 2011/12 school year and the 2020/21 school year, the district lost 186 students (7.9%). While not immediately concerning, the decrease may be due to an increasing amount of acreage annexing and redistricting for residential development purposes.

Current enrollment indicates that Buckeye Valley is weighted towards elementary school enrollment with almost 50% of the student population in grade 5 or below. The student base is also predominately white, non-Hispanic at nearly 90% of the total enrollment. Providing educational opportunities for the disabled and providing resources for economically disadvantaged students may be a challenge, with more than 1 in 10 students having a disability or being

Figure 26. Overall Enrollment and Demographics

Demographic	Enrollment	Percentage
All Students	2158	
American Indian	-	-
Asian or Pacific Islander	23	1.1%
Black, Non-Hispanic	11	0.5%
Hispanic	60	2.8%
Multiracial	136	6.3%
White, Non-Hispanic	1928	89.3%
Students with Disabilities	296	13.7%
Economic Disadvantage	414	19.2%
Limited English Proficiency	0	0%

Source: Ohio Department of Education, 2020-2021

Figure 28. Historical School-Year Enrollment

Grade	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Pre-K – 5	1,080	1,018	973	922	926	910	954	975	1,041	1,023
6—8	563	560	576	568	573	541	519	513	484	453
9 – 12	719	713	723	693	680	706	737	714	734	700
Ungraded	0	0	0	0	0	0	0	0	0	0
Total Enroll.	2,362	2,291	2,272	2,183	2,179	2,157	2,210	2,202	2,259	2,176
Change		-3.0%	-0.8%	-3.9%	-0.2%	-1.0%	-2.5%	-0.4%	2.6%	-3.7%

Source: Ohio Department of Education, September 2021

Buckeye Valley continued

disadvantaged economically. To protect student identities, some of the reported data may not add up to or equal 100%, or reflect exact comparisons with other metrics.

Student and Teacher Performance Metrics

The Ohio Department of Education performs an annual evaluation of local school districts based on a Performance Index and a number of Indicators, but due to the COVID-19 pandemic, the full indicators for each grade 2019-2020 were unavailable. The following figures illustrate the Buckeye Valley School District's academic rankings by component. The Buckeye Valley School District's grades varied, with the strongest component being in "Graduation Rate", and the weakest component being in "Prepared for Success."

In addition to the Student Performance Grades, the Ohio Department of Education does a profile on the educators for the district. The educators for the Buckeye Valley School District are highly experienced and are on the higher end when compared to some of the other school districts (specifically, Delaware City Schools, Big Walnut Local School District, and Olentangy Local School District) in Delaware County. Aside from the percentage of educators with a Masters' Degree and salary, both of which are on the lower end, every other informational metric is right around is the same with the other school districts.

Current Facilities

The district maintains four academic facilities:

- **Buckeye Valley Local High**, 901 Coover Road, Delaware;
- **Buckeye Valley Local Middle**, 683 Coover Road, Delaware;
- **Buckeye Valley East Elementary**, 522 E. High Street, Ashley; and
- **Buckeye Valley West Elementary**, 61 N. 3rd Street, Ostrander.

Financial Information

The Buckeye Valley Local School District reported a 2020/21 total revenue of approximately \$30.9 million. The revenues are heavily supported by local funds with \$20.9 million in local revenue, while State and Federal contributions total approximately \$8.5 million. The District's spending per pupil was \$11,280. The majority of those expenses come from classroom instruction costs.

Figure ##. Performance Grades

Component	Grade
Achievement	C
Graduation Rate	A
Progress	B
Gap Closing	B
Improving At-Risk K-3 Readers	C
Prepared for Success	D

Figure ##. Educator Information

Informational Metric	Value
Attendance Rate	95.4%
Salary (Average)	\$65,671
Years of Experience (Average)	16
w/ a Bachelors' Degree	99.3%
w/ a Masters' Degree	43.5%

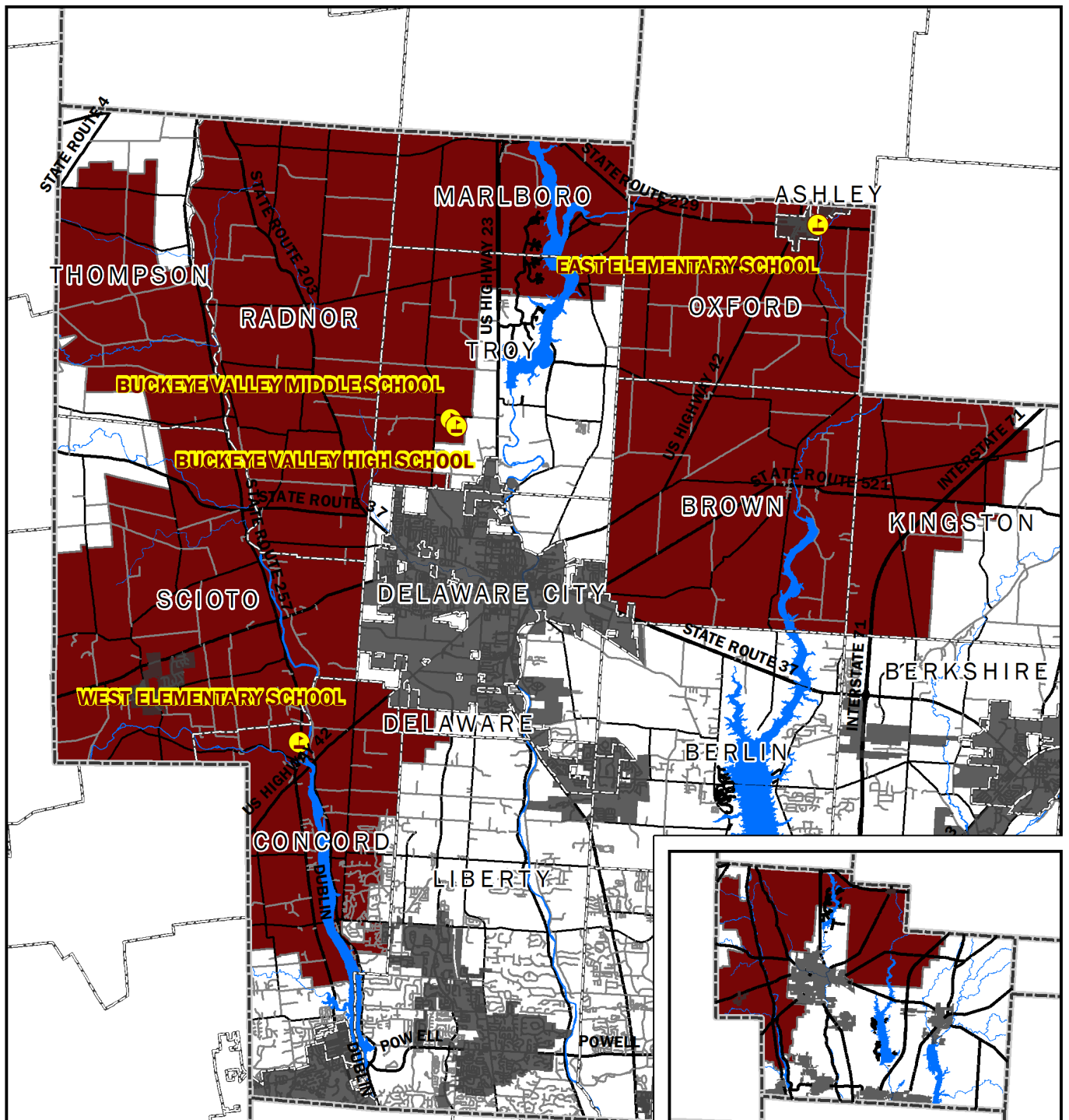
Figure ##. Title

Source	District	State Total
Local	\$20,903,992	\$10,445,025,000
State	\$6,768,727	\$10,766,602,000
Federal	\$1,718,783	\$2,390,865,000
Other	\$1,510,701	\$1,703,394,600
Rev. Total	\$30,902,203	\$25,305,886,600

Figure ##. District Spending Per Pupil

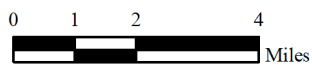
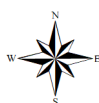
Category	Spending per Pupil
Operating Spending Per Pupil	\$11,280
Classroom Instruction	\$7,421
Non-Classroom Spending	\$3,859
Federal Funds	\$307
State and Local Funds	\$9,984
Total	\$30,874

Source: Ohio Department of Education, 2020-2021



Buckeye Valley School District

Delaware County



Prepared by: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org (3/5/2021)

- Schools
- Buckeye Valley School District
- Rivers/Lakes/Streams
- Incorporated Area
- Township Boundaries
- County Boundaries

Delaware City School District

The Delaware City School District is centrally located in the County, covering the City of Delaware, the majority of Troy Township, and most of Delaware Township; covering just over 36 square miles. All data contained herein was obtained from the Ohio Department of Education's data for the 2020/21 school year, unless otherwise noted.

Enrollment

Enrollment over the last 10 years has remained relatively constant. There was a small jump in enrollment in the 2012/13 school year, but the school district lost that increase in the 2014/15 school year. Since that time, enrollment has been gradually increasing until the 2020/21 school year which saw a loss of 6.8% of the student body. That reduction largely appeared to be across all grade ranges.

Current enrollment indicates that the Delaware City School District has a distribution of students that is heavily weighted among the elementary schools with almost half of the District's student body.

The student base is also predominately white, non-Hispanic (though less than other school districts in Delaware County) at nearly 80% of the total enrollment. Funding educational opportunities for the disabled and providing resources for economically disadvantaged students is a major factor for the district, with 16% of the student body having a disability, and 23% being disadvantaged economically. To protect student identities, some of the reported data may

Figure 26. Overall Enrollment and Demographics

Demographic	Enrollment	Percentage
All Students	5,296	
Native American	-	-
Asian or Pacific Islander	23	0.4%
Black, Non-Hispanic	228	4.3%
Hispanic	397	7.5%
Multiracial	431	8.1%
White, Non-Hispanic	4,217	79.6%
Students with Disabilities	850	16.0%
Economic Disadvantage	1,219	23.0%
Limited English Proficiency	125	2.4%

Source: Ohio Department of Education, 2020-2021

Figure 28. Historical School-Year Enrollment

Grade	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Pre-K – 5	2,681	2,776	2,767	2,685	2,708	2,727	2,736	2,750	2,727	2,500
6 – 8	1,178	1,238	1,304	1,255	1,257	1,210	1,279	1,303	1,336	1,242
9 – 12	1,391	1,441	1,480	1,408	1,427	1,595	1,573	1,611	1,615	1,562
Ungraded	0	0	0	0	0	0	20	18	12	0
Total Enroll.	5,250	5,455	5,551	5,348	5,392	5,532	5,608	5,682	5,690	5,304
Change		3.9%	1.8%	-3.7%	0.8%	2.6%	1.4%	1.3%	0.1%	-6.8%

Source: Ohio Department of Education, September 2021

Delaware continued

not add up to or equal 100%, or reflect exact comparisons with other metrics.

Student and Teacher Performance Metrics

The Ohio Department of Education performs an annual evaluation of local school districts based on a Performance Index and a number of Indicators. Due to the COVID-19 pandemic, the full indicators for each grade 2019-2020 were unavailable. The following figures illustrate the Delaware City School District academic rankings by component. The Delaware City's School District's grades varied. The strongest components were "Progress" and "Gap Closing", and the weakest components being "Improving At-Risk K-3 Readers" and "Prepared for Success."

In addition to the Student Performance Grades, the Ohio Department of Education does a profile on the educators for the district. Educators for the Delaware City School District have an average of 8 years of experience. Salaries are above some of the rural school districts like the Buckeye Valley and Big Walnut School Districts. Educators in this school district are highly educated. All educators have attained a Bachelor's Degree, and the majority have attained a Master's Degree.

Financial Information

The Delaware City Local School District reported a 2020/21 total revenue of approximately \$72.0 million. The revenues are heavily supported by local funds with \$40.4 million in local revenue, while State and Federal contributions total approximately \$27.6 million. The District's spending per pupil was \$9,895. The majority of those expenses come from classroom instruction costs.

Current Facilities

The district maintains seven academic facilities (attendance in parenthesis):

- **David Smith Elementary School (385)**, 355 North Liberty Street, Delaware;
- **Ervin Carlisle Elementary School (547)**, 746 State Route 37 West, Delaware;
- **James Conger Elementary School (389)**, 10 Channing Street, Delaware;
- **Laura Woodward Elementary School (483)**, 200 South Washington Street, Delaware;
- **Robert F. Schultz Elementary School (696)**, 499 Applegate Lane, Delaware;
- **John C. Dempsey Middle School (1,242)**, 599 Pennsylvania Avenue, Delaware;
- **Rutherford B. Hayes High School (1,562)**, 289 Euclid Avenue, Delaware; and
- **Willis Education Center (Administrative Offices)**, 74 West William Street, Delaware.

Figure ##. Performance Grades

Component	Grade
Achievement	C
Graduation Rate	B
Progress	A
Gap Closing	A
Improving At-Risk K-3 Readers	D
Prepared for Success	D

Figure ##. Educator Information

Informational Metric	Value
Attendance Rate	95.8%
Salary (Average)	\$71,092
Years of Experience (Average)	8
w/ a Bachelors' Degree	100.0%
w/ a Masters' Degree	69.7%

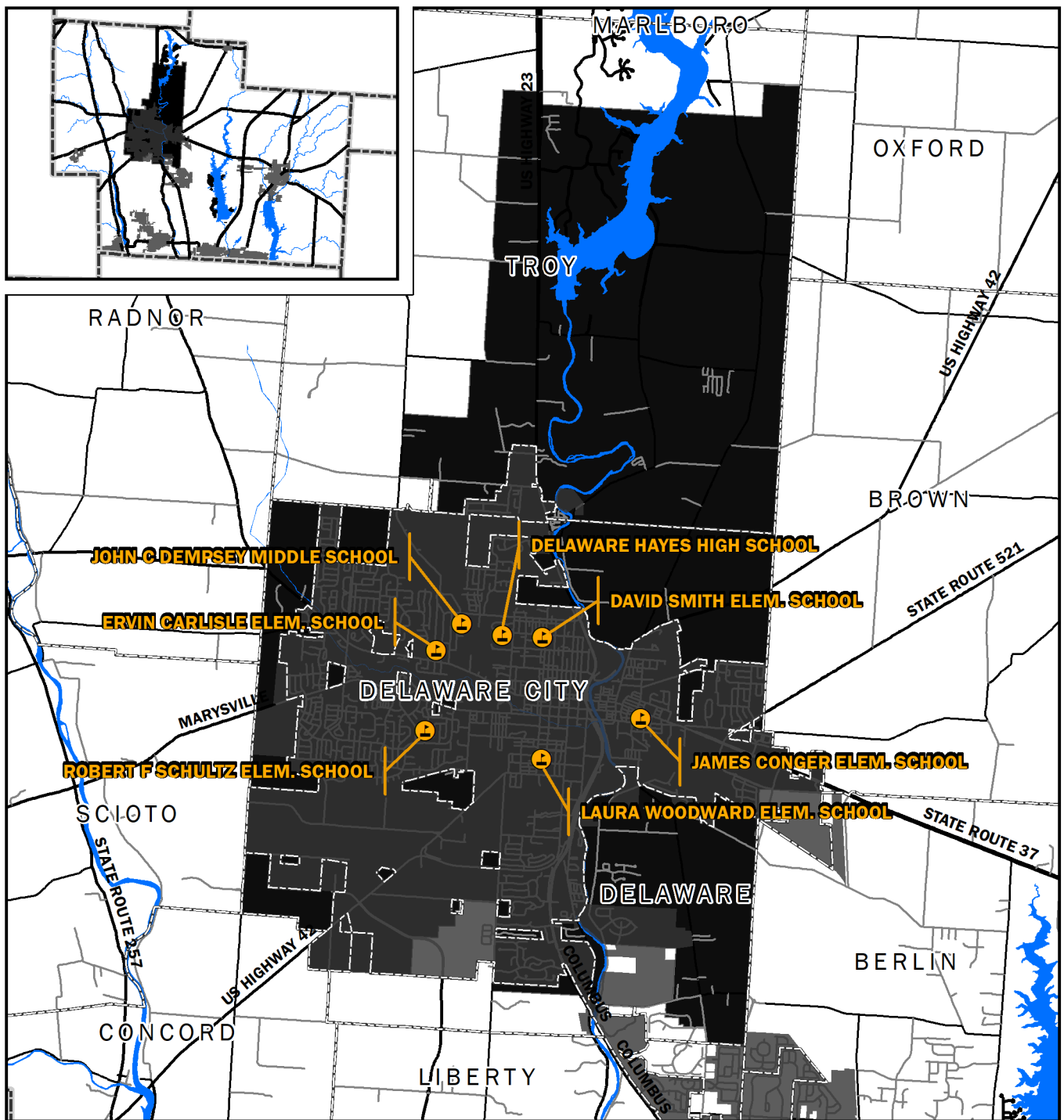
Figure ##. TITLE

Source	District	State Total
Local	\$40,421,050	\$10,445,025,000
State	\$23,076,608	\$10,766,602,000
Federal	\$4,598,360	\$2,390,865,000
Other	\$3,939,078	\$1,703,394,600
Rev. Total	\$72,035,096	\$25,305,886,600

Figure ##. District Spending Per Pupil

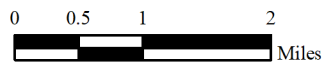
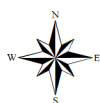
Category	Spending per Pupil
Classroom Instruction	7,252
Non-Classroom Spending	2,643
Federal Funds	541
State and Local Funds	9,353
Total	9,895

Source: Ohio Department of Education, 2020-2021



Delaware City School District

Delaware County



- Delaware City Schools
- Delaware City School District
- Rivers/Lakes/Streams
- Incorporated Area
- Township Boundaries
- County Boundaries

Prepared by: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org (3/5/2021)

Olentangy School District

The Olentangy Local School District is located entirely within Delaware County, situated primarily in the southern and central parts of Delaware County which have developed rapidly. The district's boundaries includes all of Berlin, Orange, and Liberty Townships, and some of Genoa, Berkshire, Concord, and Delaware Townships. The district also includes the City of Powell and parts of the Cities of Columbus and Delaware.

Enrollment

Unlike some of the other school districts in Delaware County, enrollment over the last 10 years has generally increased every year. Increases in student enrollment has mostly been between 3 and 4%, year-over-year. However, in the 2018/19 school year, enrollment increases slowed to between 2 and 3%, and actually declined in the most recent year of data (2020/21 school year). Despite the recent minor decline, enrollment is anticipated to increase due to the significant residential development pressures in the Olentangy School District boundaries.

Current enrollment indicates that the Olentangy City School District has a distribution of students that is heavily weighted among the elementary schools with almost half of the District's student body enrolled in grades K through 5. The enrollment skew towards elementary aged school kids may indicate a growing number of younger families within the school district in general.

The student base is also predominantly white, non-Hispanic (though less than other school districts in Delaware County) at nearly 70% of the total enrollment. Funding educational opportunities for the disabled and providing resources for economically disadvantaged students is far less of an issue than other districts in Dela-

Figure 26. Overall Enrollment and Demographics

Demographic	Enrollment	Percentage
All Students	21,963	
Native American	-	-
Asian or Pacific Islander	3,503	15.9%
Black, Non-Hispanic	963	4.4%
Hispanic	912	4.2%
Multiracial	1,352	6.2%
White, Non-Hispanic	15,233	69.4%
Students with Disabilities	2,878	13.1%
Economic Disadvantage	1,297	5.9%
Limited English Proficiency	768	3.5%

Source: Ohio Department of Education, 2020-2021

Figure 28. Historical School-Year Enrollment

Grade	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Pre-K – 5	8,963	9,037	9,151	9,344	9,316	9,441	9,646	9,963	10,187	9,871
6 – 8	3,898	4,165	4,413	4,589	4,832	5,021	5,141	5,083	5,099	5,082
9 – 12	4,202	4,511	4,753	5,111	5,511	5,857	6,184	6,512	6,794	6,956
Ungraded	0	0	12	0	0	12	25	11	0	0
Total Enroll	17,063	17,716	18,329	19,044	19,659	20,331	20,996	21,569	22,080	21,909
Change		3.8%	3.5%	3.9%	3.2%	3.4%	3.3%	2.7%	2.4%	-0.8%

Source: Ohio Department of Education, September 2021

Olentangy continued

ware County, with 13% of the student body having a disability, and only 6% being disadvantaged economically. To protect student identities, some of the reported data may not add up to or equal 100%, or reflect exact comparisons with other metrics.

Student and Teacher Performance Metrics

The Ohio Department of Education performs an annual evaluation of local school districts based on a Performance Index and a number of Indicators. Due to the COVID-19 pandemic, the full indicators for each grade 2019-2020 were unavailable. The following figures illustrate the Olentangy Local School District's academic rankings by component. The Olentangy Local School District's grades were high, with three areas receiving "A" ranks: "Graduation Rate", "Progress", and "Gap Closing." There was only one weakest component that received a "C" rank: "Improving At-Risk K-3 Readers."

In addition to the Student Performance Grades, the Ohio Department of Education does a profile on the educators for the district. The educators for the Olentangy Local School District's have—on average—12 years of experience, and are highly educated. All Olentangy School District educators have received a Bachelor's Degree, and over 75% have received a Master's Degree. The combination of experience and educational attainment lend to the higher average salary when compared to other districts, at \$78,584.

Financial Information

The Olentangy Local School District reported a 2021 total revenue of approximately \$285.5 million, including approximately \$199.3 million in local funds and approximately \$34.3 million in state funds. For the District Spending Per Pupil, the total was \$10,521.

Current Facilities

The district maintains 25 academic facilities (attendance in parenthesis):

- **Alum Creek Elementary School (540)**, 2515 Parklawn Drive, Lewis Center;
- **Arrowhead Elementary School (706)**, 2385 Hollenback Road, Lewis Center;
- **Cheshire Elementary School (739)**, 2681 Gregory Road, Delaware;
- **Freedom Trail Elementary School (598)**, 6743 Bale Kenyon Road, Lewis Center;
- **Glen Oak Elementary School (675)**, 7300 Blue Holly Drive, Lewis Center;
- **Heritage Elementary School (696)**, 679 Lewis Center Road, Lewis Center;
- **Indian Springs Elementary School (577)**, 3828 Home Road, Powell;
- **Johnnycake Corners Elementary School (719)**, 6783 Falling Meadows Drive, Galena;

Figure ##. Performance Grades

Component	Grade
Achievement	B
Graduation Rate	A
Progress	A
Gap Closing	A
Improving At-Risk K-3 Readers	C
Prepared for Success	B

Figure ##. Educator Information

Informational Metric	Value
Attendance Rate (%)	95.8%
Salary (Average)	\$78,584
Years of Experience (Average)	12
w/ a Bachelors' Degree (%)	100%
w/ a Masters' Degree (%)	78.3%

Figure ##. Title

Source	District	State Total
Local	\$199,267,760	\$10,445,025,000
State	\$34,338,924	\$10,766,602,000
Federal	\$12,358,249	\$2,390,865,000
Other	\$39,601,900	\$1,703,394,600
Rev. Total	\$285,566,833	\$25,305,886,600

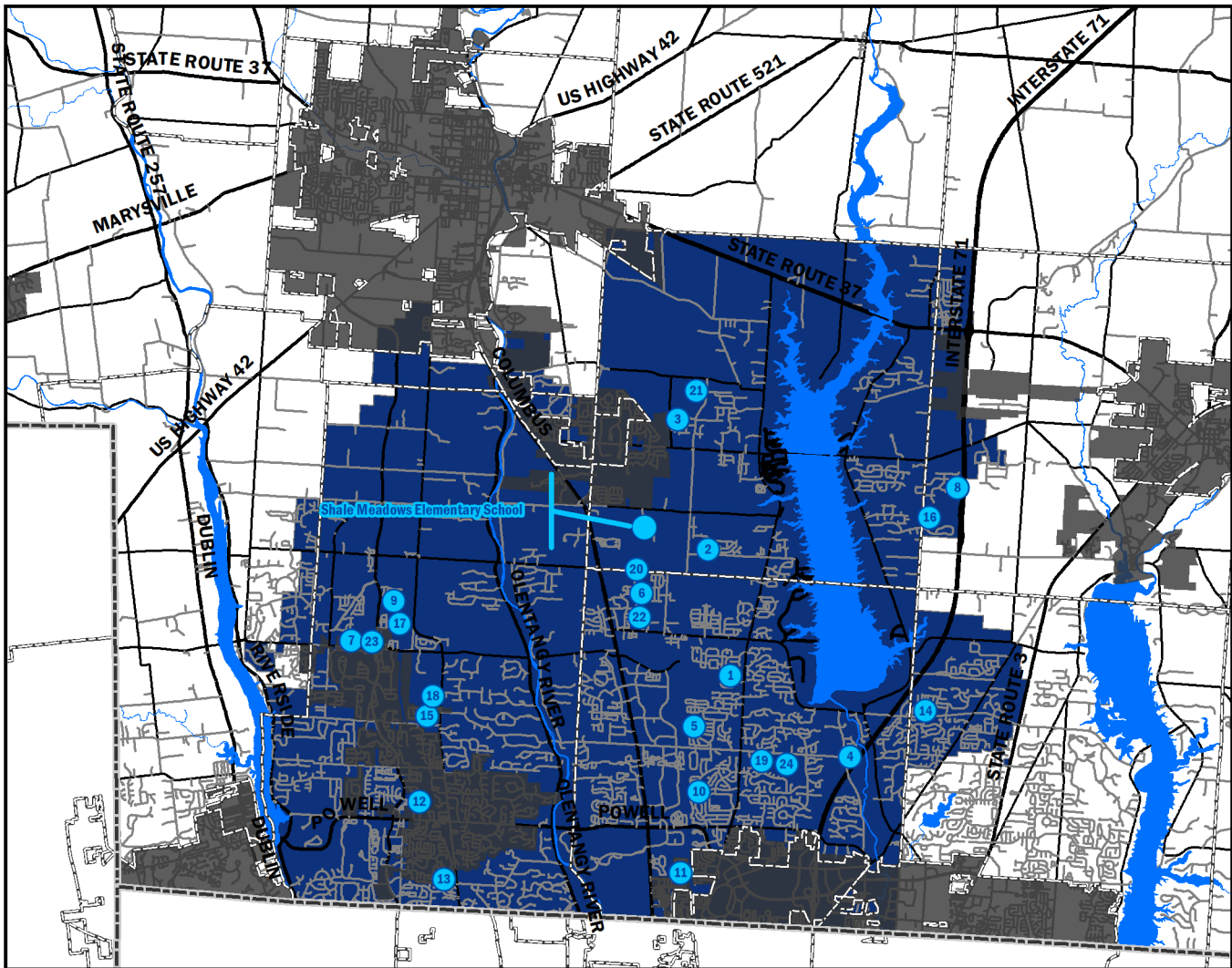
Figure ##. District Spending Per Pupil

Category	Spending per Pupil
Classroom Instruction	\$7,929
Non-Classroom Spending	\$2,592
Federal Funds	\$297
State and Local Funds	\$10,242
Total	\$10,521

- **Liberty Tree Elementary School (586)**, 6877 Sawmill Parkway, Powell;
- **Oak Creek Elementary School (676)**, 1256 Westwood Drive, Lewis Center;
- **Olentangy Meadows Elementary School (712)**, 8950 Emerald Hill Drive, Lewis Center;
- **Scioto Ridge Elementary School (590)**, 8715 Big Bear Avenue; Powell;
- **Tyler Run Elementary School (655)**, 580 Salisbury Drive, Powell;
- **Walnut Creek Elementary School (666)**, 5600 Grand Oak Boulevard, Galena;
- **Wyandot Run Elementary School (736)**, 2800 Carriage Road, Powell;
- **Berkshire Middle School (1,139)**, 2869 South Three B's & K Road, Galena;
- **Olentangy Hyatts Middle School (889)**, 6885 Sawmill Parkway, Powell;
- **Olentangy Liberty Middle School (988)**, 7940 Liberty Road, Powell;
- **Olentangy Orange Middle School (1,067)**, 2680 East Orange Road, Lewis Center;
- **Olentangy Shanahan Middle School (999)**, 814 Shanahan Road, Lewis Center;
- **Olentangy Berlin High School (1,451)**, 3140 Berlin Station Road, Delaware;
- **Olentangy High School (1,516)**, 675 Lewis Center Road, Lewis Center;
- **Olentangy Liberty High School (1,979)**, 3584 Home Road, Powell; and
- **Olentangy Orange High School (2,010)**, 2480 East Orange Road, Lewis Center

The Olentangy School District also opened a new elementary school in the 2021/22 school year. Shale Meadows Elementary School is located at 4458 North Road. Data regarding the Olentangy School District did not include any information from Shale Meadows Elementary School, as the school is too new to have been included in any of the tabulated information.

Label	School	Label	School
1	Alum Creek Elementary School	13	Tyler Run Elementary School
2	Arrowhead Elementary School	14	Walnut Creek Elementary School
3	Cheshire Elementary School	15	Wyandot Run Elementary School
4	Freedom Trail Elementary School	16	Berkshire Middle School
5	Glen Oak Elementary School	17	Olentangy Hyatts Middle School
6	Heritage Elementary School	18	Olentangy Liberty Middle School
7	Indian Springs Elementary School	19	Olentangy Orange Middle School
8	Johnnycake Corners Elementary School	20	Olentangy Shanahan Middle School
9	Liberty Tree Elementary School	21	Olentangy Berlin High School
10	Oak Creek Elementary School	22	Olentangy High School
11	Olentangy Meadows Elementary School	23	Olentangy Liberty High School
12	Scioto Ridge Elementary School	24	Olentangy Orange High School



Olentangy School District

Delaware County



0 0.75 1.5 3
Miles

- Schools
- Olentangy School District
- Rivers/Lakes/Streams
- Incorporated Area
- Township Boundaries
- County Boundaries

Prepared by: Delaware County Regional Planning Commission (740-833-2260)
www.dcrpc.org (3/5/2021)

Chapter 11A

Open Space

Delaware County



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. The chapter on open space and recreation relates the following critical functions of open space:

- Preserving ecologically important natural environments
- Providing attractive views and visual relief from developed areas
- Providing sunlight and air
- Buffering other land uses
- Separating areas and controls densities
- Functioning as a drainage detention area
- Serving as a wildlife preserve
- Providing opportunities for recreational activities
- Increasing project amenity
- Helping create quality developments with lasting value

The economic benefits of open space cannot be overstated. 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 standards for local 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 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.”

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.”

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.

Preservation Parks receives a 0.4 mills levy, which is expected to generate about \$900,000 per year for parks. Some of that money is set aside for townships and municipalities to develop parks. Townships can apply for this funding.

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 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. Instead of 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. This classification system is intended to serve as a *guide* to planning – not as a blueprint.

Figure 35. 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*

Chapter 11B

Open Space

Berlin Township



Introduction

Berlin Township is blessed with a large park that provides passive (undeveloped) open space and active (developed) open space through the center of the township. It does not, however, provide recreational fields for organized sports.

Alum Creek State Park

Alum Creek State Park comprises 8,874 acres principally within Orange, Berlin, and Brown Townships. A smaller portion of the park is located in Genoa Township. 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 to 1973. The dam is 93 feet high and 10,500 feet long between the levies. 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 *Ohio Department of Natural Resources' Map* and may be itemized as follows:

- **Land (entire park):** 5,213 acres, Hiking Trails – 7.1 miles, one multi-use trail – 7 miles, Bridle Trails – 38 miles, Mountain Bike Trails – 14 miles
- **Campground:** 286 sites, including 24 RV sites, 5 camper cabins
- **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
- **Disc Golf:** 18-hole “players course” is located at the New Galena Launch Ramp area.
- **Dog Park:** 4-acre site along the lake near the marina includes a fenced area with water access and two additional fenced areas for small and large dogs.
- **Picnicking:** 8 scenic picnic areas with tables, grills, restrooms, and drinking water, three of which area shelterhouses maintained by the Army Corps.



Wall Map at the Alum Creek Marina

Park personnel estimate that over 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.

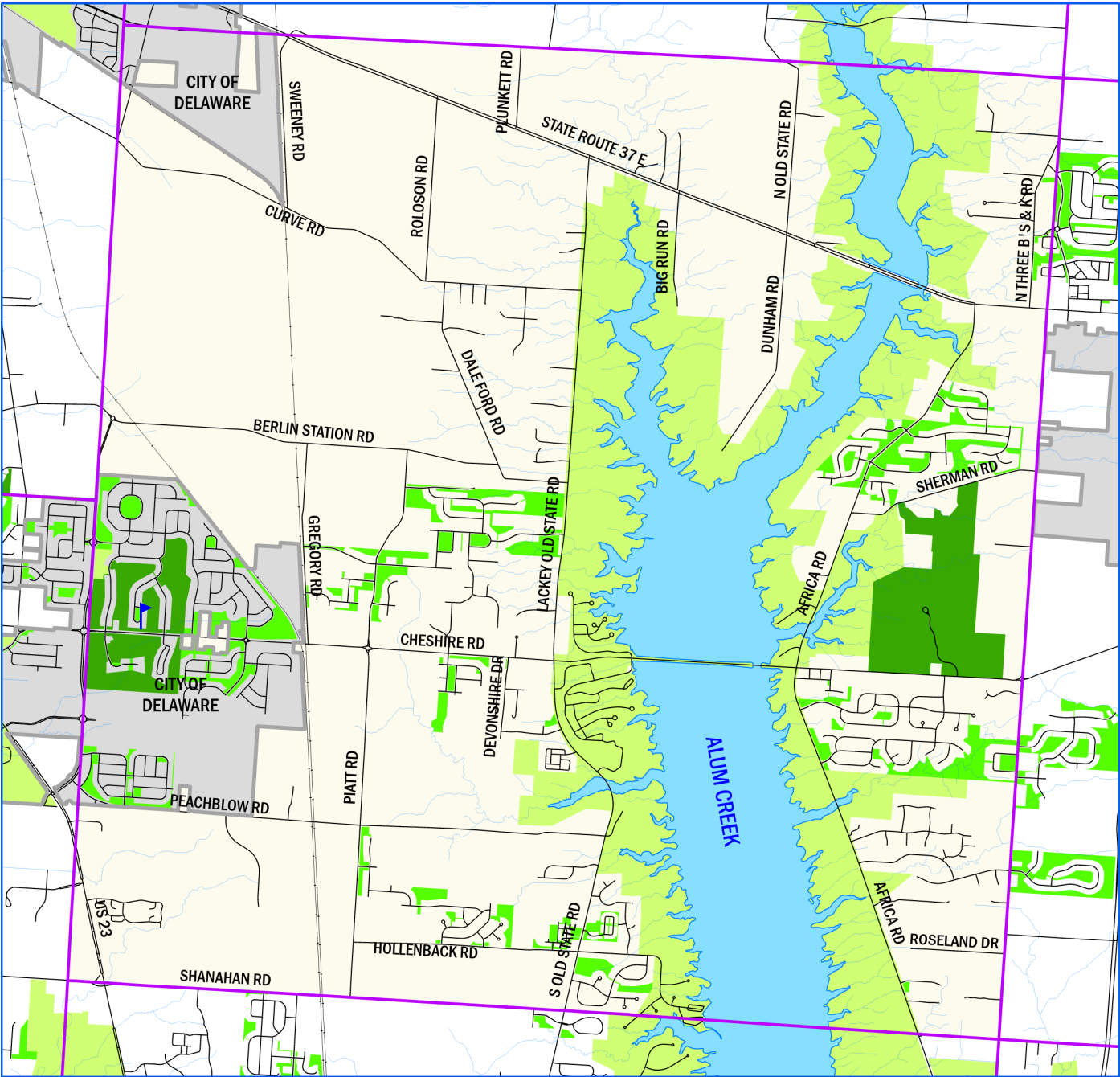


Central Open Space in The Pines subdivision

Open space in subdivisions

Berlin Township's zoning code requires a dedication of open space of between 20% and 40% of the overall subdivision, based on the specific district and article language being used. This type of open space will be discussed elsewhere in this plan.

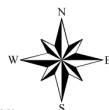
Figure 11B.1 Parks and Green Space Map



Parks and Green Space

Berlin Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet



Prepared By: Delaware County Regional Planning Commission (740-368-1960)
(5/7/2018)

- Township Boundary
- Incorporated Area
- Development / Golf Course
- Public Golf Course
- Roads
- Railroad
- Rivers / Lakes
- Streams / Drainage Courses
- Parks
- Platted Open Space
- Golf Courses

Chapter 12A

Development Patterns

Delaware County

Rural Large-Lot Development

Residential development began 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 ORC now allows review of lots up to 20 acres in size.

Large-lot development can occur on CAD subdivisions, which are three to five lots on a 12-foot wide gravel drive approved by the Regional Planning Commission. CAD subdivisions 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 DCRPC 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.



(left) “No Plat” Lot splits in Berkshire where all lots have frontage on an existing road. (right) Hickory Woods in Genoa Township, a conventional subdivision with large lots.

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 CAD 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 can lead to “rural sprawl.”

Alternative Development Patterns

PRD Subdivisions

For years, cluster subdivisions, or “Planned Residential Developments,” have been touted as an improved alternative to the conventional subdivision. Township PRDs can take the form of a rezoning or use an overlay system that defines allowable density based on the underlying zoning. The open space requirement is usually around 20-40%, depending on specific factors within the township.

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.

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.



Killdeer subdivision west of I-71 in Berkshire Township

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 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.



Harbor Pointe, Berlin Township. Note the preserved tree lines and open space at the entrance and distributed throughout the site.

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 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.

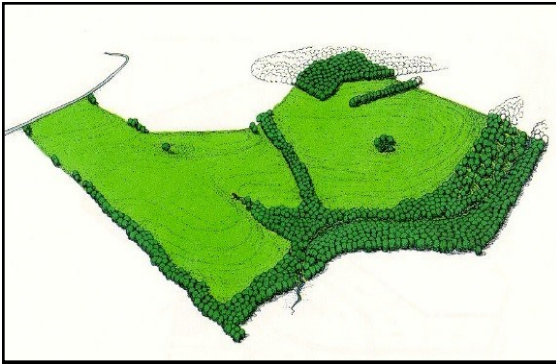
Conservation Subdivisions

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:

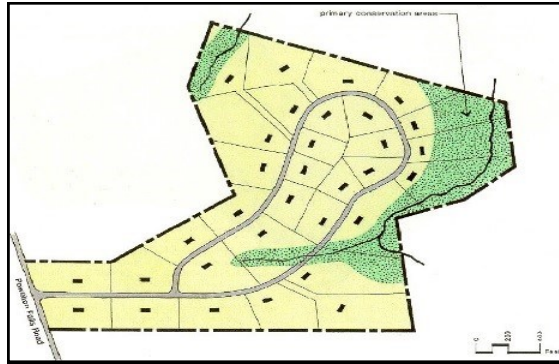
- 50% or more of the buildable land area is designated as undivided permanent open space.
- The overall number of dwellings allowed is the same as would be permitted in a conventional subdivision layout based on an alternative "yield plan."
- Primary Conservation Areas are protected as open space and 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.

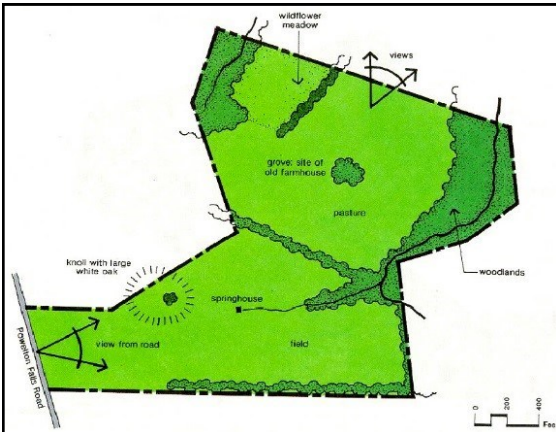
Some townships have taken the additional step by including the Conservation Subdivision standard in its zoning code, sometimes adopted pursuant to ORC Section 519.021(C), the "floating cloud" provision. This process overlays the Planned Residential Conservation Subdivision standards across all land zoned FR-1. It is a permitted use with the submission and



Site before development



Typical layout with acreage lots



Identifying conservation areas



End result, same number of houses

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 development. A school of architects and planners, led by the firm Duany, Plater-Zyberk, and Calthorpe advocates a return to traditional design. A growing group of supporters make up "The New Urbanism," a movement based on principles of planning and architecture that work together to



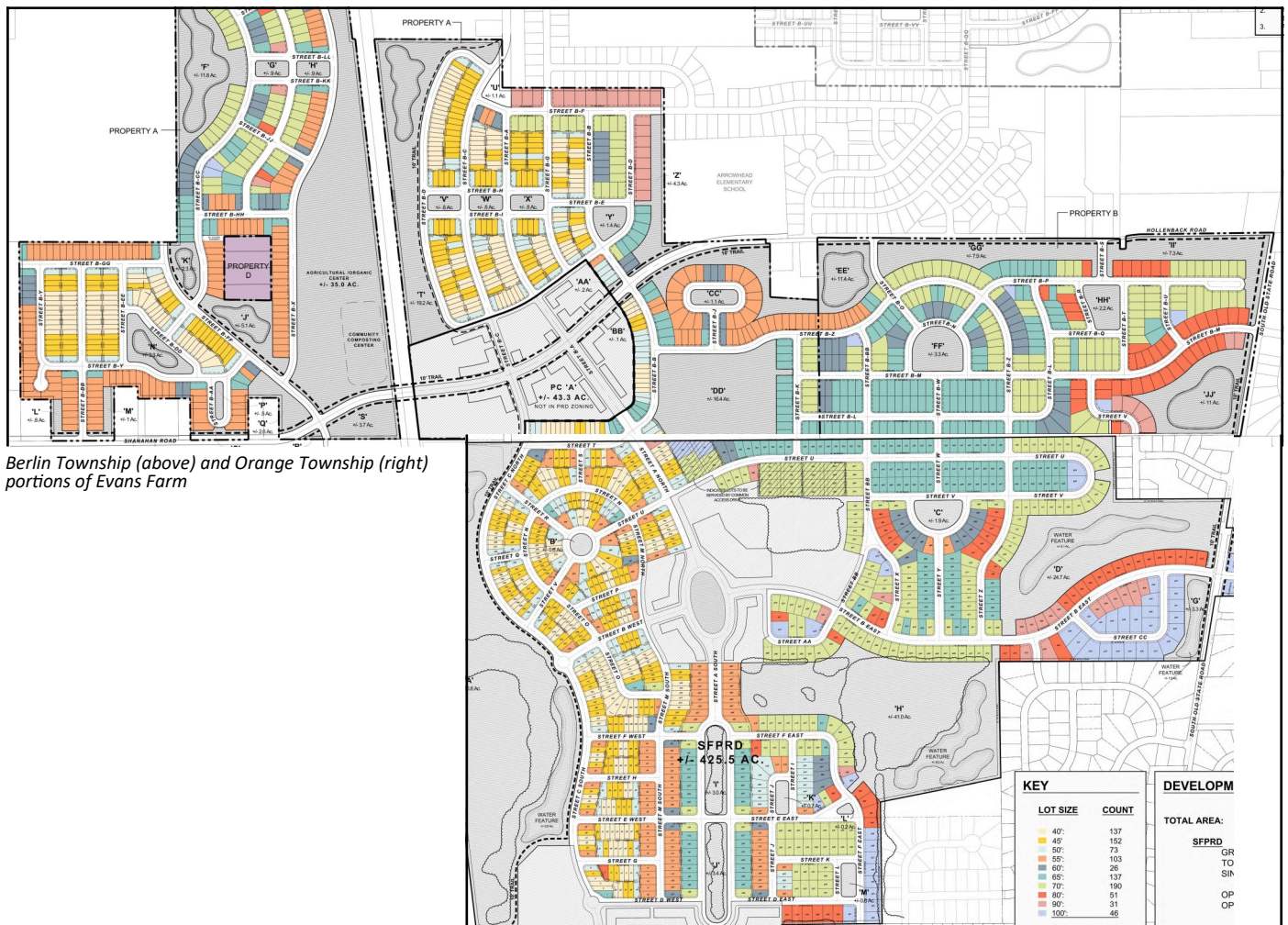
Clark's Grove, a development with a mixture of lot sizes in Covington, Georgia, is a small-scale TND surrounding a school and park site.

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 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.



Berlin Township (above) and Orange Township (right) portions of Evans Farm

- 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 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.



Streetscape at Easton

- 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.

These elements combine to form the ideal form of TND as promoted by the New Urbanists.

Starting in 2016, the TND Evans Farm began to be reviewed and developed 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.

Best Management Practices

Best Management Practices 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

Conventional developments would require densities at a maximum of 2 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). 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

Setbacks	<ul style="list-style-type: none"> - “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.

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:

The following images represent how some of these principles can be applied in both a formal town center development, and 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



Example of site furnishings

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 to the right). 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 commercial development. Continuous ‘strip’ buildings should be discouraged.



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

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.



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

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.

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.

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.

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



Example of cohesive contiguous building heights



“In-line” stores, or strip centers, built with high-quality materials and architectural details



Example of circulation streets



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

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 image 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.

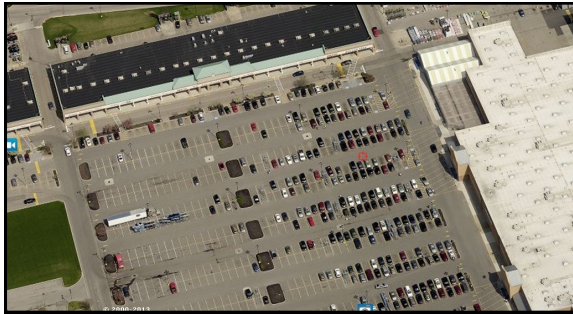
The third image shows an arrangement of buildings around a square, providing green space and a public area. Parking is provided along the storefronts, protecting the walkway from traffic. Sidewalks are wide, providing areas for outdoor dining in front of the buildings. Larger parking areas are provided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

Service

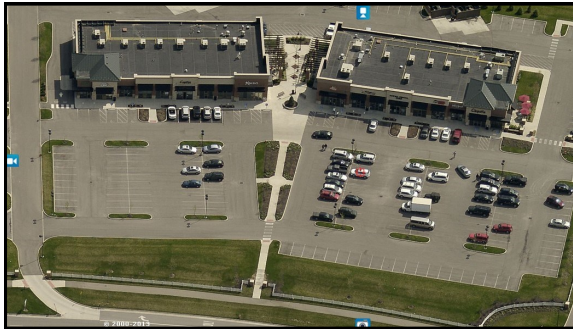
Service and delivery should be accommodated on side streets or from the rear of buildings. Dumpsters may be grouped for multiple users. All refuse collection areas should be screened from public rights-of-way (below).

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.



Example of typical big-box stores



Example of retail with connected pedestrian elements



Example of protected and connected retail with open space



Example of screened dumpster

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.

Signage

Each community must address sign control appropriate to that community. Although there are legal limitations to the extent of regulations (i.e. political signs and content), townships in Ohio can regulate the number of signs allowed, their location, height, size, and materials used in construction. Some signs are allowed 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. Though no permit is required, the size, number, and placement of these signs may be regulated.

The second category, signs requiring a permit, includes billboards or off-premise signs and on-site commercial, industrial, and office display signs.

Prohibited signs often include portable signs, 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. These “non-conforming” regulations define which 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 to conform to the standards. If changes other than routine maintenance are made to a sign, it should be brought into compliance with current regulations.

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



Example of natural-colored materials for monument signs



Example of variation in signage themes based on sign types



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

simple to encourage readability and increase identification. 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.

Landscaping and Buffering

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. Many zoning codes in the County require the following common language in non-residential uses:

“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.”

The following concepts may or may not be codified, but are always worth considering when reviewing a development plan:

- 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 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 drivers.
- 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



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

- 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” (image on following page). 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.

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.

Smart Growth

Since 1997, Smart Growth has been a topic for planners nationwide. The American Planning Association (APA) 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.”

This differs from Delaware County’s stated definition of smart growth: “commercial development that helps to diversify the tax base, create jobs for residents and respect the heritage of the community.” This fits more appropriately as the definition of “good planning.”

The **broader** definition of Smart Growth from a Planner’s standpoint is encouraging 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.

Chapter 12B

Development Patterns

Berlin Township

The Development Pattern information in the county version of this chapter related to general development approaches that can apply throughout the county. However, in Berlin Township, the Berlin Commercial Overlay and Berlin Industrial Overlays are a significant new feature in the future pattern of the township and will be specifically covered here.

Creation of the overlays

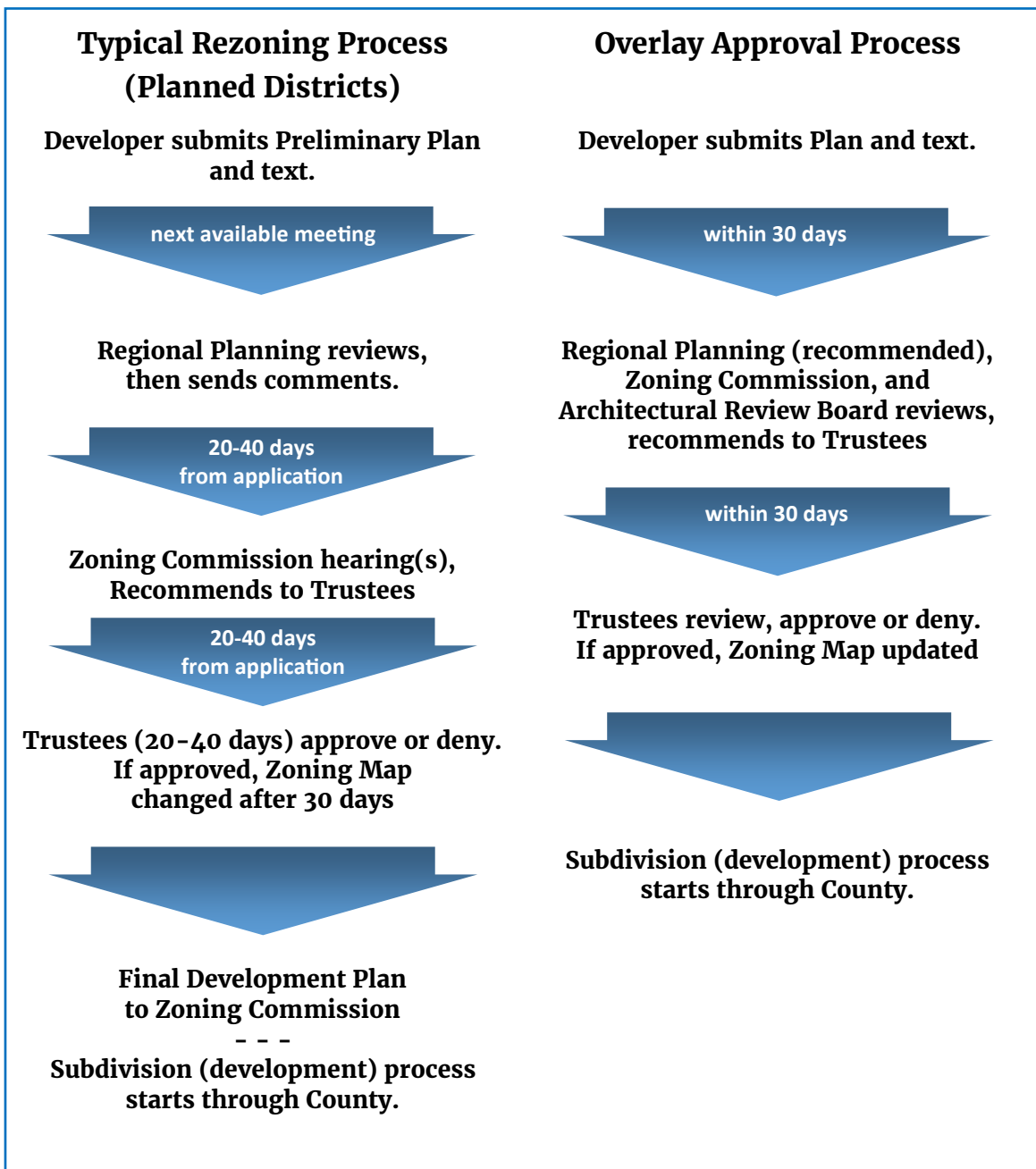
The two overlays that were established toward the end of 2020 in order to encourage the creation of the Berlin Business Park. The overlays are created pursuant to Section 519.021(C) of the Ohio Revised Code to further the purpose of promoting the general public welfare, encouraging the efficient use of land and resources, promoting public and utility services, and encouraging innovation in the planning and building of appropriate types of retail, office, and commercial development. The overlay encourages flexibility of design to promote and accommodate environmentally sensitive and efficient use of the land, thereby allowing for a unified development that:

- Preserves unique or sensitive natural resources and integrates Open Space within developments;
- Plans the appropriate amount of infrastructure, including paved surfaces and utility easements, necessary for development;
- Reduces erosion and sedimentation by minimizing land disturbance;
- Provides an opportunity for an appropriate mix of uses;
- Enables an extensive review of design characteristics to ensure that projects are properly integrated into surroundings and are compatible with adjacent development;
- Assures compatibility between proposed land uses through appropriate development controls;
- Enhances the welfare and economy of the Township by making available a variety of employment opportunities, providers of goods and services as well as providing a variety of housing options for the Township residents;
- Encourages unified development projects that exhibit creative planning and design in ways that cannot be achieved through a standard zoning district, yet are imaginative in architectural design and are consistent with applicable public plans for the area and are compatible with surrounding land uses.

How overlays differ from rezoning

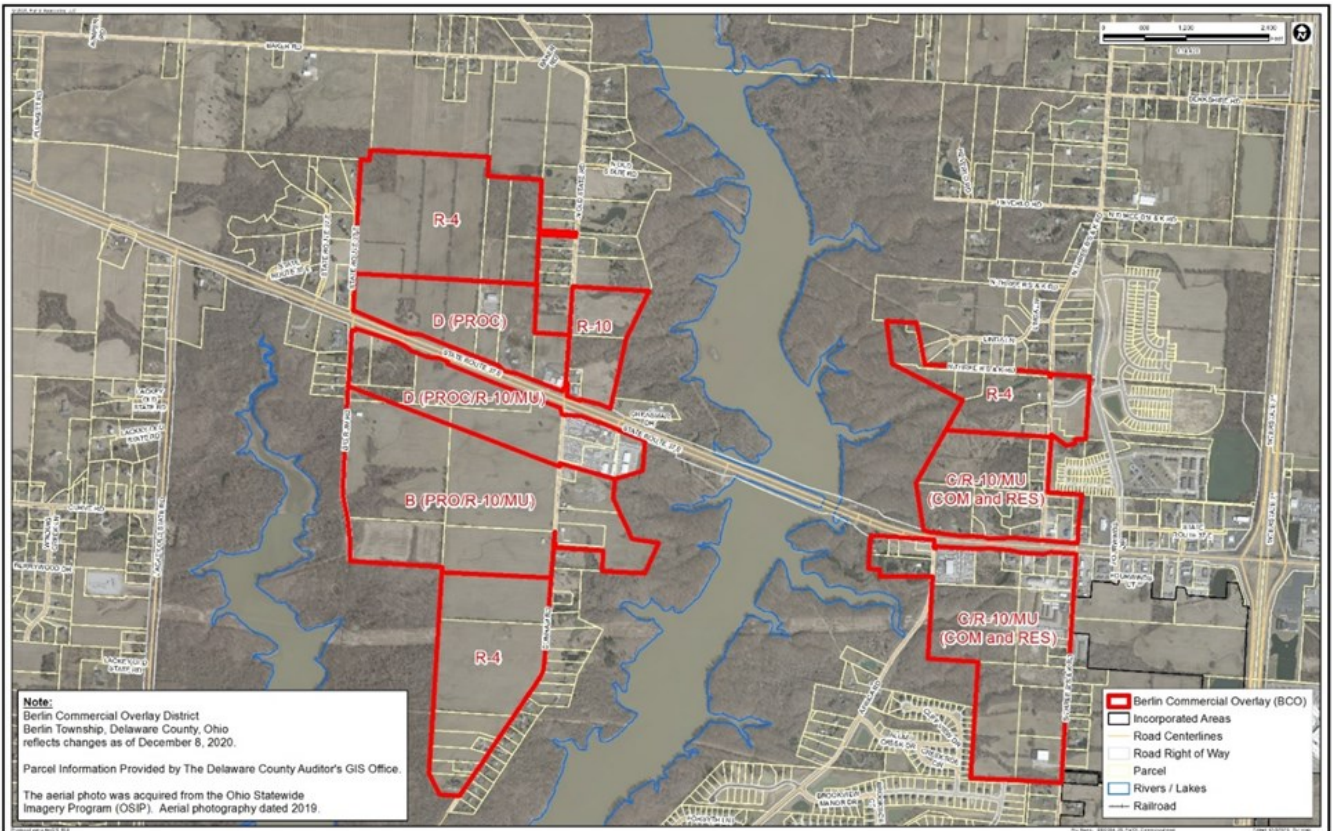
In a typical rezoning process, an applicant brings a rezoning request and related development plan to the Zoning Commission and Trustees. This development plan typically follows the regulations of one of the zoning districts within the zoning code. The development plan usually proposes divergences from the written requirements that suit the site or desires of the applicant. The Zoning Commission votes and sends a recommendation to the Township Trustees. Trustees then vote for the rezoning with a majority decision. That decision is subject to referendum.

In an overlay in accordance with ORC 519.021(C), the township adopts a more stringent “district,” specifically targeted at the uses it would like to encourage at specific locations. Applicants file Individual projects with a detailed development plan that strictly follows the standards in the code. Additional review steps are put in place since the referendum was available at the point of code adoption.

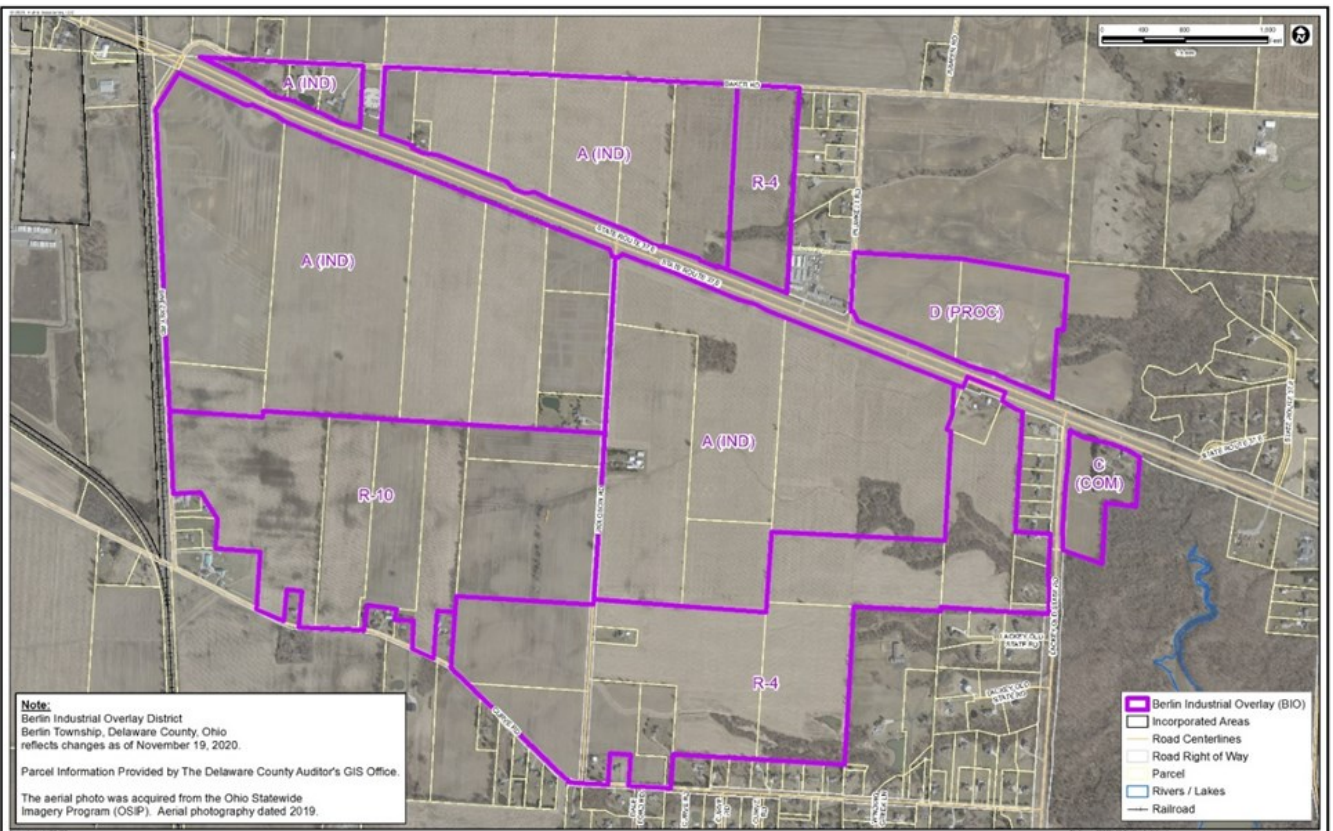


The two Berlin Business Park overlays

The overlays were adopted in two segments, The Berlin Commercial Overlay is located east of Big Run Road (below).

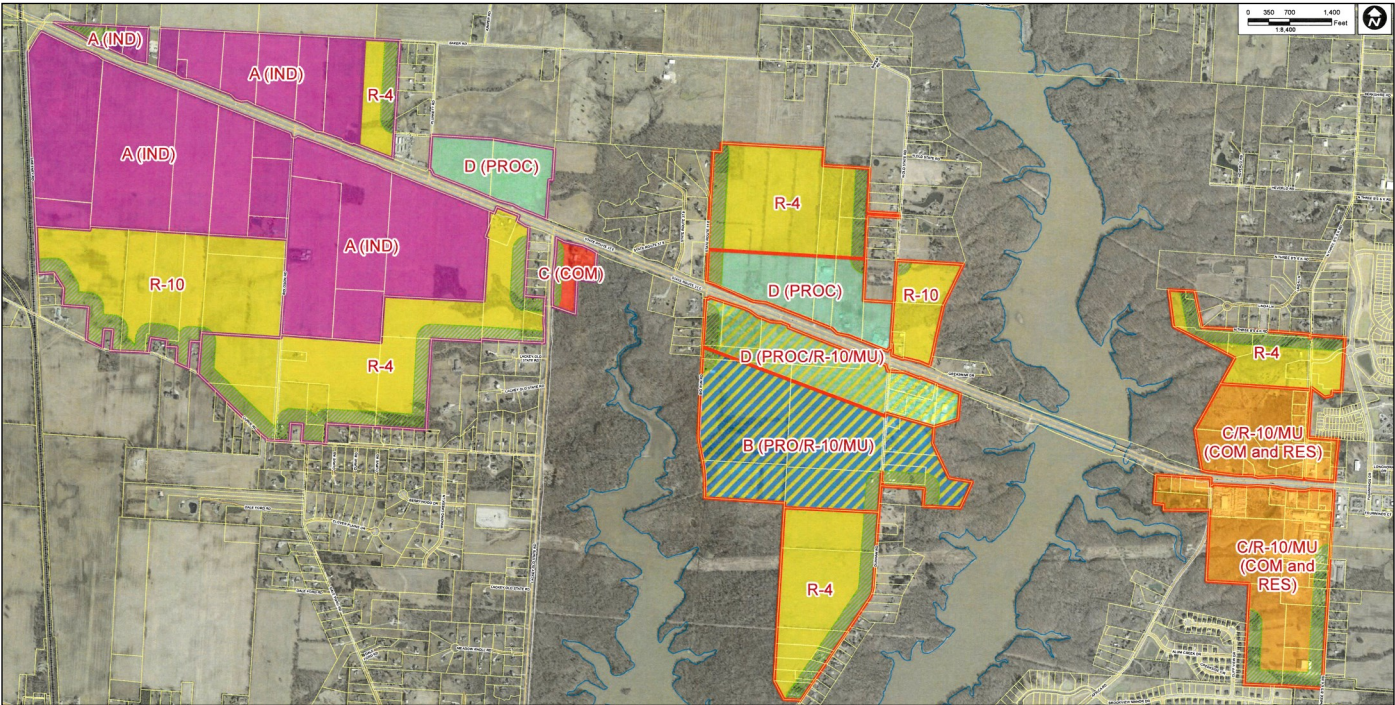


The Berlin Industrial Overlay is located between Sweeney Road and Big Run Road (below).



Berlin Business Park overlay uses

The following exhibit is intended to show the various uses that are provided in each subarea. It is not part of the adopted overlays but is intended to visually indicate where certain uses can be located.



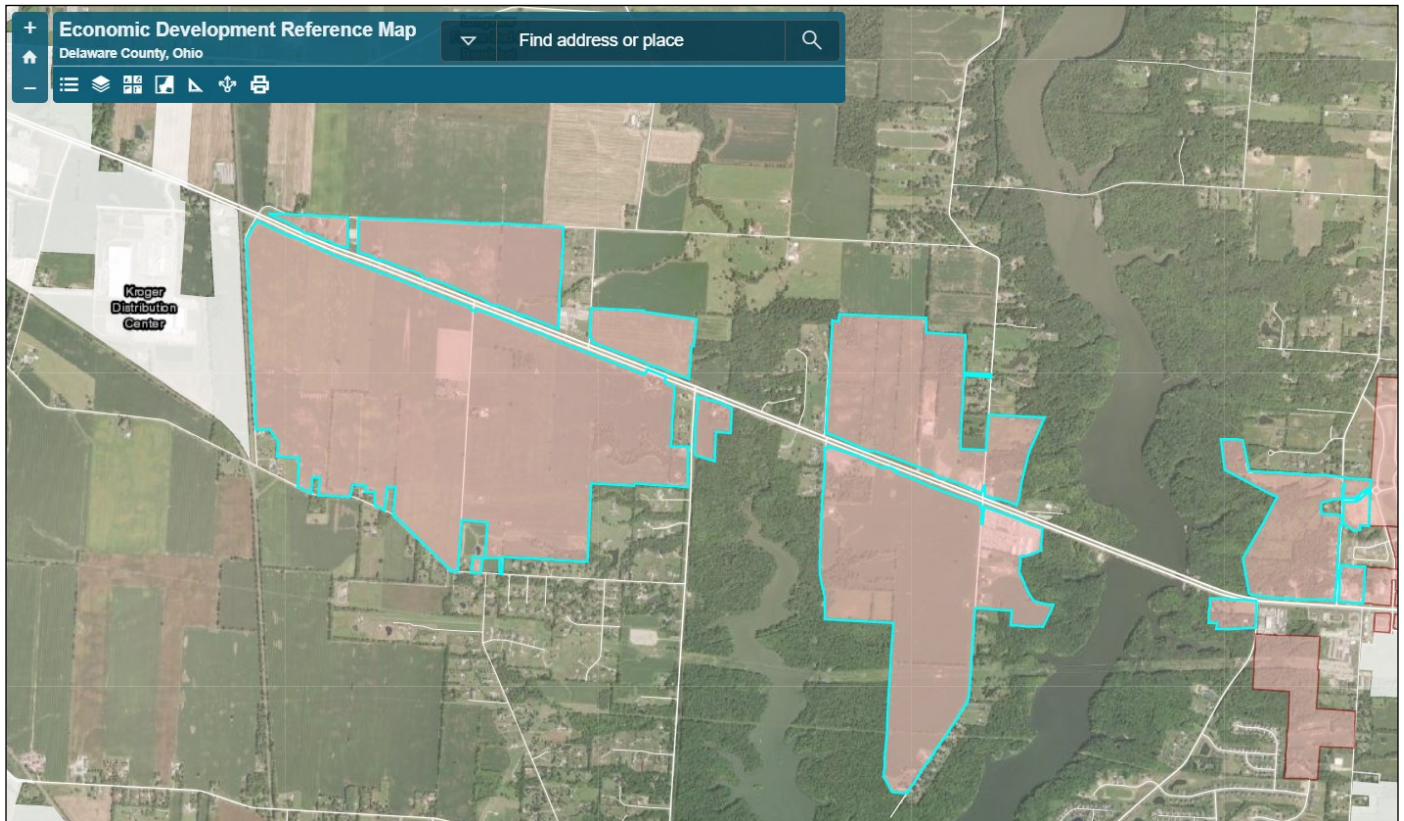
	R-4 and R-10	Residential, either at 4 units per acre or 10 units per acre
	C/R-10/MU	Commercial or Residential at 10 units per acre
	PRO/R-10/MU	Professional/Research/Office and Residential/Mixed Use
	PROC	Professional/Research/Office/Commercial
	PROC/R-10/MU	Professional/Research/Office/Commercial/Residential/Mixed Use
	IND	Professional/Research/Office/Commercial/Light Industrial

Actual uses are defined within the overlay code through a table of uses. This table references the 5-digit numbering system of the North American Industrial Classification System (NAICS). This system was utilized to specifically define the allowable uses:

2017 U.S. NAICS CODE #	PERMITTED USES	Use map reference			
		Subarea on zoning map			
		PR OC	PR O	CO M	RES
		D	B	C	R
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers				
423410	Photographic Equipment and Supplies Merchant Wholesalers	X	X		
423420	Office Equipment Merchant Wholesalers	X	X		
423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	X	X		
423440	Other Commercial Equipment Merchant Wholesalers	X	X		
423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	X	X		

Tax Increment Financing

Tax Increment Financing (or TIF) is used to redirect the taxes based on an increase in value of a project to a specific set of improvements. More additional general information about TIFs is located in the County Economic Development chapter.

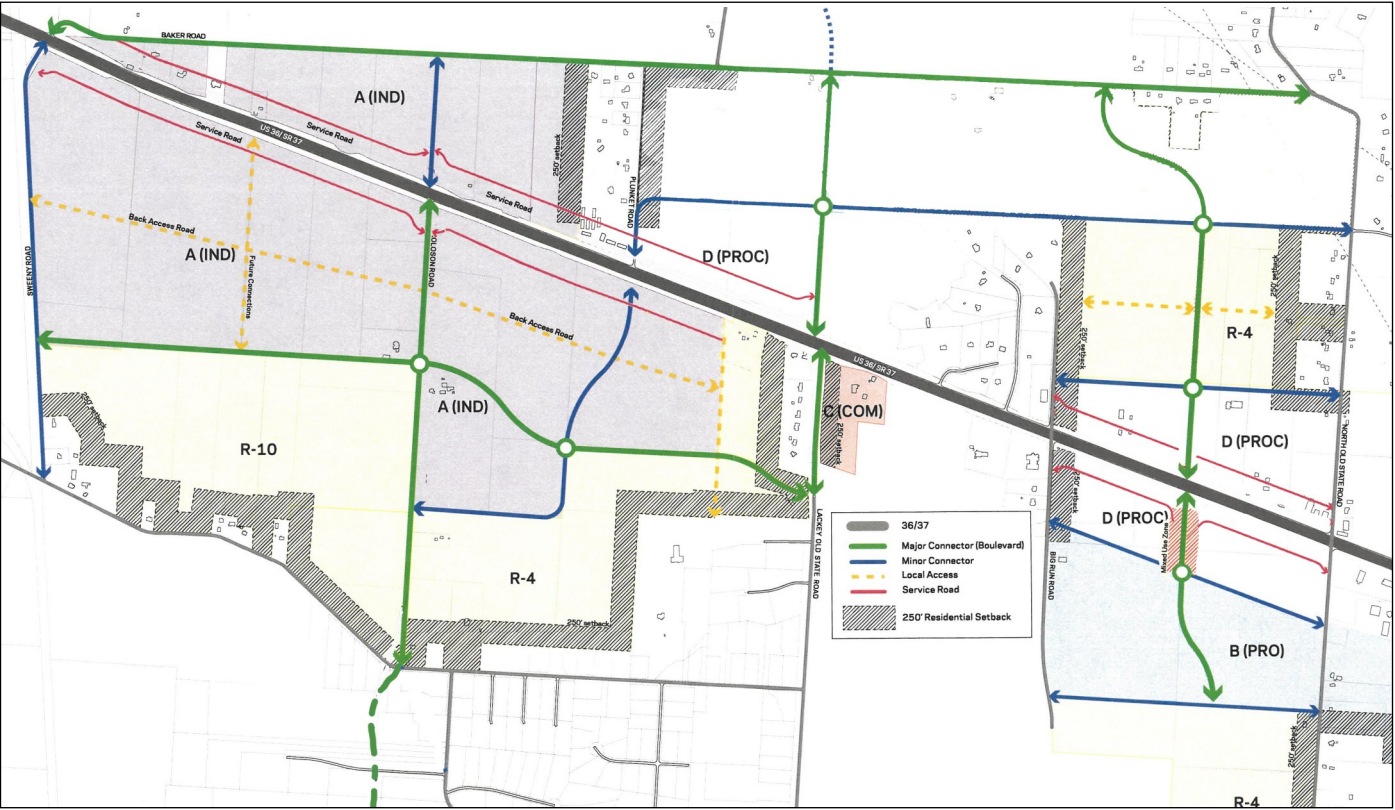


A 20-year/75% TIF was created for the Berlin Business Park on June 28, 2021. It will apply to commercial and industrial uses within the overlay areas noted above. Residential uses are required to be designed in buildings with at least four units, which are taxed at the commercial rate.

Improvements that can be paid for with the funds include improvements to the following roads: Sweeney, Curve, Roloson, Lackey Old State, Big Run, Dunham, Africa, Three B's and K, existing or future interchanges at Interstate Route 71 and US36/SR37, Baker, Plunkett, N. Old State, and other County and Township transportation and sewer public improvements benefiting the TIF district as determined in the Delaware County Board of Commissioners. Improvements can include constructing, reconstructing, extending, opening, widening, grading, draining, curbing, paving, resurfacing, and traffic signage and signalization, bridges or tunnels, public utilities, including water, sanitary sewer, storm sewers, storm water improvements, burial and/or relocation of utility lines, gas, electric and communications service facilities (including fiber optics), street lighting, business signage restoration or improvements, landscaping, aesthetic improvements, sidewalks, bikeways, acquisition of interests in real property, erosion and sediment control measures, and acquisition of related equipment, each together with all other necessary appurtenances thereto, which improvements will benefit the Parcels. With the exception of any public infrastructure improvements made to Interstate 71 and US36/SR37, Improvements shall be made within the jurisdictional boundaries of the Olentangy School District.

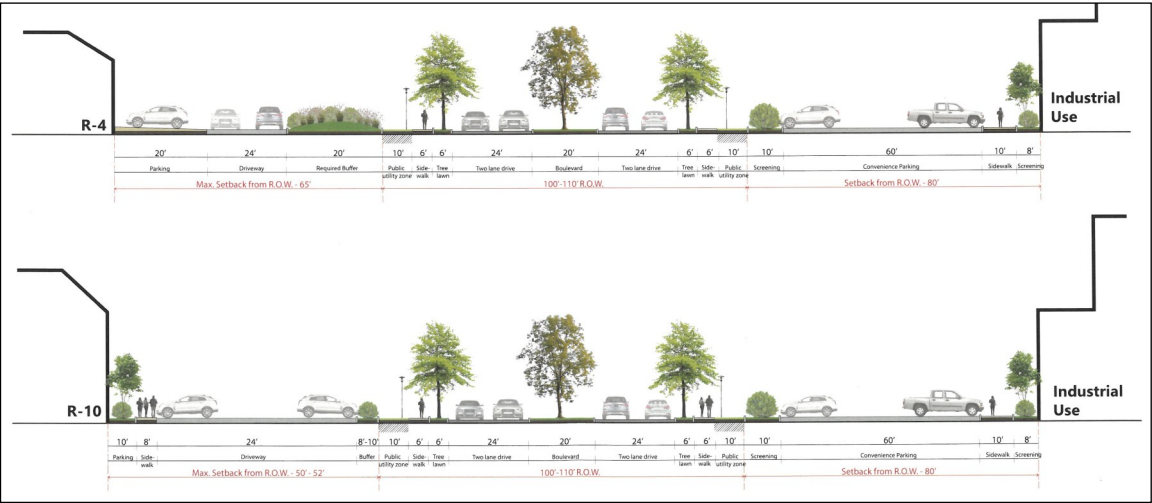
Potential Road Layout

A conceptual street layout needed to be created for several reasons. End users are unlikely to be attracted to an industrial park if they are responsible for their “share” of a road network. Such an expectation would lead to a piece-meal approach. Individual developers will benefit from a conceptual plan or such a plan may be used by the county as a public project, built in a phase approach and paid for as a Capital Improvement Project.

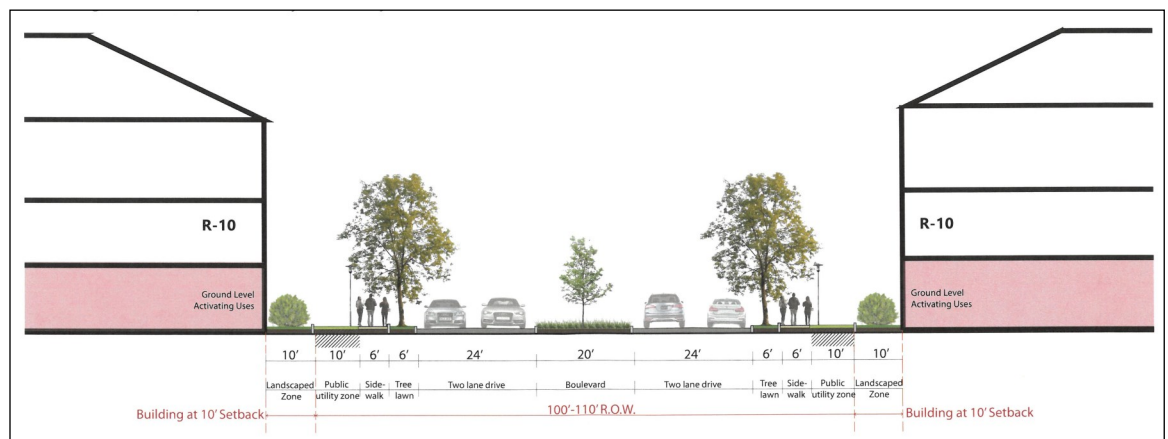
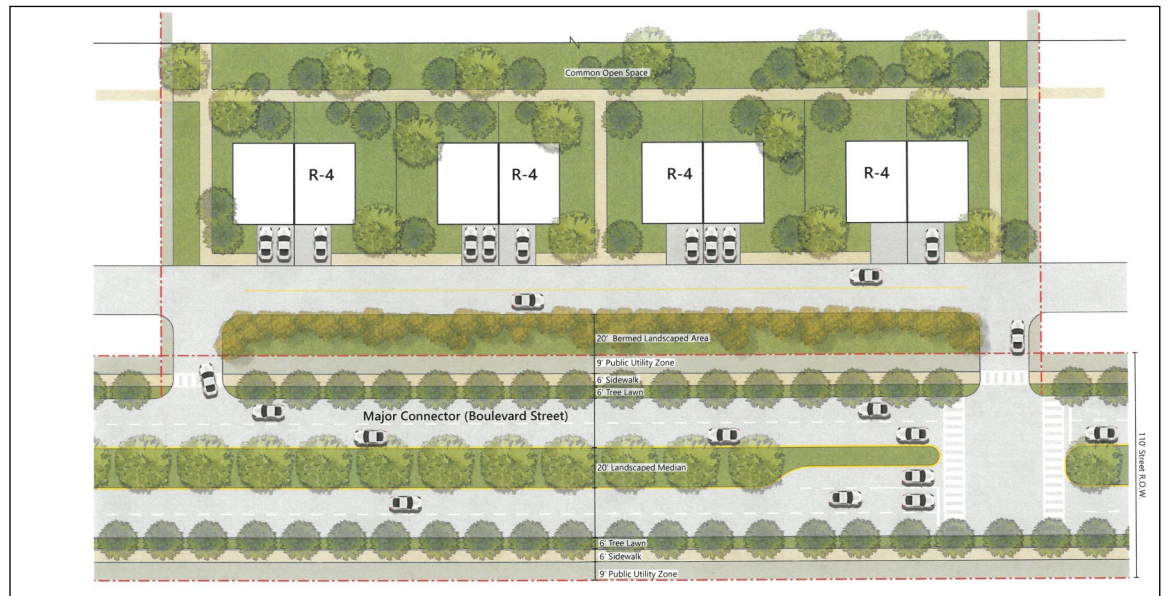
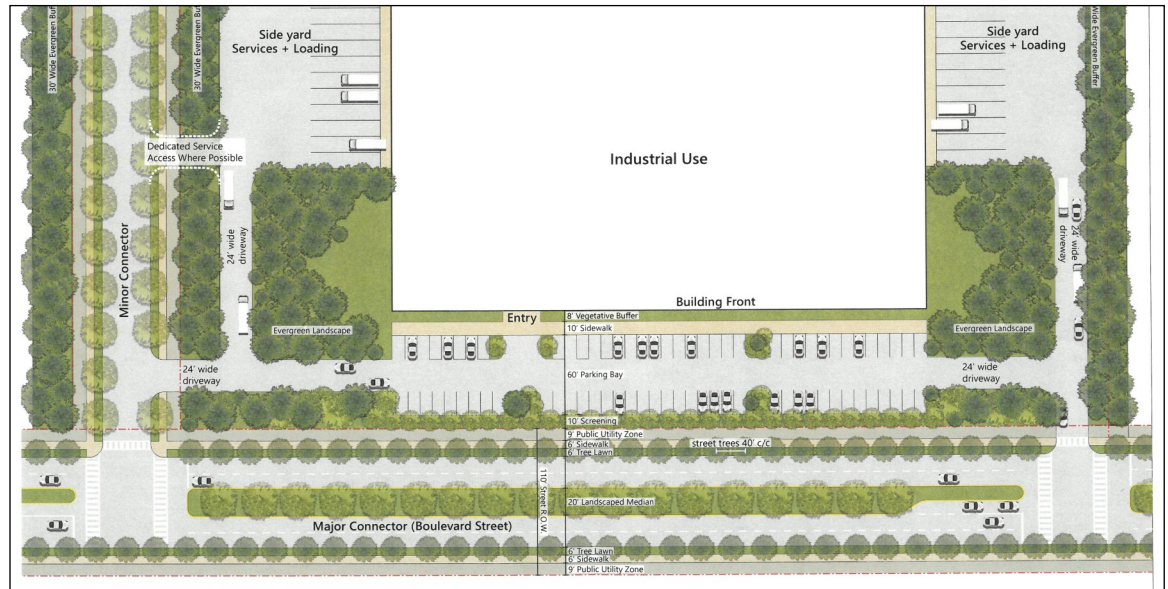


Road Heirarchy

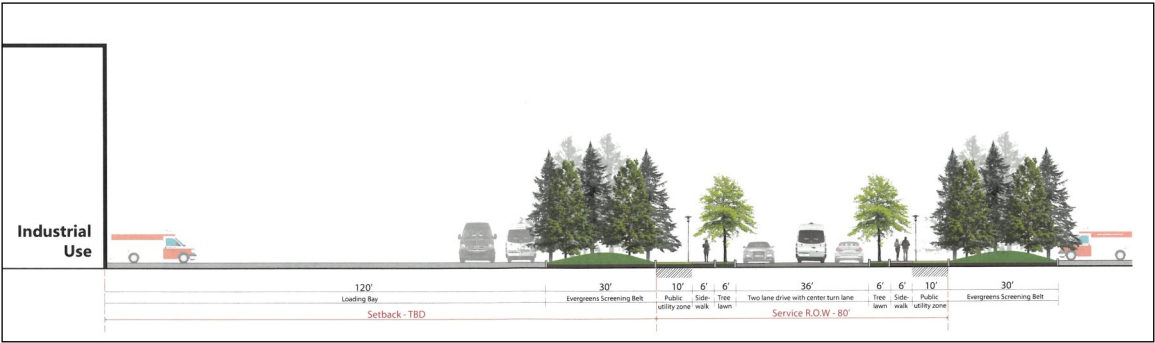
The road types noted above are defined by their purpose. The following graphics are illustrative of how they may be applied as development occurs. The specific standards of each road type, as well as the arrangement of the adjacent uses, are defined within the overlay zoning codes.



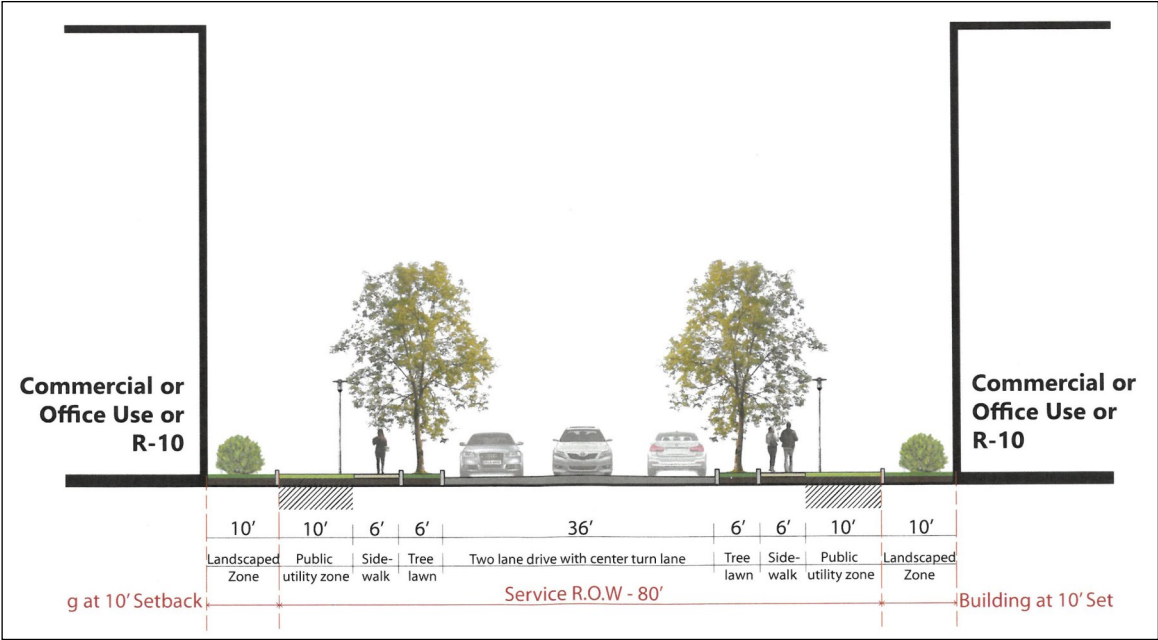
Major Connector layouts.



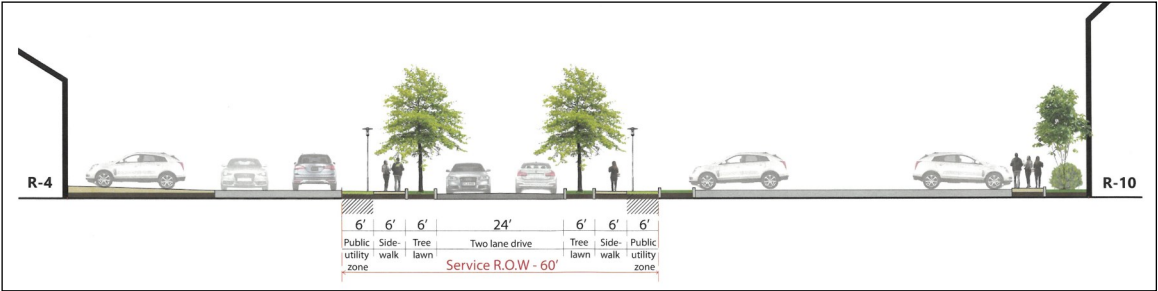
The **Minor Connector** connects major/minor collectors (arterial roads) and 36/37 with a right-of-way of 80 feet. (Blue on road layout map.)



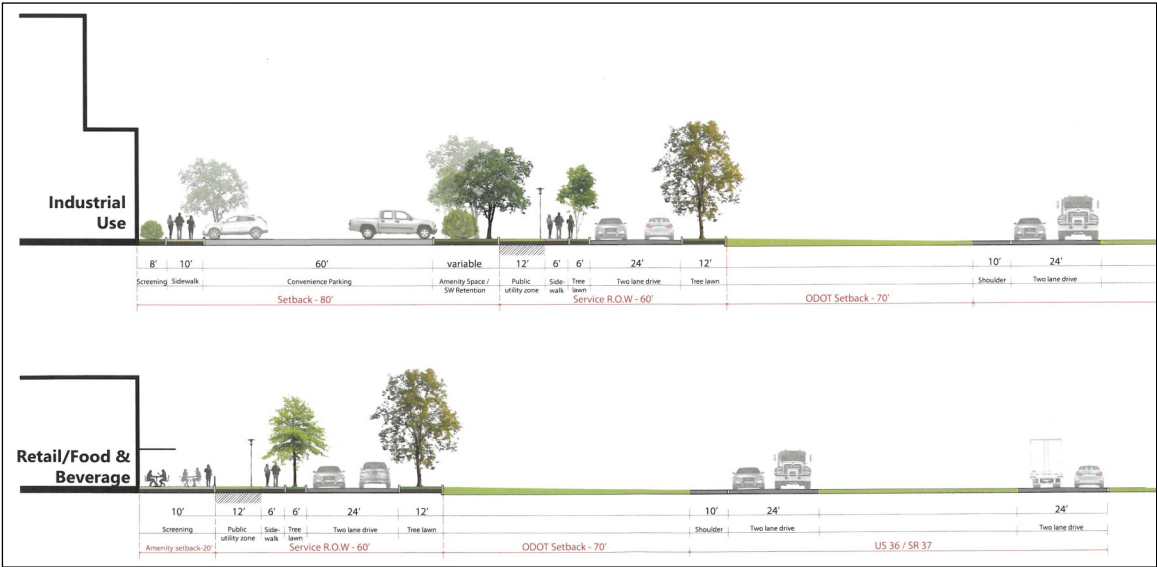
Minor Connector between less intense uses.



Local Access Roads provide local access to developments with a 60-foot right-of-way. (Yellow dashed on road layout map.)



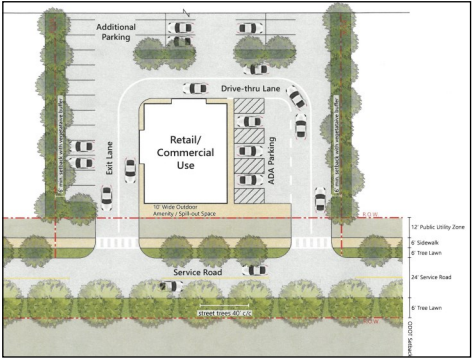
Service Roads are frontage roads adjacent to 36/37, also with a 60-foot right-of-way. (Red on road layout map.)



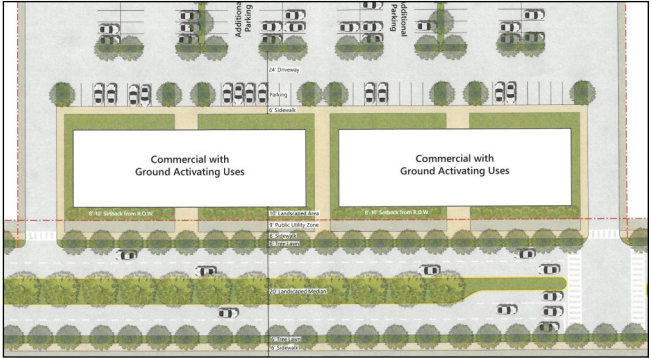
Sample Industrial uses along 36/37



Retail/Commercial use

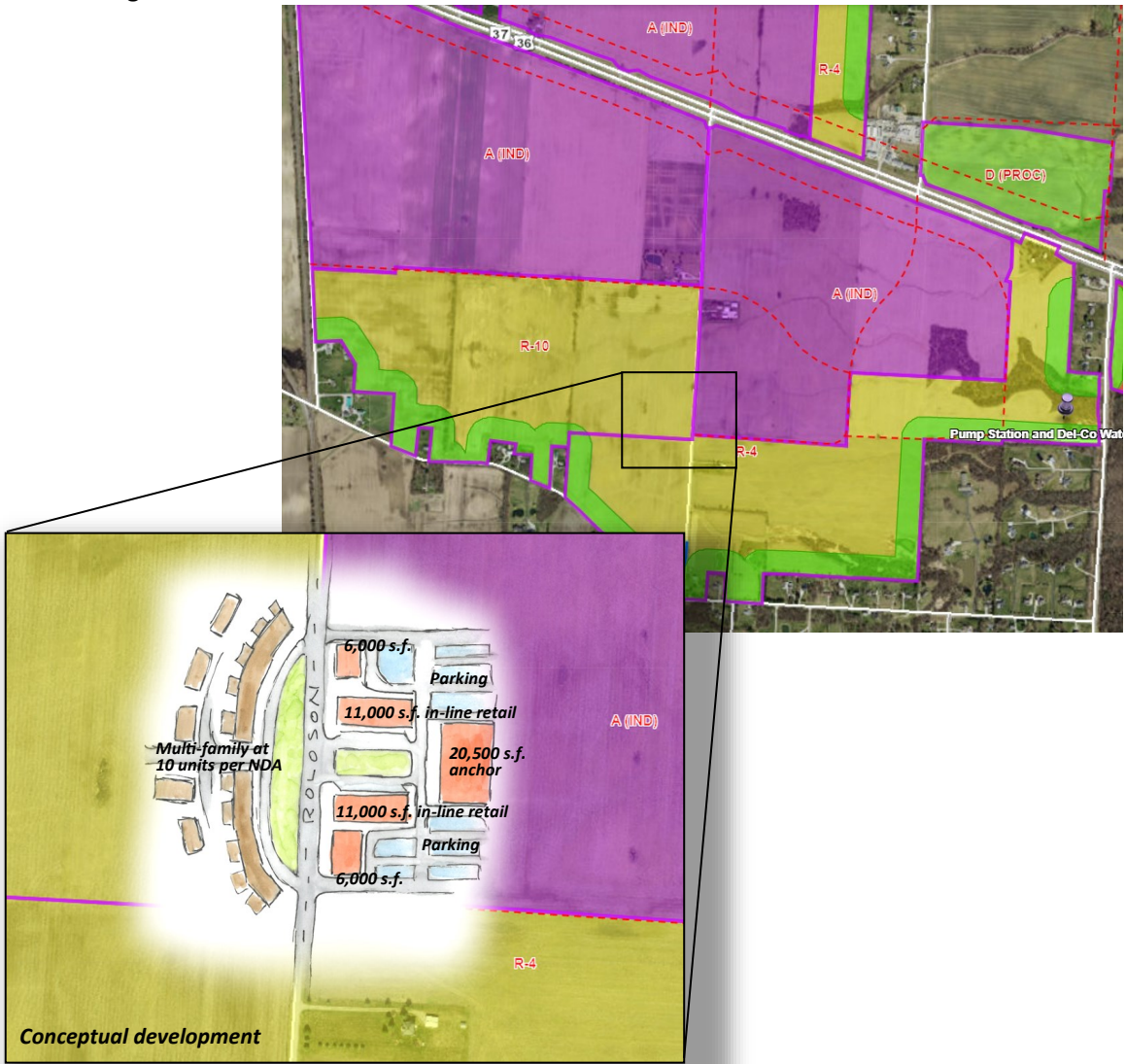


PROC uses



Potential Town Center

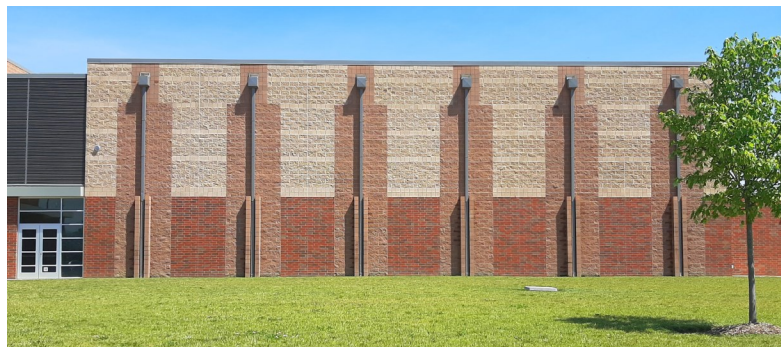
Although not specifically described in the overlay text, the commercial and retail aspects of the 1A (IND) area and the residential nature of 1D (Residential at 10 units per net developable acre) could be utilized to create a town center near existing Roloson Road. Commercial is allowed in the overlay along the east side of Roloson while the west provides for residential. This mix could be utilized for a town center with local commercial uses, providing economic development opportunities as well as providing an activity and community gathering center for the larger area.



Chapter 13

Goals and Objectives

Berlin Township



Community Vision Statement

When Berlin Township is built out, we would like to be a community with a rural feel and character. Rural roads would have a rough edge, with fencing that reminds us of the rural past, and mature landscaping to replace fence/tree rows that are removed. We would like areas with low-density, large lots, as well as areas with greater density and diversity of housing.

We would like planned, commercial and industrial uses, with attractive landscaping in commercial corridors and at entrances to neighborhoods. We would like useable green spaces throughout the community. We would like to retain historic and agricultural structures that give a sense of our heritage. We would like to preserve unique scenic views and our critical natural resources such as ravines, floodplains, wetlands, and forests.

We would like to see a center of the township, perhaps at Historic Village of Cheshire, where a traditional village with neighborhood shops would be an attractive destination. We would like to retain the small town feel in the human scale of structures, the use of natural materials and traditional structural colors. Roads should remain as narrow as possible, but safely carry the traffic.

General Goals

- Preserve the rural, scenic character of the Township through preservation of natural resources, open spaces, agriculture, and low density, single-family, diverse housing. This includes maintaining wildlife corridors, preserving rural look along township roads, and dense landscape buffering between incompatible uses.
- Create a heart of the township at Historic Village of Cheshire with mixed uses.
- Promote passive/active recreational activities including linking developments with green spaces and paths.
- Encourage commercial and light industrial development in planned districts to broaden jobs and tax base while limiting land use and density to suitability, utility availability, and carrying capacity of land infrastructure.
- Determine and implement an appropriate land use mix while discouraging overdevelopment or pre-mature development and maintaining services needed for predominantly rural/low density communities and management controls to limit key access points to minimize highway congestion.
- Implement and maintain the land use plan and enforce zoning regulations.
- Expand township services at a rate to ensure public health and safety.
- Acquire suitable land for the township and school future needs.

Objectives

- Continue to utilize the Berlin Township Parks Committee;
- Fair signage rules for the community;
- Trails to areas like adjoining township trails, Alum Creek, new Delaware shopping plaza, schools, recreation;
- Actively pursue the types of industry that would decrease the tax burden to residents;
- Township enforcement of zoning violation to ensure neighborhoods remain clutter free;
- Increase commercial areas especially in the Berlin Business Park;
- Continue to work to preserve and protect township boundaries from annexation;
- Require developers to donate land for recreational areas (example: Mariner's Watch has a great deal of open space, but it's passive and underutilized).

Other issues to address

- Zoning should be utilized to prevent annexation;
- Keep large lot sizes and preserve the right mix of housing density by utilizing zoning restrictions and controlling growth to minimize impact on schools;
- Develop more recreational opportunities such as a recreational center with a pool, library, paths/parks for family use, sports fields, playgrounds (perhaps in the Historic Village of Cheshire area to create a town center), bike trails;
- More green space is needed;
- Update the home occupation regulations and signage standards to promote businesses;
- Encourage retail centers and commercial use in appropriate areas as well as affordable housing;
- Ensure farmland preservation and maintenance of a local food source;
- Work towards extension of sewer services;
- Address high tax issues.

Chapter 14

Recommendations

Berlin Township

Intent of the Berlin Township Comprehensive Plan

The Comprehensive Plan is the sum of all the chapters and maps. This chapter is intended to be read and viewed in conjunction with the Comprehensive Land Use Plan (map) in this document. The recommendations are arranged into Sub-Areas as shown.

Acreage figures are approximate. Undeveloped area is calculated by using parcels larger than 5 acres in size which are not impacted with critical areas that could hinder development. Current population is an estimate based on the number of units as defined by the County Auditor and the average persons per household, which is a different methodology from the projections elsewhere in this document.

General Commercial and Multi-Family Recommendations

Commercial and Multi-Family Residential uses must follow these guidelines. Overlay requirements shall prevail where they conflict with these guidelines.

Recommendation GC.1 - Improvements, including potential signals along U.S. 36 should be installed when the warrants are met. These would regulate the traffic from new backage roads.

Recommendation GC.2 - Parcels should have limited access to arterial roads and highways and are linked with parallel rear access roads built in increments by developers.

Recommendation GC.3 - Buildings should be designed with four-sided architectural features, minimizing blank walls and non-buffered service areas.

Recommendation GC.4 - Only low level, downward-cast lighting should be allowed to reduce light pollution.

Recommendation GC.5 - To avoid sign clutter, ground signs should be the only sign type permitted along 36/37. Tall pole signs and billboard signs should be prohibited. A Berlin Township “look” or architectural sign syntax should be developed.

Recommendation GC.6 - Extensive landscaping should be required in parking lots to avoid seas of asphalt. Use landscaping to divide parking areas by using islands at reasonable spacing, at ends of rows, and along highway frontage.

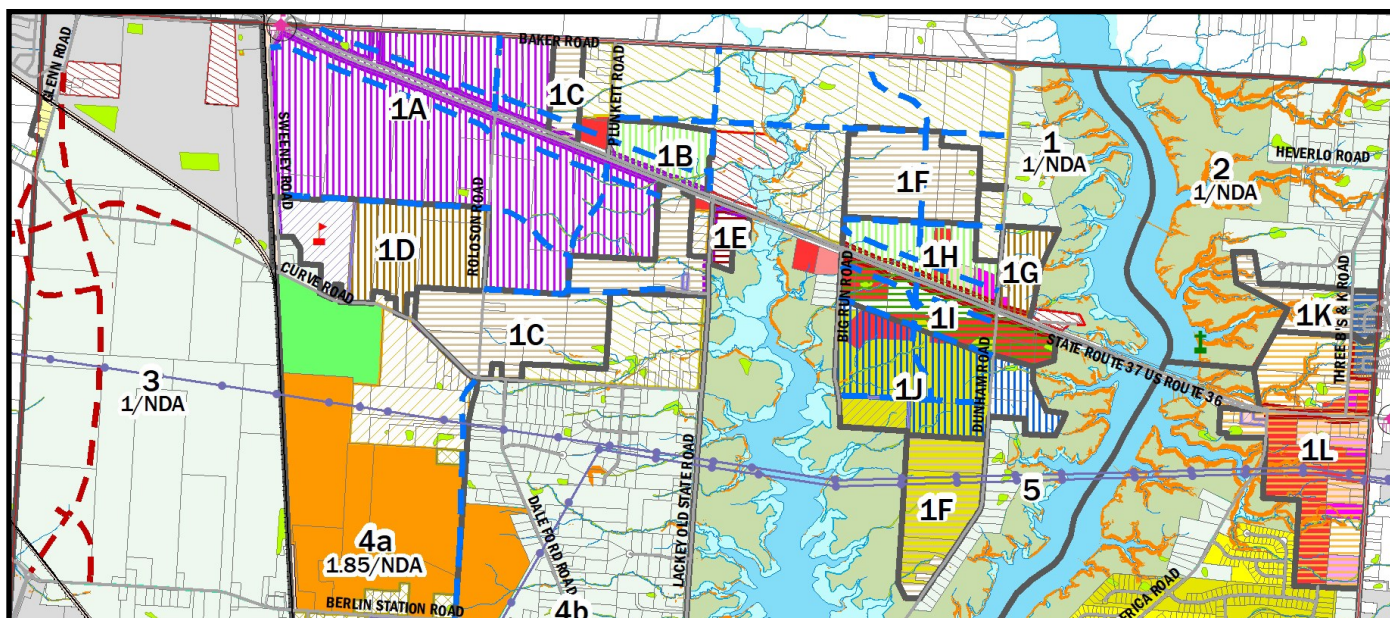
Recommendation GC.7 - Areas should be developed with pedestrian connectivity and access as a goal. Retail and office design elements should include rear parking, grid streets, sidewalks, street trees and building orientation. Angled and parallel on-street parking, may be used to improve walkability. Office, civic, and multi-type residential use may use campus-style building orientation, courtyard and on-street parking and pedestrian connections.

Planning Area One - 36/37 Corridor, areas outside the BCO and BIO overlays

Area One consists of lands bordering the city of Delaware on the west, Brown Township on the north, Alum Creek on the east, U.S. 36 on the south between Alum Creek and Lackey Old State Road, then Curve Road from Lackey Old State Road to the railroad tracks, where the southern border of area shifts to the south side of Curve Road. There is potential future sewer service by the county, as this area is within the Central Alum Creek Service Area. A future Olentangy school is proposed for the corner of Sweeney and Curve Roads.

Land area: ±767 gross acres **Current estimated population:** 175 (55 housing units) **Net Developable Acreage:** 253 acres

Recommendation 1.1: Agriculture and single family residences on 2-acre lots, or PRD development at a density of 1 unit per net developable acre (NDA) with sewer.



Subarea	Acreage	Current Population	Overlay Use	New Units	New Population
1A	594	10	Professional / Research / Office / Commercial / Light Ind.	0	0
1B	49	0	Professional / Research / Office / Commercial	0	0
1C	222	19	Multi-Family at 4 units per Net Developable Acre	638	957
1D	162	0	Multi-Family at 10 units per Net Developable Acre	1,253	1,880
1E	18	3	Commercial	0	0
1F	196	13	Multi-Family at 4 units per Net Developable Acre	254	381
1G	34	3	Multi-Family at 10 units per Net Developable Acre	231	347
1H	76	0	Professional / Research / Office / Commercial	0	0
1I	92	3	Multi-Family at 10 units per Net Developable Acre	Max 500	Max 750
1J	177	13	Multi-Family at 10 units per Net Developable Acre		
1K	52	89	Multi-Family at 4 units per Net Developable Acre	51	77
1L	225	128	Commercial, Mixed-Use, and Multi-Family at 10 units per Net Developable Acre	357	536

36/37 Corridor Planning area within BCO and BIO overlays

The areas of the BCO and BIO overlays are defined in the Berlin Township Zoning Resolution and generally follow the description of Planning Area 1 with a few exceptions. The purpose of this plan is to acknowledge the details of the overlays so that the recommendations of the plan match the allowable uses and density within the overlays.

Land area: ±1,897 gross acres **Net Developable Acreage:** 1,612 acres

Proposed uses include areas of Professional, Research, Office, Commercial; areas where those uses can be joined by Light Industrial; area of strictly Commercial uses, and a Mixed-Use area where Commercial and Multi-family could both be used. Other areas are limited to Residential uses at 4 units per NDA and 10 units per NDA. Roloson Road provides a possible location for a town center as well. Utilizing the commercial aspects of the 1A area and the residential nature of 1D, the center would provide a retail center for the larger neighborhood.

Planning Area Two - North East

Area two is bounded on the north by Brown Township, on the east by Berkshire Township, on the south by a line parallel to and approximately 700 feet north of U.S. 36 and on the west by Alum Creek. This is a low-density residential and agricultural area that backs up to Alum Creek and lands of the United States. The parcels of land have been so fragmented that it is unlikely any large enough tracts could be assembled to do on-site sewage treatment. Sanitary sewer is located along Four Winds Drive, making the area potentially served by sewer.

Land area: 555 gross acres **Current estimated population:** 124 (39 housing units)

Development pipeline population: 26 (8 units) **Net Developable Acreage:** 27 acres



Planning Area Three - Heartland

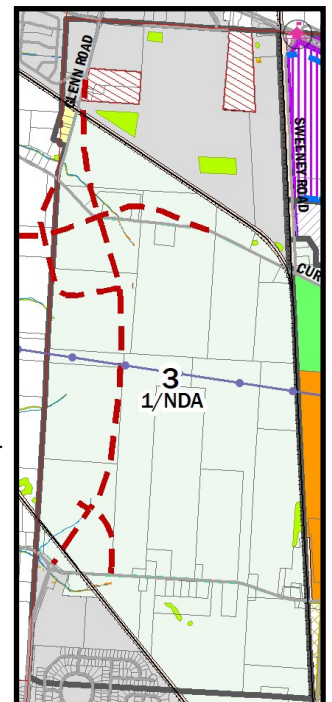
Area Three is bound on the west by Delaware Township, on the north by the AEP electric transmission lines south of and parallel to Curve Road, on the east by the Conrail tracks, and on the south by property lines parallel to and approximately 2200 feet south of Berlin Station Road.

The area is characterized by prime agricultural soils in large undivided tracts of land. There is no central sewer proposed by the county, and soils are generally unsuitable for on-site treatment plants with land application systems. There is no access to major arterial roads, although Glenn Parkway is proposed to be built as development occurs. This area lies within the exclusive city water agreement area, and the Glenn Road Extension is likely to bring additional development pressure.

Land area: 1,262 gross acres **Current estimated population:** 112 (35 housing units)

Development pipeline population: 0 (0 units) **Net Developable Acreage:** 919 acres

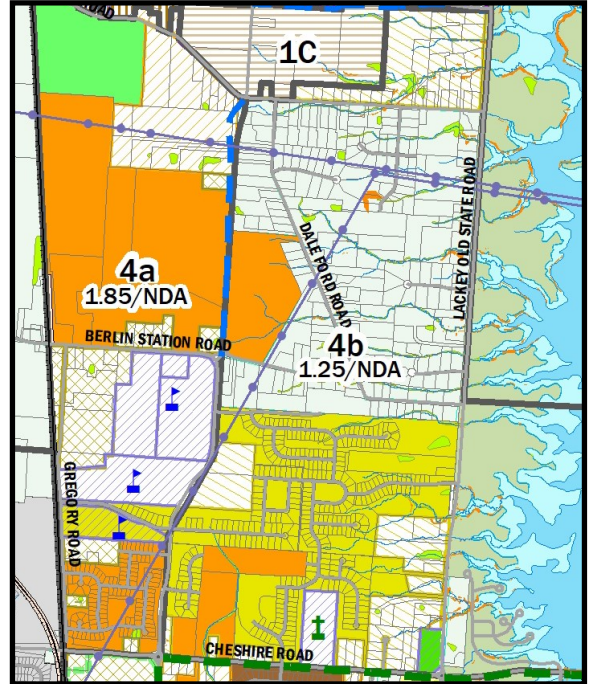
Recommendation 3.1 - Agriculture and single family residences on 2-acre lots, or PRD development at a density of one unit per net developable acre with sewer, one unit per two acres without sewer are recommended.



Planning Area Four - Suburban Transition

The area is bound on the north by Curve Road; on the east by Lackey Old State Road, on the south by Cheshire Road, and on the west by the railroad tracks. The area is sewered within the Central Alum Creek Service Area and developing. Because of the diversity of conditions and uses within this planning area, the recommendations are divided into Sub-Areas.

This area is characterized by the eastward reach of the prime agricultural soils with conditions similar to Sub-Area 3. Soils are generally unsuitable for on-site treatment. The land is flat with poor drainage. Large lots dot Berlin Station Road and Curve Road. There is no access to major arterial roads. Annexation threat is limited by the railroad tracks and agreements between the city and county. Olentangy Berlin High School, a middle school, and Cheshire Elementary have all recently been built between Piatt and Gregory Road. A landowner has placed 62 acres of land at the southeast corner of the Conrail tracks and Curve Road in an Agricultural Conservation district.



Sub-Area 4A (West side of Piatt Road.)

Land area: 839 gross acres **Current estimated population:** 153 (48 housing units)

Development pipeline population: 1,707 (535 units) **Net Developable Acreage:** 146 acres

Recommendation 4.1 - The plan recommends agriculture and single family residences on 2-acre lots, or PRD development at a density of 1.85 units per net developable acre (NDA) with sewer.

Recommendation 4.2 - The new Road (Piatt Road extension) continues north from south from Berlin Station Road to Curve Road.

Sub-Area 4B (East side of Piatt Road.)

Land area: 1,683 gross acres **Current estimated population:** 1,764 (553 housing units)

Development pipeline population: 58 (194 units) **Net Developable Acreage:** 97 acres

Recommendation 4.3 - The plan recommends a small park at the northwest corner of Cheshire and Old State Roads.

Recommendation 4.4 - The plan recommends agriculture and single family residences on 2-acre lots, or PRD development at a density of 1.25 units per net developable acre (NDA) with sewer.

Recommendation 4.5 - Bikeway paths along any widened roads should include the edge of Cheshire Road, particularly across the Alum Creek causeway to Cheshire.

Planning Area Five - Dunham Peninsula

Area Five is the area between Alum Creek on the east and west that is not included in the overlay. It has dead end access via Dunham and Big Run Roads. Sewer service is not immediately available but the area is in a future sewer service planning area.

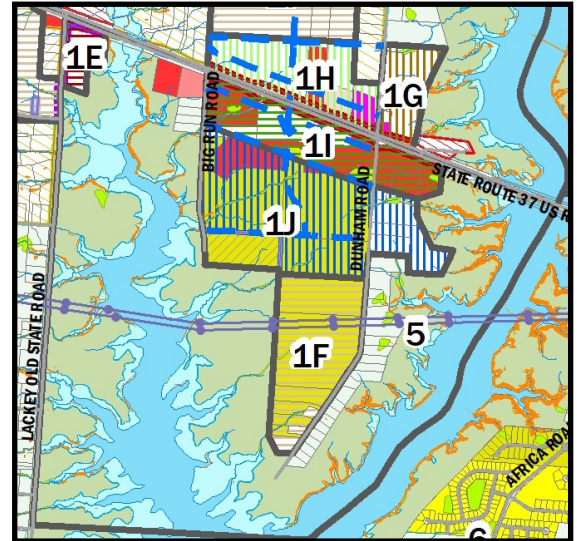
Land area: 983 gross acres

Current estimated population: 70 (22 units)

Development pipeline population: 0 **Net Developable Acreage:** 0

Recommendation 5.1 - Parcels with sufficient acreage may develop at 1 unit per acre with sewer.

Recommendation 5.2 - Dense landscaping/mounding should be located between different uses as buffering.



Planning Area Six - East Alum Creek Corridor

Area Six is bounded on the west by Alum Creek and lands of the USA, on the north by the overlay boundary, on the east by Berkshire Township, and on the south by a line approximately 1300 feet north of and parallel to Cheshire Road.

There is sanitary sewer service to this area serving residential development and commercial uses at the U.S. 36 and I-71 interchange and the U.S. 36 commercial corridor.

Land area: 1,640 gross acres

Current estimated population: 1,215 (381 housing units)

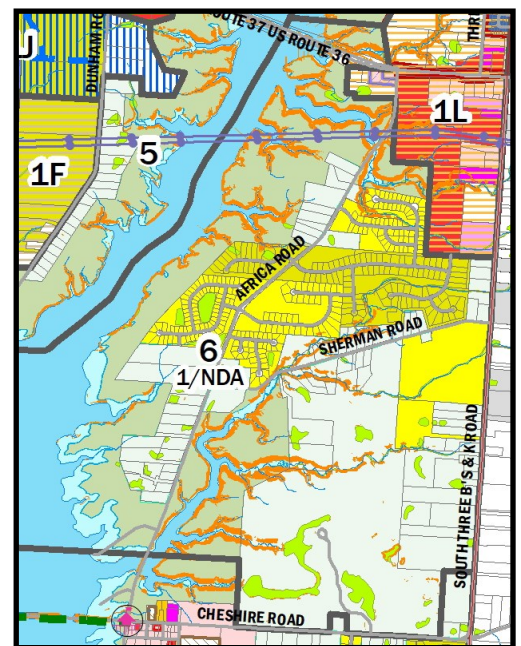
Development pipeline population: 20 (7 units)

Net Developable Acreage: 36 acres

Recommendation 6.1 - Lands west of Africa Road adjacent to Alum Creek State Park are recommended for single family residential use at very low density of one unit per two acres.

Recommendation 6.2 - Lands east of Africa Road are recommended for residential use at one unit per net developable acre.

Recommendation 6.3 - Double Eagle Golf Course is assumed to continue as a golf course without residential development within the timeframe of this plan.



Planning Area Seven – Southern Gateway

Planning Area Seven is bounded on the west by Liberty Township, on the east by the Conrail tracks and Gregory Road, on the south by Orange Township, and on the north by property lines approximately 3700 feet north of and parallel to Cheshire Road. Area 7 is further divided into sub-areas 7a, 7b and 7c.

Planning Area 7 includes the U.S. Route 23 corridor, the main north-south federal highway in Delaware County. There are opportunities for commercial and industrial development along this corridor. Such development could cause congestion on U.S. 23 if not correctly planned and built. The area north of Peachblow Road is within the exclusive city water agreement area and has already seen a large amount of annexation and development.

The land is excessively flat and drainage is problematic. There are no floodplains, since this is near the top of the watershed. There are few wetlands, other than agriculturally tiled wetlands. Many of these soils are prime agricultural soils, with low suitability for on-site septic systems.

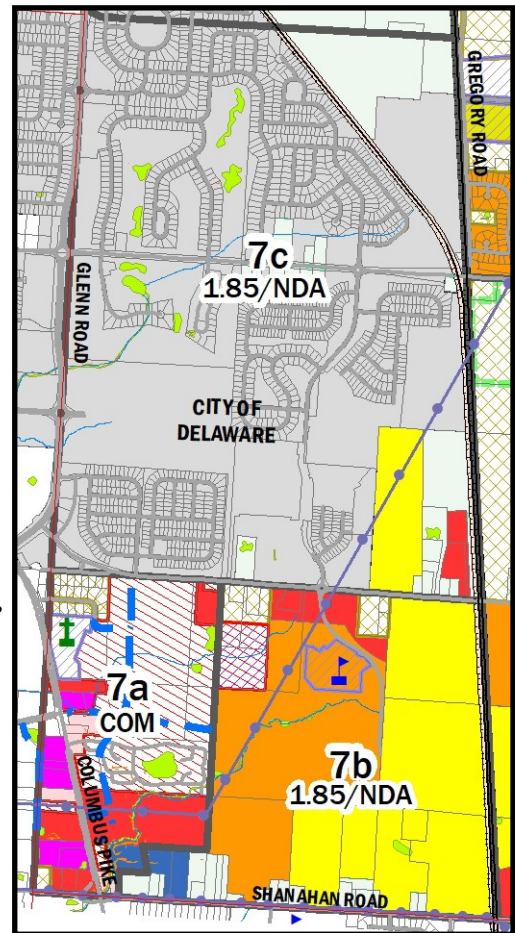
Sub-Area 7A

East Side of U.S. 23: A large manufactured home park lies behind a small commercial (restaurant) use. Some of the other existing commercial uses are temporary and will be replaced with more valuable commercial uses in time. A Speedway gas station is located at the intersection of Shanahan and U.S. 23. Fairview Memorial Park cemetery lies south of Connor Lane, a 12-lot single family subdivision.

West side of U.S. 23: A number of commercial uses, with mini-storage warehouses just north of the Hyatts Road/U.S. 23 intersection. Other commercial, office, and institutional uses exist, including Adventure Church (in Berlin and Liberty Townships), Celebration KIA, and the P&D Builders offices in the Park at Greif, served by Delaware County sewer service.

Land area: 386 gross acres **Current estimated population:** 807 (253 housing units)

Development pipeline population: 230 (72 units) **Net Developable Acreage:** 86 acres



Recommendation 7.1 - (US 23 Corridor) Planned Commercial districts are recommended for parcels with frontage on U.S. 23. Access management principles and interconnection of properties north to south must be included.

Recommendation 7.2 - (US 23 Corridor) No left turns should be permitted across U.S. 23 except at ODOT approved locations

Recommendation 7.3 - (West side of US 23) A parallel access road is recommended to be constructed in increments along the Liberty Township and Berlin Township line north to south. The first easement segments of this road are dedicated in the Park at Greif, west of P&D Builders. The road should eventually run from the northwest corner of the 5542 Columbus Pike, north to Grief Parkway.

Recommendation 7.4 - (East side of US 23) Recommend Planned Commercial as shown on the map.

Recommendation 7.5 - (East side of US 23) There should be dedication and incremental construction of a parallel access road to U.S. 23 by individual landowners as their parcels develop. This parallel access road should connect Peachblow Road on the north, run parallel to and approximately 1200 feet east of U.S. 23, running south until heading slightly west to provide access to a new entrance to the manufactured home park. Connor Lane should be extended to the east to connect with the new road. The Connor Lane entrance to U.S. 23 should be closed in a cul-de-sac after the entrance to the completed parallel access road (with improved access to U.S. 23) is achieved.

Recommendation 7.6 - (East side of US 23) A parallel access road should be incrementally constructed from the south side of the home park parallel and approximately 400 feet east of U.S. 23 south to the large ravine, as depicted on the land use map.

Sub-Area 7B

This area is bounded by commercial zoning on the west, a mix of industrial and low density Farm Residential on the north, the railroad tracks on the east and Shanahan Road on the south. Berlin Meadows and Evans Farm are large approved subdivisions that are currently under development. This development will include the full extension and connection of North Road from Shanahan to Peachblow.

Land area: 518 gross acres **Current estimated population:** 86 (27 housing units)

Development pipeline population: 3,056 (958 units) **Net Developable Acreage:** 12 acres

Recommendation 7.7 - Residential development along the south Side of Peachblow Road is recommended for a density of 1.85 units per net developable acre.

Recommendation 7.8 - Improve Peachblow Road pursuant to recommendations from the County Engineer.

Sub-Area 7c

Peachblow Road on the south to Cheshire Road on the north, from the township line on the west to the Conrail tracks. The township area north of Peachblow is all zoned FR-1, single-family one acre minimum lot size.

Land area: 197 gross acres **Current estimated population:** 61 (19 housing units)

Development pipeline population: 175 (55 units) **Net Developable Acreage:** 73 acres

Recommendation 7.9 - Develop areas that remain in the township as single-family residential. If centralized water and sewer are available, then densities may be allowed up to 1.85 units per net developable acre. If centralized water and sewer are not available, then lot sizes should be one unit per acre or larger in accordance with Health District for on-lot septic systems.

Planning Area Eight - Suburban Heart

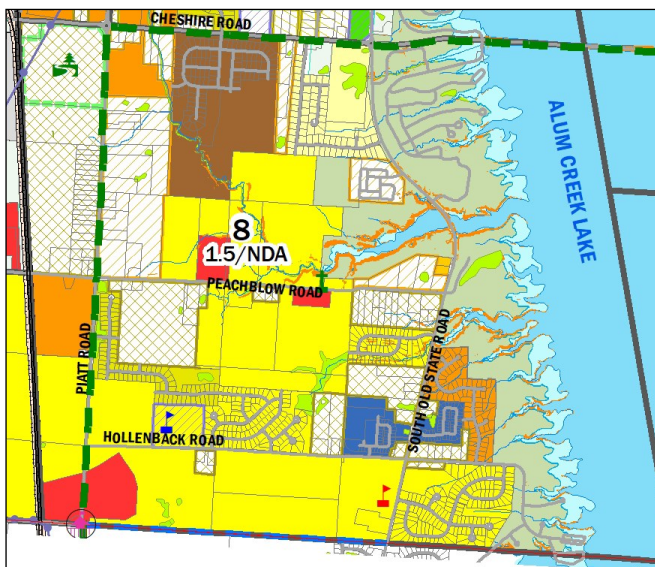
The area is bounded on the west by the Conrail tracks, on the east by Alum Creek Reservoir, on the south by Orange Township, and on the north by Cheshire Road. This area is the suburban heart of the township. There is county sewer available to this area, although the ultimate sewer capacity may be affected by other development. There is a sewer line on S. Old State Road that serves Oldefield Estates as well as sewer services that will eventually connect to Evans Farm at the Sports Park area. There are numerous drainage ravines, which empty to Alum Creek.

Land area: 2,767 gross acres

Current estimated population: 2,316 (726 housing units)

Development pipeline population: 5,059 (1,586 units)

Net Developable Acreage: 151 acres



Recommendation 8.1 - West of Piatt Road and south of Cheshire Road, the plan recommends development at one unit per net developable acre without sanitary sewer, or up to 1.85 units per net developable acre with centralized sewer.

Recommendation 8.2 - East of Piatt Road and north of Peachblow Road, the plan recommends development at one unit per net developable acre without sanitary sewer, or up to 1.5 units per net developable acre with centralized sanitary sewer.

Recommendation 8.3 - A large, approximately 40- to 60-acre township park would be desirable for athletic fields and organized sports when the township is fully built out (discuss). This park would be centrally located if land could be acquired at the northwest corner of this area, on the east of the railroad tracks, south of Cheshire Road.

Recommendation 8.4 - The 2001 Thoroughfare Plan and other local plans recommend the extension of Piatt Road at the Berlin Township line south to Lewis Center and the extension of Shanahan east to South Old State Road. The plan for Sub-Area 8 supports such a Piatt Road extension by a proposed new road south to Lewis Center.

Recommendation 8.5 - Bike paths should be provided along all major routes (North, Cheshire, Piatt, Africa, Peachblow, etc.) as development occurs. Neighborhoods should be connected with paths through open spaces and along connecting roads.

Recommendation 8.6 - A neighborhood commercial area is recommended for the improved full intersection of Piatt Road and Shanahan Road. (This is satisfied by Evans Farm) Small retail and office uses should be limited to an area approximately 300 feet in depth on the north side of Shanahan. The area would extend approximately 500 feet east of Piatt Road. Buildings should be oriented to the street, with parking to the side and rear. Sidewalk connections should be included to the any adjacent residential development with ample buffering where non-residential uses are located next to residential.

Recommendation 8.7 - An entrance feature at the intersection of Piatt Road and Shanahan Road should be incorporated into this development and would give interest and recognition upon entering Berlin Township.

Planning Area Nine - Historic Village of Cheshire and Surrounding Area

Planning area Nine is bounded on the west by Alum Creek, on the north by Cheshire Road, on the east by Berkshire Township, and on the south by the lands of the United States extending east to 3 Bs and K Road.

Land area: 721 gross acres

Current estimated population: 1,595 (500 housing units)

Development pipeline population: 102 (32 units) **Net Developable Acreage:** 4 acres



Recommendation 9.1 - The area is served by Delaware County sanitary sewer mostly within the village of Cheshire and PRD subdivisions. The lands fronting on 3 B's and K Road are recommended for single family use at one unit per net developable acre, continuing north to Cheshire Road.

Recommendation 9.2 - The unincorporated village of Cheshire and some of its adjacent properties as depicted on the Comprehensive Plan are recommended for redevelopment in a mixed use planned district that would permit residential use at up to five units per net developable acre, and local commercial uses, preferably in a downtown with historic architectural syntax, on-street angle parking, sidewalks, street trees, and shallow or zero setbacks.

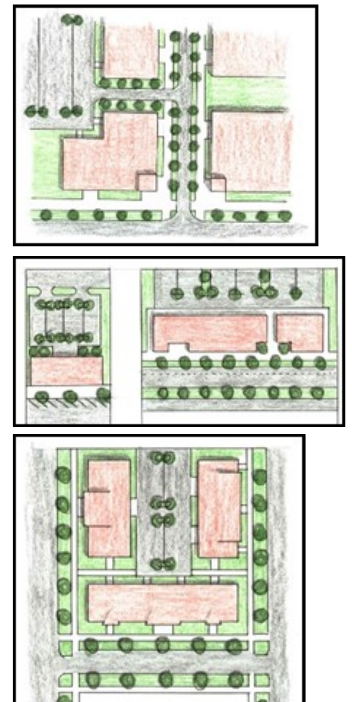
Village Center General Guidelines—Due to the intensity of uses and higher densities in town centers, good design is critical to the success of such centers. The following are general design guidelines that should be considered in developments in the Cheshire Village area and at the Piatt Road/Shanahan Road Neighborhood Commercial area.

Village Center Design Concepts

(Top) Design concept demonstrating basic retail and office design elements including rear parking, grid streets, sidewalks, street trees and building orientation.

(Middle) Design concept demonstrating basic retail design elements including rear parking, angled and parallel on-street parking, sidewalks, street trees, building orientation and pedestrian access.

(Bottom) Design concept demonstrating office, civic, or residential use with campus-style building orientation, courtyard and on-street parking and pedestrian connections.



<p>Building locations</p> <p>For retail uses, buildings should be located along a “build-to” line, providing for a 30-foot setback with curb, street trees and sidewalk.</p> <p>Office and residential uses may use a build-to line of 50 feet from curb.</p> <p>Multi-tenant buildings are encouraged. Excessive gaps and non-useable spaces between buildings are discouraged.</p> <p>Buildings should include architectural details on all exposed sides. Retail uses should have a minimum 80% “open” glazing (windows and doors) at street level.</p> <p>Pedestrian connections to rear parking areas may be established between buildings. Such areas should be wide and buildings should include four-sided architectural details.</p> <p>Buildings may have front and rear entrances whenever possible.</p> <p>Multi-family uses in single-use structures should be townhouses with rear garages near parks.</p> <p>Single-family lots with at least 80’ of frontage may use front-load garages if the garages are at least 10’ behind the front of the building. Lots with less frontage should utilize rear service roads.</p> <p>Public Spaces</p> <p>Common open spaces that are fronted by buildings are encouraged.</p> <p>In residential areas, open space should be a combination of formal town squares, pocket parks and natural preservation areas.</p>	<p>Parking</p> <p>Parking lots should be located behind or to the side of buildings rather than in front.</p> <p>Diagonal or parallel on-street parking should be located in front of retail areas and on local streets and commercial lanes where appropriate.</p> <p>Parking ratios should be calculated for the overall development rather than for individual businesses.</p> <p>Retail – 1 space per 250 gross square feet</p> <p>Office – 1 space per 250 gross square feet</p> <p>Residential – 2 spaces per unit</p> <p>Parking areas should contain landscaped curbs and islands with deciduous trees.</p> <p>Parking lots should be screened from public right-of-way by a four-foot ever-green hedge or masonry wall.</p> <p>Landscaped buffers should be provided between dissimilar uses.</p> <p>Bicycle parking should be provided at convenient intervals in safe locations near major entrances.</p> <p>Streets</p> <p>All streets should be two-way.</p> <p>Sidewalks at least 4 feet wide should be provided throughout with a minimum 5’ tree lawn between sidewalk and street (unless otherwise restricted). Retail uses may utilize tree wells instead of a tree lawn.</p> <p>Street trees should be provided on both sides of the street at a minimum 40 feet on center.</p> <p>Street furnishings (benches or other seating areas) should be provided in retail areas and public spaces.</p> <p>Streets should interconnect – cul-de-sacs should be discouraged.</p>
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Planning Area Ten – South East Alum Creek Corridor

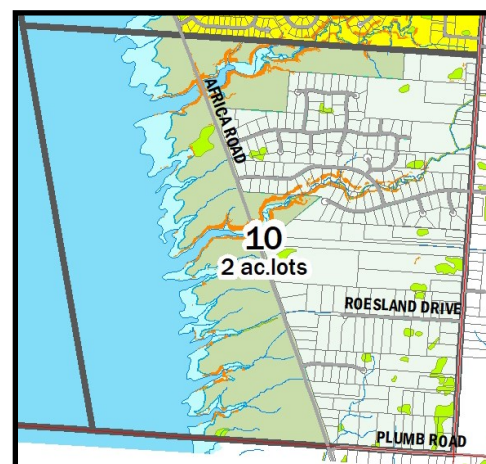
Planning area Ten is bounded by Orange Township on the south, the Alum Creek State Park on the west and north, and Berkshire Township on the east. The area includes scattered, large-lot single-family homes and two large subdivisions served by sanitary sewer. Lots are a 1-acre minimum lot size. Alum Creek State Park dominates area 10.

Land area: 1,268 gross acres

Current estimated population: 705 (221 housing units)

Development pipeline population: 57 (18 units)

Net Developable Acreage: 76 acres



Recommendation 10.1 - The plan recommends very low-density development at one unit per two acres to blend with the park. Where sanitary sewer is available, one unit per net developable acre is recommended.

General Recommendations

The following implementation items are general in nature and are not specific to any sub-area.

Recommendation G.1 — Work with township residents interested in recreation planning and encourage development of parks and leisure trails as part of new developments. Insert recommendations as they become available.

Recommendation G.2 — Continue to require sidewalks within and pedestrian connections between residential developments.

Recommendation G.3 — Encourage pedestrian-oriented commercial development and seek pedestrian connections between commercial and residential developments.

Recommendation G.4 — Require usable open space in developments by seeking amenities such as tot-lots, exercise stations, gazebos, and public furnishings such as benches and tables.

Recommendation G.5 — Consider an overall housing mix when reviewing rezoning requests as the township continues to develop.

Recommendation G.6 — Encourage the conservation of natural resources (steep slopes, woodlands, wooded ravines, floodplains, etc.) as part of a subdivision's open space while utilizing the current PRD and TPUD zoning language.

Recommendation G.7 — Seek multiple entrances to developments and the interconnection of subdivisions to improve safety, reduce travel times and lower maintenance costs.

Recommendation G.8 — Seek street connections or cross-easements between commercial uses.

Recommendation G.9 — Support access management along state routes as well as along existing and proposed arterial roads, referencing the ODOT goals for U.S. 23 and U.S. 36/S.R. 37.

Recommendation G.10 — Support the County Engineer by encouraging best practices for stormwater management and by encouraging development that preserves surface and ground water quality.

Recommendation G.11 — Keep local agencies informed throughout the development process so they can plan for future service.

Recommendation G.12 — Work with agencies to identify new sites for township facilities.

Recommendation G.13 — Provide for updates to the Comprehensive Land Use Plan within 5-10 years.

Recommendation G.14 — While the township does not encourage large-scale solar projects, the township supports alternative energy generation, including panels on industrial and commercial buildings as well as new applications such as agri-photovoltaic development.

Subarea	1	1A	1B	1C	1D	1E	1F	1G	1H	1I	1J	1K	1L	Total
Acreage	767	594	49	222	162	18	196	34	76	92	177	52	225	2,664
Current Units	55	3		6		1	4	1		1	4	28	40	143
Current Est. Population	175	10		19		3	13	3		3	13	89	128	456
Recorded but vacant														
Preliminary lots														
Rezoned lots (no prelim)														
Multi-family approved													188	188
Total Unit Increase													188	188
Population Increase													600	600
Proposed use/density	SF1	IND	PROC	MF4	MF10	COM	MF4	MF10	PROC	MF10	MF10	MF4	MF10	
Net Dev. Acreage**	253	426	37	159	125	12	64	23	29	47	131	13	36	
Potential Units	253	-	-	638	1,250	-	256	230	-	470*	1,310	52	357	4,816
New Population***	807	-	-	957	1,880	-	384	345	-	705	1,967	78	536	7,659
Total Build Out	982	0	0	977	1,880	3	397	348	0	708	1,979	****	****	7,274

Existing Land Use layer was created based on County Auditor's parcel layer dated 1/29/2022, from the following categories: Agricultural, Agricultural Vacant, Residential Vacant, Other Uses Vacant Land. Acreage larger than 10 acres classified as "Vacant Land".

* **Maximum 500 units** in combination of 1I and 1J.

****Net Developable Acreage** was calculated by excluding NWI Wetlands, 100-Year Floodplains, powerline easements from AEP.

*****Single-Family densities** figured at 3.19 people per unit (Census); **Multi-Family densities** figured at 1.5 people per unit.

******Subareas east of the reservoir** are difficult to project, based on proposed annexation, environmental, and access-related issues.

Subarea	2	3 ^	4a	4b	5	6	7a	7b	7c ^	8	9	10	Totals
Acreage	555	1,262	839	1,683	983	1,640	286	518	197	2,767	721	1,268	12,719
Current Units	39	35	48	553	22	381	253	27	19	726	500	221	2,824
Estimate Pop.	124	112	153	1,764	70	1,215	807	86	61	2,316	1,595	705	9,008
Recorded but vacant	8	42	53	58		20				36		4	221
Preliminary lots			482	194		7		914	55	952		14	2,618
Rezoned lots (no prelim)										539			539
Multi-family approved							72	44		59	32		207
Total Unit Increase	8	42	535	252		27	72	958	55	1,586	32	18	3,585
Population Increase	26	134	1,707	804		86	230	3,056	175	5,059	102	57	11,436
Proposed Use/Density	SF 0.5	SF 1	SF1.85	SF1.25	SF1.5	SF0.5	COM	SF1.85		SF1.5	MF4	SF 0.5	
Net Dev. Acreage*	27	919	146	97		36	86	12	73	151	4	76	
Potential Units	14	900	270	121		36		22	65	226	16	38	1,708
Potential Population	45	2,782	862	386		114		72	207	720	46	122	5,356
Total Build Out	195	3,117	2,245	2,914	70	1,415	1,037	3,214	443	8,095	1,744	884	25,373

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* **Maximum 500 units** in combination of 1I and 1J.

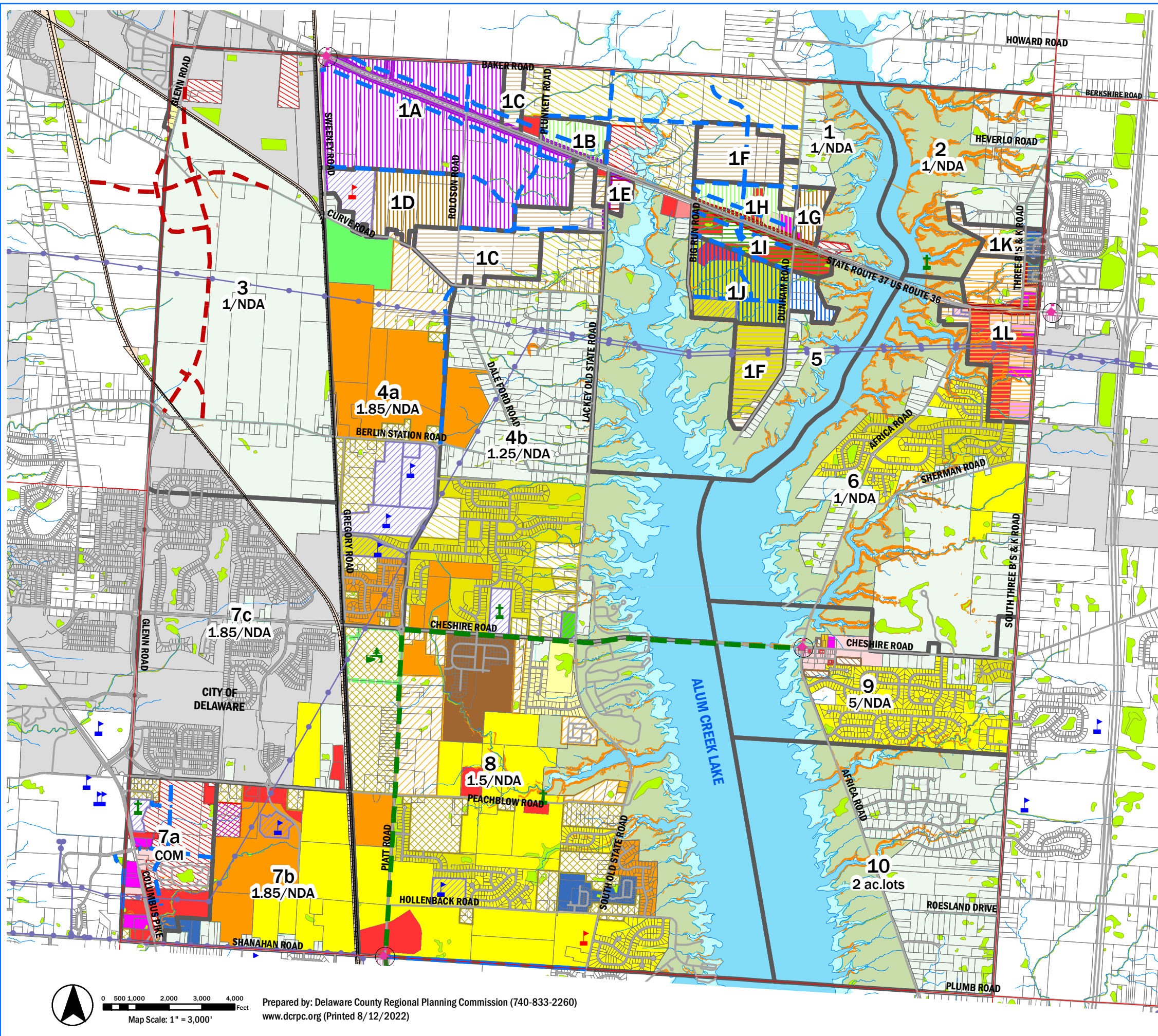
****Net Developable Acreage** was calculated by excluding NWI Wetlands, 100-Year Floodplains, powerline easements from AEP.

*****Single-Family densities** figured at 3.19 people per unit (Census); **Multi-Family densities** figured at 1.5 people per unit.

^**City utility agreement area**; area 7c includes a section of Evans Farm.

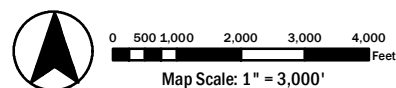
Berlin Township Comprehensive Land Use Plan

Draft 2022



- Cemeteries
- Existing Schools
- Future Schools
- Proposed Entrance Feature
- Township Boundaries
- Power Poles
- Power Lines
- Railroad
- Proposed Bikeway
- Proposed Road
- Proposed Glenn Parkway
- Road Centerlines
- Planning Subareas
- Property Lines
- Slope > 20%
- Rivers/Lakes
- Streams
- 100-Year Flood Plains
- Wetland (National Wetland Inventory)
- Public Owned Lands
- Township Park within this area
- Incorporated Areas
- Proposed Land Use 2022
 - Single Family at 1 unit/ac to 1 unit/2ac
 - Single Family at 1 unit/ac without centralized Sewer or Single Family up to 1.25 unit/ac NDA with Centralized Sewer
 - Single Family at 1.5 unit/ac NDA
 - Single Family at 1.85 unit/ac NDA
 - Historic Cheshire Village, 5 du/ac
 - Planned Industrial
 - Planned Commercial
 - Planned Commercial or Planned Industrial
 - Township Park
 - Professional, Research, Office, Commercial, Light Industrial
 - Overlay Commercial
 - Professional, Research, Office, Commercial
 - Professional, Research, Office, Commercial, Residential, or Mixed Use
 - Overlay Residential @ 4 units / NDA
 - Overlay Residential @ 10 units / NDA
 - Commercial or Residential at 10 units per acre
 - Professional, Research, Office or Residential Mixed Use
- Berlin Township Zoning
 - Farm Residential District (FR-1)
 - Low Density Residential District (R-2)
 - R-2 with PRD Overlay (R-2/PRD)
 - Multi-Type Residential District (R-3)
 - R-3 with PRD Overlay (R-3/PRD)
 - Multi-Type Residential District (R-4)
 - R-4 with PRD Overlay (R-4/PRD)
 - Planned Residential District (PRD)
 - Neighborhood Commercial District (NCD)
 - Transitional Planned Unit Development (TPUD)
 - Planned Office District (POD)
 - Planned Commercial and Office District (PCD)
 - Old Cheshire Planned Unit Development District (OCPUD)
 - OCPUD Overlay Applied
 - Industrial District (ID)
 - Planned Industrial District (PID)
 - Agricultural Conservation District (A-1)
 - Floodplain Regulatory District (FPRD)
 - Article 15 Berlin Commercial Overlay (BCO)
 - Article 19 Berlin Industrial Overlay (BIO)
 - US Land

"NDA" = Net Developable Acres



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