DELAWARE COUNTY, OHIO
Comprehensive Land Use Plan

Prepared by the
Delaware County
Regional Planning Commission

Amended/Effective March 12, 2019

THE COMPREHENSIVE PLAN OF BROWN TOWNSHIP 2019

5555 State Route 521
Kilbourne, Ohio 43032

Adopted by the Brown Township Trustees on July 10, 2001
Amended by the Brown Township Trustees on March 12, 2019

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Delaware County
Regional Planning Commission

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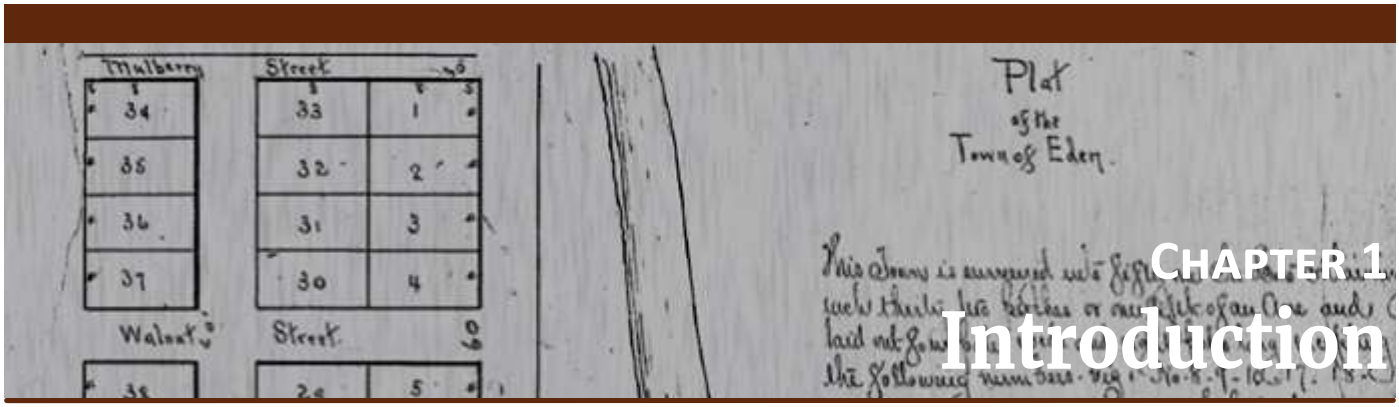


Chapter 1
Introduction

Beginnings

The history attaching to this subdivision of Delaware County really begins about 1804 or 1805, with the discovery of salt in the vicinity, although the first permanent settlement within the present boundaries of the township extends back no farther than 1817.

Originally, it [Brown Township] occupied the central portion of the County, and later, the north central portion. Just when Brown was erected into a separate and distinct township is among the lost arts. The record book of the County Commissioners' Court has been spirited away or destroyed, leaving a gap in the proceedings of the honorable court from 1822 to 1831.

When Delaware County was formed, one-half of the territory [Brown] was in Radnor, and one-half in Berkshire. It has changed hands frequently since the formation of the County, and somewhere between 1822 and 1831, probably 1826, Brown Township was created.

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

Salt Reservation and Thurstons

Among the attractions which brought the early settlers to the territory was the "Salt Lick," as it was called. When the U.S. Government sent its agents to survey the country, a salt lick was discovered in the northeast quarter of what is now Brown, from which the Indians procured this much-needed article.

Some years later, perhaps about 1804 or 1805, Dr. John Loofbourrow moved into what is now Berkshire Township from Virginia. When Dr. Loofbourrow learned from some friendly Indians where they obtained their salt, with his servant and a few of these Indians, he made a visit to the locality, which he found only about five miles to the north from his own settlement. He commenced the manufacturing of salt, and very soon [they] became noted salt merchants.

Its early settlers were mostly from New York and Virginia, the oldest, most refined and aristocratic sections of the American Union. The first permanent white settler in Brown Township was Daniel G. Thurston, in the spring of 1817. He moved into the township from the eastern part of Berlin, where he had settled in 1810. He was originally from Clinton County, New York. With his family, he left his home in the East. He located on the summit of the first little hill west of Alum Creek, on what is now known as the Delaware & Sunbury Turnpike Road.

After Mr. Thurston sold out to Loofbourrow, he moved into Brown Township. When his cabin was completed and his family located, Mr. Thurston entered into a copartnership with James Eaton and a man named Steven Gorham. These gentlemen formed the company, and were the contractors in the famous salt speculation, of which we have already spoken. These, with Daniel's brother Isaac Thurston, were the only settlers in the present limits of Brown Township.

To Daniel Thurston's son Joseph we are indebted for

much of the history of the township. The spring after his marriage, he erected a cabin on the one hundred acres of land he purchased at the sale of the "salt section." The first year he cleared ten acres of ground. This he planted in corn, which he fed to hogs, which he sold along with cattle.

New Economies

Emigrants came in rapidly, and soon the entire salt reservation was settled up. One of the first families to move in after those already mentioned was that of Benjamin McMasters, who came in about 1826 from New York through Franklin County. After purchasing 100 acres of the salt reservation and building a cabin upon it, he lived there until 1851, then started a warehouse and formed a business partnership in Ashley. He sold his place to his son Horace, who devoted much attention to fruit culture. His large and well-assorted orchards produce from one to two thousand bushels of apples annually, with other fruit in considerable quantity. He completed a cider and mill and press with a capacity of 150 barrels a day.

In 1832, a young man named Charles Neil, now better known as "Uncle Charley Neil," came in from Virginia. He carried on an ashery, and taught school for some ten years, when he was elected County Surveyor. This office was given to him by the people of Delaware County from 1842 to 1864 without any solicitation. In the latter year, he was elected to the office of County Auditor, which he held for two terms. During his second term as Auditor, he was elected Mayor of the city of Delaware by an overwhelming majority.

The patriotism of Brown is as lofty as any portion of Delaware County. Most of the early settlers were descended from Revolutionary stock, and in the war of 1812 and the Indian wars of the times, many of its citizens bore an honorable part.

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

Updating the Comprehensive Plan

The Brown Township Zoning Commission convened on June 7, 2018 for the purpose of beginning an update to its 2001 Brown Township Comprehensive Plan. The Zoning Commission is responsible (Ohio Revised Code 519.05) for the submission of a plan to the Township Trustees to achieve the purposes of land use regulation under zoning powers (ORC 519.02). At-large residents and landowners of the Township were encouraged to participate in the planning process.

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

1. Review changes in land use, population, utility services, roads, boundaries that have occurred since 2001, as well as the changes in economic, legislative, judicial, and regulatory conditions;
2. Review any existing policies and judge whether they are still representative of the community's values and visions of its future, and if those policies conform to current federal and state land use legislation and court decisions;
3. Review the goals and objectives for the growth in the ensuing 5 to 10 years;
4. Create a revised text and map for the recommended land use on a site-specific basis to guide future growth of the Township;
5. Recommend amendments to local zoning, and the adoption of development policies to assure that the Township will be what it has envisioned when it is all built out.

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

CHAPTER 2
Population

Regional Population

According to the U.S. Census Bureau, Delaware County's population grew from 109,989 in April of 2000 to 174,214 in April, 2010 (an increase of 58%). Since 2010, the County has posted an increase of 17%, to an estimate by the Delaware County Regional Planning Commission staff (DCRPC) of 204,500 in August of 2017.

Brown Township's population was determined to be 1,290 by the Census Bureau in 2000. This increased 10% by 2010 to a total of 1,416 residents. DCRPC estimates that number to currently be 1,508 in 2018, an increase of about 6.5%. DCRPC updates these figures annually, using a formula that uses building permits as its chief factor in determining growth. The formula takes into account the average number of residents per unit, a vacancy rate, and a typical period of time between building permit and home completion. The following table and graph represent the building permits since 2005 in the Township.

Figure 1. Brown Township New Residential Building Permits 2005-2017

Yr	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	4	3	2	3	5	2	3	4	3	6	3	6	3

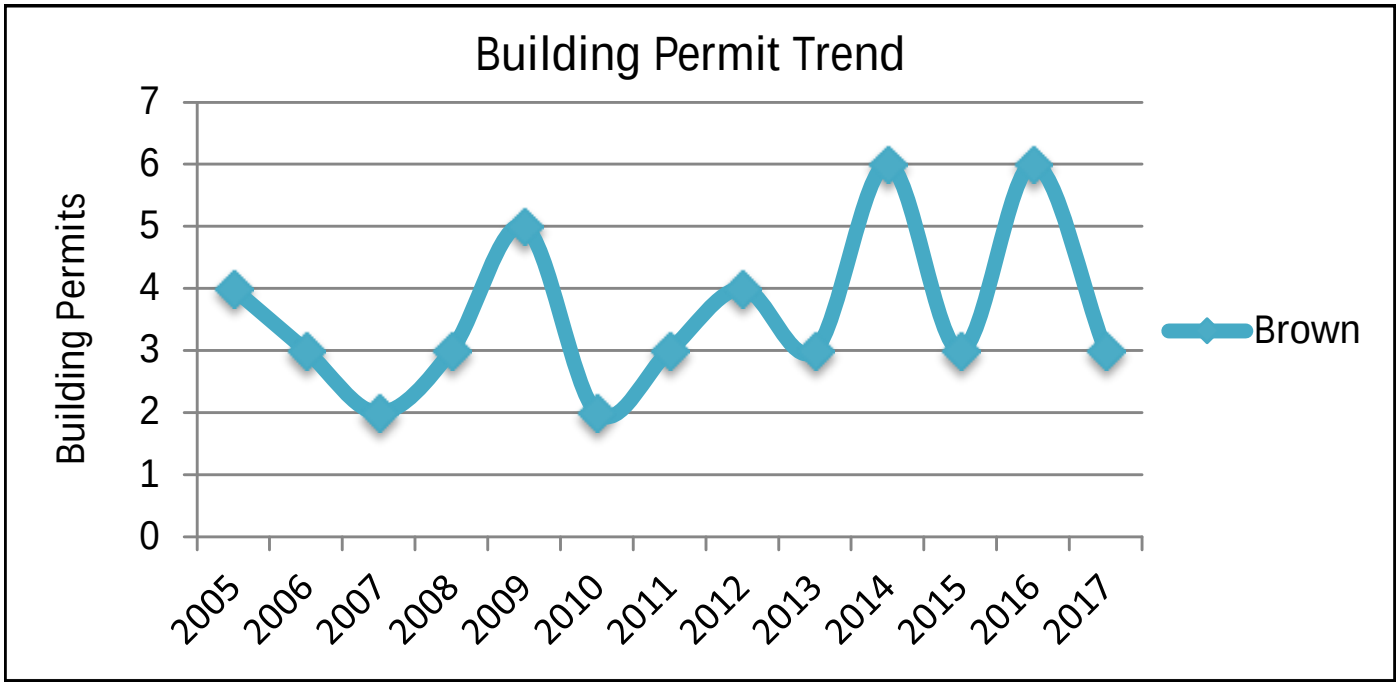


Figure 2. Historical Township Building Permits

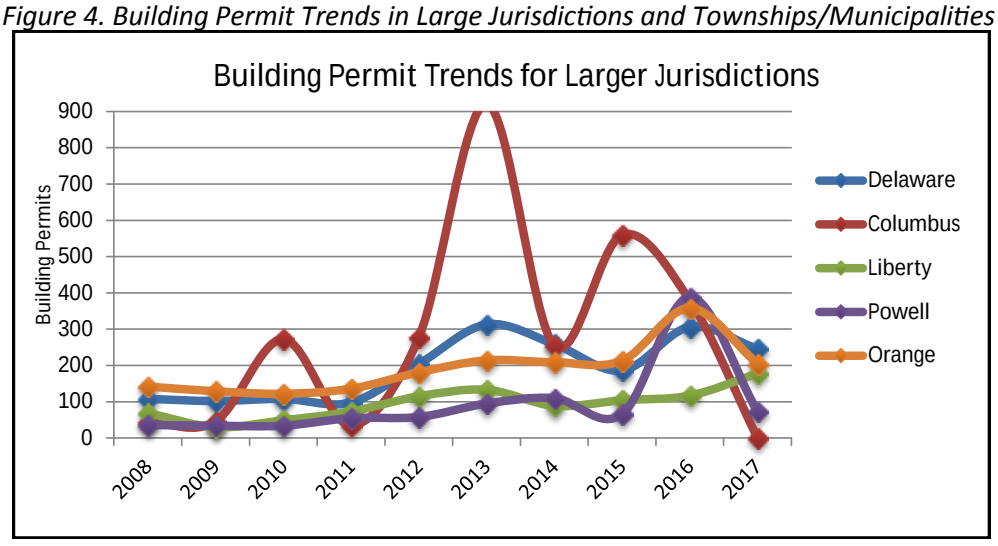
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Berkshire	17	46	23	25	26	38	45	91	55	84
Berlin	30	20	35	30	26	19	28	24	50	73
Brown	3	5	2	3	4	3	6	3	6	3
Concord	67	40	64	75	83	67	32	39	31	70
Delaware	3	1	4	9	6	7	1	7	4	2
Genoa	72	69	82	83	116	110	39	66	109	77
Harlem	17	5	5	13	9	21	13	22	29	44
Kingston	1	4	3	2	1	9	5	7	10	9
Liberty	69	30	49	73	115	133	89	104	117	178
Marlboro	0	1	0	0	0	0	2	0	0	1
Orange	142	129	122	136	181	214	209	213	358	205
Oxford	1	0	0	1	1	1	1	1	1	0
Porter	3	1	5	6	5	13	10	13	11	13
Radnor	3	0	0	1	3	6	6	2	5	10
Scioto	10	4	3	8	7	8	9	9	21	22
Thompson	0	0	2	2	2	1	0	2	1	2
Trenton	3	2	3	3	3	4	4	5	9	5
Troy	3	1	2	2	5	1	3	8	7	2
Total Twps	**444**	**358**	**404**	**472**	**593**	**655**	**502**	**616**	**824**	**800**

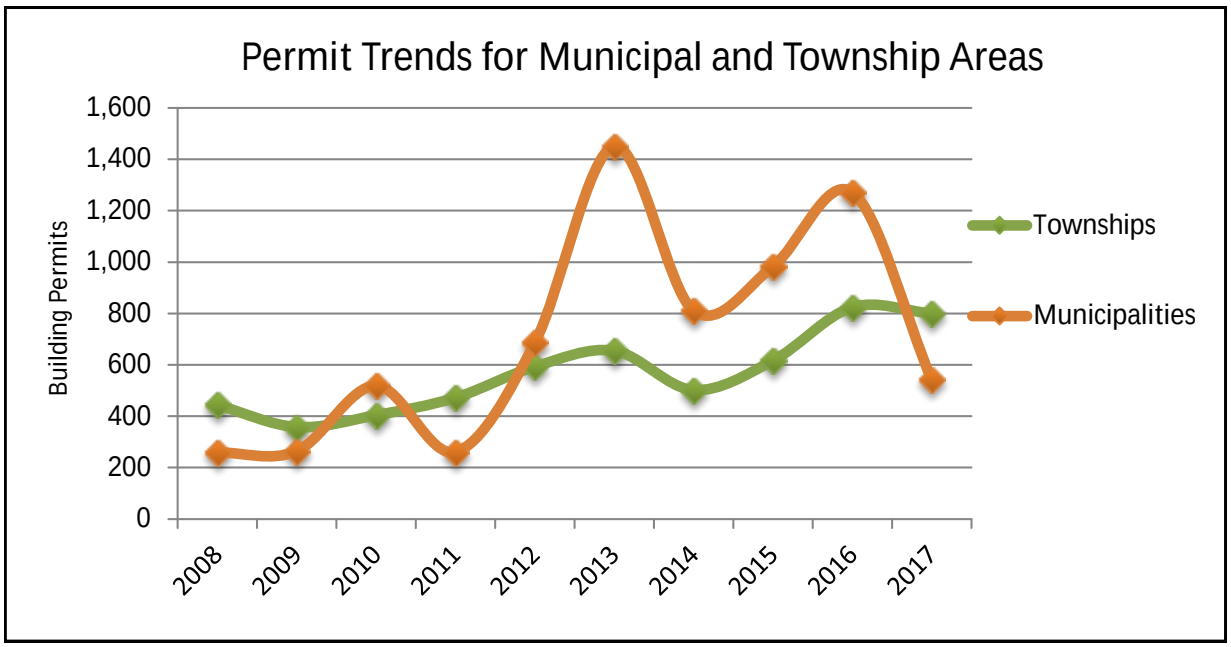
Figure 3. Historical Municipality Building Permits

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Delaware	108	102	108	98	204	313	259	186	306	246
Galena	3	4	1	7	11	4	6	7	5	10
Sunbury	31	37	34	19	34	73	36	36	31	95
Shawnee Hills	0	3	2	3	1	10	10	5	11	3
Powell	36	34	34	55	58	95	110	66	388	73
Ashley	1	0	0	0	1	1	0	0	0	1
Ostrander	6	0	7	8	10	23	12	12	7	31
Dublin*	2	1	0	0	0	0	2	0	9	18
Westerville*	29	37	60	36	89	10	121	111	136	65
Columbus*	43	46	273	35	277	921	255	560	379	0
Total Municipalities	**259**	**264**	**519**	**261**	**685**	**1,450**	**811**	**983**	**1,272**	**542**

**Portions within Delaware County*

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





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

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

	2000 US CENSUS	2010 US CENSUS	2016	2017	2020*	2025*	2030*	Maximum Build-out**
Berkshire	1,946	2,428	3,131	3,296	3,770	4,654	5,479	20,936
Berlin	3,313	6,496	7,235	7,419	7,795	8,547	9,249	23,537
Brown	1,290	1,416	1,481	1,496	1,528	1,595	1,657	17,645
Concord	4,088	9,294	10,647	10,749	11,267	12,144	12,963	40,049
Delaware	1,559	1,964	2,075	2,084	2,123	2,194	2,259	15,014
Genoa	11,293	23,090	25,421	25,718	26,496	28,027	28,454	28,454
Harlem	3,762	3,953	4,195	4,272	4,428	4,749	5,050	29,069
Kingston	1,603	2,156	2,277	2,299	2,339	2,431	2,516	26,994
Liberty	9,182	14,581	16,532	16,894	17,890	19,763	21,511	29,900
Marlboro	227	281	290	291	295	302	308	5,499
Orange	12,464	23,762	27,795	28,703	30,507	34,374	37,038	37,038
Oxford	854	987	1,011	1,013	1,023	1,040	1,057	14,291
Porter	1,696	1,923	2,085	2,116	2,200	2,361	2,512	25,000
Radnor	1,335	1,540	1,605	1,622	1,665	1,746	1,821	20,404
Scioto	2,122	2,350	2,491	2,542	2,628	2,820	2,999	25,588
Thompson	558	684	716	720	733	756	778	13,771
Trenton	2,137	2,190	2,258	2,277	2,309	2,384	2,454	11,684
Troy	2,021	2,115	2,175	2,189	2,225	2,297	2,365	13,737
Total Twps	**61,450**	**101,210**	**113,420**	**115,700**	**121,221**	**132,184**	**140,470**	

Figure 6. 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.*
***Source: DCRPC Demographic Web Page, 8/2017*

Demographic Profiles

The 2000 and 2010 U.S. Censuses show certain other profiles of Brown Township's population. The picture is of an affluent, educated, mostly white population, two-thirds of whom are 18 or older. Less than two percent are unemployed. Less than five percent are below the poverty level.

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

U.S. Census Population Category	2000 Township Population	2010 Township Population
Total Township population	1,290 persons	1,416 persons
White	1,252	1,360
African American	12	8
American Indian	1	4
Asian	8	3
Other	8	1
Two or More	9	18
	5-yr estimates, 2016	
Over 18 population	1,318 (70.1%)	
Male population	1,106 (58.8%)	
Female population	775 (41.2%)	
Median age	40.1	
Family households	88.9%	
Nonfamily households	11.1%	
Average household size	3.02 persons	
Average family size	3.15	

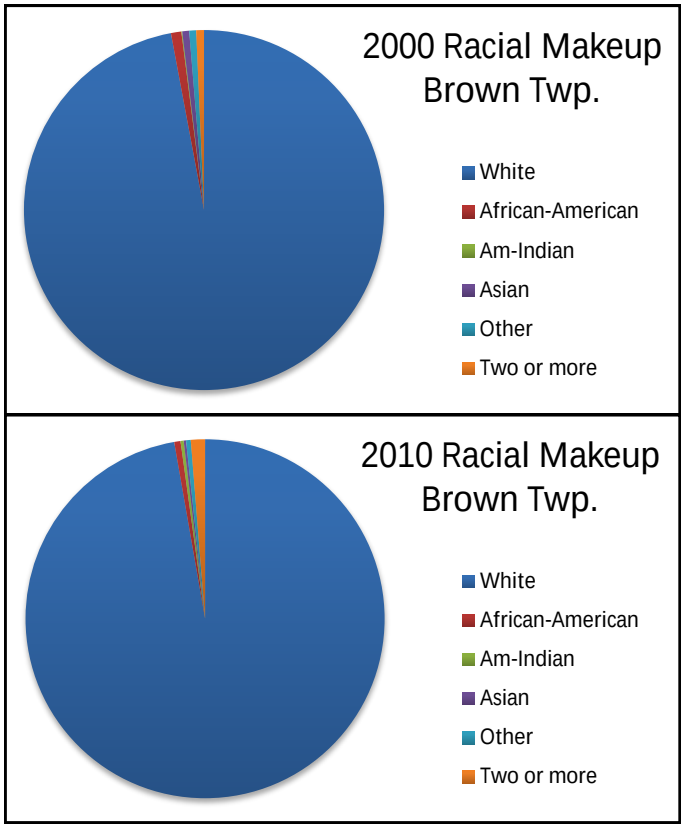


Figure 8. U.S. Census Demographic Profile, Brown Twp

U.S. Census 2016 Category	Brown Township	All Delaware Co Townships	All Delaware Co. Cities and Villages	All Delaware County
Education: Percent H.S. grad or higher	93.4%	96.0%	95.1%	96.6%
Education: Percent Bachelor's degree or higher	28.4%	42.5%	45.6%	52.5%
Civilian labor force employed	840	57,647	39,201	96,527
% Civilian labor force employed	60.6%	65.0%	69.4%	67.8%
Civilian labor force unemployed	16	1,540	1,178	2,718
% Civilian labor force unemployed	1.2%	1.7%	2.6%	1.9%
Median Household income	$83,214	$89,981	$89,940	$94,234
Median family income	$84,107	$102,231	$103,494	$111,582
Per capita income	$37,415	$39,691	$38,746	$42,985
% Families below poverty level	4.2%	2.7%	6.0%	3.2%
% Individuals below poverty level	4.5%	4.7%	7.6%	4.9%

Source: U.S. Census Bureau 2012-2016 ACS 5-Year Estimates

Brown Township Growth Summary

The location of Brown Township next to the City of Delaware offers many amenities that attract higher density development. The Township could be facing possible future annexations, as growth extends along S.R. 521, S.R. 42, and U.S. 36/S.R. 37.

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Chapter 3
Development and Change

Brown Township Development Activity

Platting activity for new subdivisions is an indicator of future growth, as it precedes building permits. Historically, subdivisions in Brown Township have been typically 2-acre to 5-acre lots utilizing on-site septic systems. Figure 9 illustrates the amount of subdivision activity in Brown Township over the past 50 years, by number of lots and acreage platted during five-year periods.

The DCRPC approves platting for the unincorporated areas of the County. The County development trends over the past 15 years demonstrate that growth in the southern tier is different from growth at the interchange, but that is starting to change.

Figure 9. Recorded Subdivisions, by date recorded, in Brown Township (since 1990)

Name	Type	Acres	SF Lots	Recorded
Fisher #2	Residential	4.25	2	3/23/1992
Alum Creek Woods	Residential	15.3	6	7/6/1994
Nabucco Subdivision	Residential	8.57	4	6/10/1996
Cabernet Subdivision	Residential	8.5	4	9/16/1996
Dicke Subdivision	Residential	8.42	2	3/8/1999
Jumper	Residential	7.18	2	10/19/1999
Hogback Bay Subdivision	Residential	16.256	4	7/14/2016

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.

Figure 10. No Plat Lot Splits 2006-2017

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Splits	4	6	1	3	0	0	0	0	1	0	5	2
New lots	1	4	1	3	0	0	0	0	0	0	2	2

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

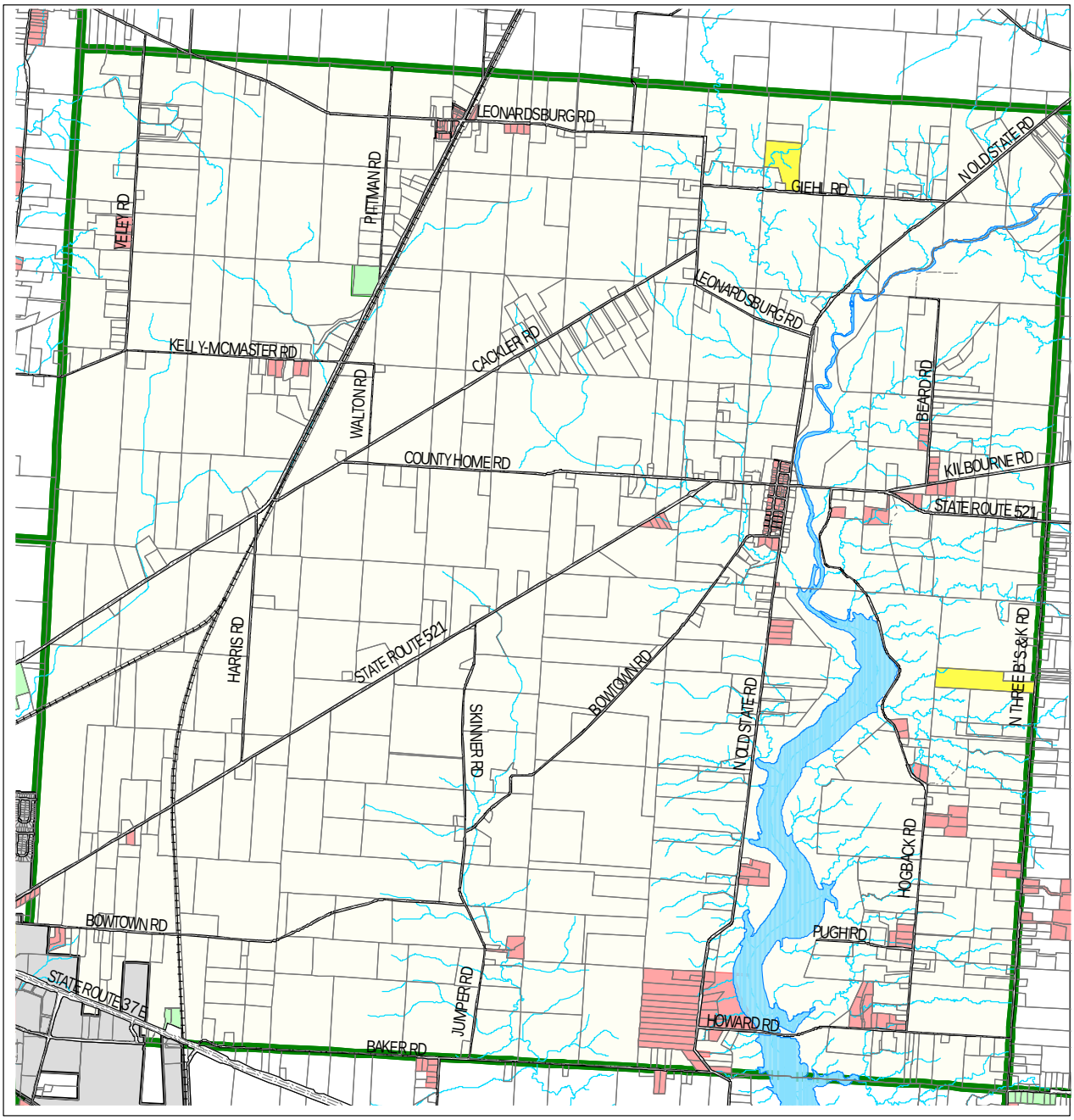
Another indicator of development and change in the Township is rezoning activity. Figure 11 indicates the change in acreage as a result of rezoning requests approved by the Brown Township Zoning Commission since 2000. In terms of land, more than 85 acres of Brown Township experienced a change of zoning from 2000-2017.

Figure 11. Zoning Reviews Since 2000

Zoning Reviews	From	To	Acres	Date
Pat Paykoff & Jeff Cutler	FR-1	I	5	5/25/2000
Pat Paykoff & Jeff Cutler	FR-1	PC	5	2/28/2002
All Seasons Self Storage	C	PC	5	6/30/2005
Edward Roop, et al.	FR-1	PUD	70.8	5/25/2006

Regional Development Activity

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



Development Pattern

Brown Township,
Delaware County, Ohio

N
W E
S

0 1000 2000 3000 4000 5000 Feet

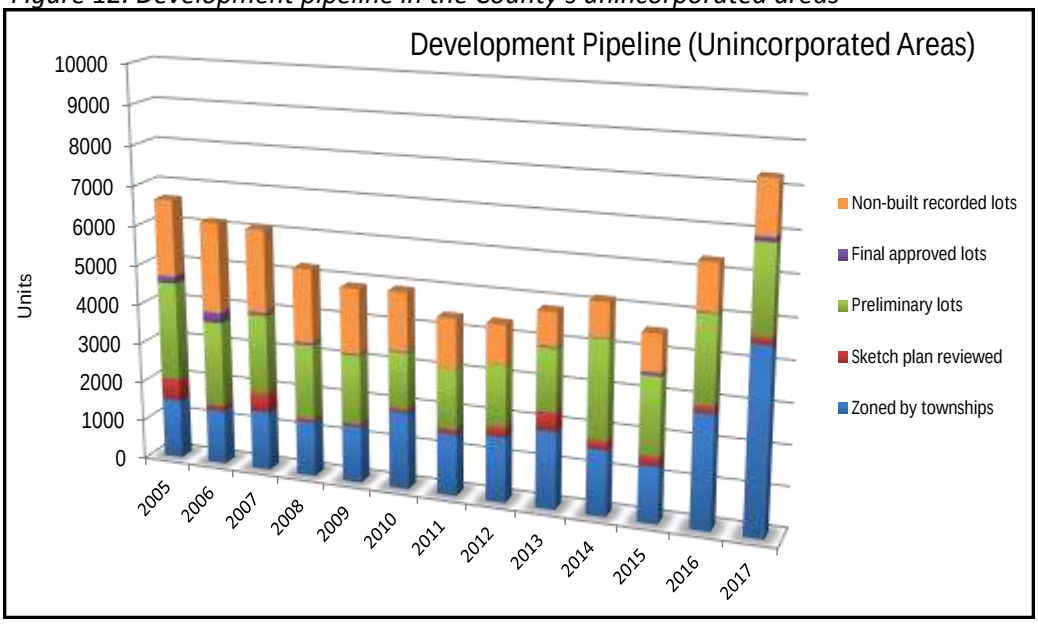
Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

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

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

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

Figure 12. Development pipeline in the County's unincorporated areas



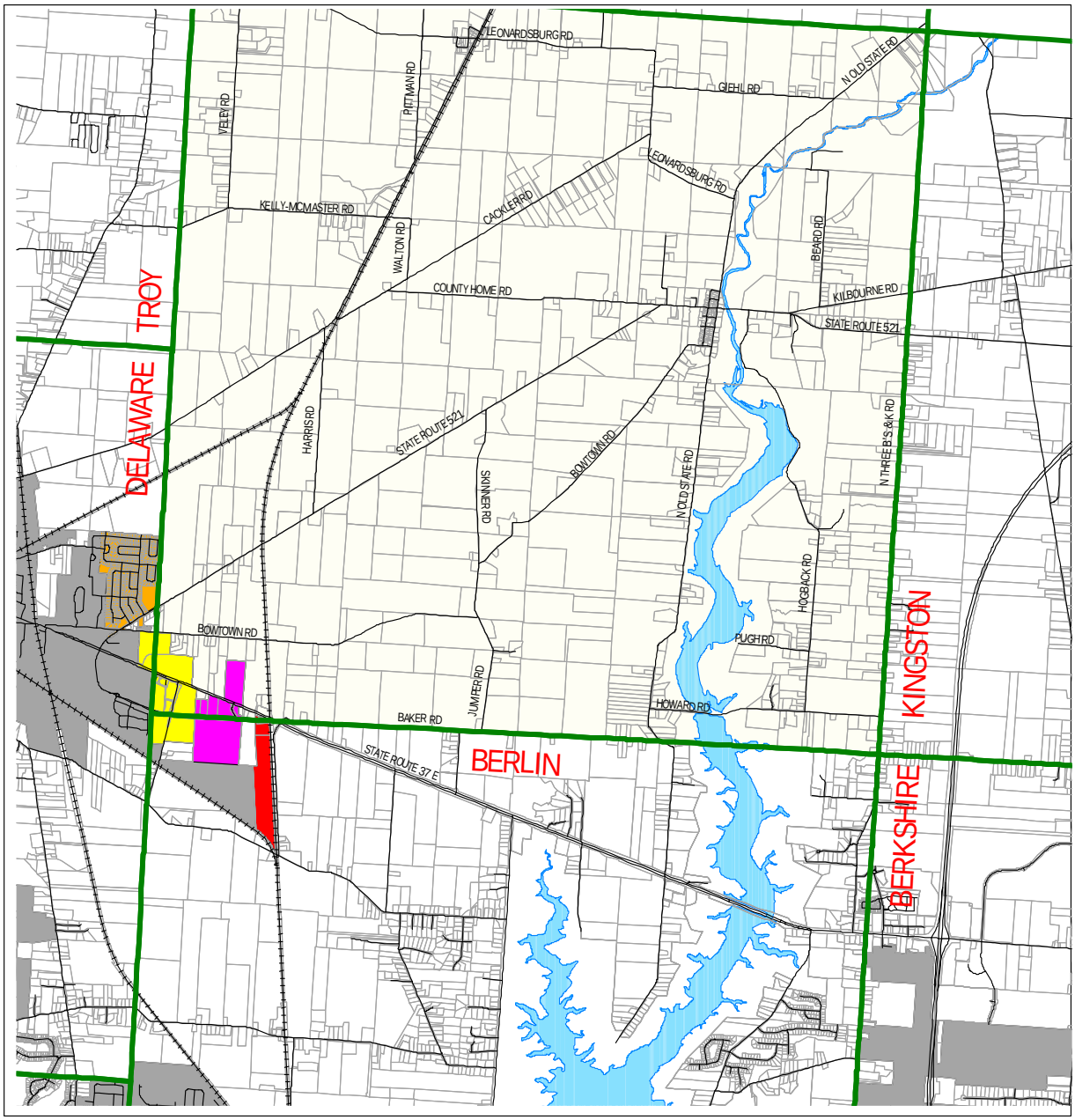
Development Process	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Zoning approved	1,386	1,423	1,941	1,549	1,626	1,925	1,636	1,401	2,816	4,558
Sketch Plan reviewed	71	64	76	119	247	464	220	228	176	171
Preliminary approved	1,889	1,736	1,417	1,488	1,523	1,563	2,454	1,934	2,161	2,153
Final Plat approved	63	38	30	6	7	36	19	83	29	124
Non-built, recorded lots	1,835	1,619	1,452	1,238	979	825	849	907	1,138	1,299
Total in Pipeline	**5,244**	**4,880**	**5,528**	**4,400**	**4,382**	**4,813**	**5,178**	**4,553**	**6,320**	**8305**

Figure 13. Development pipeline in Brown Township

Development Process	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Zoning approved	0	0	0	0	0	0	0	0	0	0
Sketch Plan reviewed	0	8	8	0	0	0	0	4	4	8
Preliminary approved	0	0	0	0	0	0	0	0	0	0
Final Plat approved	0	0	0	0	1	1	1	1	1	0
Non-built, recorded lots	4	4	4	4	4	4	4	4	5	5
Total in Pipeline	**4**	**12**	**12**	**4**	**5**	**5**	**5**	**9**	**10**	**13**

Source for Figures 12 and 13: DCRPC, 2018

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.



Annexation

Brown Township,
Delaware County, Ohio

N
W E
S

0 2000 4000 6000 8000 Feet

Township Boundary
Road Centerlines
Railroad
Property Lines
Rivers / Lakes

Annexation by Year
2004 (62.93 Acres)
1996 (115.10 Acres)
1994 (155.55 Acres)
1991 (141.55 Acres)
Other Incorporated Area

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

CHAPTER 4
Existing Land Use

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

Figure 14. Brown Township Land Use 4/2018

LAND USE	ACREAGE	PERCENTAGE
Residential	2,087.09	12.70%
Commercial	120.31	0.73%
Industrial	-	-
Institution	334.22	2.03%
Agricultural	11,364.43	69.17%
Residential Vacant Land	765.67	4.66%
Other Uses Vacant Land	0.36	0.002%
Parks	954.87	5.81%
Golf Course	-	-
ROW	407	2.48%
River/Lakes/Ponds	395.71	2.41%
Total	**16,429.66**	**100%**

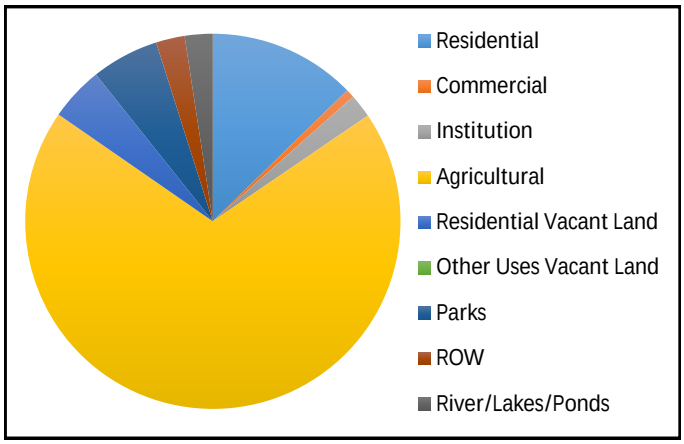


Figure 15. Delaware Land Use 11/2017

LAND USE	ACREAGE	PERCENTAGE
Residential	-	-
Commercial	53.70	39.33%
Industrial	-	-
Institution	-	-
Agricultural	-	-
Residential Vacant Land	0.46	0.34%
Other Uses Vacant Land	66.28	48.54%
Parks	-	-
Golf Course	-	-
ROW	14.94	10.91%
River/Lakes/Ponds	1.21	0.89%
Total	**136.54**	**100%**

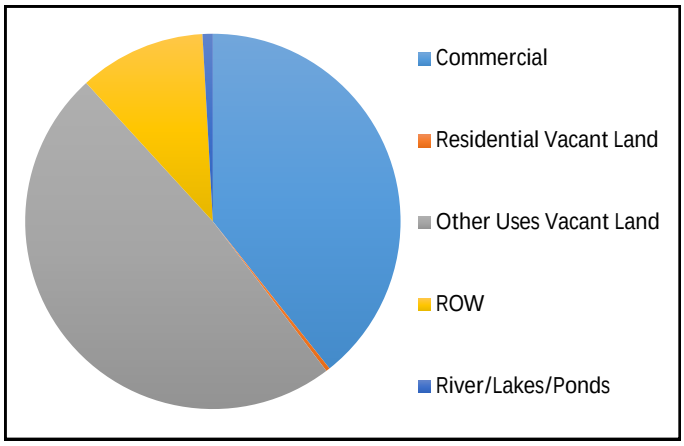
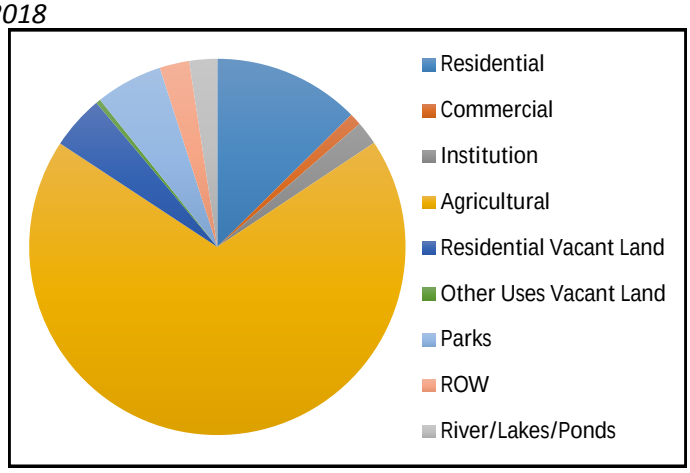


Figure 16. ALL Existing Land Use (Brown and Delaware) 4/2018

LAND USE	ACREAGE	PERCENTAGE
Residential	2,087.09	12.60%
Commercial	174.01	1.05%
Industrial	-	-
Institution	334.22	2.02%
Agricultural	11,364.43	68.60%
Residential Vacant Land	766.13	4.62%
Other Uses Vacant Land	66.64	0.40%
Parks	954.87	5.76%
Golf Course	-	-
ROW	421.89	2.55%
River/Lakes/Ponds	396.92	2.40%
Total	**16,566.20**	**100%**



Observations on Brown Township 2019 Land Use:

Agricultural is still the largest land use, with 69% of total land area, but is slowly giving way to new development. Expect this number to continue to shrink. In the map on the following page, "Agricultural Vacant Land" is distinguished from "Agricultural" according to the Auditor's codes as being agricultural land with no buildings or improvements.

Commercial acreage is 0.7%; 4% is typical of a mature community.

Residential is a significant land use — 12.7% of the acreage.

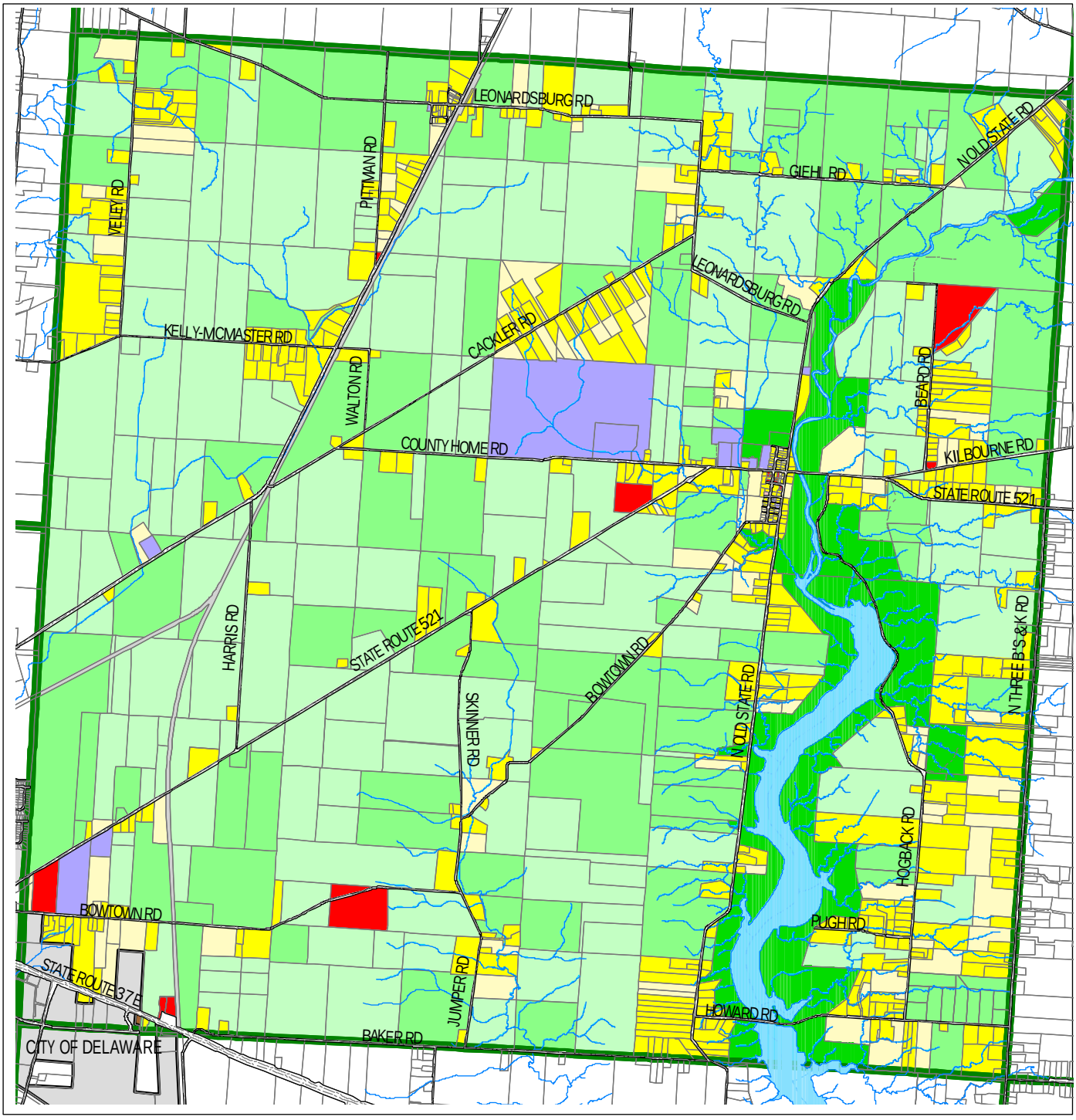
46% of the Township is undeveloped (41% agricultural, 5% residential, 0.002% commercial).

Road right-of-way is 2.5% of the Township. As roads are widened and new roads are built this number may increase typically to 10-15% at full build-out.

2.4% of the land area is in rivers and water. Since water proximity increases land value, the streams flowing toward the Alum Creek Reservoir are a major, permanent benefit to the Township.

Parks comprise 5.8% of the Township.

The incorporated area of Delaware (137 acres) represent 0.8% of the entire Township.



Existing Land Use

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Sources: Delaware County Auditor's GIS Office (10/03/2018)

- Township Boundary
- Road Right of Way
- Rivers / Lakes
- Streams / Drainage Courses
- Property Lines
- Incorporated Areas

Existing Land Use 4/2017

- Single Family
- Multi Family
- Residential Vacant Land
- Agricultural
- Agricultural Vacant
- Commercial
- Commercial Vacant
- Industrial
- Industrial Vacant
- Institution
- Park
- Golf Courses

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Chapter 5
Natural Resources and Conservation

Brown Township's principal natural resources are the Alum Creek, Reservoir, State Park, and their connecting creeks. Brown Township also has floodplains, wetlands, fertile soils, woods, and abundant wildlife. These resources should be conserved as much as possible while development continues.

Topography

Brown Township has relatively mild differences in elevations and slopes. The elevation map indicates a 110-foot difference in elevation from the highest point of 990 feet above mean sea level north of Kelly-McMaster and Cackler Roads to a low of 880 feet mean sea level at the low water elevation southeast of Kilbourne. (See map)

Slopes Greater than 20%

The Township set a goal to preserve ravines and slopes greater than 20% for open space when the Township develops. Generally, slopes greater than 20% follow Alum Creek and Reservoir, its tributary streams, Big Run, Sugar Run, and the railroad. (See map)

Floodplains, bodies of water

Alum Creek Reservoir is a significant natural resource area; it is the dominant geographic feature in Brown Township. Its principal function is a drinking water reservoir for the City of Columbus. Where lands possess ravines or floodplains that flow directly to the Hoover, and no centralized sewer is available, the Township may wish to use even lower densities to preserve water quality, especially in rural areas where some houses still rely on well water.

Most of the floodplains in Brown Township relate to Big Run and Alum Creek and Reservoir. 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 Department, 50 Channing Street, Delaware Ohio (740-368-5850). (See map)

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

- **Water Resources - Natural flood and erosion control:** flood storage and conveyance; reduce flood velocities; reduce peak flows; reduce sedimentation.
- **Water Quality Maintenance:** filter nutrients and impurities from runoff; process organic wastes; moderate temperature fluctuations.
- **Groundwater Recharge:** reduce frequency and duration of low surface flows.
- **Biological Resources:** rich, alluvial soils promote vegetative growth; maintain bio diversity, integrity of ecosystems.
- **Fish and Wildlife habitats:** provide breeding and feeding grounds; create and enhance waterfowl habitat; protect habitats for rare and endangered

species.

- **Societal Resources:** harvest of wild and cultivated products; enhance agricultural lands; provide sites for aqua culture; restore and enhance forest lands.
- **Recreation:** provide areas for passive and active uses; provide open space; provide aesthetic pleasure.
- **Scientific Study/Outdoor Education:** contain cultural resources (historic and archeological sites); environmental studies.

The Delaware County FEMA floodplain maps were revised in 2009, with one hundred year floodplain elevations rising in some areas.

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

Wetlands

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

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

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

Prime Agricultural Soils

The Prime Agriculture Soils map shows the location of soils suited for high yields in Brown Township. Agriculture is still an important land use in Brown Township, although the land value for future development may exceed the short-term value for continued agricultural use. Creative zoning and development techniques may be able to save some agricultural land as open space. (See map)

Soil Suitability for Septic Systems

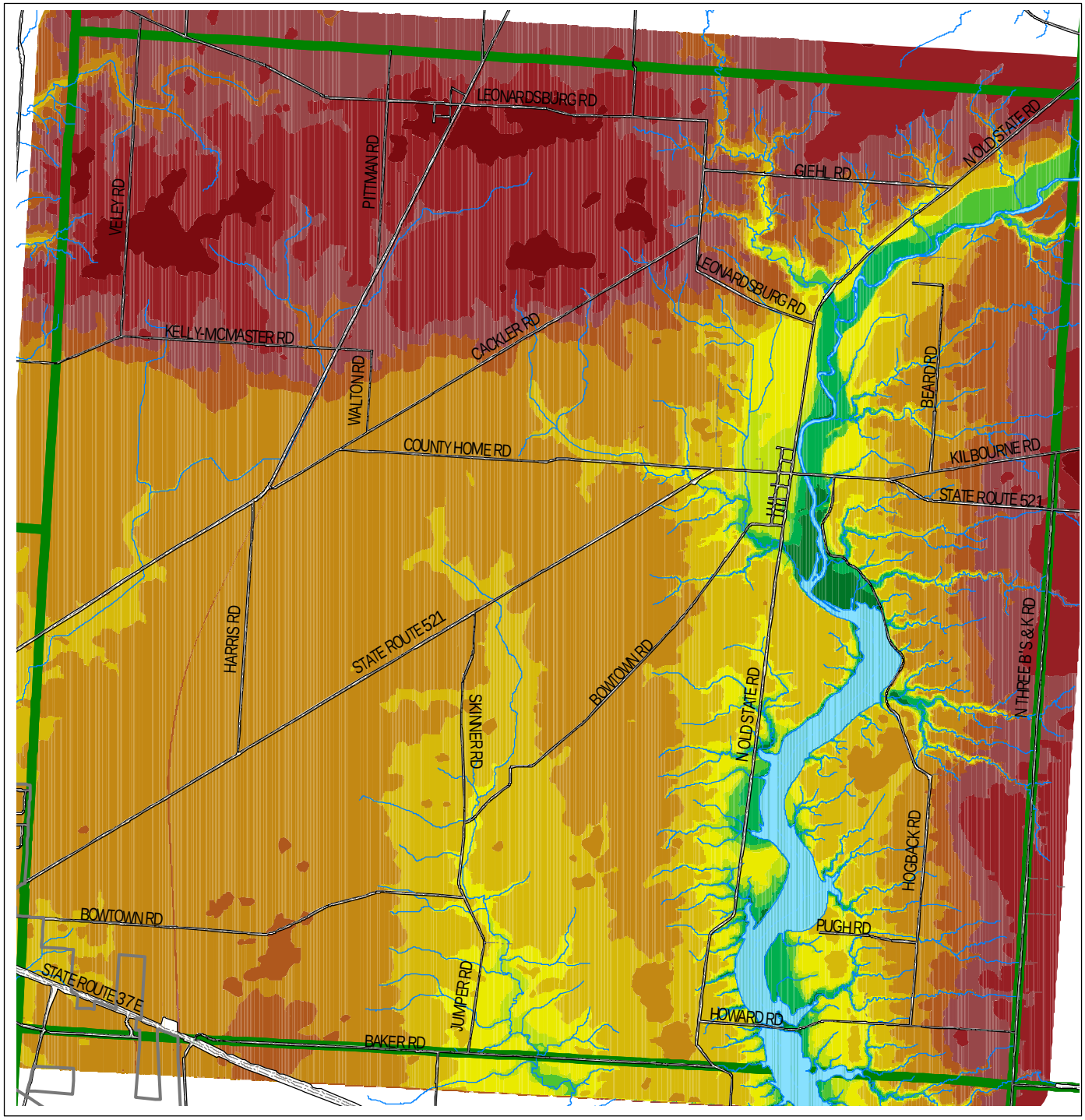
Since sanitary sewer service is not available to the Township, it is useful to evaluate the soil capability for septic systems. Land with very poor suitability for septic systems should be served by centralized sanitary sewer or alternative sewage disposal systems. (See map)

Critical Resources

The combined Critical Resources map displays generalized floodplains, water, wetlands, slopes, and historic and archeological sites. Since it is a goal to preserve the natural resources of the Township, this map should be used as an evaluation tool when land is developed. (See map)

Development or Harvesting of Natural Resources

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



Elevation

Brown Township, Delaware County, Ohio

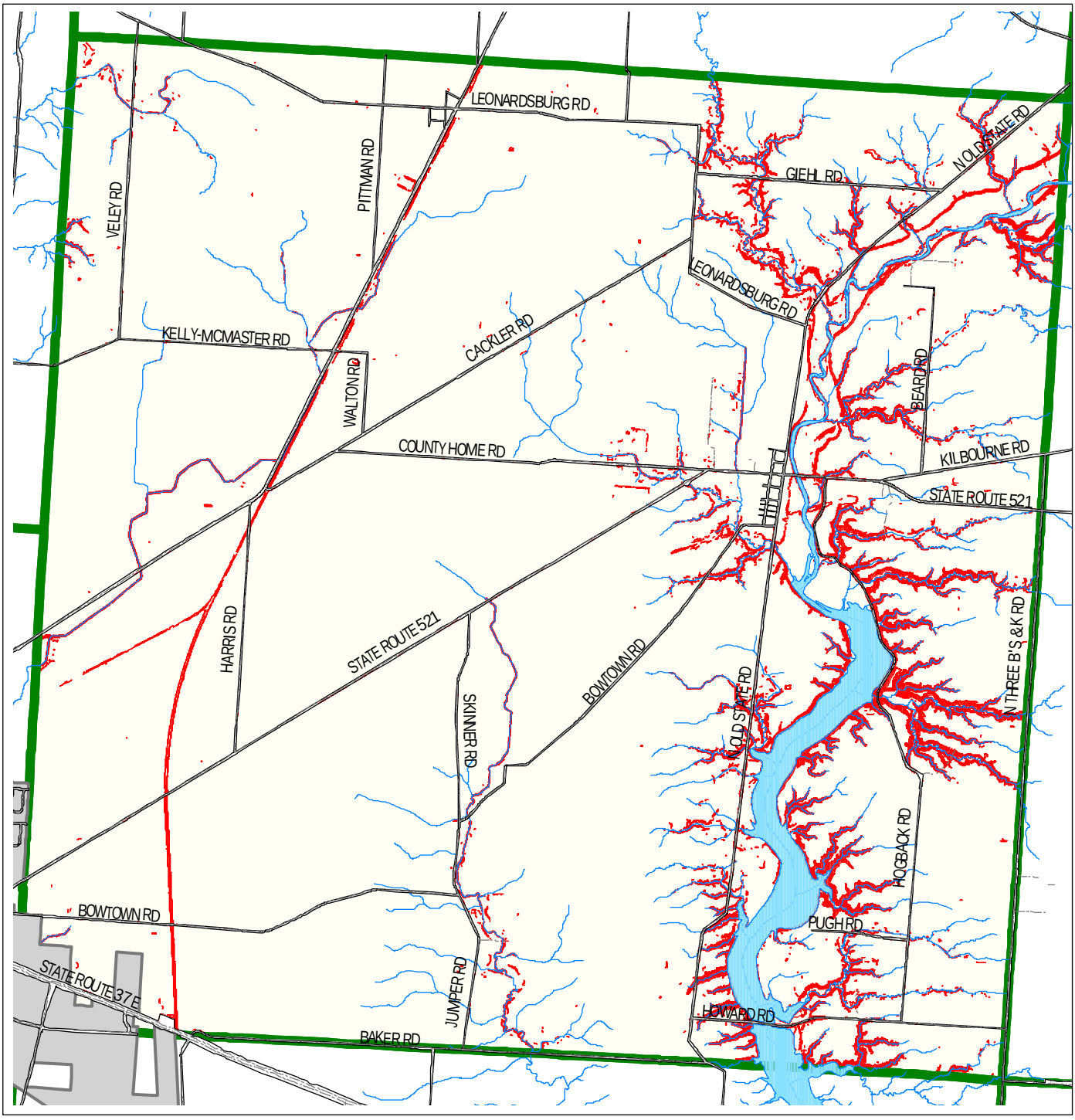
0 1000 2000 3000 4000 5000 Feet

N
W E
S

Township Boundary
Incorporated Areas
Road Right of Way
Rivers / Lakes
Streams / Drainage Courses

Digital Elevation (10 feet)
880 - 890 ft
890 - 900 ft
900 - 910 ft
910 - 920 ft
920 - 930 ft
930 - 940 ft
940 - 950 ft
950 - 960 ft
960 - 970 ft
970 - 980 ft
980 - 990 ft

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Source: Delaware County Auditor's GIS Office (10/03/2018)



Steep Slopes

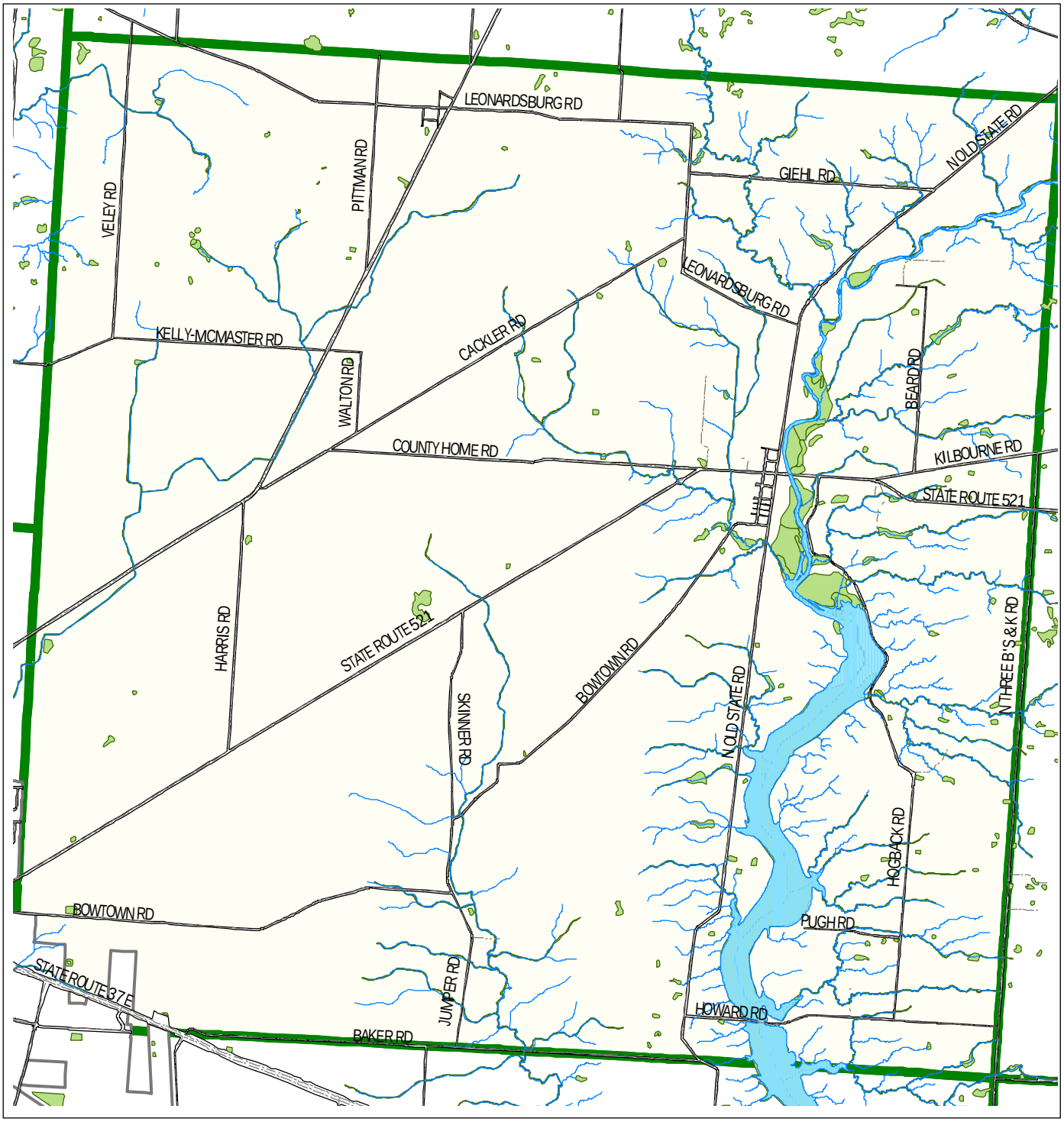
Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

Road Right of Way
Incorporated Areas
Rivers / Lakes
Streams / Drainage Courses
Township Boundary
Slope > 20%

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)



Wetlands

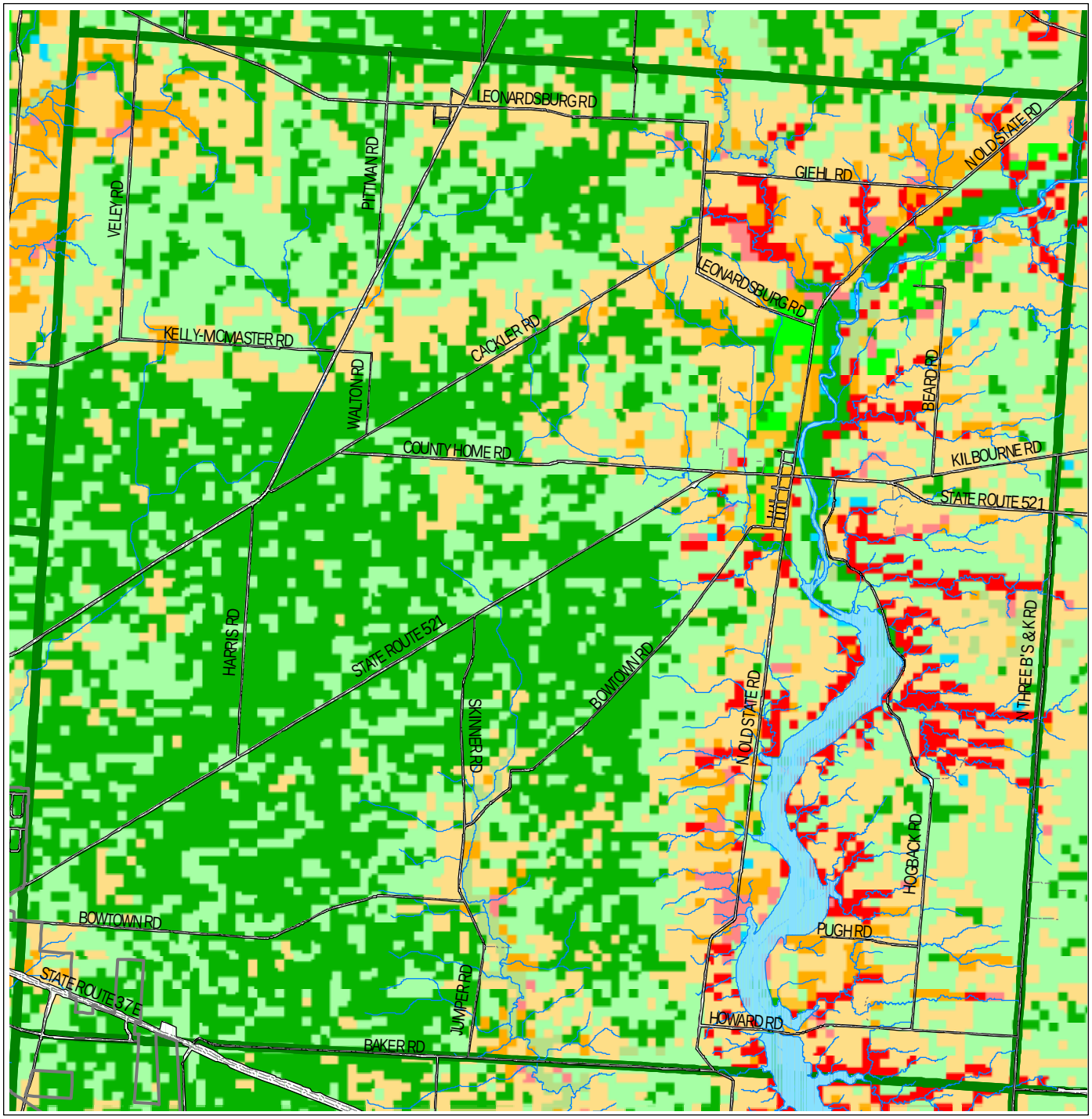
Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

- Rivers / Lakes
- Streams / Drainage Courses
- Wetland (National Wetland Inventory)
- Road Right of Way
- Incorporated Areas
- Township Boundary

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Source: National Wetland Inventory (NWI) (10/03/2018)



Prime Agricultural Soils

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

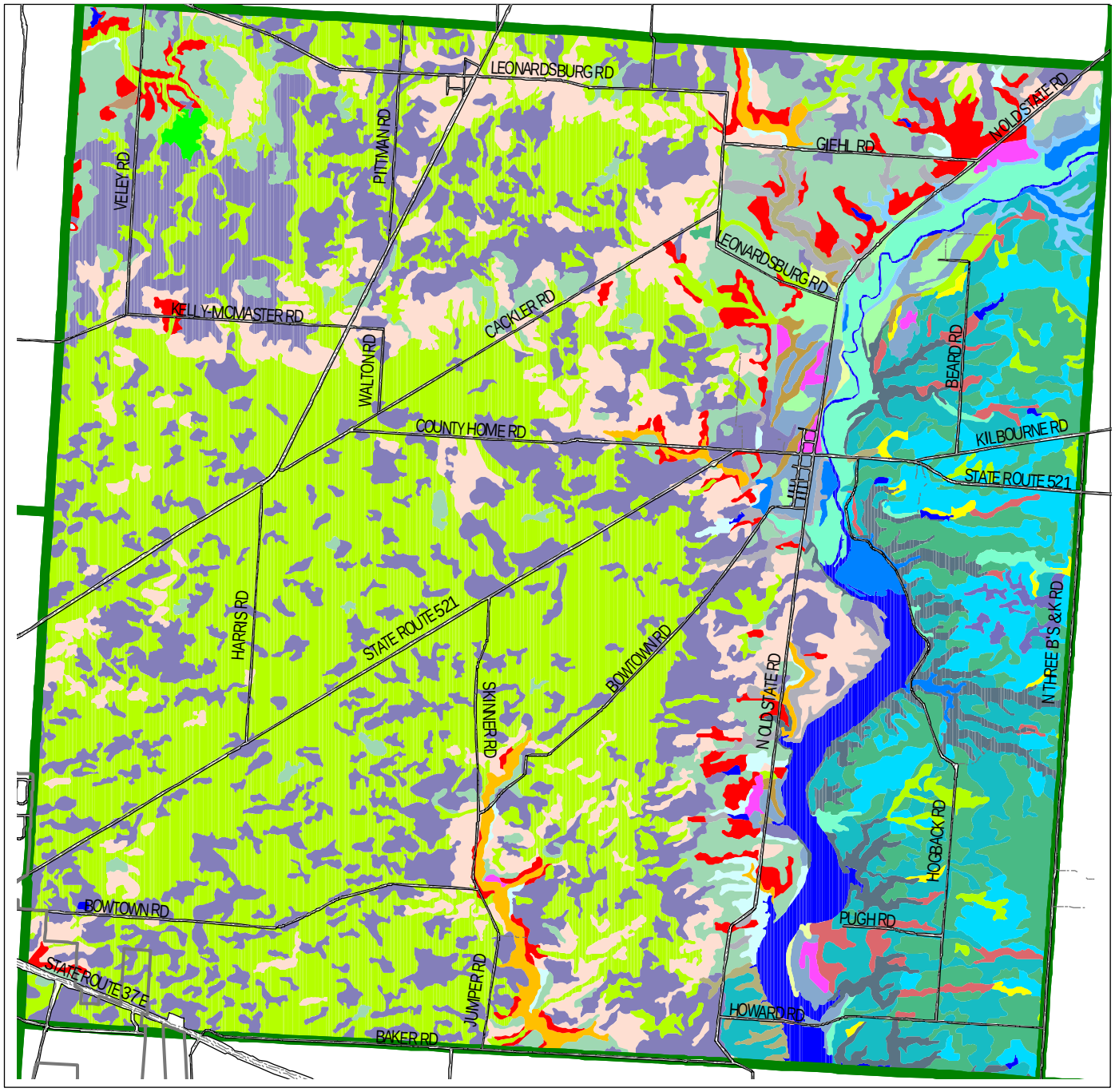
N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260), Source: OCAP (10/03/2018)

- Township Boundary
- Incorporated Areas
- Road Right of Way
- Rivers / Lakes
- Streams / Drainage Courses

Prime Farmland

- High (Y=120-130)
- High (Y=115)
- Moderate High (Y=80-115)
- Moderate High (Y=85-110)
- Moderate High (Y=95-110)
- Moderate High (Y=90-95)
- Moderate (Y=65-95)
- Low (Y=0-85)
- Not Rated / Data Not Available
- Water



Soil Types

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

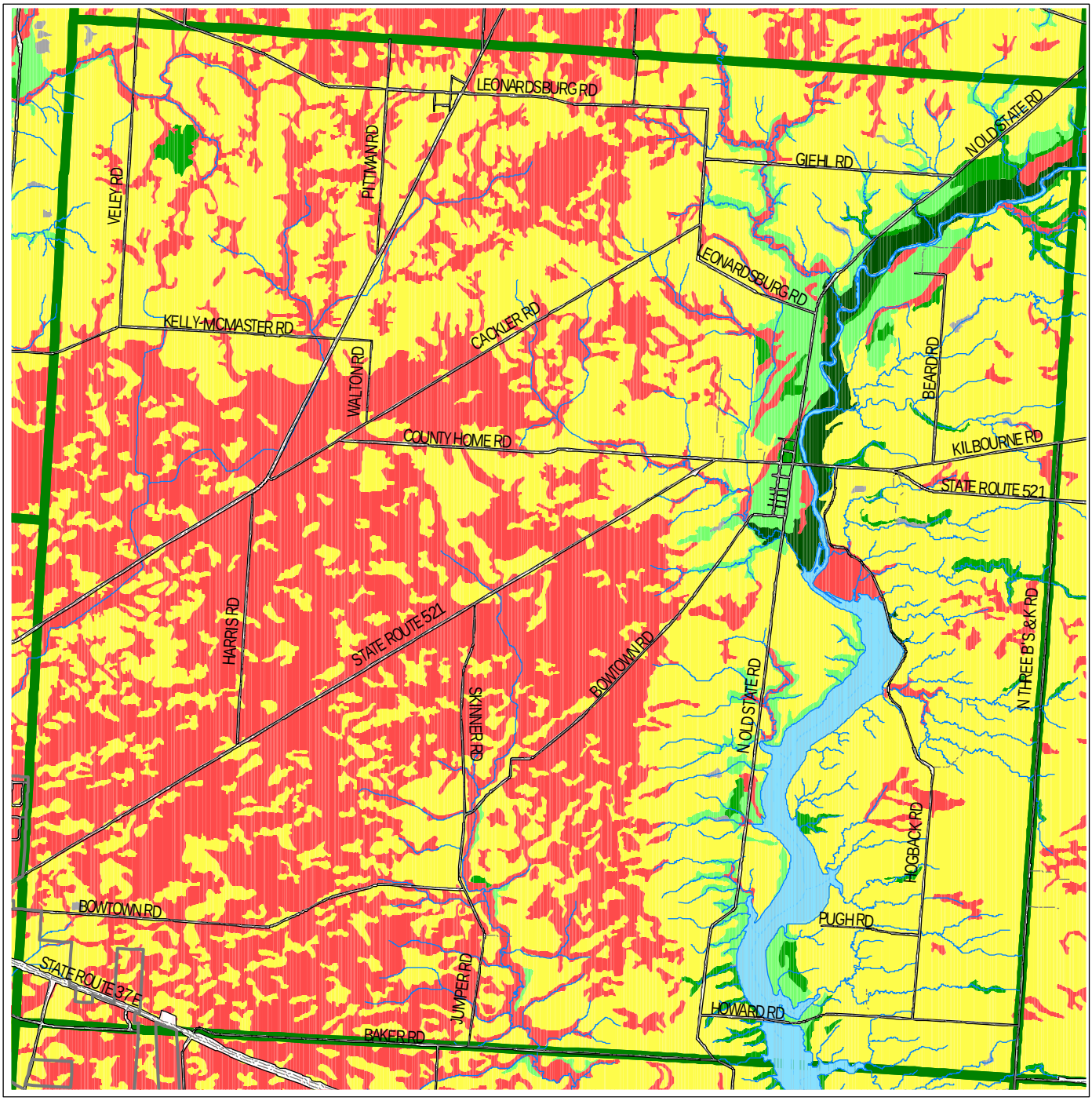
N W E S

Township Boundary
Incorporated Areas
Road Right of Way

Soil

AmD2
AmE
AmF
BeA
BeB
BoA
BoB
CaB
CaC2
CnA
GaC2
GbA
GbB
GwB
GwC2
GzC3
HeF
JmA
LbF
LoA
LsA
LyD2
LyE2
MfA
MoB
PwA
SkA
SoA
Uc
W

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Source: Delaware County Auditor's Office DALIS project (10/03/2018)



Soil Suitability for On-Site Sewage Treatment

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

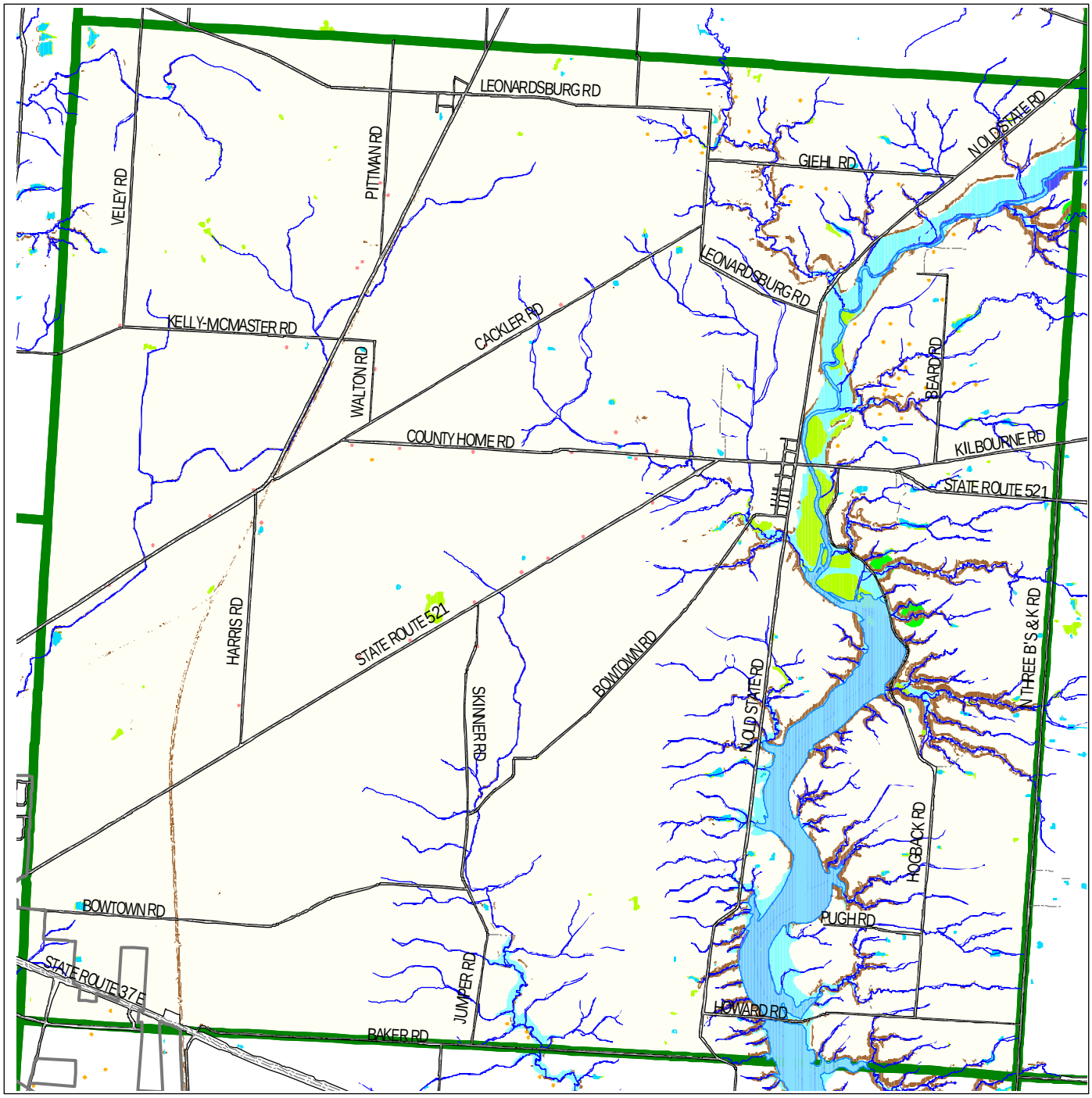
N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

- Incorporated Areas
- Road Right of Way
- Rivers / Lakes
- Streams / Drainage Courses
- Township Boundary

Soil Suitability for On-Site Sewage Treatment

- Suited for Traditional Leach Lines Systems or Mound Systems
- Suited for Mound Systems
- Suited for Mound Systems, May be Subject to Flooding
- Not Suited for Soil-based Treatment, May be Suited for Irrigation
- Not Suited for Soil-based Treatment (Hydric Soils)
- Urbanized Area / Other Soils



Critical Resources

Brown Township, Delaware County, Ohio

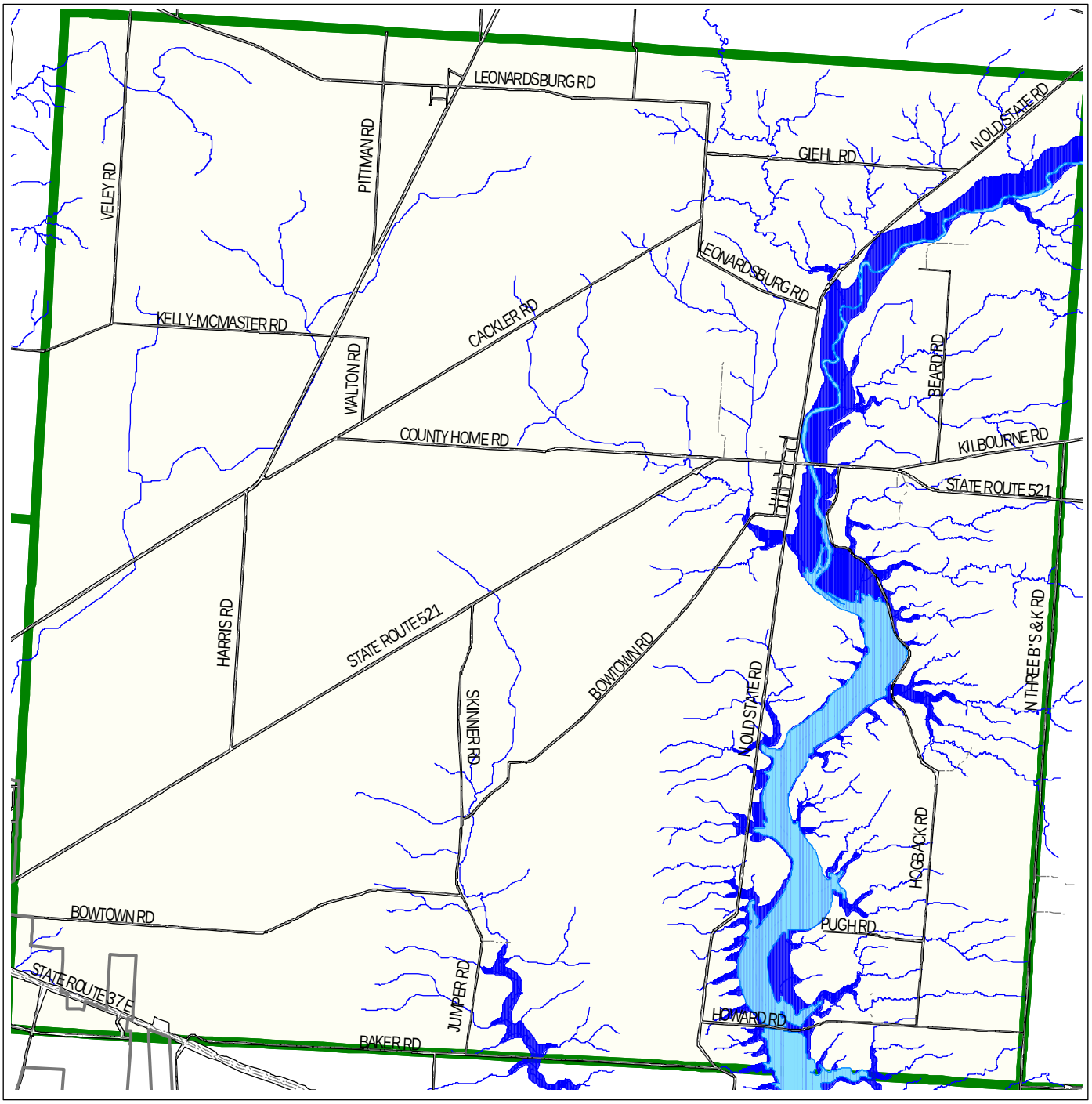
0 1000 2000 3000 4000 5000 Feet

N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

Township Boundary
Incorporated Areas
Road Right of Way
Rivers / Lakes

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



Floodplains

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

- Incorporated Areas
- Road Right of Way
- Rivers / Lakes
- Floodway
- 100-Year Floodplains
- 500-Year Floodplains
- Township Boundary

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Source: Delaware County Auditor's GIS Office (10/03/2018)

Chapter 6
Housing

General

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

Nearly all of the Township is zoned Farm Residential 1 (FR-1), which permits single-family residences on a minimum lot size of 2 acres with 225 feet of frontage on a public road. Flag lots with 60 feet of frontage are not permitted in the FR-1 district, unless by Common Access Driveway (CAD). No residential land is currently served by centralized sanitary sewer. Minimum square footage for a single-family home in FR-1 is 1,200 square feet.

Landowners eventually served by 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.

Existing housing stock

A house-to-house windshield was conducted in March 2000, finding that 89% of the housing stock at that time was either new/well maintained or in need of normal repair. It is assumed that all structures since that point are in comparable shape.

Housing in the Township is all single-family. This has been largely due to the lack of sanitary sewers and other services that multi-family housing demand.

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: Environmental Protection Agency). Delaware County calculates one-bedroom facilities at 60% per unit versus that of a single-family home. However, non-institutional uses are calculated on the same sanitary use as a single-family home. If services become available along the 36/37 corridor, there may be interest in this type of development.

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.

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

Housing Policies

Brown Township has established goals of maintaining a mostly single-family residential housing mix due to its lack of sanitary sewer and the Township's desire to maintain a sense of rural character. Brown Township's share of the Delaware County housing starts is likely to remain small. The Township should continually evaluate its housing mix as new developments are proposed.

Improved utilities in the Township would allow a mix of development densities that adds to the fiscal health of the Township while supporting rural character. Brown Township must also evaluate its housing mix in light of all state and federal housing laws, and binding court decisions.

Recent residential development in Berkshire Township

CHAPTER 7
General Economic Conditions

Brown Township Economy

The few businesses in the Township are located off U.S. 42, U.S. 36, and in downtown Kilbourne. The following table was collected from the Auditor's parcel information.

Figure 17. Businesses in Brown Township

Type	Name	Auditor Category
Education	Delaware Area Career Center - North Campus	Commercial (Other)
Farm	Longview Farms B & B	Commercial (Other)
Private Recreation	Liebert Corporation Conservation Club	Commercial (Other)
Park	Hogback Ridge Preserve	Exempt
Storage	All Seasons Self-Storage	Mini-warehouse
Education	Ventures Academy School	Exempt
Utility	Consolidated Electric	Commercial (Office)

Brown Township has the potential for economic development on 36/37. Access management (limiting left turn movements and combining curb cuts) is important for safe traffic flow. As noted in the Land Use statistics section of this plan, less than 1% of the Township land is currently developed for commercial or non-residential use. Non-residential growth shifts the tax burden for schools and other community services away from residents.

Since 2000, there have been two rezoning projects to Planned Commercial and Office District (PC) totaling 10 acres: a self-storage warehouse and a development plan amendment to another self-storage project.

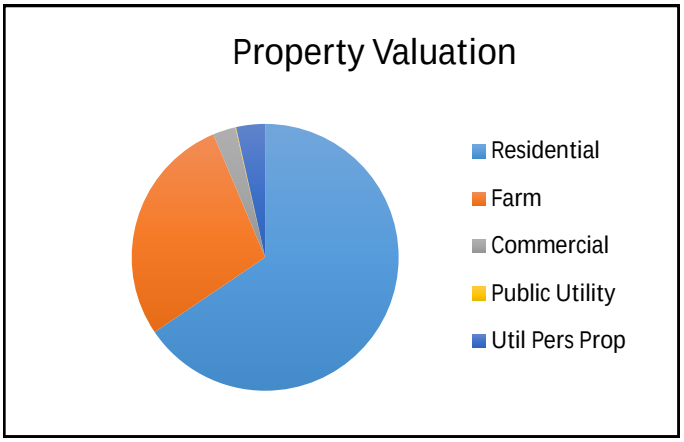
Rates of Taxation and Revenues

Property Valuation

The County Auditor tracks real estate and personal property values in the County. Because the unincorporated areas in the County are funded with property taxes, it is important to note such valuation. As of Tax Year 2016, Brown Township's residential property was valued at $36,707,600, fourth to last ahead of Oxford ($19 million), Thompson ($13 million), and Marlboro ($6 million). The City of Delaware's residential value within areas that were annexed from the Township is $520 million. The Township has seen steady growth in its residential land value. Brown's Farm value is $15,756,820.

The Township's commercial, industrial, and utility uses (including personal property) are valued in twelfth place among the County's townships at $3,551,420. For comparison, the value of the same land uses in Orange Township is $243,644,690. Radnor's is thirteenth at $2.7 million. Delaware's non-residential land is valued at $203 million.

Adding farm uses, utilities, and personal tangible value, the total valuation for Brown Township is $56,015,840. This represents 1.1% of the county/township total $4,956,693,050.

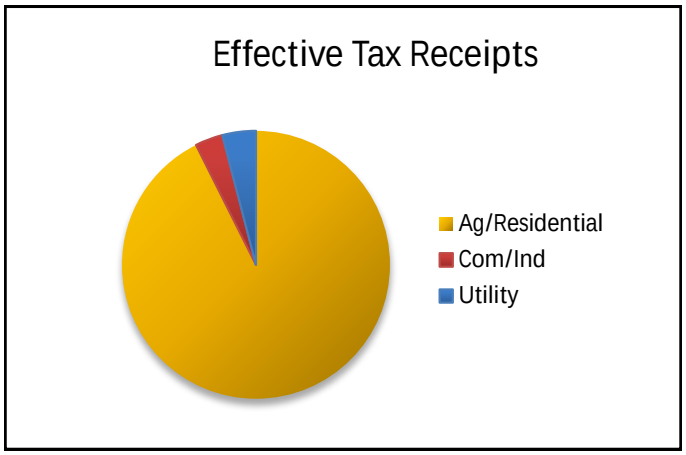


Residential	$36,707,600	65.5%
Farm	$15,756,820	28.1%
Industrial	-	-
Commercial	$1,539,940	2.7%
Public Utility	$48,100	0.09%
Util Pers Prop	$1,963,380	3.5%
Total	$56,015,840	

Effective Tax Receipts

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

The revenue is divided among two categories in Brown Township: General ($124,722) and Roads ($81,189).



Agricultural/ Residential	Commercial/ Industrial	Utility	Total
$205,911	$7,417	$8,991	$222,319
92.6%	3.3%	4.0%	

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.

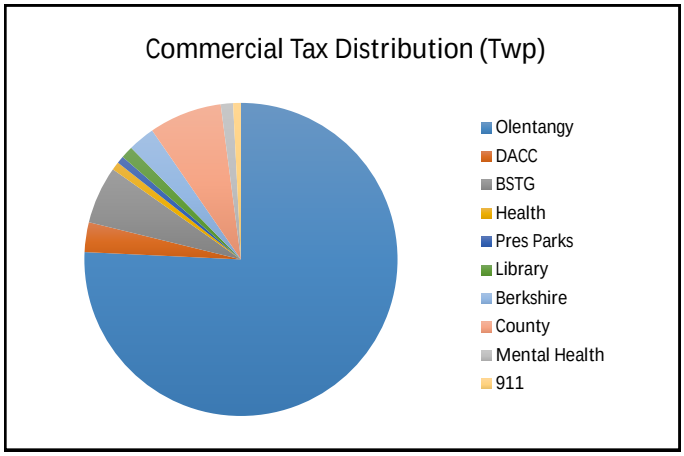
The Township's **2017 effective** tax rates include the following, based on the Auditor's online property report function:

	School	DACC	BST&G	Health	Pres Parks	Library	Twp.	Corp.	County	Mental Health	911
Township, Buckeye Valley	35	3.2	5.23	0.547	0.525	1	12	N/A	8.09	0.876	0.557
Delaware City Schools	83.55	3.2	-	0.646	0.577	1	0.7	2.7	8.09	0.962	0.611

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.

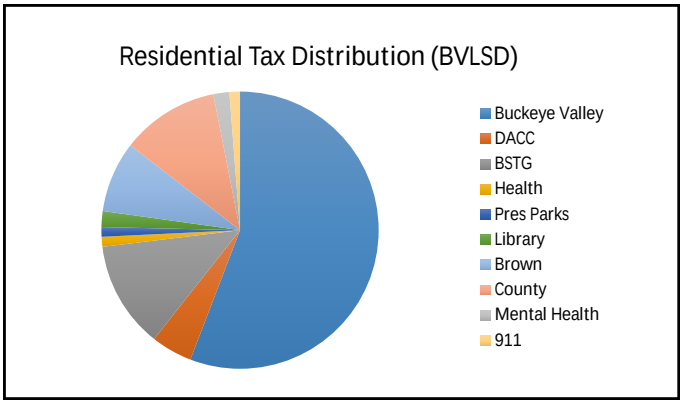
The following figures are taken from a typical retail commercial property along the 36/37 corridor in the Olentangy Local School district. The total market value is $1,293,800.



Olentangy	$26,045.65
DACC	$1,056.73
BST&G Fire	$2,040.80
Health	$292.44
Preservation Parks	$261.45
Library	$436.25
Berkshire Township	$362.26
Twp. Except for Villages	$588.68
County	$2,587.66
Mental Health	$435.52
911	$276.83
TOTAL	**$34,384.27**

Residential

The following figures are taken from a sample property within the unincorporated portion of Brown Township in the Buckeye Valley district. The total market value of this example is $269,000.



Buckeye Valley	$2,176.93
DACC	$187.22
Tri-Township Fire	$485.20
Health	$45.32
Preservation Parks	$43.46
Library	$72.45
Brown Township	$91.14
Twp. Except for Villages	$231.39
County	$445.34
Mental Health	$72.60
911	$47.97
TOTAL	**$3,899.02**

School District	Ag/Res Effective	Com/Ind Effective
Brown Twp., Buckeye Valley	46.1371	50.4209
City of Delaware	70.2487	75.2243

**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.*

Economic Development in Delaware County

In the last 30 years, as water and sewer systems branched out into the townships, economic development has followed.

Brown Township Future Economic Development

Brown Township should plan for future economic development by:

- Working with the City of Delaware to investigate a Joint Economic Development District (JEDD) with a commercial base utilizing city sewer service;
- Avoiding zoning property before there is an apparent market need to avoid oversupply;

- Considering possible future local commercial growth for Kilbourne, capturing through traffic along S.R. 521.

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 can be taken on machinery, equipment, furniture, fixtures, and inventory that is new or first-used in the State of Ohio. A three-member negotiation team reviews the project and negotiates a package specific to each project.

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

Port Authority

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

New Community Authority

The "New Community Authority" (NCA) is a tool defined by 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;

Commercial development at I-71 in Berkshire Township

- 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 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 District

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

Simon Tanger Mall in Berkshire Township

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.

Commercial development along 36/37 in Berkshire Township

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 *The New Practitioner's Guide to Fiscal Impact Analysis*, (Center for Urban Policy Research, Rutgers University, 1985), and the *Development Assessment Handbook*, (Urban Land Institute, 1994).

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

Agricultural Component of the Delaware County Economy

Agriculture is still the largest land use (by acreage) in Delaware County. Agricultural acreage has been converting to other land uses since the end of World War II.

Delaware County — Total Acres	283,585
Delaware Co. Agricultural Acres (2012-Ohio Dept. Dev.)	140,902
Delaware County Agricultural Acres Percentage	49.7%
Ohio Agricultural Acres (2016)	14,000,000
Delaware County Percentage of Ohio Agricultural Acres	1.01%

Census of Agriculture, Change in Land in Farms in Delaware County

Agriculture (farming, as reported by the Delaware County Farm Bureau) represented 755 farms in 2012. According to 2016 American Community Survey data, these employees (most are family farmers) represent about 0.5% of the total Delaware County labor force (this industry category also included forestry, fishing and hunting, and mining).

Total 2012 cash receipts for all agricultural production in Delaware County was $119,266,000. This represented 3.08% of the total sales/receipts for the County ($3,877,719,000). It may be observed that in 2012, nearly 50% of the land was in agriculture, an estimated 0.5% of the labor force was in agriculture, and approximately 3% of the total cash receipts for productions of goods and services was in agriculture. Clearly, agriculture is still an important land use in Delaware County, but it is becoming a smaller portion of the local economy.

Figure 18. Delaware County Agricultural Comparison: 2007 & 2012

	2007	2012
Number of Farms	726	755
Average Farm Size	190 ac	-
Total Land in Farms	138,140 ac	140,902 ac
Fertilizer Deliveries	-	-
Commercial/On-Farm Grain Storage Capacity	1,067,000 bushels	6,746,007 bushels

Source: 2012 and 2017 Ohio Department of Agriculture Annual Report

Figure 19. Delaware County Agricultural Production Comparison: 2012 & 2016

Crop	2012 Acres	2016 Acres	2012 Production	2016 Production
Corn (grain)	48,500	42,000	6,604,000 Bu	6,980,000 Bu
Soybeans	72,100	71,500	3,181,000 Bu	3,807,000 Bu
Wheat	3,900	3,200	281,000 Bu	243,000 Bu
Oats	-	-	-	-
Hay	-	4,500	-	13,800 Ton

Source: 2012 and 2017 Ohio Department of Agriculture Annual Report

Figure 20. Delaware County Cash Receipts from Marketing of Farm Commodities

Crop	2011	2012
Corn	$40,675,000	$40,553,000
Soybeans	$37,044,000	$39,460,000
Wheat	$2,695,000	$1,404,000
Oats and Hay	$617,000	-
Other Crops	$11,408,000	$25,303,000
Dairy and Milk	$1,620,000	$1,568,000
Cattle and Calves	$1,140,000	$880,000
Hogs and Pigs	$13,787,000	$9,814,000
Poultry and other Livestock	$871,000	$284,000
Total	**$109,861,000**	**$119,266,000**
Average per farm	**$151,324**	**$157,968**

Source: 2012 and 2017 Ohio Department of Agriculture Annual Report

Ohio's Historic Family Farms Program

The Ohio Department of Agriculture (ODA) recognizes the many social, economic, and historic contributions made by Ohio's founding farm families. Ohio's Historic Family Farms program was developed as a way to honor these families for their enduring legacy to our state.

The program grants three designations based on the number of years of same-family ownership:

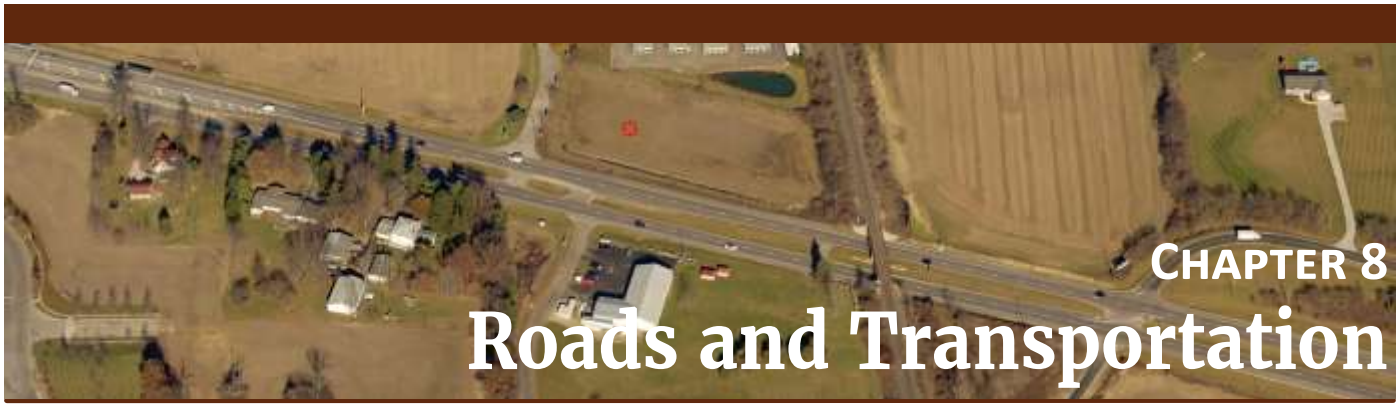
- Century Farm (100-149 years);
- Sesquicentennial Farm (150-199 years); and
- Bicentennial Farm (200 years or more).

Qualified registrants receive an heirloom certificate signed by the Governor of Ohio and the Director of ODA. Out of 21 historic family farms in Delaware County in ODA's database, four of them are located in Brown Township:

- The Colflesh Family farm established in 1854 (Sesquicentennial)
- George & Marsha Jumper's farm established in 1876 (Century)
- Carlos Dennis' farm established in 1904 (Century)
- Hardscrabble Farms established in 1912 (Century)

Two other "Century Farms" are recognized in Brown Township as locally significant:

- Reely/Potter Farm
- Osborn Century Farm



CHAPTER 8
Roads and Transportation

General

Most of Brown Township's roads were laid out in the 19th Century. As the area develops, the function of these original roads will change. As traffic counts increase, roadway improvements and new roads will be needed.

As noted in Figure 21, Brown 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; Brown Township maintains township roads; Homeowner associations maintain private subdivision roads; CADs are private roads serving two to five lots, maintained by the lot owners.

Federal and State Roads

U.S. 36/S.R. 37 – 0.9 miles of 36/37 passes through Brown Township. U.S. 36 acts as an east-west connector from U.S. 23 to I-71. This road is heavily traveled with trucks carrying interstate commerce and passenger vehicles. Truck traffic often clogs the diamond interchange at I-71 at peak hours, causing backups and a reduced level of service. ODOT District 6 completed a number of safety improvements prior to the construction of the outlet mall. The safety study added turn lanes, restriped the bridge deck for additional lanes, and made other access improvements and changes.

Figure 21. Principal Roads and Widths in Brown Township

Road #	Maintained	Road Name	Surface Width (typ.)
U.S. 36	ODOT	U.S. 36	48'
U.S. 42	ODOT	U.S. 42	24'
S.R. 37	ODOT	State Route 37	48'
S.R. 521	ODOT	State Route 521	18'-20'
10	County	N. Old State	18'
35	County	N. 3 B's and K	17'
65	County	County Home Kilbourne	18' 21'
80	County	Leonardsburg	18'-22'
84	County	Bowtown	12'-24'
76	Township	Hogback	16'-20'
77	Township	Howard	18'-20'
81	Township	Cackler	19'
82	Township	Giehl	14'-16'
85	Township	Jumper Skinner	16' 20'
86	Township	Baker	18'
87	Township	Harris	20'
219	Township	Kelly-McMaster	14'-16'
247	Township	McCurdy	12'
252	Township	Beard	16'
253	Township	Pugh	15'
263	Township	Pittman	14'
265	Township	Walton	14'
276	Township	Veley	20'

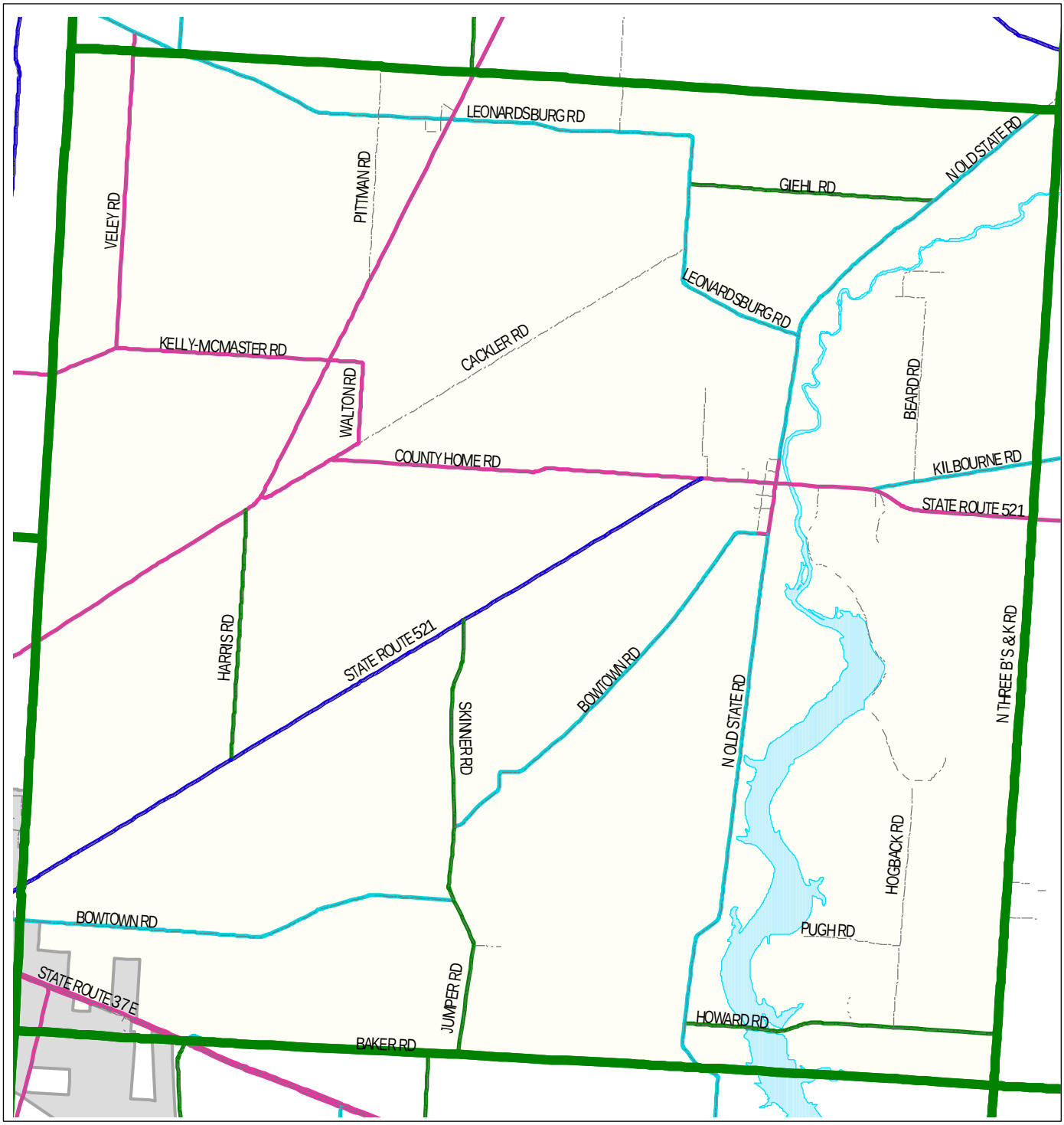
Source: ODOT Road Inventory

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.



Functional Classification

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

Functional Classification
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Freeway
- Township Boundary
- Incorporated Area
- Rivers / Lakes

- Major arterial roads in Brown Township: U.S. 36/S.R. 37, U.S. 42, S.R. 521, County Home, N. Old State, Walton, Kelly-McMaster, Veley, Cackler.
- Minor arterial roads in Brown Township: S.R. 521.

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%.

- Major collector roads in Brown Township: N. Old State, N. 3 B's and K, Kilbourne, Leonardsburg, Bowtown, Baker.
- Minor collector roads in Brown Township: Bowtown, Howard, Giehl, Jumper, Skinner, Harris.

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

- Examples: Hogback, Cackler, McCurdy, Beard, Pugh, Pittman.

Access Management

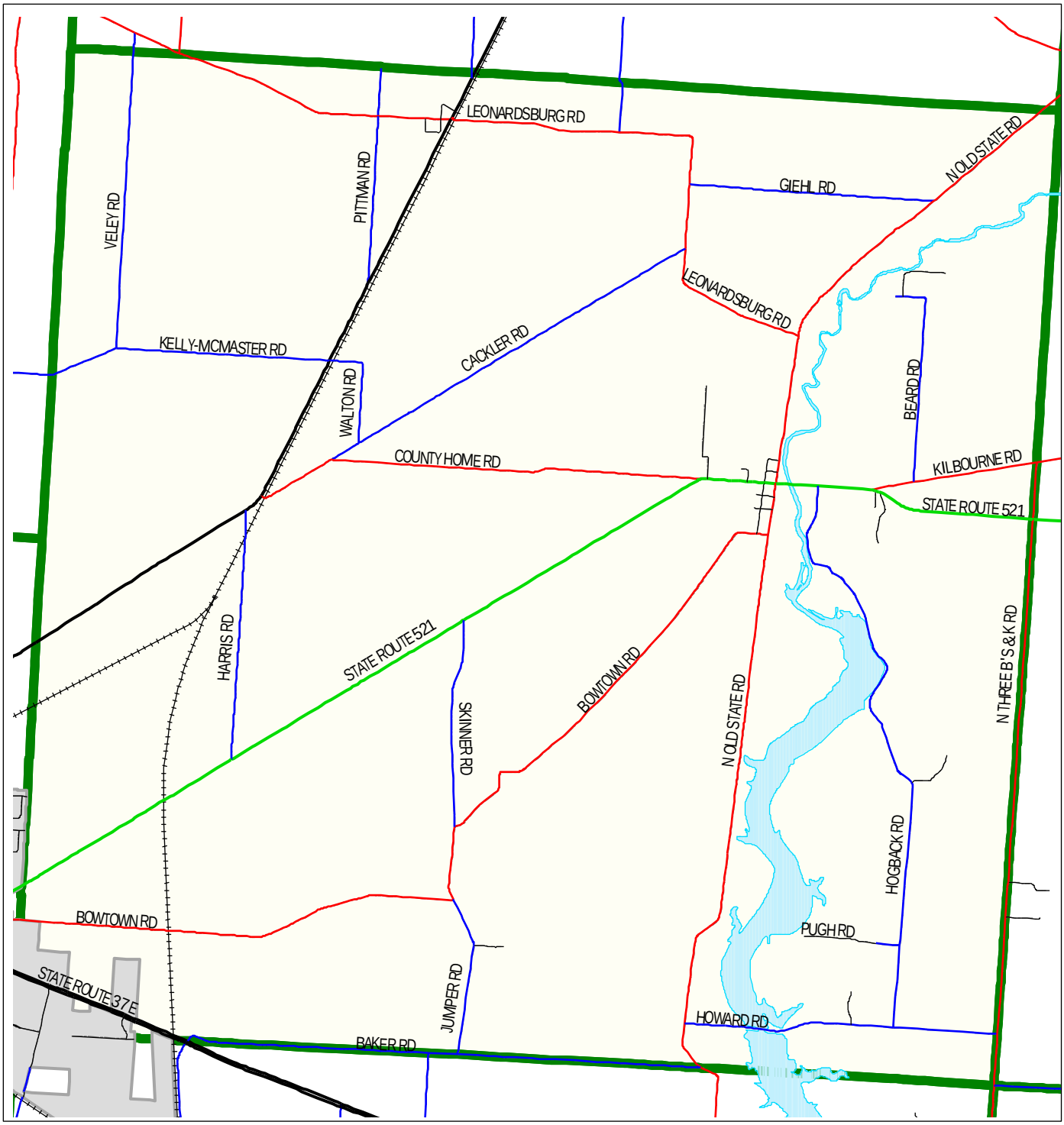
Access management is the practice of limiting curb cuts to major roads to prevent conflicting turning movements and maintain safe traffic flow. In July 2010 ODOT completed an Access Management Study that will impact future access to the 36/37 corridor. The resultant Access Management Plan (AMP) is used 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.



Roads

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

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Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

Township Boundary

Roads Classification
- US Highway
- State Highways
- County Roads
- Township Roads

Fut. Subdivision Streets
Railroad
Rivers / Lakes
Incorporated Area

- Encourage internal access to out-parcels - connect parking lots; share driveways.
- Use frontage roads to connect commercial traffic and keep it parallel to the main road - connect frontage roads to collector streets at properly spaced intersections.
- Use backage roads as rear access roads connecting commercial uses.
- Use the 30-curb cuts/mile standard, or maximum of one access each 350 feet.
- Minimize the number of traffic signals. Two per mile is ideal (half-mile spaced).
- Use medians to separate traffic flows.
- Coordinate access permit review between ODOT, local zoning, and building departments.

The U.S. 36 corridor offers potential commercial tax base to Brown Township. When new sites are zoned for commercial use, access management is imperative to maintain safe traffic flow. Figure 22 shows the portions of the AMP that directly impact the Township.

The AMP indicates the following highlights (from west to east within Brown Township). Locations of intersections and backage roads are conceptual and based on ideal spacing. Site distance, topography, environmental features, and other factors do not appear to have been considered.

- 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 Sweeney/Baker Road intersection to right-in/right-out access by closure of median opening and construction of right turn deceleration lanes on 36/37

Figure 22. U.S. 36/S.R. 37 Access Management Plan, 2010

Larger maps from the 36/37 AMP are located in Appendix A.

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.

This plan, which can be found in Appendix B, recommends a number of new collector and arterial roads as described in the Implementation section.

Thoroughfare Plan Recommendations:

- **Alternative Y:** Extension of Mink Street Road from River Road east to County Home Road near its intersection with U.S. 42
- **Alternative 5:** North-south route extending from Alternative Y south to intersect with 36/37 at Glenn Road
- **Alternative 5:** Extension of Panhandle Road at U.S. 23 east to connect with north-south Alternative 5

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.

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

Delaware Northeast Bypass - Bike/Ped Facilities	2020-2030
U.S. 36/S.R. 37 - Bike/Ped Facilities	2030-2040

Bikeways

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

Multi-use path near Simon Tanger Mall

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.

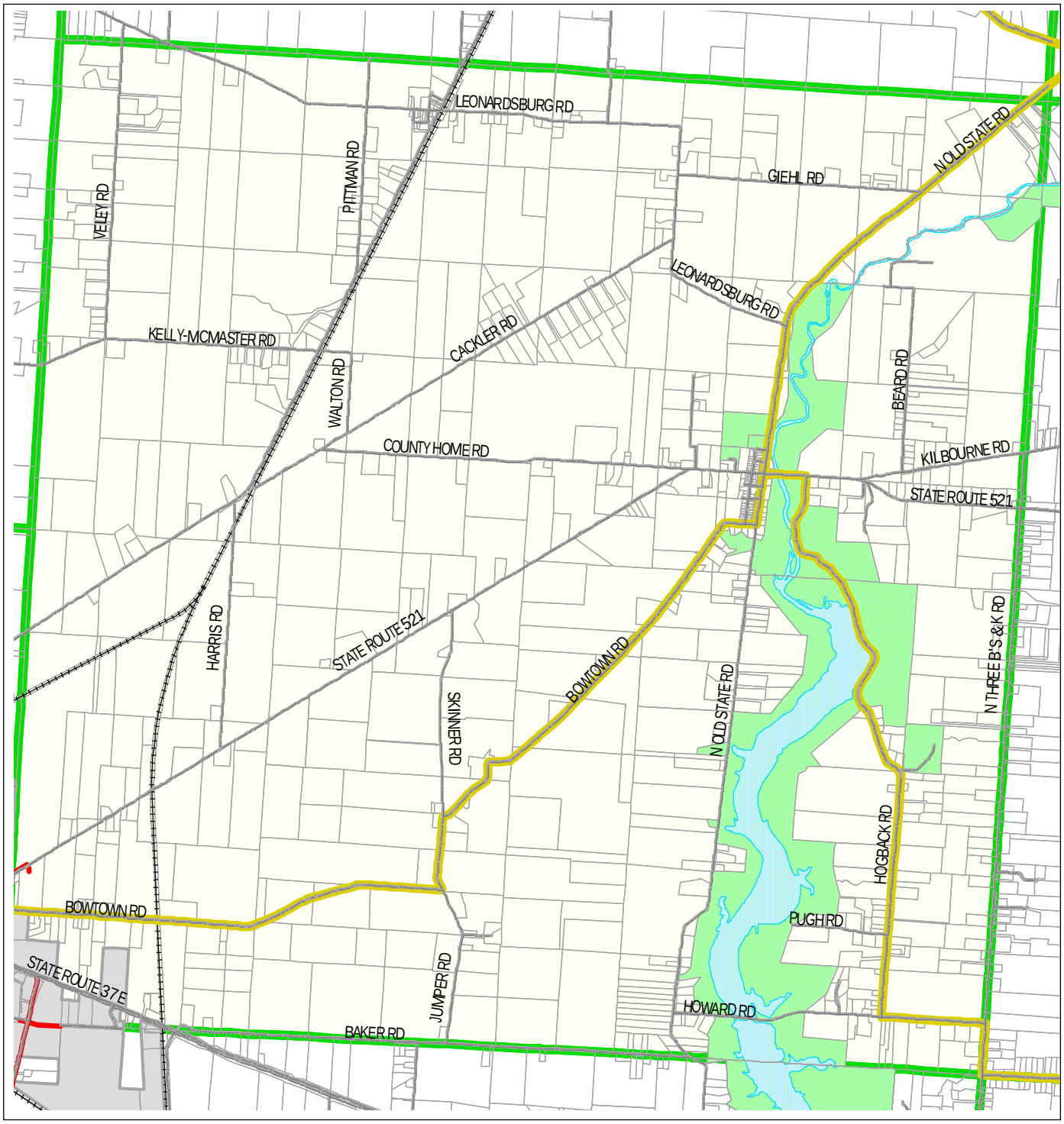
Recommended Bikeways

The regional bikeway plan recommends a number of On-Road Routes for cyclists along traditional roads in Brown Township to create a network that will connect Ashley, Kilbourne, Delaware, and Sunbury. The proposed routes are indicated in blue on the Sidewalks and Paths map.

Clean Ohio Fund

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

2015	Delaware County Orange Township	Shared use path and bridge over the Alum Creek Reservoir spillway channel that links the Orange Township Trail and the Alum Creek State Park Trail.
2015	Delaware County Orange Township	Phase I of the Bale Kenyon Road Trail starting at the corner of E. Orange Road and Bale-Kenyon Road and ending at the Delaware County improvement project of Bale-Kenyon Road and Lewis Center Road, approximately 2,900 linear feet.
2014	Delaware County	Part of the northernmost section of the Ohio to Erie Trail, 1.6 miles of rural and wooded areas to connect with the Knox County section of the Ohio to Erie Trail.



Sidewalks and Paths

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

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Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

- Proposed Bikeway
- Popular On-Road Routes

Sidewalks

- Multi-Use Path
- Sidewalk
- Road Centerlines
- Road Right of Way
- Railroad
- Parks

Rural roads are predominant in Brown Township.


Typical residential streetscape in Delaware County

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

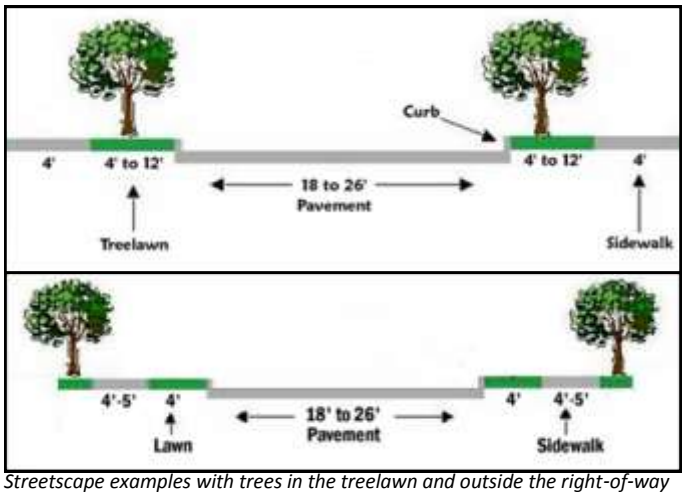
Increase in population yields increased traffic flow on local roads. The following considerations should be made when reviewing rezoning requests:

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, 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



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

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

Alternative Street Designs — The Roundabout

Low Speed Roundabouts have begun to be used as an alternative to the traditional signalized intersection throughout 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.

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.

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.

Transit

The Delaware Area Transit Agency (DATA) 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.

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Chapter 9
Utilities

General

Additional utility services will be needed as Brown Township develops. Water, sanitary sewer, telephone, electric, natural gas, cable television, and high speed internet are desirable utilities in the Delaware County real estate market. Stormwater management is required by Delaware County.

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 Township. 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 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.

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

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.

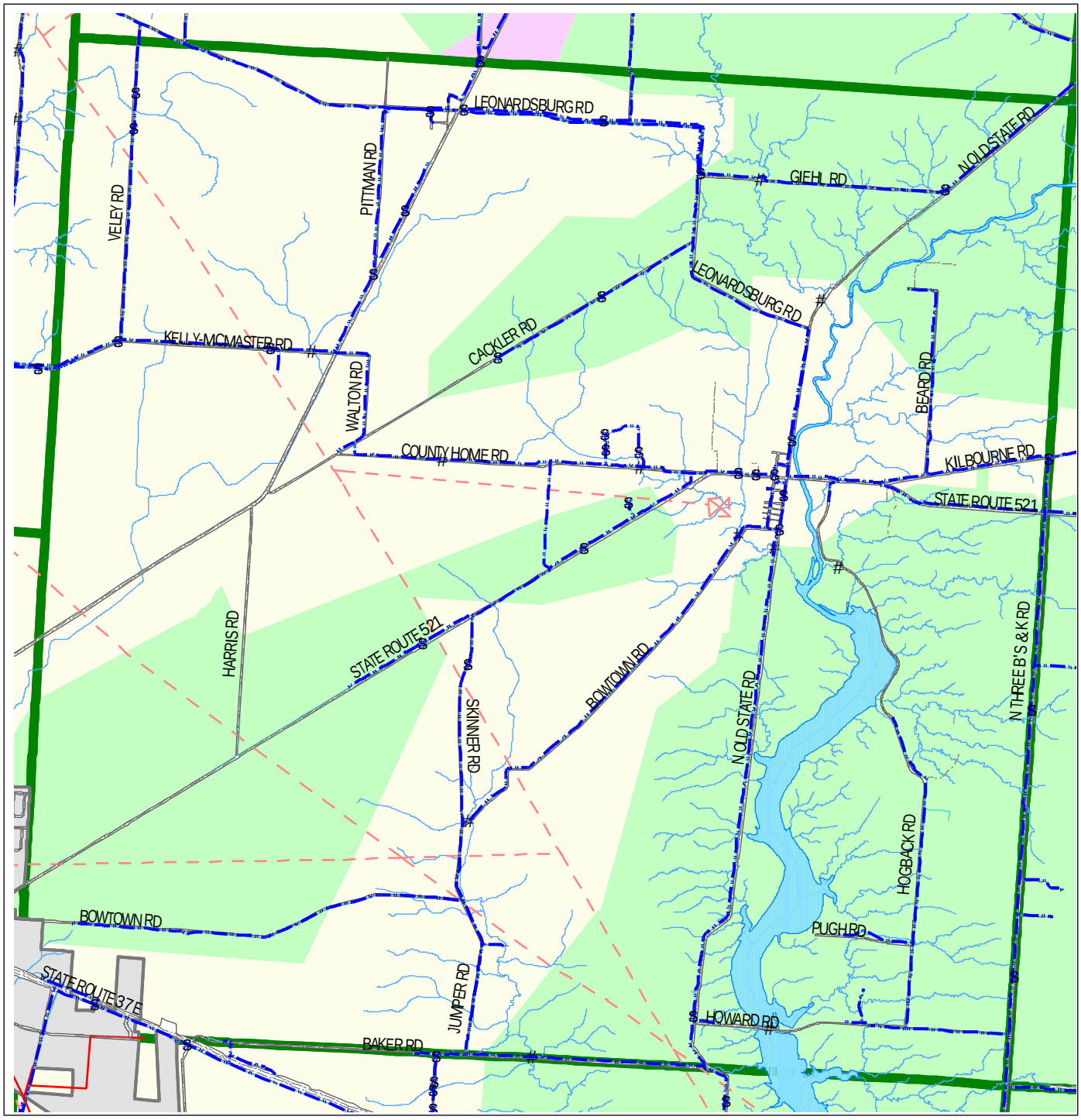
Water Lines

The Utilities map shows the location and diameters of water lines in Brown Township. In general, those streets that have water lines of less than 6 inches in diameter will not offer fire hydrants. Fire hydrants are normally a requirement of new development.

Sanitary Sewer

Brown Township uses 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.

The improvements listed in Figure 24 and shown in Figure 25 are being considered as part of possible future improvements that will impact Brown 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



Utilities

Brown Township, Delaware County, Ohio

0 1000 2000 3000 4000 5000 Feet

N W E S

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

- # Bridge locations
- Gas Lines
- Incorporated Areas
- Road Right of Way
- Rivers / Lakes
- Streams / Drainage Courses
- Township Boundary

Electric Service Boundaries
- American Electric Power
- Consolidated Electric Co.
- Ohio Edison

DELCO Waterlines
- Waterlines
- Hydrants

a new treatment plant south of 36/37 between Big Run and Dunham Roads. This 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. Construction may not be complete for five years, but the Township should plan with this information in mind.

Figure 23. Sewer Service Areas Map

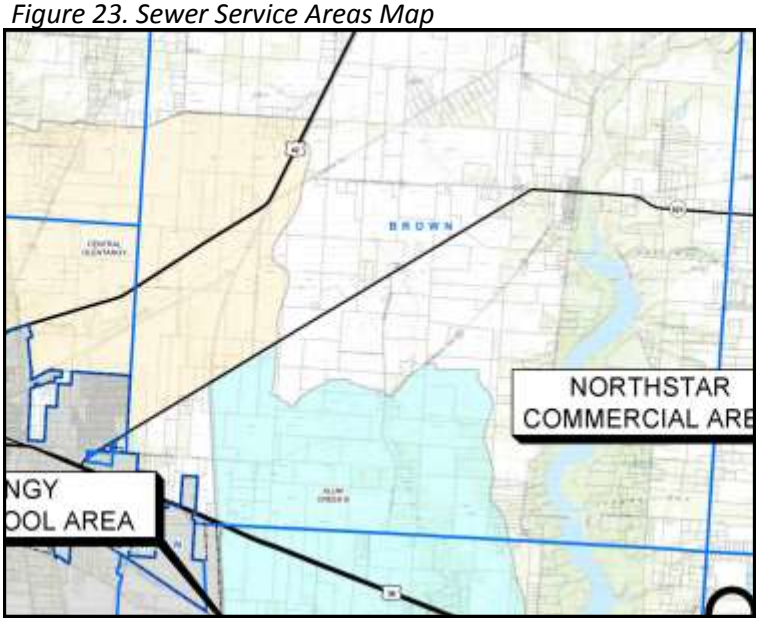
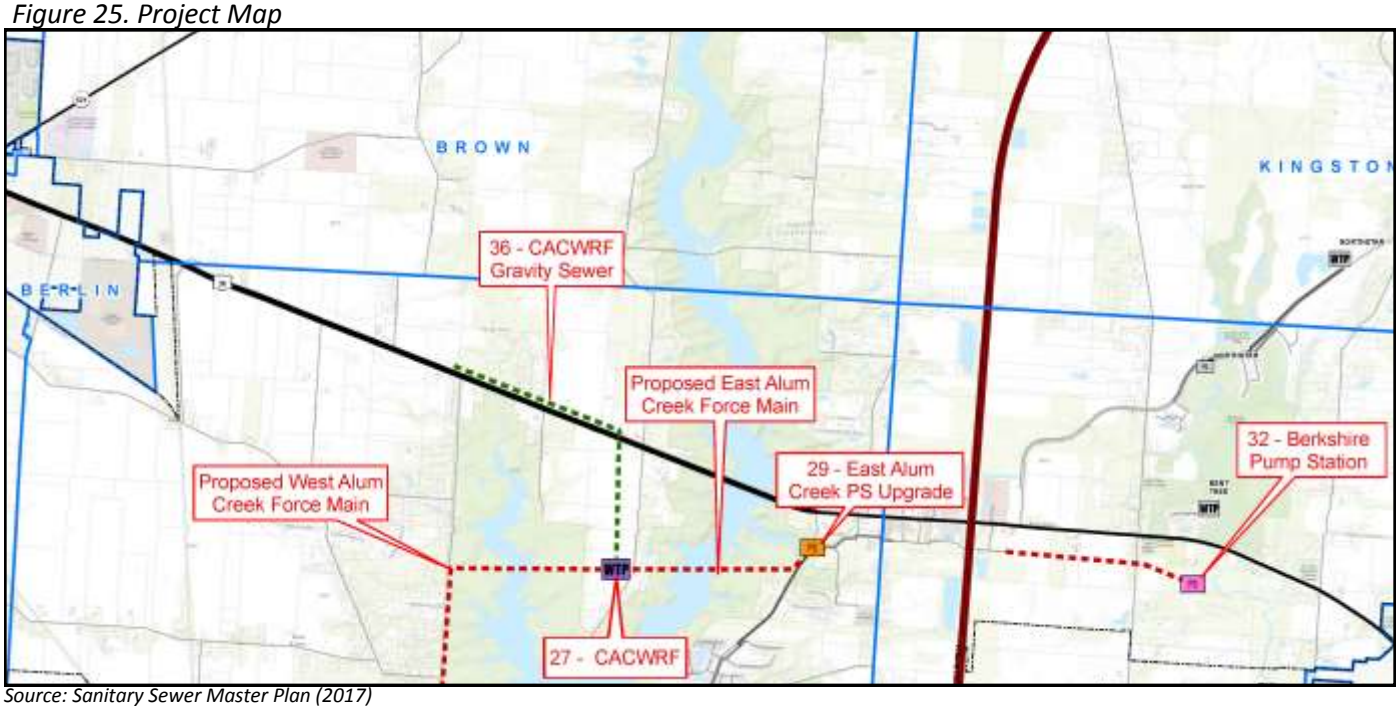


Figure 24. Project Table

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 25. Project Map



Source: Sanitary Sewer Master Plan (2017)

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.

Electric

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

Natural Gas

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

Telecommunications/Internet Service

Based on private sector marketing information, the southern half of Brown 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.

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 10
Community Facilities

Schools

Buckeye Valley Local School District

Brown Township lies completely within the Buckeye Valley Local School District. The 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.

Buckeye Valley Enrollment

Enrollment over the last 10 years has declined slightly, but has been on the rise since 2013. The table below shows the enrollment by year for the last decade. The district recently completed an enrollment projection study with the findings shown in the second table. Based on development and construction activity noted throughout this Comprehensive Plan, the district is poised to see consistent growth of approximately 0.5% each year.

Figure 26. Overall Enrollment and Demographics

Demographic	Enrollment	Percentage
All Students	2,100	
American Indian	-	-
Asian or Pacific Islander	27	1.3%
Black, Non-Hispanic	11	0.5%
Hispanic	52	2.5%
Multiracial	67	3.2%
White, Non-Hispanic	1,939	92.3%
Students with Disabilities	226	10.8%
Economic Disadvantage	433	20.6%
Limited English Proficiency	10	0.5%

Source: Ohio Department of Education, 2016-2017

Figure 27. Building Enrollment

	Buckeye Valley East	Buckeye Valley West	Buckeye Valley	Buckeye Valley
Grade	Elementary	Elementary	Middle	High School
Total	337	415	675	673

Source: Ohio Department of Education, 2016-2017

Figure 28. Buckeye Valley Historical School-Year Enrollment

Grade	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Pre-K – 4	919	947	979	945	902	816	788	821	798	819
5 – 8	722	741	713	732	750	768	748	727	755	735
9 – 12	734	763	748	746	720	713	707	774	770	807
Pre-K – 12	**2,375**	**2,451**	**2,440**	**2,423**	**2,372**	**2,297**	**2,243**	**2,322**	**2,323**	**2,361**
Ungraded	3	2	2	1	0	2	0	2	5	2
G. Total	**2,378**	**2,453**	**2,442**	**2,424**	**2,372**	**2,299**	**2,243**	**2,324**	**2,328**	**2,363**
Change		*+3.15%*	*-0.45%*	*-0.74%*	*-2.15%*	*-3.08%*	*-2.44%*	*+3.61%*	*+0.17%*	*+1.50%*

Source: Future Think, March 2017

Figure 29. Buckeye Valley Enrollment Projection

Grade	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Pre-K – 4	832	846	861	857	883	895	901	903	910	913
5 – 8	721	715	705	706	692	703	710	710	737	748
9 – 12	833	834	857	852	834	825	814	819	802	814
Pre-K – 12	**2,386**	**2,395**	**2,423**	**2,415**	**2,409**	**2,423**	**2,425**	**2,432**	**2,449**	**2,475**
Ungraded	3	3	3	3	3	3	3	3	3	3
G. Total	**2,389**	**2,398**	**2,426**	**2,418**	**2,412**	**2,426**	**2,428**	**2,435**	**2,452**	**2,478**
Change	*+1.10%*	*+0.38%*	*+1.17%*	*-0.33%*	*-0.25%*	*+0.58%*	*+0.08%*	*+0.29%*	*+0.70%*	*+1.06%*

Source: Future Think, March 2017

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

Figure 30. Indicators Met

Student Achievement Level	Subject	Indicator
3rd Grade	Mathematics	86.4%
	Reading	76.3%
4th Grade	Mathematics	76.4%
	Reading	75.9%
	Social Studies	83.4%
5th Grade	Mathematics	69.5%
	Reading	68.6%
	Science	85.0%
6th Grade	Mathematics	66.7%
	Reading	74.4%
	Social Studies	78.0%
7th Grade	Mathematics	53.3%
	Reading	65.9%
8th Grade	Mathematics	79.5%
	Reading	74.9%
	Science	90.7%
High School	Algebra I	67.5%
	Biology	75.9%
	English I	71.7%
	English II	67.1%
	Geometry	55.8%
	History	85.5%
Total Indicators Met = 7 out of 24 for a grade of F		

Source: Ohio Department of Education, 2016-2017 Report Cards

Figure 31. Performance Index

Student Achievement Level	Percent of Students
Advanced Plus	2.3%
Advanced	25.3%
Accelerated	25.0%
Proficient	23.2%
Basic	13.2%
Limited	10.9%
Untested	0.1%
Total Index = 95.3 out of 120 for a grade of C	

Source: Ohio Department of Education, 2016-2017 Report Cards

Buckeye Valley Current Facilities

The district maintains four academic facilities:

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

Funding for Buckeye Valley Local Schools

The Buckeye Valley Local School District reported a 2016 total revenue of $26.4 million, including $17 million in local revenue and $6.3 million in state revenue. Total instructional and non-classroom expenses were $22.9 million (does not include non-operating district expenditures, adult education, etc.).

Figure 32. District Expenditures Per Pupil

Area	Total Amount	Per Student (x/2,357)
Instruction	$13,517,938	
Pupil Support	$1,158,902	
Staff Support	$318,657	
Total Instruction	**$14,995,497**	**$6,362**
General Administration	$1,072,301	
School Administration	$1,258,528	
Operation and Maint.	$2,316,157	
Transportation	$1,591,571	
Other Support	$898,846	
Food Service	$795,524	
Total Non-Classroom	**$7,932,927**	**$3,366**

Source: Ohio Department of Education, 2016-2017

Figure 33. District Revenues Per Pupil

Area	Total Amount	Per Student (x/2,357)
Local Revenue	$17,017,439	$7,220
State Revenue	$6,347,188	$2,693
Federal Revenue	$1,019,011	$432
Other Non-Tax	$2,054,387	$872
Revenue Total	**$26,438,026**	**$11,217**

Source: Ohio Department of Education, 2016-2017

Delaware Area Career Center (DACC) and Columbus State

Delaware City and County boards of education established the Joint Vocational School in 1974 as a career/technical school to offer specific career training to Delaware County residents. The center, now called the Delaware Area Career Center, provides career training and academic instruction to over 650 area High School juniors and seniors who desire skilled employment immediately upon high school graduation. The 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.

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

Effect of Land Use Planning on School Planning

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

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

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 control the timing of zoning. Brown Township may wish to use the schools as one additional indicator of critical facilities that need to be monitored in making zoning decisions.

Historic Sites

There are no sites in Brown Township listed on the National Register of Historic Places. There are, however, historically significant structures. Some of these include the following.

The **Old Brown Township Hall** was erected in 1874 and is believed to be the site of the first Grange Hall built in Ohio. It is located at 3832 Main Street in the Village of Kilbourne, and is still used as a community facility.

The **Kilbourne Post Office** was opened in 1837 when the federal government commissioned C.M. Thrall postmaster. Before that time, residents received their mail at Berkshire and Delaware. Although no longer in operation, the post office building is located at 3928 Main Street in the Village of Kilbourne.

The Community Facilities and Historical Features Map indicates possible archeological sites around the Salt Lick and some historic sites across the Township. These sites are mapped by the Ohio Capability Analysis Program data available from the Ohio Division of Natural Resources. The DCRPC has no information regarding any materials found at any of these sites.

Community Facilities

Libraries

Currently, there are no public libraries in Brown Township. However, 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

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

Fire Protection & Emergency Medical Services

Fire protection is provided by the Tri-Township Fire Department. Established in 1975, the district provides fire protection to Brown, Delaware, and Troy Townships.

There are two stations, one located at 495 Sunbury Road in Delaware City and one located at 660 Coover Road in Troy Township. The department currently has 35 fire fighters, which include one full-time Fire Chief, three full-time Fire Captains, one full-time firefighter, and 30 part-time volunteer firefighters. The department maintains a staff on stations to respond 24 hours a day, every day with an up to date fleet of equipment to serve the community's needs. The District continues to monitor the development in and around the area to provide a timely and professional response to our residents.

Tri-Township Fire Department staff is dispatched on all EMS runs in Brown Township as a first responder with a transporting medic unit. In addition, the department has mutual aid contracts with all Delaware County Fire Departments, including automatic response on all structure fire assignments. All firefighters are CPR and AED trained.

The Fire Department has the following equipment for emergency response:

Station 331 (Sunbury Road)

- 2008 KME Engine/Rescue - Initial response unit on any rescue situation or fire response
  - Seating for four firefighters
  - 1,500 gallon per minute pumps
  - 1,000 gallons of water
  - 1,000 feet of 4-inch supply line
  - 500 feet of 2½-inch fire hose
  - 200 feet pre-connected attack lines
- 1991 Engine - "Second-out" unit
  - Seating for five firefighters

  - 1,250 gallon per minute pumps
  - 1,000 gallons of water
  - 1,000 feet of 4-inch supply line
  - 500 feet of 2½-inch fire hose
  - 200 feet pre-connected attack lines
- 1995 International Tanker to transport water from source to the scene (purchased from Monroe equipment)
- 1999 Ford F-350 FWD grass-fire truck with a 250 gallon tank - First responder and responds to all medical assist calls

Station 332 (Coover Road)

- 2015 KME Mini Pumper/Rescue
  - Seating for two firefighters
  - 1,000 gallon per minute pump
  - 250 gallons of water and Class A foam
  - 600 feet of 4-inch supply line
  - 250 feet of 2½-inch fire hose
  - 200 feet pre-connected attack lines
- 2017 KME Engine/Tanker
  - Seating for two firefighters
  - 1,000 gallon per minute pump
  - 2,000 gallons of water
  - 1,000 feet of 4-inch supply line
  - 500 feet of 2½-inch fire hose
  - 200 feet pre-connected cross lines
- 2004 Ford F-350 FWD grass-fire truck with a 220 gallon tank and Class A foam
- Hazardous materials response trailer
- Water rescue trailer
- Kubota special service unit
- Pickup truck to pull the trailers

Police

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

Sheriff's Complaints

Brown Township represented 2.4% of the Sheriff's recorded incidents in 2016, but represented only 1.3% of the County's population. It should be noted that Genoa Township and the Cities of Delaware, Dublin, Columbus, Westerville, and Powell provide their own police protection.

Figure 34. Most Prevalent Crimes or Incidents

Crime/Incident	Percentage
Delaware County	
Traffic Stops	38%
Theft/Larceny	10%
Domestic	8%
Brown Township	
Juvenile-Unruly/Runaway	20%
Suspicious Person/Vehicle	14%
Domestic	10%

Source: Delaware County Sheriff's Office 2016 Annual Report

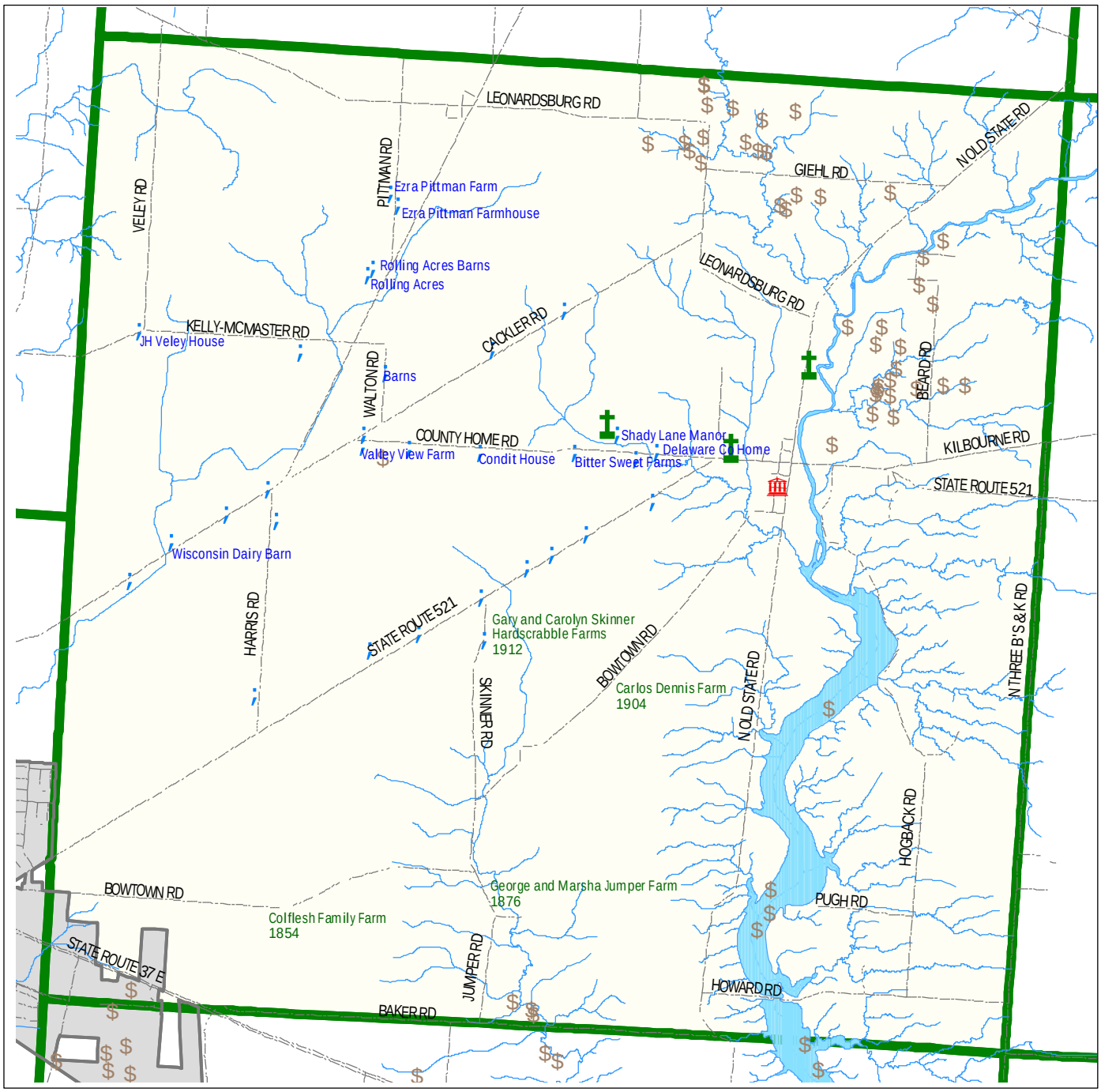
Cemeteries

- Green Mound Cemetery - North side of S.R. 521, just west of the Village of Kilbourne
- Kilbourne Cemetery - East side of N. Old State Road, just north of the Village of Kilbourne
- County Home Cemetery - North side of County Home Road, behind the County Home

Other Township Facilities

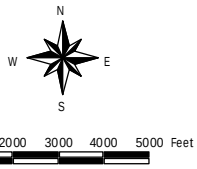
The new **Brown Township Hall** is located at 5555 State Route 521, where Township Trustee meetings, Zoning Commission meetings, and Board of Zoning appeals meetings are all held. The Township Trustees constructed the new township hall in 2018 on the former site of Brown School with funds in part received by donation from Charles and Betty Sheets.

The **Brown Township Maintenance Building** is located in the Village of Kilbourne on N. Old State Road.



Community Facilities and Historical Features

Brown Township, Delaware County, Ohio



Township Hall
Archaeological Sites
Historical Sites
Cemeteries
Incorporated Areas
Rivers / Lakes
Streams / Drainage Courses
Township Boundary

Prepared By: Delaware County Regional Planning Commission (740-833-2260) (10/03/2018)

Chapter 11
Open Space and Recreation

Introduction

The ORC 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 NRPA model is found in Figure 35 at the end of this chapter.)*

Listokin and Walker note that: "Ideally, the [NRPA] national standards should stand the test in communities of all sizes. However, the reality often makes it difficult or inadvisable to apply national standards without question in specific locales."

Location of Open Space Parcels

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

Existing Parkland within the Township

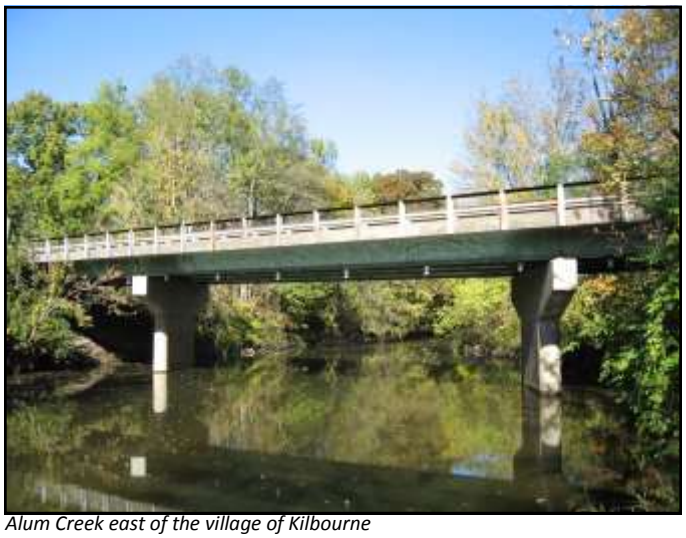
Alum Creek State Park

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)



Alum Creek east of the village of Kilbourne

- 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.

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.

Hogback Ridge Park

Preservation Parks maintains 41 acres on the east side of Hogback Road south of S.R. 521 that is completely

wooded. White tail deer, wild turkeys, and many other species of birds make their home in the park. It includes two mulched trails that wind through a ravine system with hardwood and pine trees, and a bridge spanning a scenic ravine (approx. 1 mile total). There is also an equestrian trail, completed in 2017, that connects to the equestrian/hiking trail in Alum Creek State Park.

Glaciation, which occurred during the last Ice Age, helped shape the park by creating ridges. Melt water carved the stream beds. The park houses the Mary Barber McCoy Nature Center. The initial 32 acres were left to Preservation Parks in the estate of Mary Barber McCoy in 1998. The Park District later purchased an adjoining 9 acres, bringing. The park opened to the public in 2002.

Kilbourne Ball Park

A developed active recreation site with ball fields on the north side of S.R. 521 in Kilbourne behind the new Brown Township Hall.

Future Recreational Needs

As the Township grows, it may wish to use the NRPA model. It surveys the service area population to determine demand for different activities, which is then converted to land requirements.

Undeveloped Open Space - **Regional and Township:** Alum Creek State Park within Brown Township and Hogback Ridge Park may satisfy the requirement for passive open space and a portion of active open space on a township-wide basis. They do not replace the need for neighborhood parks and township-wide parks with athletic fields for organized sports.

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

Developed Open Space – Township-wide: The Township should provide active recreational areas for its ultimate population.

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. Brown Township could 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,* p. 56

CHAPTER 12

Future Development Patterns

Rural Large-Lot Development

Most residential development has taken place along existing township and county roads. Many of these splits result in lots that are larger than 5 acres and simply recorded with the County with no review process. When land is split resulting in parcels that are smaller than 5 acres, a process called a "No Plat" or "minor" subdivision is required. These NPA subdivisions may be used to create no more than four lots from an original parcel (five including the residue, if smaller than 5 acres), and where there is no creation of new streets or easements of access. The ORC now allows review of lots up to 20 acres in size.

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

In addition to small CADs, larger subdivisions that include paved private or public streets built to county standards can be developed as long as the lots conform to local zoning. Such larger scale subdivisions follow the same process as 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 would actually lead to "rural sprawl."

(left) Lot splits in Berkshire where all lots have frontage on an existing street (right) Hickory Woods in Genoa Township, a conventional subdivision with large lots

Alternative Development Patterns

PRD Subdivisions

For 30 years, cluster subdivisions, or "Planned Residential Developments," have been touted as an improved alternative to the conventional subdivision. Brown Township's PRD uses an overlay system that

Killdeer subdivision west of I-71 in Berkshire Township


Cheshire Woods subdivision, in Berkshire Township

defines allowable density based on the underlying zoning. The open space requirement is 40% for FR-1 and 20% for R-2.

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

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

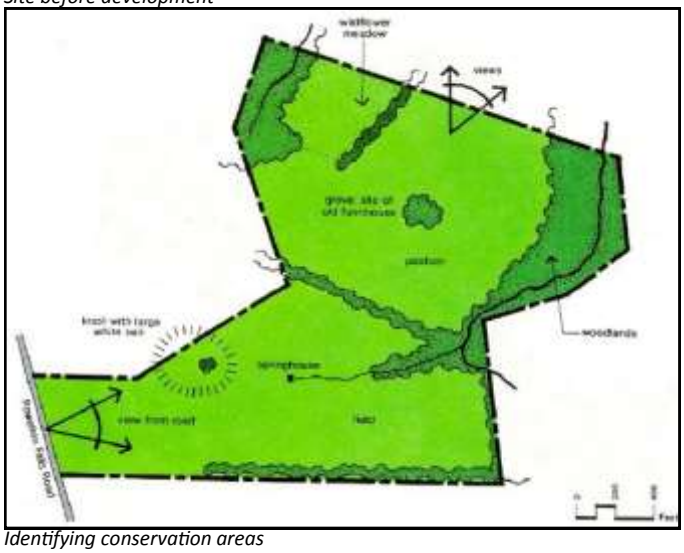
Conservation Subdivisions are a form of rural cluster subdivisions where natural features and environmentally sensitive areas are excluded from development and preserved. Homes are clustered in the remaining areas. The term "Conservation Subdivision," as coined by author Randall Arendt (*Conservation 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.

Site before development

Typical layout with acreage lots



Identifying conservation areas

End result, same number of houses

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

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

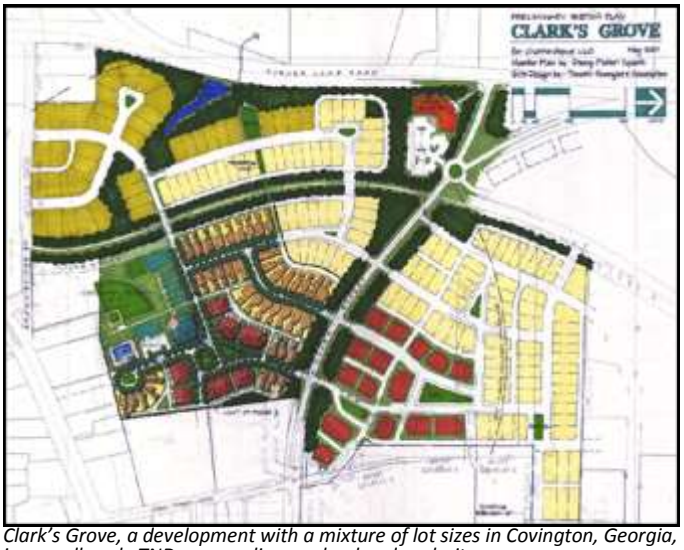
New Urbanism - Traditional Neighborhood Development

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

Streetscape at Easton

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.
- There is a variety of dwelling types — houses, townhouses, and apartments — so that younger and

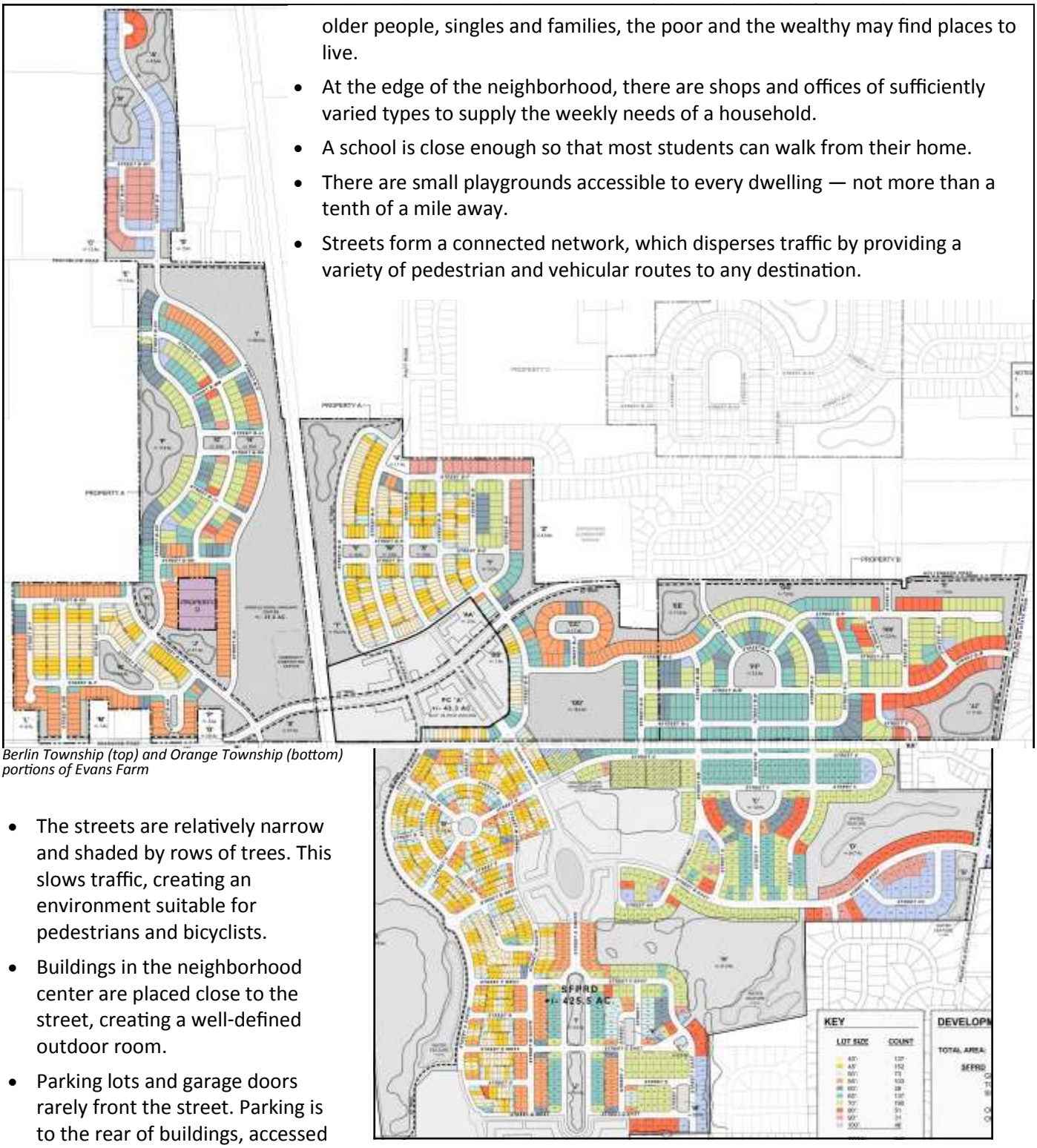


Clark's Grove, a development with a mixture of lot sizes in Covington, Georgia, is a small-scale TND surrounding a school and park site.

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

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.
- Streets form a connected network, which disperses traffic by providing a variety of pedestrian and vehicular routes to any destination.



Berlin Township (top) and Orange Township (bottom) portions of Evans Farm

- 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.

As of 2016, a new TND called Evans Farm is in various forms of review and progress in Orange and Berlin Townships. The overall plan covers more than 1,100 acres and proposes over 2,000 single-family parcels of varying sizes, more than 500 other types of housing units, two commercial areas, a school site, parks, trails, and recreational features.

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 with 0-foot setback should require masonry construction. Maximum front setback - 15 feet. Lots on streets closest to the "Core" could have the shallowest setbacks, then increase setbacks as you move outward. For example:

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

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

Example of site furnishings

fixtures, trash receptacles, benches, and other usable structures. Furniture should be permanently installed, be vandal-resistant, have replaceable components, and be easily maintained. It should be of high quality design and "timeless" in style (image to the right). Seating should be located at logical resting points and situated so they do not block the internal walkway system.

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

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.

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


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


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

projections in new construction can add value and character to a commercial development. Continuous 'strip' buildings should be discouraged.

Building Height/Appearance

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


Example of cohesive contiguous building heights

Roof Forms and Building Materials

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

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

Environmental Sustainability

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

Parking and Access

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

Example of circulation streets

Parking lots should be screened and separated from the public right-of-way. Large expanses of surface parking should be broken up into smaller areas. These may be located beside or between buildings. Parking located directly in front of buildings should be minimized where possible. All lots should be landscaped and shading maximized.

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

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

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

Commercial zoning can require a certain number of parking spaces per square footage of commercial space. In commercial developments with multiple tenants, this can result in an excessive amount of pavement leading to a "sea of asphalt." Retail parking requirements should be somewhere between 4 and 5 spaces per

1,000 feet of gross leasable space. This amount can be reduced in multiple-tenant developments, where different uses demand different peak parking times, and in retail buildings above a certain size threshold (i.e. “big box” stores).

Pedestrian Orientation

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

Example of typical big-box stores

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.

Example of retail with connected pedestrian elements

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.

Example of protected and connected retail with open space

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).

Example of screened dumpster

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 lighting designed as a cohesive part of other site elements

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 in a way that is appropriate to that community. Although there are legal limitations to the extent of regulations (i.e. political signs and content), townships in Ohio commonly regulate the number of signs allowed, their location, their height, their size, and the materials used in their construction. Some signs are permitted with no permit required. These typically include "For Sale" signs, political signs, certain temporary signs, signs approved as part of planned districts, and farm signs. Although no permit is required, the size, number, and placement of these signs may be regulated.

Another type of sign defined in the code is one requiring a permit. This category generally includes billboards or off-premise signs, and on-site commercial, industrial, and office display signs. Prohibited signs often include portable sign devices, sandwich boards, revolving or animated signs, and wall-painted signs. Finally, a sign code will define provisions for signs that already exist but do not conform to the standards when a code is adopted. Such provisions describe which "non-conforming" signs must be removed and which can continue. Typically, such signs cannot be improved or changed and, if a particular percentage of the sign is ever destroyed, the sign must be replaced in a way that conforms to the standards. If changes are made to a sign, other than routine maintenance, it should be brought into compliance with current regulations.

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.

Example of natural-colored materials for monument signs

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

Example of variation in signage themes based on sign types

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

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

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

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 auto operators.

Plant materials should be native to the area when possible.

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

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

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

Guidance for minimum standard plant sizes at installation:

Shade Trees – 3" Caliper, 12'-14' height
Ornamental Trees - 8'-10' height
Evergreen and Deciduous Shrubs – 24" height

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

Residential Garage Placement

One issue that often arises in Planned Residential reviews is streetscape. Sidewalks, street trees, and structure setbacks all contribute to the perception of a neighborhood's value. One factor that can impact the streetscape of a subdivision is the placement of the garage. On large lots with at least 90 feet of frontage, most garages are side-load or do not make up a large percentage of a house's front elevation. As lots become smaller and frontage decreases, such as in TNDs and some condominium developments, garages take up more and more of the frontage. In extreme cases, the garage projects fully in front of the house. Such residential structures have been termed "snout houses" (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.

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

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."

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

Which Development Pattern(s) for Brown?

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

- Identify critical resource areas that should be given primary or secondary conservation area status, and consider allowing both conventional large-lot and Conservation Subdivisions in the FR-1 District.
- Consider using Conservation Subdivisions to preserve open space and/or farmland.
- Consider allowing higher density Conservation Subdivisions in areas where annexation is a possibility.
- Consider village-center development adjacent to existing villages, and also allow for new walkable centers in areas planned for eventual sewer service (DCRPC has a model code for such development).
- Commercial development should group buildings to share parking and access to arterial streets.
- Consider mixed uses of commercial and residential as part of a large-scale planned unit development that creates a sense of community rather than strip the commercial along arterial roads.

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CHAPTER 13
Goals and Objectives

On July 6, 2000 a citizens group of approximately 10 people derived goals statements from the "likes" and "dislikes" outlined in Chapter 4. These goals were incorporated into a vision statement for future development.

Community Vision
Goal: To Retain Economically Viable Agriculture
Objectives: 1. Classify the most important farmland by soil type, location, productivity, and proximity to development using the County's Soil Survey data. 2. Preserve viable farmland as part of Planned Residential Developments (PRDs) by transfer (sale) of development rights from farmland to adjacent PRDs in return for a permanent easement for open space and/ or agriculture on the remaining adjacent farmland where allowed by law. 3. Keep Farm-Residential zone densities low at one unit per 2 acres.
Goal: To Retain Rural Character
Objectives: 1. Retain lands in Farm-Residential zoning status where no sanitary sewer is expected. 2. Encourage Conservation Subdivision design.
Goal: To Ensure Significant and Diverse Citizen Input into the Planning Process
Objectives: 1. Use a steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan. 2. Advertise an open information meeting to discuss and review the recommendations of the plan prior to meetings. 3. Collect information using a citizen survey to the Township. 4. Provide for 5-year updates and revisions to the plan.
Goal: To Prevent Undue Congestion on Narrow County and Township Roads Goal: To Protect Rural Real Estate Values
Objectives: 1. Maintain a minimum lot size in areas with sanitary sewer service that emulates suburban densities (not to exceed 1.25 du/acre). 2. Maintain a rural lot size adequate to safely utilize on-site water supply and sewage disposal systems where no sanitary sewer service is available.

Environment

Goal: To Preserve Natural Beauty, Wildlife, Quietness, and Open Space

Objectives:

1. Amend the zoning text to require a greenway link between adjacent PRD subdivisions.
2. Create a landscape detail for greenway paths.
3. Retain wooded greenways along ravines, waterways, and project perimeters in reviewing planned developments and conventional subdivisions.
4. Set landscape and architectural design standards for planned developments that stipulate the kinds of centralized green spaces envisioned.
5. Require the linkage of planned developments by bike paths or walking paths in greenways so that new neighborhoods are all pedestrian-oriented and children can move safely between neighborhoods without having to be driven by automobile.
6. Create a landscape detail or "look" for new developments that front on township roads.
7. Amend the zoning text to require the appropriate landscaping buffer detail between certain residential and non-residential land uses. Create a landscaping detail(s) to be used between incompatible land uses.

Goal: To Avoid Inappropriate Sprawl and Retain Critical Resource Areas and Wildlife Corridors

Objectives:

1. Retain natural vegetation and use existing topography as buffers where they exist.
2. Protect critical resources, including floodplain and slopes over 20% with adequate buffer distances and corresponding densities.
3. Encourage the use of conservation design in site development to protect natural resources and unique areas in the Township.
4. Identify and protect floodplains, jurisdictional wetlands, and slopes over 20% in PRDs through the zoning resolution.

Goal: To Conserve Surface and Groundwater Quality

Objectives:

1. Require minimum 2-acre lot size in areas without sanitary sewer; require larger lot sizes within close proximity to the Alum Creek drinking reservoir.
   a) 1,000' from edge of Alum Creek 100-year floodplain—density of 1 unit per 5 acres
   b) 1,000' from top of Alum Creek bank slopes 20% or greater—density of 1 unit per 5 acres

Land Use

Goal: To Retain a Primarily Single-Family Housing Mix and, When Needed Services are Available, Offer a Diversity

Goal: To Retain an Overall Low Density

Goal: To Protect Sensitive Surface and Groundwater Aquifers

Objectives:

1. Retain single-family densities of at least one unit per 2 acres where there is no centralized sanitary sewer provided by Delaware County or Delaware City, and emulate surrounding densities when sewer is available.
2. Use the width of roads, the capacity of water and sewer systems, and the soil characteristics to regulate development, using the densities and land uses on the comprehensive plan map as a guide.

Land Use (continued)

Objectives:

3. Avoid development of uses or densities that cannot be serviced by currently available or imminently planned infrastructure, unless such development mitigates its unplanned infrastructure impacts.
4. Permit single-family housing in standard subdivisions with 20,000 square foot lots with centralized sanitary sewer and water, adequate fire protection, and road access.
5. Allow multi-family units as part of PRDs, approved per the development plan.
6. Allow flexible lot sizes as part of PRDs.
7. Maintain the area at the borders of Delaware City between U.S. 42 and U.S. 36/S.R. 37 and along the 36/37 corridor as a suburban residential heart of the Township, with water and sewer provision there before any further expansion to the remainder of the Township. Maximum gross density of 1.25 units per acre for PRDs.
8. Develop policies for service provision that relate to the comprehensive plan.

Goal: To Provide Appropriate Recreation and Managed Open Space

Objectives:

1. Acquire additional land for a future township park with active recreation (playing fields for organized sports).
2. Create a series of mini-parks (less than 1 acre) with ¼ mile spacing as part of PRDs where densities are greater than 1 unit per acre. Create a series of neighborhood parks of 15 acres with active recreation with ½ mile spacing in PRD neighborhoods.

Goal: To Determine and Implement an Appropriate Land Use Mix

Objectives:

1. Direct Planned Commercial and Industrial growth along the 36/37 corridor.
2. Create architectural guidelines for commercial, industrial, and office development; avoid “franchise architecture” that has no community architectural look.
3. Acquire new sites for township facilities, including fire, police, road maintenance, etc., as needed.
4. Avoid prematurely zoning land beyond the reasonable needs of the real estate market.
5. Use the Comprehensive Plan as the guideline in zoning.
6. Avoid strip commercial development by addressing the proposed access management policies.

Goal: To Offer Development Alternatives to Annexation

Objective:

1. Work with the City of Delaware to possibly create cooperative agreements for commercial, industrial, or higher-density residential uses.

Goal: To Use Access Management Controls to Limit Key Access Points to Minimize Traffic Congestion

Objectives:

1. Require commercial parallel access roads and connections between planned commercial developments on major arterial streets.
2. Space new signals on U.S. 42 and 36/37 in accordance with ODOT’s Access Management Plan.
3. Adopt the appropriate ODOT Access Management recommendations; work with ODOT to prevent the deterioration of U.S. 42 and 36/37.

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Chapter 14
Recommendations

Intent of the Brown Township Comprehensive Plan

The Brown Township 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.

Sub Area 1 - Growth and 36/37 Corridor

Boundaries: *West*: Delaware Township/City; *East*: Conrail Railroad tracks; *North*: Conrail Railroad tracks; *South*: Berlin Township/Delaware City. Also includes the area south of Bowtown Road and west of Jumper Road.

Land Area: ±1,391 acres

General Facts and Findings

Sub Area 1 has access to U.S. 36/S.R. 37 and S.R. 521 and is adjacent to the City of Delaware. The Growth and 36/37 Corridor is intended to provide a transition from the high densities of Delaware City to the lower densities in the rural agricultural heartland.

The Sub Area is generally flat, with Pewamo soils mostly suitable for high-yield agriculture but unsuitable for septic systems. Public water is only available on most of 36/37 and a portion of Bowtown Road. Sanitary service may be available along the 36/37 corridor east of the railroad within a 5-10 year timeframe.

The area is characterized by large tracts of land still engaged in farming. To take advantage of the Township's proximity to the 36/37 corridor, well-designed and buffered planned commercial and planned industrial should be anticipated along 36/37. This area is regarded as a source of much-needed commercial/industrial tax revenues. Appropriate access management principles restricting left turns across traffic should follow ODOT standards.

The 2001 Delaware County Thoroughfare Plan shows a new road extending north and south from 36/37 east of Delaware City. This road is intended to act as an alternate route around the city, most likely as a limited access highway. City, county, and developer funds might potentially fund the road. The intersection of this new road at Glenn Road and 36/37 is an appropriate location for new commercial and office activity. However, rear access roads should be utilized to limit

curb cuts along the proposed new road and 36/37. The Delaware County Trail System Master Plan indicates an on-road route from Delaware to Kilbourne using Bowtown. This might be encouraged with signage but no off-road trail is proposed. Development along 36/37 would need to provide pedestrian and bike access along the corridor and other related roads.

Recommendations

1. Planned Commercial - Continue planned commercial development of the 36/37 frontage to Bowtown Road, as well as the portion south of 36/37 from the City of Delaware to the Conrail tracks, provided that:
   a) Parcels have limited access to 36/37 and are linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced, as approved by ODOT. Most access points should be right-in/right-out only.
   b) Any development in this area should take into consideration the proposed road alignments and recommendations of the Delaware County 2001 Thoroughfare plan.

c) Only low level, downward-cast lighting should be encouraged to prevent a halo effect on the night sky in deference to the Perkins Observatory, and to reduce light pollution as noted by residents.

d) To avoid sign clutter, ground signs should be the only commercial sign type permitted along 36/37. Billboard and pole signs should be prohibited.

e) A Brown Township "look" or architectural sign syntax should be developed.

f) Extensive landscaping should be required in parking lots to avoid the "sea of asphalt" to reduce runoff and temperatures (and thus ozone levels). Use reasonably-spaced landscaped islands at ends of rows to divide parking areas along 36/37 frontage. Any areas that are adjacent to existing and future residential uses should be landscaped with mounding. A standard landscape detail should be adopted.

2. Planned Industrial - Allow Planned Industrial development on the north side of 36/37 along the east and west side of the railroad tracks in the southeastern corner of Sub Area 1. There is an existing commercial and industrial use in Berlin Township on the south side of 36/37 (carpet factory and glass manufacturing) with access to 36/37 in Brown Township. This area is desirable due to its proximity to the railroad tracks and its accessibility to 36/37.

3. Residential - The remainder of Sub Area 1 (716 acres) is recommended for single-family development at 1 unit per 2 acres without sanitary sewer service. If centralized sanitary sewer becomes available, the plan recommends densities up to 1.25 units per acre. This area has natural boundaries of the Conrail tracks to the north and east, with the planned commercial and industrial development along 36/37 to the south, and Delaware City to the west. PRD/Cluster development with densities of up to 1.25 du/acre shall include open spaces to adequately serve the residents of the development. Any residential uses south of Bowtown Road should be designed to create a buffer between the agricultural and low-density areas and any non-residential areas adjacent to the corridor.

Sub Area 2 - Agricultural Heartland

Boundaries: *West*: Sub Area 1, Delaware and Troy Townships; *North*: Oxford Township; *East*: A line 1,000' from the floodplain and/or the top of 20% slopes on the west side of Alum Creek; *South*: Berlin Township

Land Area: ±9,386 acres

General Facts and Findings

The area is characterized by generally flat topography with prime agricultural soils in large undivided tracts of land. There is no central sewer, none proposed by the County, nor is it anticipated that Delaware City could provide sewer service in the foreseen future. Soils are generally unsuitable for on-site treatment plants with land application systems. There is water service for most of this planning area.

Recommendations

1. The plan recommends this area to be the agricultural heart of the Township. Due to the impermeability of soils and lack of sanitary sewer, the minimum lot size for single-family residences should be 2 acres. To preserve agriculture, conservation subdivisions such as the Farm Village Planned Developments could be encouraged at 1 unit per 2 gross acres with 15,000 square foot lots in cluster developments and contiguous open space preserved for agriculture. Development rights could be transferred from agricultural lands to directly abutting, adjacent tracts for Farm Village developments, thus saving this area as a permanent agricultural and low-density core of the Township.

2. The 2001 Delaware County Thoroughfare Plan shows a new road as a northern east-west connector to aid in regional traffic movements. This road would initially extend west from County Home Road toward U.S. 23, and on toward Mink Street in Thompson Township.
3. A second east-west road would connect with a new north-south road and aid in bypassing traffic from Delaware City.
4. The primary use for the Agricultural Heartland will be for farm and accessory uses.
5. Leonardsburg is located in the northern part of this Sub Area and is not anticipated to grow significantly during the planning period. It could serve as a center for a traditional neighborhood development if sanitary sewer were provided.

Sub Area 3 - Old Village of Kilbourne

Boundaries: *North*: A line approximately 1,600' north of S.R. 521; *South*: south boundary of lots on the south side of Bowtown Road; *East*: east boundary of the lots on the east side of North Old State Road; *West*: A line approximately 850' west of North Old State Road

Land Area: ±107 acres

General Facts and Findings

This Sub Area includes the unincorporated Village of Kilbourne and additional land to the south, located in the center of the Township. The old Village of Kilbourne is a small-lot traditional neighborhood development with mixed uses on the west bank of Alum Creek Lake. Kilbourne's traditional character could be threatened if adjacent development does not take into consideration its unique architectural and spatial features. The Village is defined by skinny streets arranged in a grid pattern with small setbacks, and many historic buildings.

Sub Area 3 includes the existing Village and also encompasses enough land to the west to double its size. Sub Area 3 also includes 30 acres for a possible township park that is currently part of a large agricultural tract located directly to the north of the existing Village. The Old Kilbourne Village Center would be at the heart of the Township's small-town commercial activity with small shops mainly catering to local residents. Commercial and residential development should meet architectural standards and setback requirements to maintain the traditional pedestrian-oriented character of the Village.

Kilbourne was originally platted as the town of Eden with additional land added to extend the village south to Bowtown Road. The lots were platted prior to the adoption of zoning. Some of the small platted lots may be able to obtain building permits as non-conforming lots of record. Since many of the lots are less than 10,000 square feet this scenario is only feasible with central sewer.

Recommendations

1. Any growth within the Kilbourne area is recommended to retain and even promote elements of a traditional, walkable mixed-use neighborhood. To achieve this, a gross density of 2 units per acre is recommended if central sewer becomes available. Without sewer, development is recommended at a density of 1 unit per 2 acres.

2. Architectural standards should be developed to retain the traditional neighborhood character.
3. If sewer becomes available, both infill development and new development on approximately 22 acres west of the existing village is likely to occur.
4. A 30-acre tract directly north of the Village of Kilbourne along North Old State Road should be considered as a possible location for a township park. The tract is centrally located, large enough and flat enough for active recreation facilities, and is easily accessible. The Township has two baseball fields north of the Township Hall, and this new 30-acre tract would be an extension of this use.
5. Streets should be designed to balance traffic between pedestrians, bicycles, and automobiles by connecting multi-use paths, village green areas, and pocket parks.
6. Garages should be located behind houses, and houses and porches moved closer to street to maintain the historic grid design from the street entrance.
7. Shops and offices could use rear parking lots to encourage shopping and browsing.
8. Complementary mixed land uses all within ¼ mile walking distance, center to the edge of the Village.
9. Surface water runoff must be carefully planned to avoid pollution of the Alum Creek Reservoir.

Sub Area 4 - Critical Resource

Boundaries: 1,000' from floodplains and/or the top 20% or greater slopes surrounding the Alum Creek Lake, and 200' east of Hogback Road in the southeastern portion of the Sub Area

Land Area: ±4,068 acres

General Facts and Findings

This Sub Area contains the most rugged topography in the Township. It is heavily wooded and consists of large ravines that drain into Alum Creek Lake, a public drinking water reservoir. Steep slopes, scenic views, vistas, wildlife, and even scenic roadways typify the landscape. These elements are all critical to the environmental stability, natural beauty, and culture enjoyed by Brown Township. Roads are narrow, curving with low speed limits, following the Creek and terrain. An extensive veined pattern of deep ravines delivers surface water rapidly to the reservoir.

There is no sanitary sewer and none proposed. The Township's intent for this area is to limit the population density in order to protect surface and groundwater quality, to prevent pollution of Alum Creek Lake, to prevent undue congestion of the primitive rural road network, to protect floodplains, and to protect the real estate values of large-lot residential neighborhoods.

Recommendations

1. The plan recommends a gross density of 1 unit per 5 acres for all lands within 1,000 feet of the 100-year floodplain and/or top of 20% or greater slopes as well as 200 feet east of Hogback Road. This lower density of development is intended to limit the disturbance to the natural ecosystem and the preservation of groundwater.
2. A streamside "No-build" buffer is also recommended within the Sub Area for the protection of the Alum Creek Lake and its wildlife. This buffer would extend 120 feet from the normal high-water line.

3. The Sub Area should encourage conservation subdivision guidelines that promote natural landscapes. Tree preservation is encouraged to reduce stormwater runoff and protect surface and groundwater quality.
4. Hogback Road's scenic qualities should be protected by limiting future curb cuts where feasible and preserving existing trees as part of future subdivisions.
5. Further preservation of natural areas in the Township could be achieved through any or all of the following:
   a) Identify and catalog the community's environmentally sensitive areas.
   b) Establish a land trust to acquire and accept development rights and easements to unique natural areas such as scenic views, woodlands, and wetlands.
   c) Co-operate with other public and private agencies interested in protecting the critical resources of the Township.

Sub Area 5 - Estate Conservation

Boundaries: *North*: Oxford Township; *West*: Sub Area 4; *East*: Kingston Township; *South*: Berlin Township

Land Area: ±1,474 acres

General Facts and Findings

Sub Area 5 lies in the far eastern portion of the Township. It is isolated from the west side of the Township by Alum Creek Lake. Soils are generally suitable for leaching and the topography is more conducive to development than Sub Area 4. The land is flatter, and surface water is not discharged as directly to Alum Creek Lake. This Sub Area has accessibility to major thoroughfares (36/37/I-71 interchange and potential S.R. 521/I-71 interchange). Therefore, densities can be higher than the Critical Resource Sub Area. However, since Sub Area 5 is separated from the west side of the Township by Alum Creek Lake and no sanitary sewer service is available or proposed, an overall low density is appropriate.

Recommendations

The plan recommends a gross density of 1 unit per 3 acres. To help preserve open space, Conservation Developments with an overall density of 1 unit per 3 acres and lot sizes of 15,000 square feet with contiguous open space should be a permitted use.

Chapter 15
Implementation

Recommended Zoning Amendments

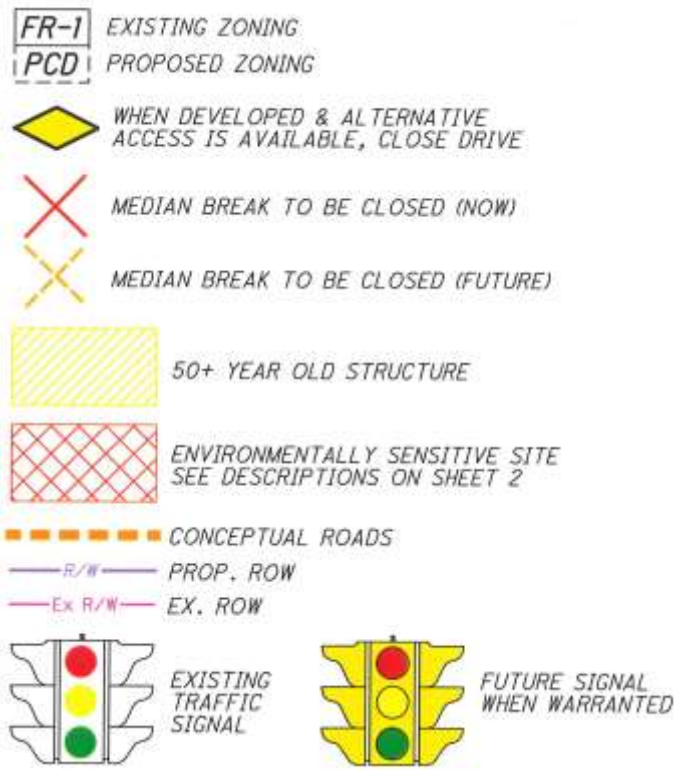
1. Adopt access management policies for all township roads, make a condition of Development Plan approval for Planned Developments and curb cut permits from township road superintendent.
2. Require traffic studies for any use that generates more than 100 new trips per day, or as determined by the proposed Delaware County Traffic Impact Standards. Require developer to mitigate his traffic impact as necessary. Establish a Level of Service C as the desired level of service.
3. Use the Comprehensive Plan as the guide where new roads need to be built, and negotiate their provision as part of development of new super blocks of land. Secure the right-of-way as part of the subdivision plat or by acquisition.
4. Adopt NRPA standards for recreational areas and secure the donation and/or construction of useable open space by developers of major new residential subdivisions (30 homes or more).
5. Require linkage of new neighborhoods with trails and greenways along natural streams. Add greenway criteria to the zoning resolution, count its area as open space. Adopt a standard for the make-up of trails.

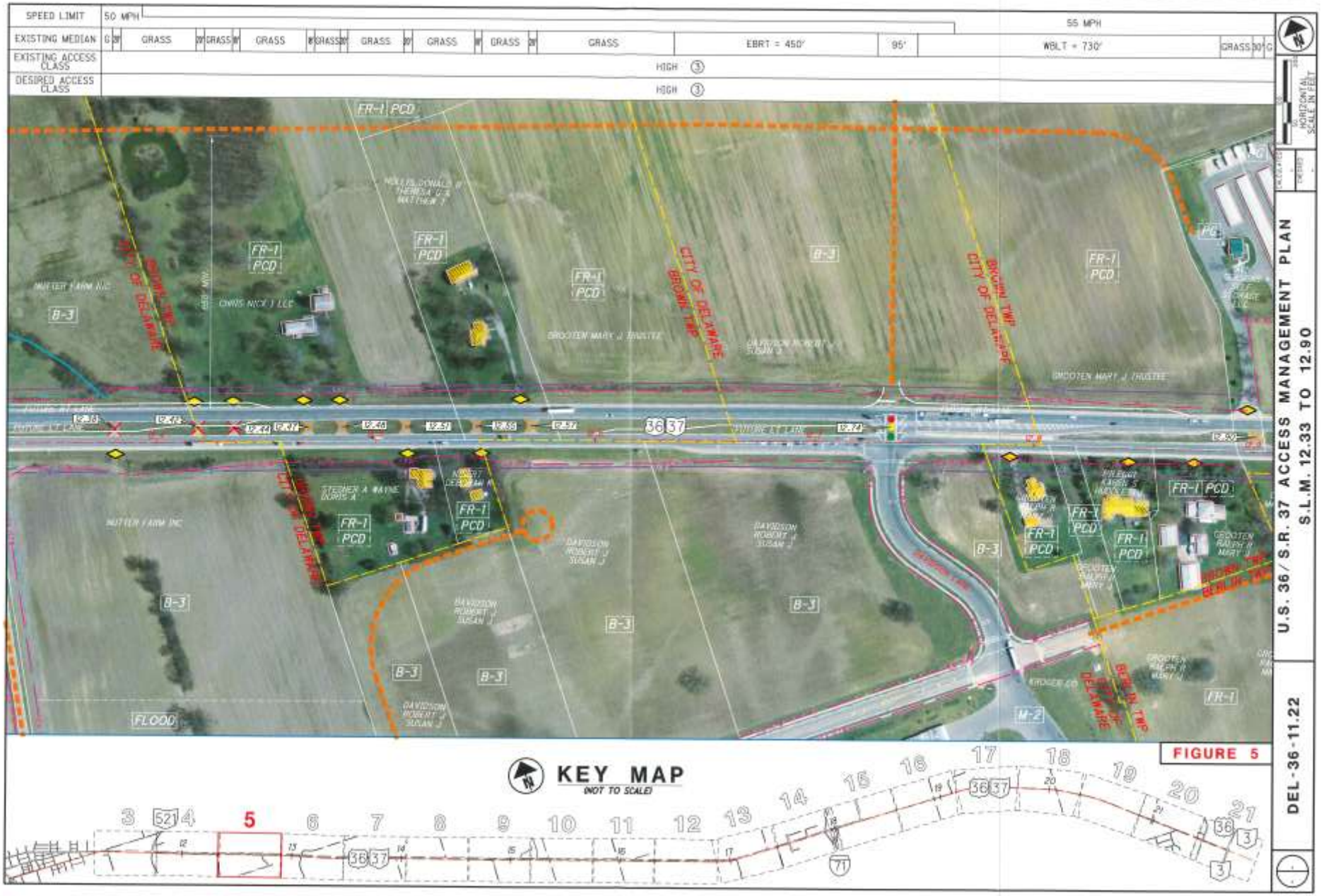
Non Zoning-Related Actions

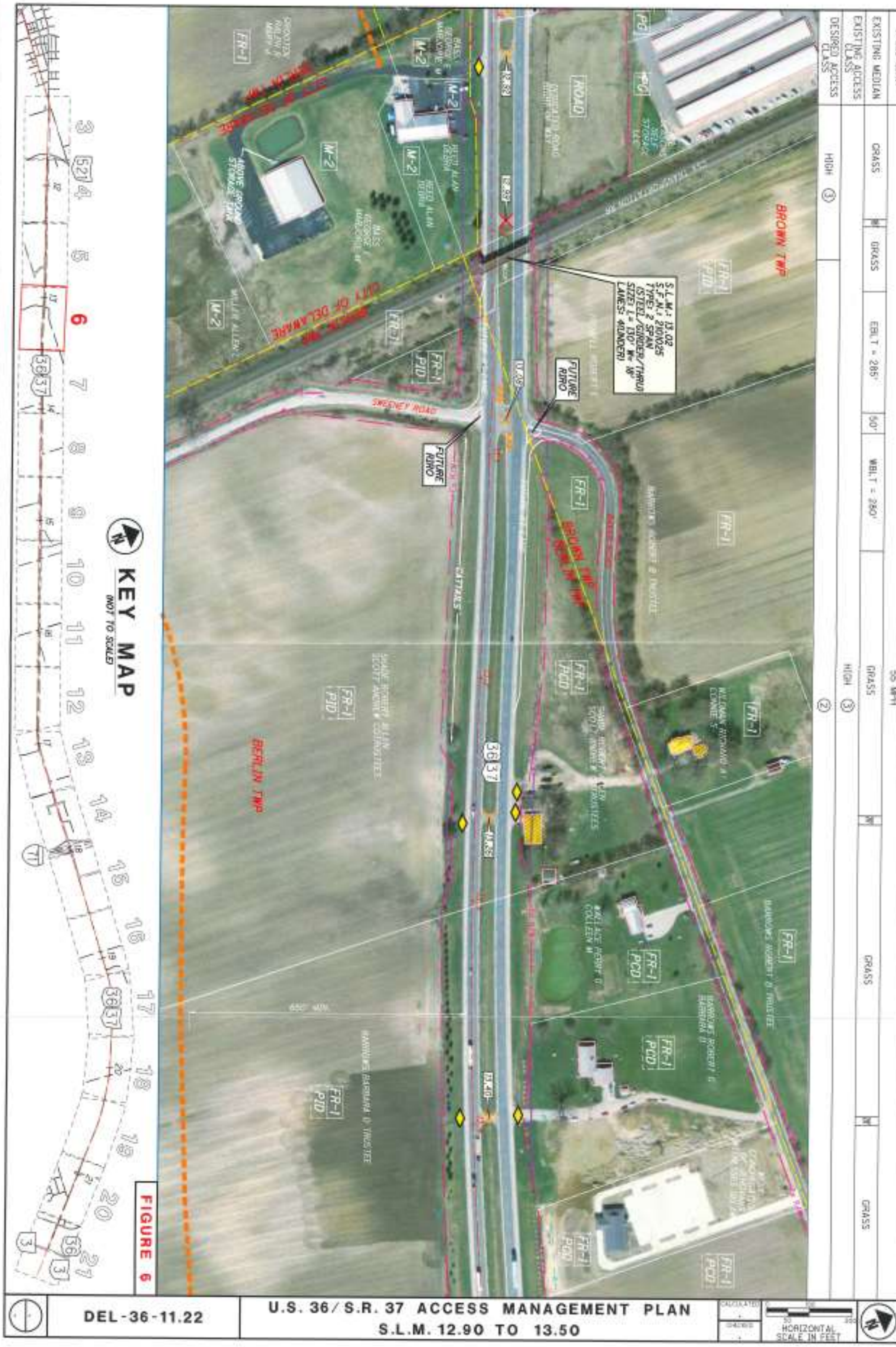
1. Acquire 50 acres of land for a future township park.

APPENDIX A

ODOT U.S. 36/S.R. 37 Access Management Plan (2010)




SPEED LIMIT
50 MPH
55 MPH
EXISTING MEDIAN
GRASS
EBRT = 450'
95'
WBLT = 730'
EXISTING ACCESS CLASS
HIGH 3
DESIRED ACCESS CLASS
HIGH 3
FR-1 PCD
B-3
M-2
FLOOD
CITY OF DELAWARE
BROWN TWP
KEY MAP
(NOT TO SCALE)
FIGURE 5
U.S. 36/S.R. 37 ACCESS MANAGEMENT PLAN
S.L.M. 12.33 TO 12.90
DEL-36-11.22


SPEED LIMIT
EXISTING MEDIAN
EXISTING ACCESS CLASS
DESIRED ACCESS CLASS
55 MPH
GRASS
HIGH
BROWN TWP
BERLIN TWP
SWEENEY ROAD
FUTURE RDRD
KEY MAP
(NOT TO SCALE)
FIGURE 6
DEL-36-11.22
U.S. 36/S.R. 37 ACCESS MANAGEMENT PLAN
S.L.M. 12.90 TO 13.50
HORIZONTAL SCALE IN FEET

APPENDIX B

Delaware County Thoroughfare Plan (2001)

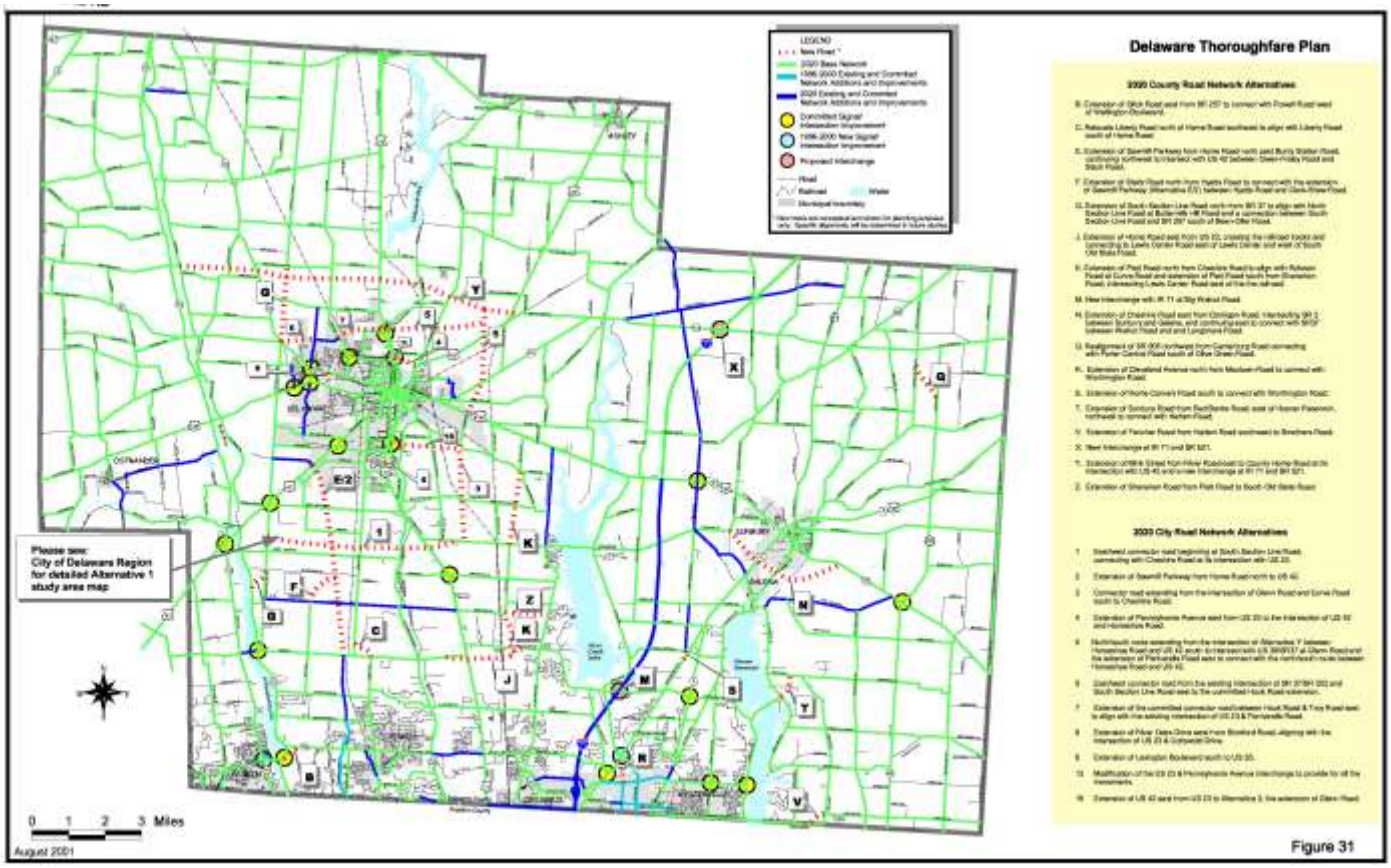


Figure 31

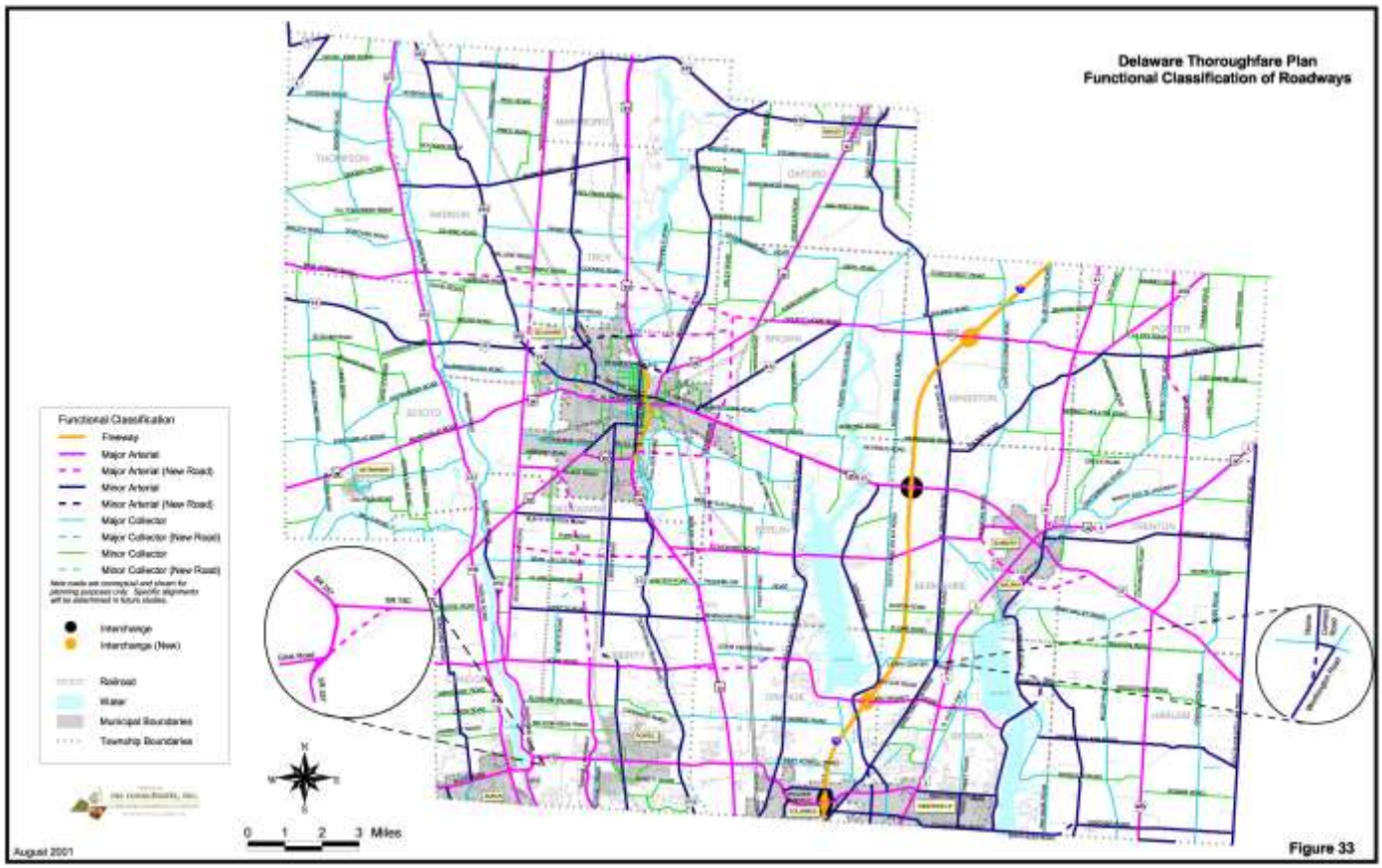


Figure 33

APPENDIX C

Brown Township Public Survey Results

Survey takers were given the options “strongly agree,” “agree,” “neutral,” “disagree,” and “strongly disagree.”
A score of 100 would represent 100% “strong agreement” to the given statement.
A score of -100 would represent 100% “strong disagreement” to the given statement.

Strengths

Low densities, quiet, and low crime rate	**84.8**
Good Location – Proximity to Delaware City and I-71	**81.8**
Alum Creek State Park Recreational and business opportunities	**76.8**
Prime farmland, very large amount of Pewamo soils	**72.7**
Homes are a good value compared to south of I-270	**63.6**
Proximity to Columbus	**63.6**
SR 37/US 36, SR 521 and SR 42 corridor benefits	**60.6**
Utilities in place include water, electric, gas and some areas have cable	**56.6**
Zoning in place; PRD ordinance updated; have a zoning inspector	**55.6**
Village of Kilbourne – Homey feel with narrow streets and closeness of residents	**37.4**
Contract with DCRPC to create comprehensive plan	**22.2**

Weaknesses

Increased traffic along corridors due to increased growth of County. Roads and Infrastructure can’t handle traffic.	**43.4**
Cost of contracting for planning assistance, etc.	**23.2**
Not adequate planning regarding elementary school district boundaries	**20.2**
No comprehensive plan to guide zoning and direct growth	**16.2**
No sewer; a portion of the Township is still not served by Del-Co water.	**10.1**
Pewamo soils are undesirable for leach fields	**6.1**
Proximity to I-71 and Columbus	**-29.3**
Proximity to Delaware City and Columbus	**-36.4**

Opportunities

Development will be limited without sewer due to poor soils; Better probability that farming will remain a mainstay of Township	**69.8**
Close to amenities offered by Delaware City (Convenience)	**60.4**
Public access locations in Township to Alum Creek State Park	**40.6**
Professional help to set future course of growth; Site specific recommendations for the entire Township; Become educated stewards of the Township’s future.	**38.5**
Zoning can be further supported and understanding will increase through comprehensive planning process	**35.4**
No sewer in the township may decrease the probability of high density development	**24.0**
Potential to create local commercial district that may grab some traffic from SR 521 within the Village of Kilbourne, not dominated by “big box” retail; Closeness of residents may increase participation in local planning.	**9.4**
Opportunity to use commercial districts to grab through traffic generates tax base	**-5.2**
Possibilities for commercial and residential development in the Township	**-11.5**
On site central sewers with land application of treated effluent are available options to allow cluster development	**-12.5**

Threats

Annexation and possible increased traffic from further growth into the township	**81.3**
Lack of sewer service may initiate annexations into City; Higher densities could be considered a loss of 'rural character'.	**64.6**
Demand for housing near park may increase runoff into Alum Creek Lake.	**59.4**
Large lot subdivisions in areas with only small amounts of good soil may still cut into the farmland	**54.2**
Traffic may put pressure on infrastructure and the Village of Kilbourne.	**51.0**
Potential for infill housing within the Village of Kilbourne on existing platted lots if sewer becomes available	**28.1**
Perception the government is big brother, heavy handed	**19.8**

Goals

To preserve natural beauty, wildlife, quietness and open space.	**93.9**
To conserve surface and ground water quality	**93.9**
To ensure significant and diverse citizen input into the planning process.	**90.9**
To protect sensitive surface and groundwater aquifers.	**87.9**
To avoid inappropriate sprawl and retain critical resource areas and wildlife corridors	**87.9**
To retain rural character.	**84.8**
To use access management controls to limit key access points to minimize traffic congestion	**84.8**
To retain economically viable agriculture	**78.8**
To retain an overall low density.	**78.8**
To provide appropriate recreation and managed open space.	**66.7**
To determine and implement an appropriate land use mix	**63.6**
To offer development alternatives to annexation	**60.6**
To retain a primarily single family residential housing mix, but offer diversity of housing choices when needed services	**45.5**