

# Come home to Pierpont

## Pierpont Township, Ohio Revitalization & Development Plan 2018-2019



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## Executive Summary

# Come home to Pierpont

### A vibrant rural community with a strong social and economic center

**The situation.** Pierpont Township is growing. The population in 2016 was 1,500 people, a 17% increase from 2010. June 2018 ODOT traffic count reported 2,264 vehicles/day in downtown Pierpont at the intersection SR7 and SR167, an increase of 204 vehicles since 2013. Located in eastern Ashtabula County, Pierpont has scenic agriculture and forestry-based landscapes cultivated by English and Amish landowners a short drive from the shores of Lake Erie and Pymatuning Reservoir. Pierpont Township has numerous agricultural and non-agricultural enterprises with potential to grow and expand the economic base of the township. **Downtown Pierpont, the social and market center of the township is at risk with loss of local businesses, aging housing and commercial buildings, and inadequate infrastructure to grow existing businesses and draw new residents, business and services.**

**The Pierpont Revitalization Committee charge.** Township Trustees in April 2018 appointed a committee to look forward to 1) discover the aspects of our community that we value and would like to strengthen and restore; 2) identify key infrastructure, economic and environmental areas we could improve; 3) explore new opportunities and potentials, and 4) encourage actions and investments that can revitalize our community.

**Community values and perspectives.** A 2018 survey of Pierpont Township residents reveals over 80% of residents value Pierpont as a small town and the sense of community they have from living here. The Pierpont Volunteer Fire Department, US Post Office, Pymatuning Valley School district and churches close to where residents live are important and valued institutions. Residents have concerns about the cost and repair of new septic systems, aging housing stocks and buildings in poor condition and adequate all-season roads. More than two-thirds of the residents consider it a problem that Pierpont lacks destination services downtown, lacks access to reliable internet service, and lacks a sewer system downtown to draw new business and grow existing businesses. Overall residents would like a strong social-economic center with more shopping opportunities and a more attractive downtown. Further they believe that residential housing would grow if there were more retail business.

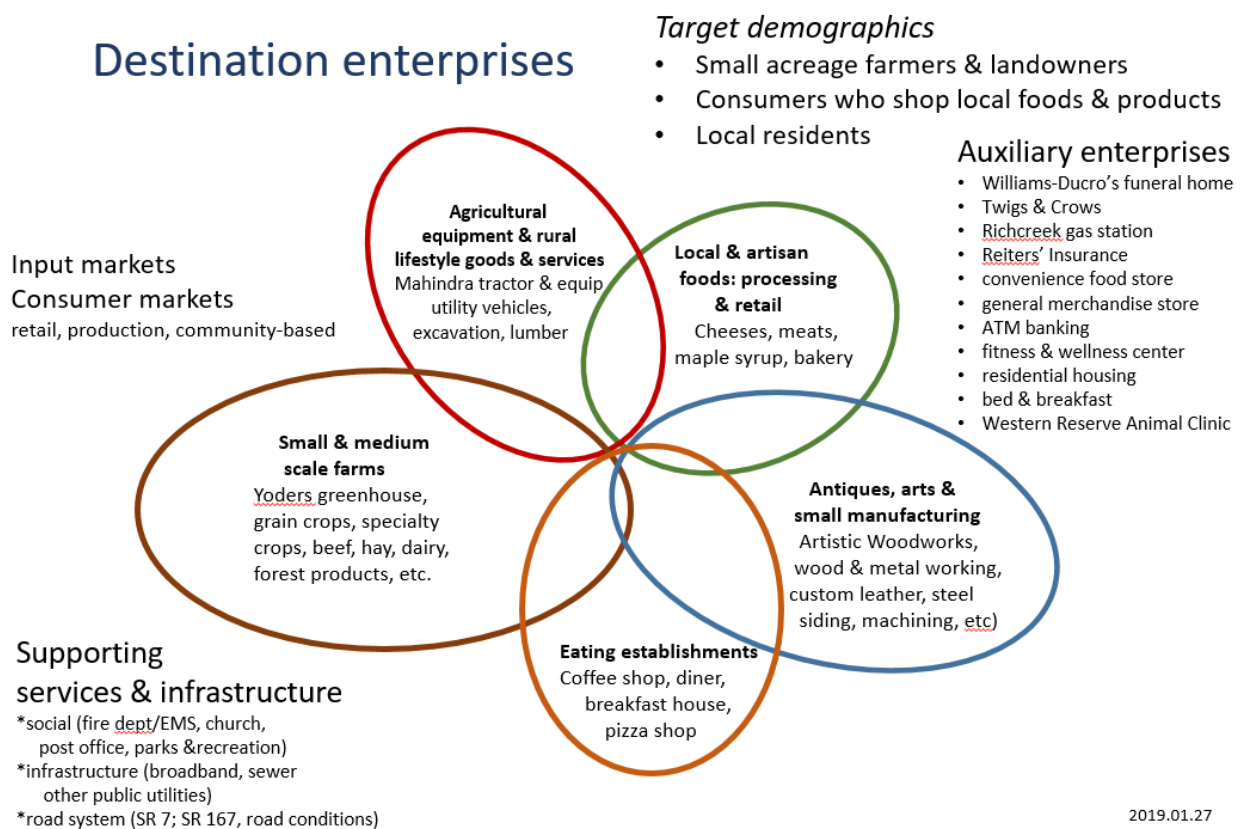
Residents suggest three actions that could be taken now without spending money: 1) make Pierpont Township a more attractive place, 2) enforce existing and strengthen current zoning laws, and 3) strengthen our sense of community.

**The vision.** Pierpont is an attractive, vibrant small rural community of industrious people surrounded by rivers, agricultural and forested landscapes with **a strong social and economic center.**

## The plan based on survey findings

1. Develop an economic action plan;
2. Explore improvements in broadband access, reliability, and speed;
3. Explore a downtown sanitary sewer system to bring in new businesses and grow existing ones; and encourage quality residential housing;
4. Actively engage partners and funding sources.

## Pierpont Economic Development Framework. A rural agri-based consumer economy



**The challenge and goal.** A revitalized Pierpont that stimulates and unifies the township economy, strengthens social ties and renews the community.

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## 1.0. Introduction

This Pierpont Township Revitalization and Development Plan is intended as a “living” document prepared by the Pierpont Revitalization and Development Committee to assess the current economic situation and propose community actions that can help Pierpont act now and prepare for the future. It includes Pierpont assets and values; residents’ concerns about current conditions in the township; barriers to future economic vitality, and a vision and plan for Pierpont’s future. The committee **challenge and goal is to propose strategies and action items that will stimulate and unify the township economy, strengthen social ties and renew the community.**

The Revitalization Committee began as an ad hoc group of concerned local residents and businesspersons informally meeting to discuss how to re-energize and re-build the economic vibrancy that has historically characterized Pierpont Township. The recent loss of a viable grocery store coupled with earlier closure of the local elementary school and bank branch were events that eroded the economic and social health of the community. Although the township population has grown 17% to over 1500 people in the last 15 years, economic growth has been faltering. With the loss of an economic center, community residents shopping and work patterns are fragmenting the social fabric of the township, often leaving new residents unconnected to their neighbors. Early on it became apparent that this effort would require the involvement and commitment of the entire township to create positive change in the community. The group reached out to Pierpont community leaders and residents, Ashtabula County leadership, and organizations and institutions with public and private missions to help rural communities to gather information and data that could guide how to tackle this difficult and complex problem. The Township trustees agreed to officially appoint a committee to work on finding solutions to the economic issues facing Pierpont (see Appendix A for resolution and charge).

One of the first efforts of the committee was to develop and conduct a community survey of the 600+ households in the township. The results of this survey were shared with the community in a public forum on September 4, 2018 and used to create a shared vision:

*Pierpont is an attractive, vibrant small rural community of industrious people surrounded by rivers, agricultural and forested landscapes with a strong social and economic center.*

The foundation of the Pierpont Township Revitalization and Development Plan is based in this vision of **a vibrant rural community with a strong social and economic center.**

The community meeting was a good start toward realizing the vision. 183 Pierpont residents and 23 landowners/not residents responded to the survey. Over half of the respondents were willing to actively help revitalize Pierpont. Many wrote extensive, thoughtful comments about concerns, love of Pierpont, satisfaction and discontent with

their community, and hopes for the future. A number of respondents worried about over-development and cautioned that we not lose the small town, rural atmosphere in the process of strengthening the social and economic aspects. The committee recognizes this concern and has attempted to balance plans for economic revitalization and growth with valuing and protecting the small town rural atmosphere that makes Pierpont “home.”

There is a shared understanding that revitalizing Pierpont is a long term commitment. It will need the people of Pierpont to generously give of their talents and resources; and will require they listen to each other and are respectful and tolerant of many differences in cultures and ways of thinking. A renewed community is possible when we focus on shared values and vision for Pierpont and we encourage each other to seek established and innovative, unique ways of working towards the goal. There is not one, but many paths that can get us to our vision.

The community survey was central in solidifying the near term priorities of the Revitalization Committee:

1. Develop an economic revitalization action plan;
2. Explore improvements in broadband access, reliability, and speed;
3. Explore a downtown sewer system to bring in new businesses and grow existing ones; and encourage quality residential housing
4. Actively engage partners and funding sources

This document proposes an economic revitalization action plan. Background processes used to gather information, build partnerships, assess infrastructure needs, and evaluate potential scenarios are discussed.

Section 2 presents Pierpont Township demographics and current zoning maps. There is an urgent need for us to evaluate current zoning and update our maps and regulations to protect the small town rural atmosphere we value.

Section 3 presents the findings of two community surveys.

Section 4 Economic Development proposes a development framework, guiding principles for making Pierpont more attractive and several scenarios for downtown Pierpont destination enterprises.

Section 5 examines current infrastructure and explores infrastructure needed to draw downtown Pierpont businesses with a focus on state highways and all-season roads, broadband, downtown household septic systems and public sanitary sewer system.

## 2.0. Pierpont Township



**Pierpont Township’s population is growing, has become younger, and has considerably higher median incomes and median home values than 15 years ago.**

The 2016 population of Pierpont Township at 1503 people consisted of English and Amish households. This represents about a 25% increase from 2000 US Census of 1197 people (see figure 1 for Pierpont Township census data). There is a slight drop in percent of the population 65 years and over during this period, from 13.8% in 2000 to 10.4% in 2016. There is a corresponding increase in children under the age of 14. Median age similarly dropped from 2000 to 2016 from 36 to 22 years of age. This trend likely can be attributed to the increase in Amish families with more children per household than English families. In 2016 less than half (46%) of Pierpont residents reported being employed, 1% unemployed and more than half (53%) were not in the labor force.

There are over 600 households in Pierpont Township. Median 2016 household income was \$50,074, an increase of \$17,574 over 2000 median income of \$32,500. Township housing units in 2016 had a median value of \$154,800 with 44% built in 1939 or earlier.

**2.1. Scenic community.** Pierpont has a rural forested and agricultural landscape characterized by the gently rolling hills of the Appalachian Plateau. The terminal moraine of the Wisconsin glacier halted in Pierpont Township and left behind glacial till, weathered shales and isolated large boulders as it receded. The East and West Branches of the Ashtabula River, both designated Ohio Scenic Rivers dissect the township as they flow north into Lake Erie (figure 2). Two covered bridges, one on Caine Road and a second on the south side of Graham Road historically have enabled traffic to cross the West branch of the Ashtabula River.







**Pierpont Twp Census Data**

	2016 ACS	2010 ACS	2000
<b>Population</b>			
Total Population	1503	1354	1197
Male	782	740	589
Female	721	614	608
Median Age	21.6	32.7	36.1
Under 14 years	30.6%	11.9%	24.6%
65 years and over	10.4%	12.4%	13.8%
<b>Race</b>			
White	100%	96.8%	98.70%
Hispanic	1.70%	12.9%	1.30%
<b>Employment</b>			
Employed	46.1%	61.5%	59.2%
Unemployed	1.0%	9.9%	2.8%
Not in Labor Force	52.9%	38.5%	38%
<b>Income</b>			
Median Household Income	\$ 50,074	\$ 35,299	\$ 32,500
All people below poverty level	44.7%	16.1%	18%
Under 18	64%	28%	34%
Over 65	14.7%	0%	9.8%
<b>Housing</b>			
Total Housing Units	404	674	474
Occupied	370	521	428
Vacant	34	153	46
Mobile Homes	44	143	104
<i>Built 1939 or earlier</i>	44.30%	40.10%	28.6%
Owner Occupied	79.2%	79.10%	84.8%
Median Value	\$ 154,800	\$ 109,900	\$ 84,200
Median Rent	\$ 649	\$ 728	\$ 413
2 Vehicles Available	58.60%	28%	55%
0 Vehicles Available	12.4%	7.70%	5.6%

25 West Jefferson Street, Jefferson OH 44047  
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Figure 1. Pierpont Township Census 2000-2016

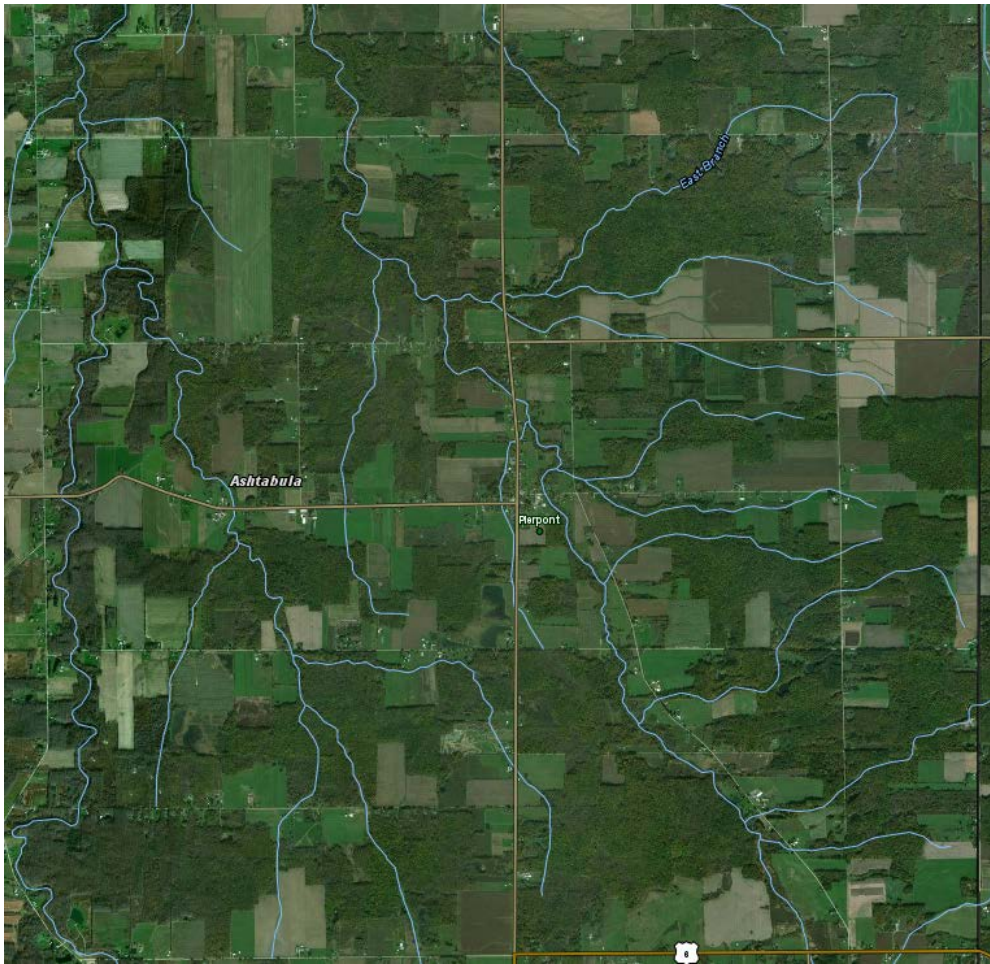


Figure 2. USDA NRCS Web Soil map. The headwaters of the East and West Branches of the Ashtabula River run through Pierpont Township and flow north to Lake Erie

**2.2. Unique heritage.** Pierpont was settled in the early 1800s and officially became Pierpont Township in 1818. Sometime between 1798 and 1808 the first settler, Edward Spear arrived from Vermont, and built the first log home in the south-east corner of Pierpont. After a short time he left for other parts, and the Native Americans living in the area burned his log home. In 1808 the first permanent settlers, immigrants Wareham Grant, Harvey Rockwell, Martin Vosburg and Ewins Wright arrived. They cut trees for their log homes, settled in, and waited for their families who arrived a year later.

By 1818, their determination and commitment for their new-found home would lead to what we know today, as Pierpont Township. By 1837, a church, schoolhouse, post office and hotel had all been built in the township. Now 200 years later, the descendants of these brave pioneers as well as many new families have settled the township and call it home. They find themselves using the same determination and commitment to make Pierpont Township a vibrant, healthy place to live, work, raise families, and enjoy the later years of life.

**2.3. Township zoning.** Pierpont Township is zoned and has zoning regulations that govern the location, size, height, and use of building and structures, the area and dimension of lots and yards. These regulations also set forth the use of land and divides the township into zones or districts deemed best suited to carry out specific purposes. The township has the following districts:

Agricultural-Residential District—designated Agr-R  
Business and Neighborhood Commercial—designated B  
Industrial and Manufacturing—designated I  
Recreation—designated R  
Special Use-Conditional Zoning Certificate

The Agricultural-Residential District (Agr-R) encompasses the entire township, with both agricultural and residential uses permitted throughout without regard to other district designations layered upon this district. The Business and Neighborhood Commercial District (B) encourages businesses and commercial enterprises such as, but not limited to, retail and wholesale stores, eating establishments, gas stations, arts and antiques shops, service business, churches and community organizations in addition to agricultural and residential uses. The Industrial and Manufacturing District (I) is well suited to larger scale production and manufacturing uses where concern for activities and traffic may be disruptive of residential and smaller-scale neighborhood enterprises. However this district may include agricultural, residential, commercial and business uses. Recreation Districts are areas set aside specifically for public and private parks and recreation but can include agricultural, residential, business and commercial uses. Lastly, Special Uses require a conditional zoning certificate issued by the Township Zoning Board when a variance seems appropriate and congruent with community social, economic and environmental well-being. Zoning variances must prove “unnecessary and undue hardship” in accordance with Ohio 11<sup>th</sup> District Court of Appeals case law.

**2.3.1. Pierpont Zoning maps, 1985.** The current township and downtown Pierpont zoning maps created in 1985 (Figures 3 and 4) are shown below. Township zoning regulations, based in Ohio Law and Ohio Revised Code 519.12 and subject to County Planning Commission review, provide a method and proceedings for township administration and enforcement. **District definitions and map locations as well as procedures for administration and enforcement are currently under review.**

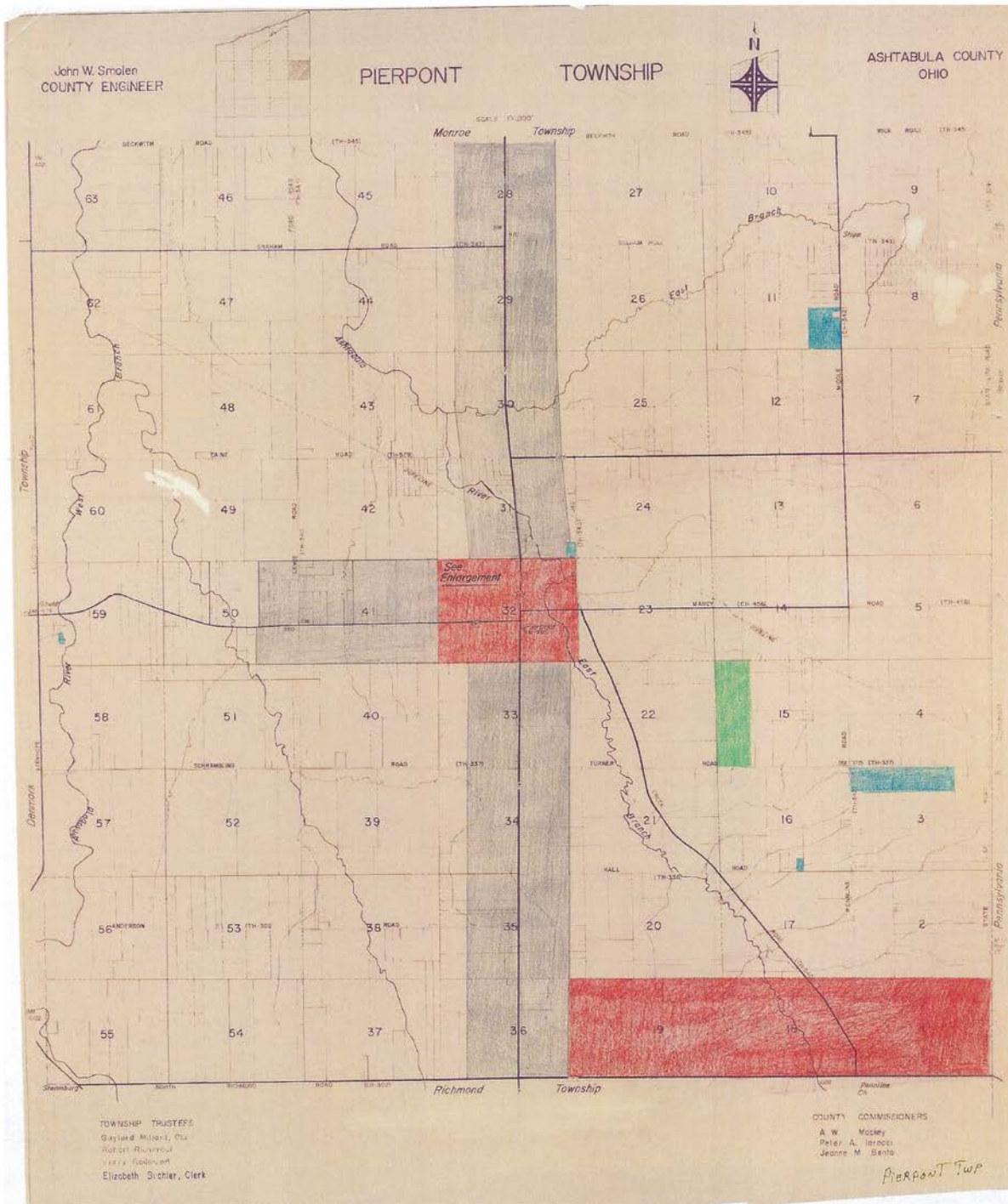


Figure 3. 1985 Zoning map of Pierpont Township.  
Color key: no color-residential and agriculture; gray-industrial; red-commercial; green-parks, blue-public

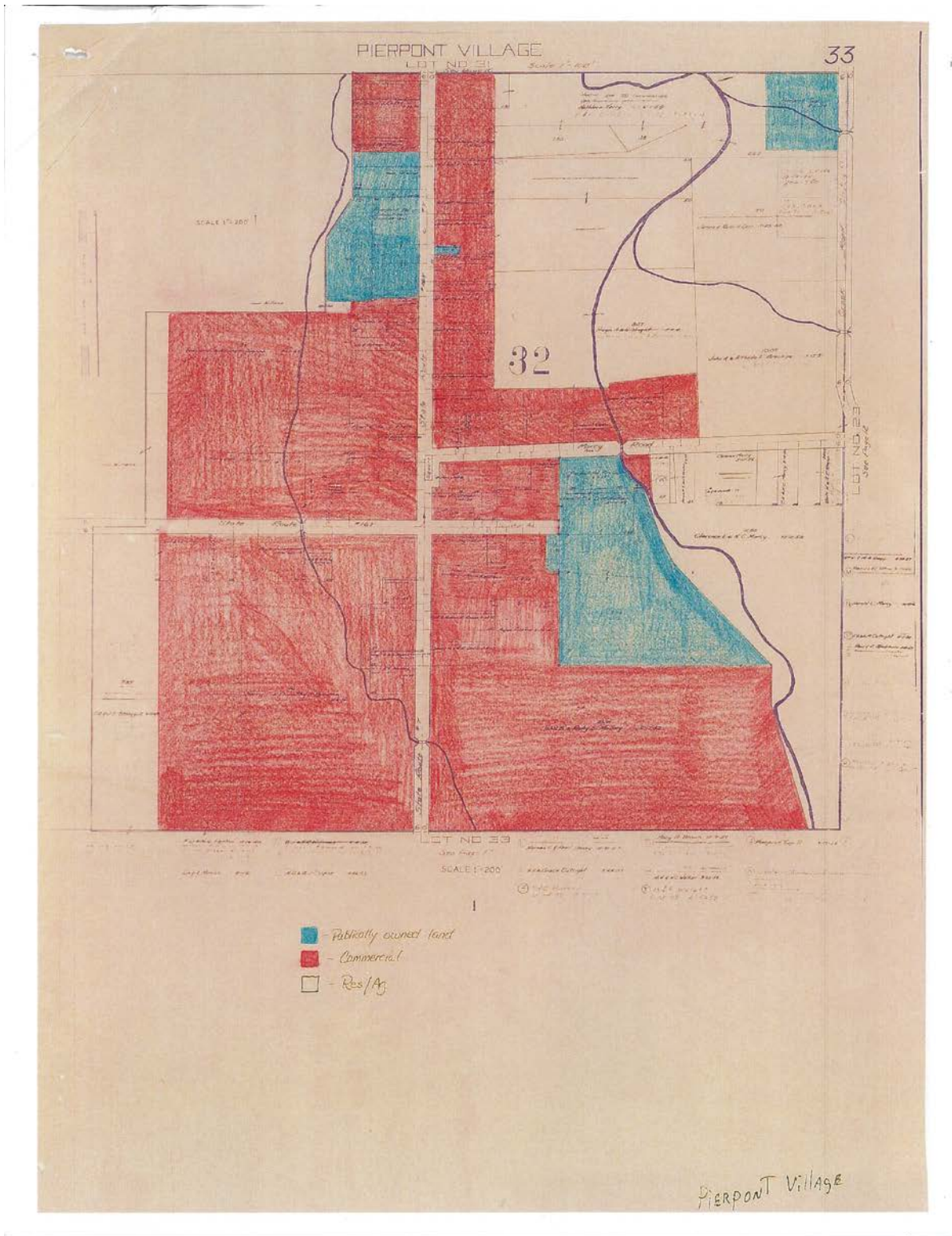


Figure 4. 1985 zoning map of downtown Pierpont  
 Color key: no color-residential and agriculture; gray-industrial; red-commercial; green-parks, blue-public lands

### **3.0. Community residents' values and perspectives**

Two surveys were conducted in 2018 to discover the aspects of our community that we value and would like to strengthen and restore. Findings are used to guide the revitalization development plan, set priorities and develop short and long term action items.

**3.1. June 2018 Pierpont School Alumni survey.** Selected qualitative findings from a two-question survey given to 110 attendees of the 2018 Pierpont Alumni dinner meeting held at the Pierpont Volunteer Fire Department Community building, Saturday June 2 are presented below. Note: Selected quotes represent similar comments and observations from three or more people. About half attendees were currently non-residents of Pierpont, but former residents and students of Pierpont schools [incl Pierpont School and consolidated school systems: Buckeye and Pymatuning] for one year or more. A number of spouses attended, many who were also Pierpont School alumni. Response n=38; 34.5% response rate.

#### **Q1. What is one “cool” thing about Pierpont Township that you really like?**

*Small town feel and the beautiful outdoors.*

*People who work together and support each other. Strong sense of community. A place to come home to.*

*Friendly people. Opportunities to build close, caring relationships.*

*Open spaces, farmland, covered bridges and country roads.*

*Peaceful and quiet, picturesque.*

#### **Q2. What would you like Pierpont Township to look like in ten years (2028) to make it a great place to live or visit?**

*Small business need to come back. Restaurant where [we can] get breakfast, lunch or dinner, good quality home cooked food.*

*A coffee shop where people could gather, buy ice cream, or a winery. A good grocery store, perhaps a Dollar General, and gas pumps. Local people to work and manage businesses here.*

*At least one convenience store and a restaurant. Something close, as well as the opportunity to run into your neighbors.*

*Things that would draw newer families with kids. A nice healthy environment to raise them. A park and/or play area for kids.*

*A senior independent living facility, apartments.*

*Keep the country atmosphere. Don't let the place get junky; would be an improvement if some of the junk vehicles and other junk were removed from several properties. Enforce the zoning laws that are in place.*

*The town would improve the look by taking down unused old buildings. Park-like feel, landscaped patches of ground. More trees downtown along Rt 7. Sidewalks that are maintained, a walkable community.*

*More focus on tourism, campers and hunters travelling through to Pymatuning Reservoir; agriculture, farms, and Amish*

### **3.2. Pierpont Township 2018 mail survey key findings (June 10-August 1, 2018)**

A mail survey addressed to “current residents” was delivered by the local US Postal Service mail carrier on June 10, 2018 to 610 Pierpont Township households. 183 persons responded by August 1st, a 30% response rate. Findings were presented to the Pierpont community on September 4, 2018 in an open forum at the Pierpont Volunteer Fire Department community room. Over 100 people attended. Survey methodology, data and the power point presentation can be downloaded at

<https://pierponttownship.com>

#### ***Who responded to the survey?***

30% of Pierpont Township households (183 out of 610)  
89% live in & own land in Pierpont; 11% live in Pierpont, but do not own land  
51% female; 49% male  
49% two person households; 15% one-person households  
23% lived in Pierpont Township 12 yrs or less; 49% 22 yr or less; 28% 40+ years  
12% under the age of 40 yr; 52% are over the age of 60; 25% are 68+ yr

#### ***Values & perspectives held in common*** [very important/important]

87% value Pierpont because it is a small town  
84% value Pierpont's sense of community

##### *Institutions*

97% value the volunteer fire department  
95% value the US Post Office  
71% value Pymatuning Valley Schools  
59% value churches close to where I live

##### *Natural & built resources*

88% value the abundance of water our climate produces  
83% value living close to a natural environment  
82% value Pierpont's forests and woodlands  
80% value Pierpont's agricultural landscape  
70% value the covered bridges in the township  
69% value closeness to Lake Erie & Pymatuning Lake  
69% value natural resources for outdoor sports

- 69% value being close to family and friends
- 68% value Pierpont as a great place to retire
- 67% value scenic rural vistas
- 64% value East & West Branches of the Ashtabula River

**Concern about Pierpont Township housing**

- 66% find the cost repair/replacement of septic systems a big concern
- 49% find aging housing stock & number of buildings in poor quality a big concern
- 45% find residential homes have adequate all-season roads a big concern
- 37% find the quality & quantity of drinkable water a big concern
- 25% find failing residential septic systems a big concern

**Pierpont infrastructure**

- 76% find lack of destination services in downtown Pierpont a problem: serious (47%) or moderate (29%)
- 76% find aging commercial buildings downtown a problem: serious (39%) or moderate (37%)
- 71% find access to reliable internet service and affordable internet a problem: serious (44%; 45%) or moderate (27%; 26%)
- 70% find lack of recycling services a problem: serious (26%) or moderate (35%)
- 69% find lack of sewer system downtown to draw new business/expand existing business a problem: serious (39%) or moderate (30%)
- 58% find township secondary roads are not paved a problem: serious (34%) or moderate (24%)
- 55% find lack of public water system a problem: serious (25%) or moderate 30%
- 37% find sidewalks downtown a problem: serious (12%) or moderate (25%)
- 36% find limited green space downtown a problem: serious (8%) or moderate (28%)
- 33% find attractiveness of Pierpont cemeteries a problem: serious (11%) or moderate (22%)
- 29% find inadequate downtown parking a problem: serious (6%) or moderate (23%)

**Pierpont residents' vision for Pierpont** [strongly agree/agree]

- 90% would like more local shopping opportunities
- 88% would like downtown Pierpont to be more attractive
- 85% would like for Pierpont to have a strong social-economic center
- 68% think that residential housing would grow if there were more retail businesses

**Services Pierpont residents would use if they were available**

[definitely, likely...never]

- 90% would definitely or likely use a convenience food store; 3% never use
- 81% would definitely or likely use a full service grocery store; 4% never use
- 80% would definitely or likely use a general merchandise store; 4% never use
- 77% would definitely or likely use a diner/restaurant; 4% never use
- 77% would definitely or likely use a gas station; 2% never use
- 75% would definitely or likely use banking services; 6% never use



75% would definitely or likely use a hardware store; 3% never use  
 60% would definitely or likely use a bakery; 5% never use  
 51% would definitely or likely use a beer, wine, spirits store; 30% never use  
 43% would definitely or likely use an auto service & repair shop; 12% never use  
 42% would definitely or likely use a doctor/health care office; 8% never use  
 33% would definitely or likely use an exercise/fitness center; 31% never use  
 26% would definitely or likely use a physical therapy center; 22% never use  
 22% would definitely or likely use access to continuing ed/certification program;  
 38% never use  
 15% would definitely or likely use retirement housing; 34% never use  
 12% would definitely or likely use childcare; 67% never use  
 8% would definitely or likely use office/business space to rent; 58% never use

Survey write-in comments. More than half of those responding to the survey wrote in their observations, comments, and recommendations. Persistent themes revolved around three actions residents and township leadership could do now without significant dollar investments. The themes and a sample of the comments are below:

- 1) ***Make Pierpont Township a more attractive place.***  
*Improvements have to start with residents.  
 Junk yards and buildings are in deplorable conditions; so many houses in town are rundown with vehicles and clutter in the yard.  
 Clean up trashy houses.  
 Downtown looks sloppy and unkempt. People do not want to linger.  
 Homeowners and renters need to take pride in their homes and community*
  
- 2) ***Enforce existing and strengthen current zoning laws.***  
*We cannot go forward without enforcing zoning; and making our zoning laws stronger so they can be enforced.*
  
- 3) ***Strengthen our sense of community.***  
*New residents that move here get lost and don't experience sense of community.  
 New people need a warmer welcome.  
 We need younger families.  
 A stronger social center would give people a place to build relationships.  
 A playground and parks could draw young families.*

## 4.0. Economic Development

### 4.1. Inventory of Pierpont Township farms and businesses



Pierpont Township has 17,920 acres of land. About half are agricultural lands and the other half forest lands, primarily hardwoods (e.g. maple, oak, tulip, cherry, black walnut). Almost 84% of total Township acres are small acreage and medium sized farms of 20 acres or more. Ashtabula County average farm size reported by the 2012 USDA Census of Agriculture was 151 acres, and average farm size in the Township is likely quite similar. Forty-one landowners own 100 acres or more of agricultural lands in the Township. These farms include cattle ranching, corn-soy-small grain rotations, hay production, and dairy cattle.

An inventory of businesses in Pierpont Township was conducted in 2018. A framed map and list of Pierpont Township businesses are located at the Pierpont Town Hall in a birdseye maple frame built by local resident, Fred Mallory. The list of Township businesses is periodically updated. Appendix B lists 55 township businesses, including several of the Township's largest farms as of 2018 year-end. The inventory of businesses forms the foundation of the Township broadband ten year plan (see section 5.2). Five general enterprise categories were identified. In a number of instances local businesses overlapped two or more categories; these business are grouped in the category that seemed to be the primary activity. Pierpont business owners are encouraged to contact the committee to request additions, updates and/or correct errors in Appendix B so this list can be kept current.

#### Enterprise categories

- **Local food & products, wholesale & retail (blue)**
- **Local agriculture & natural resource production, wholesale & retail (green)**
- **Service businesses (red)**
- **Manufacturing/transportation/construction (purple)**
- **Arts & antiques/entertainment/retail/other (orange)**

## 4.2. Pierpont Township economic development framework

**A rural agricultural-based consumer economy.** Pierpont Township is home to English and Amish landowners who are primarily small (annual gross revenue less than \$99,999) and mid-sized (annual gross revenue \$100,000-\$999,999) farmers. Production ranges from corn, soybean, small grains and hay to dairy, beef cattle and horses to forest products lumber and maple syrup to specialty crops, perennial and annual greenhouses. Most of these farms are diversified systems rather than monocrop systems with products sold in local and regional, national and international markets. A second large group of Pierpont landowners are small acreage residents who value living in a rural community and managing their land but are not financially dependent upon selling agricultural-forestry based products. Both of these types of landowners are valuable sources of economic, social and ecological assets not only to Pierpont but to the natural resource base that protects the Lake Erie watershed. From an economic viewpoint, they are consumers of a wide variety of “inputs” necessary to effectively manage their properties and businesses. These inputs include services and goods such as seeds and plants, fertilizers, equipment, fencing, outdoor work clothing, equipment parts and repair, and labor. They are also producers for intermediary and consumer retail markets. Further, these two demographic categories are not confined to Pierpont Township but are found regionally throughout NE Ohio and neighboring Erie and Crawford counties, Pennsylvania and offer an enlarged base for input and consumer markets.

**The Pierpont Economic Development Framework (figure 5) is designed to leverage our agricultural-based resources to grow existing and draw new enterprises to Pierpont.** Recent research by the St. Louis Federal Reserve Bank reaffirms and expands on the untapped potential of local foods and products to stabilize and expand rural economies (Dumont et al. 2017). This research finds that local food<sup>ii</sup> has become so pervasive, “that it has emerged as a major driver of retail and restaurant offerings across the board” (Dumont et al. 2017, p.17). Almost 9 out of 10 (87%) shoppers claim that the availability of local food is either very or somewhat important to their choice of a primary supermarket and two-thirds of restaurant patrons are more likely to visit a restaurant that offers locally produced food items. Locally sourced meats, new cuts of meat, locally grown produce, natural ingredients/minimally processed foods, house-made artisan ice cream and environmental sustainability top the list of “hot foods” reported by the National Restaurant Association in 2016. The Federal Reserve report elaborates that the preference for local foods is not restricted to high-end eating establishments but has moved to casual dining, fast-casual, family-dining and quick service food establishments (Dumont et al. 2017). Local foods are sold based on “nearby” source of origin as a primary product differentiation in the marketplace.

**Target audiences** for Pierpont economic revitalization are regional farmers, small acreage landowners, and consumers who would travel to Pierpont because they value and routinely shop for local products--foods and uniquely crafted products and like to experience a rural working landscape. Pierpont, on the Ohio-Pennsylvania state line is strategically located (figure 7) at the intersection of two highly traveled state road

systems, SR 7 and SR 167 which connect to two-four lane highways, SR 11 (north-south to Youngstown, Ohio) and I 90 (a national east-west highway between Cleveland, Ohio and Erie, PA). SR 6, the southern boundary of the Township runs directly east into Pennsylvania connecting the Township with the towns of Conneaut Lake and Meadville. Tourists, vacationers, hunters and fishers as well as local residents travel these roads daily and seasonally on their way to work, summer homes and recreation destinations such as Lake Erie and Pymatuning Reservoir. A third but **critical audience are local residents who lack easy access to products of daily living and socialization—gas, grocery store, coffee shop, general merchandise, and banking.**

The centerpiece of the economic development framework are key destination enterprises with auxiliary enterprises that cluster around and offer mutual benefit and profitability (Figure 5). These destinations were identified as either existing or highly desired by Pierpont residents. They are not mutually exclusive, nor are the five categories exhaustive in potential. Many of these businesses could serve multi-consumer segments representing wholesale, intermediate, and direct-to-consumer markets.

Underpinning the success of growing existing and drawing new destination and auxiliary enterprises is the assumption of available and affordable supporting services and infrastructure. The network of state and local roads throughout the township, public and social resources such as the US Post Office, Pierpont Volunteer Fire Department, local churches, Township cemeteries, and public lands (eg. Covered bridges metro parks, Horner Woods, Pioneer Picnic grounds) are foundational infrastructures upon which revitalization is built. However, **two critical infrastructures—broadband access, reliability and speed; and adequacy of downtown sewer/septic systems to support growing existing and attracting new businesses are huge barriers that must be addressed.** These and several other infrastructure concerns emerged from the 2018 resident survey (see section 3). These are high priority projects that the revitalization committee is seeking solutions and funding (see section 5).

# Pierpont Economic Development Framework

## A rural agri-based consumer economy

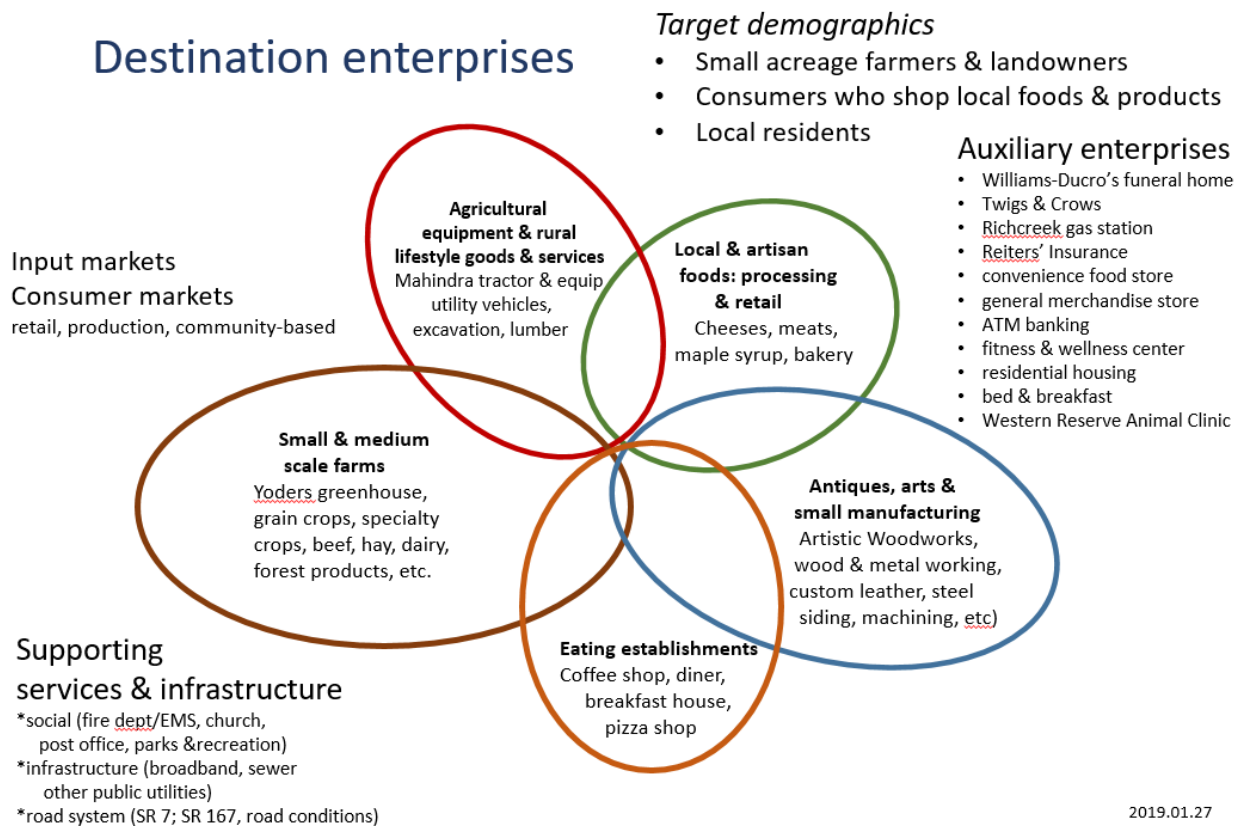


Figure 5. Pierpont Economic Development Framework 2018

### **4.3. Guiding principles for Pierpont Township and downtown development**

In realizing the community vision for a revitalized Pierpont that stimulates and unifies the township economy, strengthens social ties and renews the community, the committee has set forth a number of guiding principles. **These principles provide a check list for the zoning board in developing and enforcing stronger zoning laws and making variance decisions; and to the township in recruiting and investing in businesses that “fit” and support the natural resource-based community and family values of the Township.**

#### **Township-wide, including downtown Pierpont**

1. Multi-functional and mixed-land uses
2. Visually appealing
3. Reflects Pierpont’s unique heritage
4. Reflects Pierpont’s agricultural-forestry based local food & products
5. Signage that builds Pierpont image, and is attractive
6. Cultivates partnerships, collaborations, markets, and connections beyond Pierpont
7. Promotes health and well-being, family friendly

#### **Downtown Pierpont**

8. Public spaces for social interaction
9. Spaces for special events to bring people downtown  
(e.g. farmer’s market, food cart festival, summer music, theatre)
10. Walkable, safe, pedestrian friendly
11. Green spaces
12. Adequate, safe and accessible parking
13. Attractive streetscape

### **4.4. Scenarios for downtown Pierpont destination businesses**

The committee is working to develop a portfolio of existing and potential future businesses for downtown Pierpont. Entrepreneurs considering a local business are encouraged to share with the committee their scenario which could include:

1. description of the business and ownership;
  2. target audiences;
  3. estimate of acreage/sq. footage, buildings/structures inside/sq. footage;
  4. projected employment (full and part time);
  5. infrastructure needs and preferences;
  6. auxiliary businesses that could mutually reinforce profitability;
  7. financing needs;
  8. other relevant information.
- This information will help the committee as they seek grants and financial support for economic development.

Scenarios for downtown Pierpont destinations:

- 4.4.1. Convenience food store and gas station
- 4.4.2. General merchandise store
- 4.4.3. Coffee shop/bakery
- 4.4.4. Pizza & salad shop
- 4.4.5. Family-style restaurant
- 4.4.6. Breakfast diner
- 4.4.7. All-season local foods & products market
- 4.4.8. Agricultural equipment & rural life-style goods & services

## 5.0. Infrastructure

**Community infrastructure that reflects public and private services and technologies and effectively and efficiently serve businesses, residents, and community institutions will enable local businesses to be competitive and profitable and improve residential quality of life.** The local roads and county and state highways that run throughout the township are valuable assets that need upgrading and continued investment. Two infrastructures for recruiting new businesses, growing existing ones, and drawing new residents that need immediate attention are: 1) access to reliable high speed broadband and 2) septic and sewer systems that address Ohio Environmental Protection Agency, State of Ohio Health Department and Ashtabula County Health Department standards for waste disposal and treatment for downtown businesses, community institutions, and residences.

### 5.1. State highways and all season roads



Pierpont has two state highways, SR 167 (east-west) and SR 7 (north-south) that intersect at the center of the township, downtown Pierpont (figure 6). The south-east township line of Pierpont (shared with Richmond Township) is formed by SR 6 which intersects with SR 7 and runs east into Linesville, Conneaut Lake and Meadville, PA. The Ohio Department of Transportation (ODOT) June, 2018 traffic count numbers for Pierpont were as follows (personal email from ODOT, J Chesnic): SR 167, just west of SR 7 – 1,282 vehicles per day; SR 7 where it merges with SR 167 – 2,264 vehicles per day ; SR 7 south of SR 167 – 1,612 vehicles per day. There has been an increase of 204 vehicles/day since the ODOT 2013 traffic count for downtown Pierpont at 2,060 vehicles/day at the intersection of SR 7 and SR167. At the SR7 intersection with SR 6 on the Pierpont-North Richmond township line in 2013 there were 1,600 vehicles/day recorded.



The Township has several paved county roads including Graham Road west of Rt 7 to Stanhope Kelloggsville Road, Creek and Marcy roads east of downtown Pierpont. Directly north of the Township is Monroe Township, and the eastern border of Pierpont Township is shared with the state of Pennsylvania. The Township is bordered on the west by Denmark Township, demarcated by Stanhope Kelloggsville Road, a paved county road. Pierpont Township legally owns half of SR 6, half of North Richmond Road (county road), and portions of Middle Road (a county road). The Township maintains and plows 27 miles of all-season gravel roads. Much of the Township budget is allocated to maintaining Township roads. Two of Ashtabula County's 18 covered bridges are located within the Township: Graham Road (built from remnants of bridge wash-out in the 1913 flood) and Caine Road (built in 1986).



Figure 6. ODOT state road map of Pierpont Township and Ashtabula County  
[www.dot.state.oh.us/maps](http://www.dot.state.oh.us/maps)

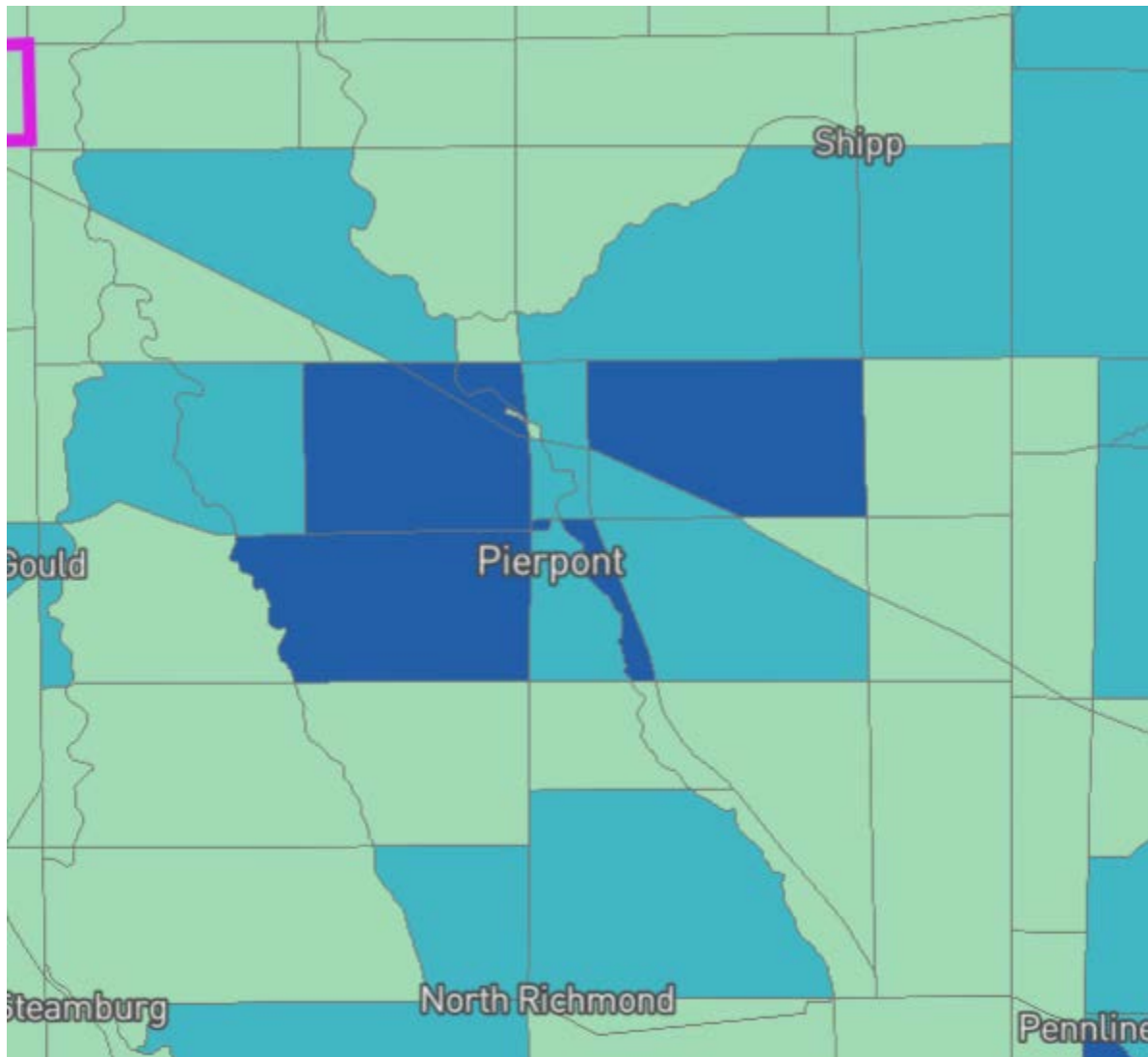
## 5.2. Broadband

**Reliable high speed internet and mobile phone service are as essential as running water and electricity for improving the daily life** of rural people and providing a standard of living equal to urban and suburban households in the US (Reardon 2018). The Federal Communications Commission (FCC) 2016 report finds that almost 39 percent of rural America lacks access to high-speed broadband compared with just 4 percent of urban Americans. Rural areas such as Pierpont are increasingly attracting retirees in search of scenic or lifestyle amenities (USDA ERS 2018). **Employed rural residents and retirees expect to have reliable high speed internet to maintain and expand their personal, financial, medical health and service relationships as well as social media networks.** Pierpont's scenic atmosphere and rural lifestyle are also a draw for people who are self-employed or employed in jobs that are not location-bound, meaning they can live and work where ever they have reliable, high-speed internet and proximity to transportation corridors. **Reliable high speed internet is a high priority and key location decision criteria for retail, wholesale, and service businesses seeking to locate in Pierpont.**

Over 70% of current Pierpont Township residents report that access to reliable, affordable internet service is a serious or moderate problem (section 3). Local businesses anecdotally report download and upload speeds are unreliable, not as advertised and insufficient to conduct some business transactions with frequent interruptions to service and inability to reconnect to lost services. Cellular/LTE service is uneven throughout the Township with some areas having "dead spots" where no service is available and/or dropped calls are routine. The Township has two cell towers with limited geographic service and a third one projected to come on-line north of town. This will solve some access issues but leave other sections of the Township with continuing poor or no mobile service. Unreliable and slow fixed and mobile broadband service is inconvenient at best and can be fatal for business operation and profitability as well as community emergency services provided by the Pierpont Volunteer Fire Department EMS.

The US Federal Communication Commission (FCC) 2016 report<sup>iii</sup> on consumer fixed broadband performance found that overall maximum advertised download speeds offered by internet service providers across the US increased from 12-30 mbps in 2011 to 100-300 mbps in 2015 with median speeds across all consumers in 2015 at 39 mbps. And for the most part major broadband providers' (cable and fiber) download speeds were 100% as advertised. However, **the exceptions are DSL providers Windstream and CenturyLink with mbps still as low as 12 mbps and 80/80 speed consistency far below other major broadband providers (FCC 2016).** Although the FCC reports significant growth in broadband speeds and their uptake by consumers, the results are not uniform across geographies or technologies. These speeds and reliability numbers primarily represent urban and suburban consumers and do not well represent rural residents and businesses experiences. The map in Figure 7 shows Pierpont's broadband provider coverage in 2016 according to the FCC. Pierpont residents,

primarily served by DSL providers commonly experience 2-3 mbps, far below even the 12 mbps average, neither which are even close to 100 mbps.



**Legend**

**Dark blue** Zito Media, cable ~100mbps down; 10 mbps up; windstream 50-75 mbps down; 8 mbps up; dishNET satellite 25 mbps down; 3 mbps up; ViaSat satellite 5 mbps down; 1 mbps up; VSAT systems satellite 2 mbps down; 1.3 mbps up

**Light blue** Windstream ~ 50-75 mbps down; 8 mbps up; dish NET satellite 25 mbps down; 3 mbps up; Via Sat satellite 5 mbps down; 1 mbps up; VSAT satellite 2 mbps down; 1.3 mbps up

**Light Green** dishNET satellite 25 mbps down; 3 mbps up; Windstream 4-12 mbps down; 1.5 mbps up; Via Sat satellite 5 mbps down; 1 mbps up; VSAT satellite 2 mbps down; 1.3 mbps up

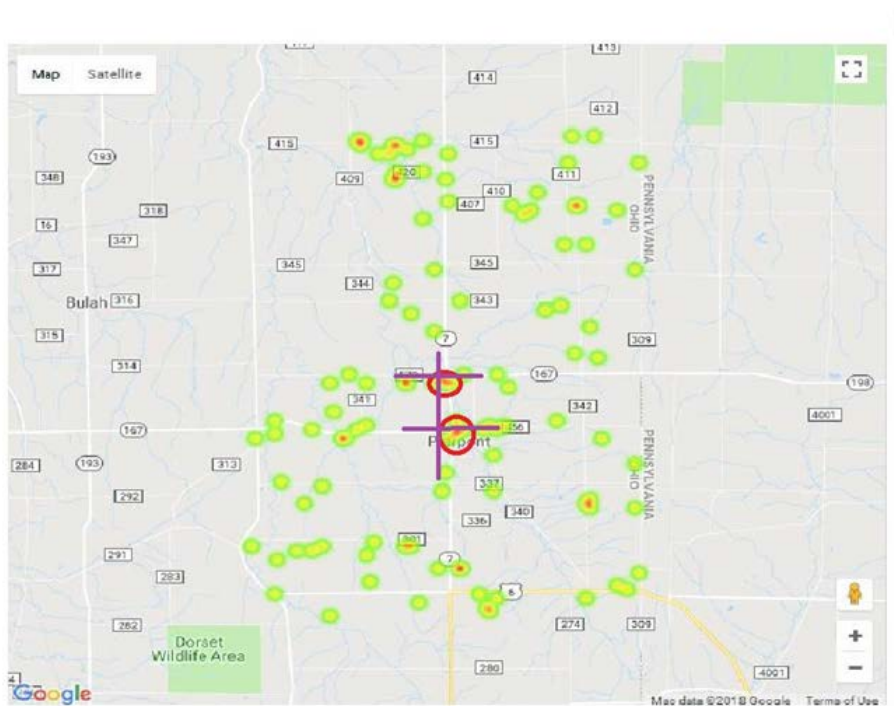
Figure 7. FCC Fixed Broadband Deployment map of Pierpont Township; June 2017

As FCC looks into the future they suggest there will be a growing disparity in download speeds between DSL and cable and fiber technologies. Broadband technologies are currently driven by the cable industry and fiber based systems which tend to deliver download speeds as advertised. Satellite broadband services have been found to have uneven performance growth. A number of rural communities (e.g. Minnesota, Alabama, Iowa) have created an alliance of residents, organizations and government to develop locally controlled hybrid fiber and wireless systems that give farms and rural businesses and residents reliable high-speed internet (Miller 2018). Miller (2018) reports that scientists researching precision farming tools expect that full-scale adoption of digital technologies could mean an increase in farm productivity not seen since mechanization. Minnesota farmers are integrating digital technologies, combining fiber to specific access points and delivering services via laser technologies to in-the-field equipment as their demand for bandwidth increases (Miller 2018). Fiber has unlimited capacity for bandwidth and connections to new technologies as they develop.

**5.2.1. Exploring broadband for Pierpont.** Pierpont residents currently have uneven access and unreliable speeds in fixed broadband service depending on their geographic location in the Township (Figure 7). Portions of the township have cable and telephone lines which are used by Windstream (DSL) and Zito (cable) internet providers (IP). Both telephone and cable are aging systems. Copper phone lines are aged and limited. Cable lines (those who have them) are faulty due to severe neglect since the push to satellite TV providers, leaving cable lines abandoned with little or no maintenance. Fiber connections TimeWarner and Greatwave are not currently available to Township residents.

Throughout 2018, committee members attempted to contact broadband providers to learn how they might meet and improve Pierpont's broadband infrastructure needs. In Fall, 2018 several broadband experts including Bruce deRider, IT technician for Greatwave, Jake Brand Ashtabula County Planning Commission, and Joe Zinski, Greatwave Communications discussed with the committee how broadband works and how Pierpont Township might improve access and stimulate reliability and increased speed.

Joe Zinski representing Greatwave Communications, a Conneaut, OH-based internet service provider, discussed the current fiber service available from Conneaut to Bushnell along SR 7 and options available to Pierpont. Zinski gave the committee a rough ball-park estimate of the cost to construct a dedicated line from Bushnell to downtown Pierpont ~ 7 miles. He also developed several maps (Figures 8, 10) showing potential locations for fiber optic services serving downtown Pierpont in support of drawing new and growing existing businesses. Jake Brand from County Planning prepared a Pierpont Township Broadband Planning map (figures 9) and will continue to work with Pierpont in the development of a plan and seek grants for funding.



**Pierpont Township Broadband Potential 2018**

(Joe Zinski mapping based on 5-mile radius from downtown Pierpont)

259 U.S. Consumers at this zoom level



**Legend**

- Green-yellow. Locations of incomes between \$60-\$90K a year
- Red dots. Concentrations of incomes between \$60-90K
- Purple line. Proposed Phase I broadband fiber route

Figure 8. Pierpont Township 110 hot spots in potential broadband use. J Zinski Greatwave Communications September 2018

**Reliable high speed internet is critical if Pierpont Township is to grow existing businesses and draw new ones.** The Inventory of Pierpont Business list (Appendix B) of locations throughout the township form the basis for broadband planning. Jake Hudson, Revitalization committee member with broadband communication experience is leading the committee effort to prepare a 10 year township broadband plan based on the business inventory map and hot spot footprints. The current discussion is how to extend a dedicated fiber line from Bushnell to downtown Pierpont (~7 miles) and from downtown Pierpont to the Richmond Township line (~4 miles) as the backbone of the Township system (Phase 1); and grow the system through Phases 2, 3, 4..., building off the core fiber nodes with towers and other technologies (figure 10).

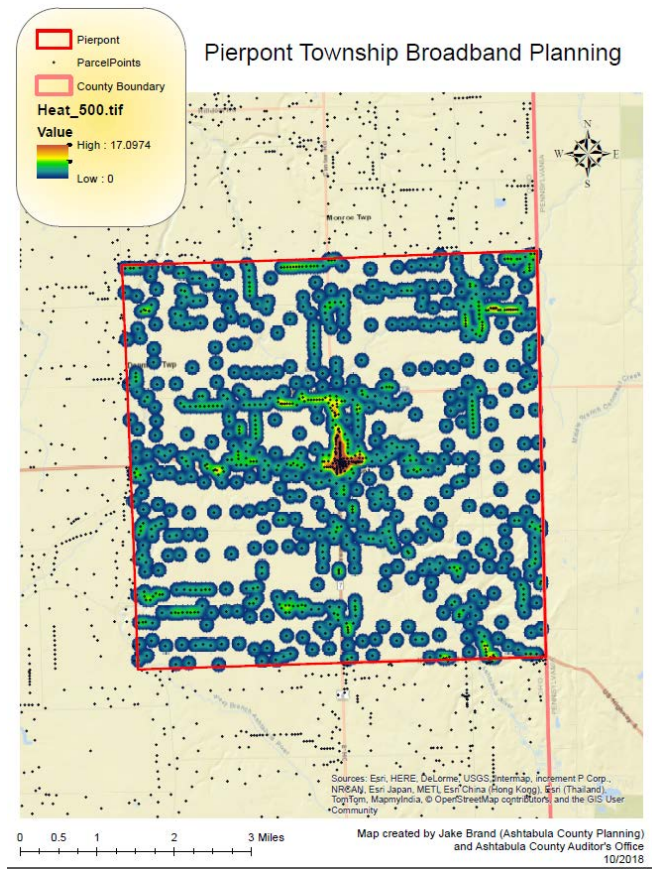


Figure 9. Pierpont Township Broadband map prepared by Jake Brand and Ashtabula County Auditors' Office

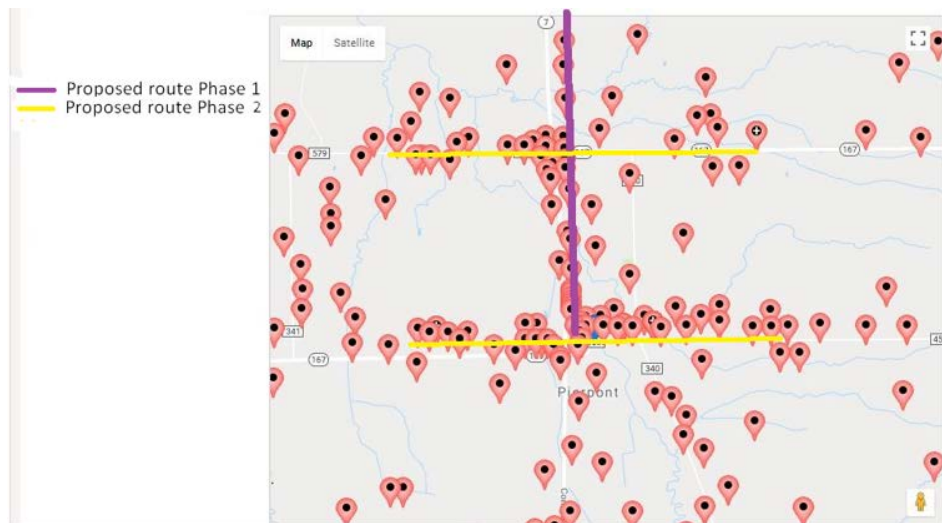


Figure 10. Downtown Pierpont, potential broadband customers and routes for fiber broadband, Joe Zinski Greatwave Communications 2018.10.4

In order to provide high speed internet to the entire Township, it is likely a combination of fiber, towers, and wireless technologies will be needed. Infrastructure and equipment cost projections will enable us to start seeking funding of phase 1. Meanwhile, the Township will work with county leadership to propose and seek funding for a county-wide rural inventory of current physical infrastructure (cable, fiber, towers, etc.) and reliability and speed of broadband services. This will enable gap identification as a precursor to the development of a coordinated county-wide plan and strategies for implementation.

**5.2.2. Broadband potential funding.** There is a need to continue to explore sources of Township level broadband funding. USDA Rural Development has a Community Connect Grants program that helps fund deployment into rural communities where it is not yet economically viable for the private sector providers to deliver service. Matching funds of at least 15% from non-federal sources are required. The 2018 US Farm Bill includes Precision Agriculture Connectivity (HR 4881) which requires the FCC to work with the US Department of Agriculture to boost broadband deployment and adoption in rural areas. The Ohio House of Representative have passed a bipartisan Ohio Broadband Development Grant Program bill (OH HB378/132 General Assembly) which was introduced to the Ohio Senate in April, 2018 and is currently stalled in the Ohio Senate Finance Committee. Recently USDA Rural Development announced in December 2018 a new national program to create high-speed e-connectivity for rural America; Jake Brand, Ashtabula County Planning Commission has also agreed to help identify other grant sources. **Next steps are to survey Pierpont businesses and residents to understand their current access along with download and upload speeds; and preparation of a ten-year plan so as to be ready to submit a proposal for Phase 1 to these grant programs as they become available.**

### 5.3. Downtown Pierpont: Household sewage treatment systems and sanitary sewer system options

#### **Housing is more than shelter. It is critical to the quality of life for individuals and families and core to the social and economic well-being of communities**

(MacTavish et al. 2014). Pierpont residents in the 2018 community survey (see section 3) recognized this truth when many wrote in the margins of their survey linking their desire for an attractive place to live and an economically strong community. These comments sum up shared concerns:

*...buildings are in deplorable condition;*  
*...so many houses in town are rundown with vehicles and clutter in the yard;*  
*...downtown looks sloppy and unkempt. People do not want to linger.*  
*...Homeowners and renters need to take pride in their homes and community.*

**The quality of commercial buildings and homes affect the kind of population a community is able to attract and hold onto, thus contributing deeply to social and economic vitality** (Ziebarth 2000). For sale signs and real estate values reflect homeowners and families' capacity to realize financial value when households expand, downsize, or need to move to a new location. Underlying landowner's willingness to maintain and improve the quality and appearance of building structures is the availability of basic infrastructure such as wastewater disposal and treatment and drinkable water to justify the investment. **Without these essentials, existing residents will choose to leave if they can and businesses will exit or not come.**

Advances in technologies such as broadband and transportation make it increasingly possible to work and live wherever one chooses. Pierpont offers a lifestyle that offers scenic beauty, outdoor recreation, and opportunities to build productive and caring community relationships locally and to connect nationally and globally for work and pleasure. We want people who live in Pierpont to choose to stay; and new people to seek Pierpont as a desirable place to be.

This suggests that **any community effort to revitalize Pierpont must include a close look at the condition of downtown Pierpont's housing and commercial structures and the underlying infrastructure.** In this section of the plan, downtown Pierpont wastewater disposal and treatment are examined by assessing the current condition of private home sewage and septic systems and exploring public sanitary sewer options.

#### 5.3.1. Downtown Pierpont parcels

In 2018, there were 34 owner occupied residential parcels and 22 non-owner (rental, vacant residential, unregistered land contracts) residential parcels. There were 17 commercial businesses, government, or non-for-profit parcels and 12 vacant lots greater than .25 acre. This totals to 85 parcels with structures or potentially buildable lots greater than ¼ acre with **40% of all downtown parcel owners living downtown.** There are 48 small parcels, defined as less than 30,000 sq ft as measured from the county auditor's middle of the road lot line to boundary length; and 28 parcels that are 30,000 sq ft or larger. (Note: A number of residential parcels combine two or more small



lots creating one residence on several lots as defined by the county auditor records. Small parcel counts include those less than .25 ac. This leads to a variation in the “counts” of residential and commercial properties.)

### 5.3.2. Downtown Pierpont inventory of structures and household sewage treatment system permits

There are currently about 74 structures (houses and commercial buildings) in downtown Pierpont. Fourteen of these structures are commercial in nature; of which five are community-type organizations (church, Volunteer Fire Department, Masonic Lodge, Post Office, and Town Hall). Nine are some type of business use. Sixty are considered residential. There are 12 parcels greater than 1/4 acre that have no structures, that is they are vacant parcels with building potential in sizes ranging from 1/4 ac to 45 acres.

**Of the 74 structures, 50 of the structures have county health department permits and 24 have no health department permit on record.** Figure 11 shows the age of permitted home sewage/septic systems based on county health department records. Nineteen of the permitted septic systems will be less than 30 years old by 2020 (the health department assumed life expectancy). The most recent downtown system for a commercial building was installed in 2014 and was required to be permitted by Ohio Environmental Protection Agency (OEPA) at a cost over \$50,000.

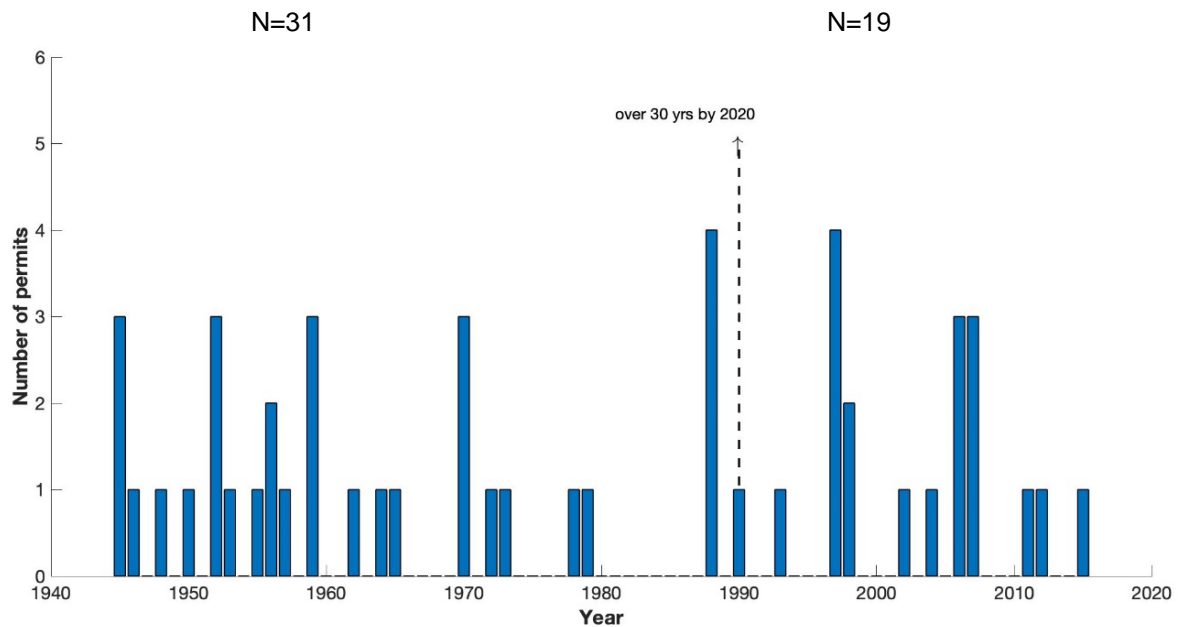


Figure 11. Number of Ashtabula County Health Department permitted home sewage/septic system structures and year of last permit (N=50), downtown Pierpont, 2018.

**Thirty-one of the permitted septic systems are more than 30 years old with the oldest 17 permitted in the 1940s and 1950s.**

➡ If one assumes that the 31 permitted systems over 30 years old will likely need repairs or replacement in the next 5 to 10 years in order to meet increasing state and county health department and Ohio Environmental Protection Agency (OEPA) standards and inspections; and

➡ assume that the 24 systems that have no septic permit on record likely need new systems;

➡ There are a total of about 55 [31+24] septic systems or 74% (55/74) of current downtown septic systems that will likely need constructed, repaired or replaced in the next 5 to 10 years.

Assuming worst case scenario, 55 systems could need repair/replacement to meet ODH standards. Average cost estimates for installation of residential conventional systems range from \$15,000 to \$25,000 with a trend toward the higher end rather than low end. Commercial system costs are considerably higher with estimates obtained in 2019 running \$75,000-\$120,000. **At \$15,000, the aggregated cost to current downtown residents would be \$825,000 (55 x \$15,000); at \$20,000 per system the aggregated cost would be \$1.1 Million (55 x \$20,000); and at \$25,000 the aggregated cost would be \$1.375 Million (55 x \$25,000).**

Residential septic systems on Mill-Platea-Darien soils with a high water table and poor drainage will likely need aerobic (oxygen infused) systems (rather than conventional) (See Appendix D) which are somewhat more expensive initially and require electricity and component parts that have annual maintenance costs (unlike conventional systems).

Assuming, \$20,000 for a residential installation and adding the **12 parcels that could potentially have at minimum one business or residence apiece, there could be an additional cost of \$570,000** assuming 6 of the 12 are residential (\$20,000 x 6=\$120,000) and 6 are commercial OEPA permitted systems (\$75,000 x 6=\$450,000).

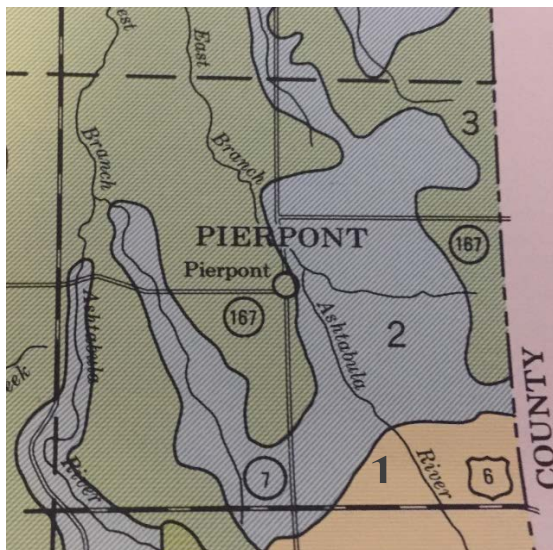
Based on these assumptions, **total potential aggregated cost to downtown landowners could be \$1.67 Million (\$1.1 M +\$570,000).** These costs, which do not include routine septic maintenance, would accrue to the individual landowner.

These are modest estimates and actual costs could look much different. There are a number of factors that influence the cost of repairing, replacing and installing new systems and the type of permit needed. Currently, all but one of the downtown commercial buildings have residential disposal system permits (IF they have a permit). **Any transfer or upgrade of existing commercial structures, depending on their particular use will be subject to OEPA regulations (see section 5.3.5) rather than county health department residential permit regulations. This makes it very hard**

**for current businesses to realize their full value and sell them.** Further, in addition to type of residential or commercial activity that guides waste capacity needs, septic systems have physical criteria that guide the type of system best suited to handling waste disposal: 1) lot size, 2) soils that drain well, and 3) undisturbed soil (Appendices C, D).

### 5.3.3. Pierpont Township soils and suitability uses

Pierpont Township is located on a drainage divide ridge, an end moraine of the Wisconsin Glacier as it receded, between Lake Erie and the Ohio River. At its high point the Township, part of the Allegheny Plateau has an altitude of over 600 feet above Lake Erie. The substratum rock of this ridge is Erie shale, a soft, blue aluminous slate that weathers red on exposure and decomposes into a stiff yellow clay. A peculiarity of this ridge is that the wettest lands are upon its summit with wet clay soils and wetland vegetation. USDA-SCS/NRCS Pierpont Township mapped soil associations (Figure 12) are: 1) Venango-Mill-Cambridge association consisting of level to moderately steep, poorly drained to well drained loamy soils and glaciated uplands in the southeast corner of the township; 2) Mill-Platea-Darien association characterized by nearly level to sloping somewhat poorly drained to poorly drained silty soils on glaciated uplands found primarily on the eastern portion of the township and along East and West branches of the Ashtabula River that run north through the township; and 3) Mill association found in the western portion of the township and along the eastern township border with Pennsylvania.



**Legend. Soil Associations.** Yellow (1) Venango-Mill-Cambridge association: Deep, nearly level to moderately steep, poorly drained to moderately well drained loamy soils and glaciated uplands  
Blue (2) Mill-Platea-Darien association: Deep, nearly level to sloping, somewhat poorly drained to poorly drained silty soils on glaciated uplands.  
Green (3) Mill association: Deep, nearly level, poorly drained to somewhat poorly drained silty soils on glaciated uplands

Figure 12. General Soil Map Ashtabula County, Ohio. USDA, Soil Conservation Services, Ohio Department of Natural Resources, Division of Lands and Soil, The Ohio Agricultural research and Development Center. 1972

Bordered on the east by the East branch of the Ashtabula River, downtown Pierpont soils are mapped Mill, Darien, Platea and Wick silt loams (see Appendix C). USDA-SCS/NRCS estimated limitations for specific land uses note the following: Mill, Darien, and Platea silt loam soils used for farming will be moderately wet. When used for homesite locations they have a seasonal high water table and are poorly or somewhat poorly drained. When used for sewage effluent on-site waste disposal, these soils have a seasonally high water table, are poorly drained and have very slow permeability (Figure 13, red shaded area). Wick soils are moderately wet for farming and are not suitable for housing locations or on-site sewage effluent disposal due to being poorly drained and subject to flooding.

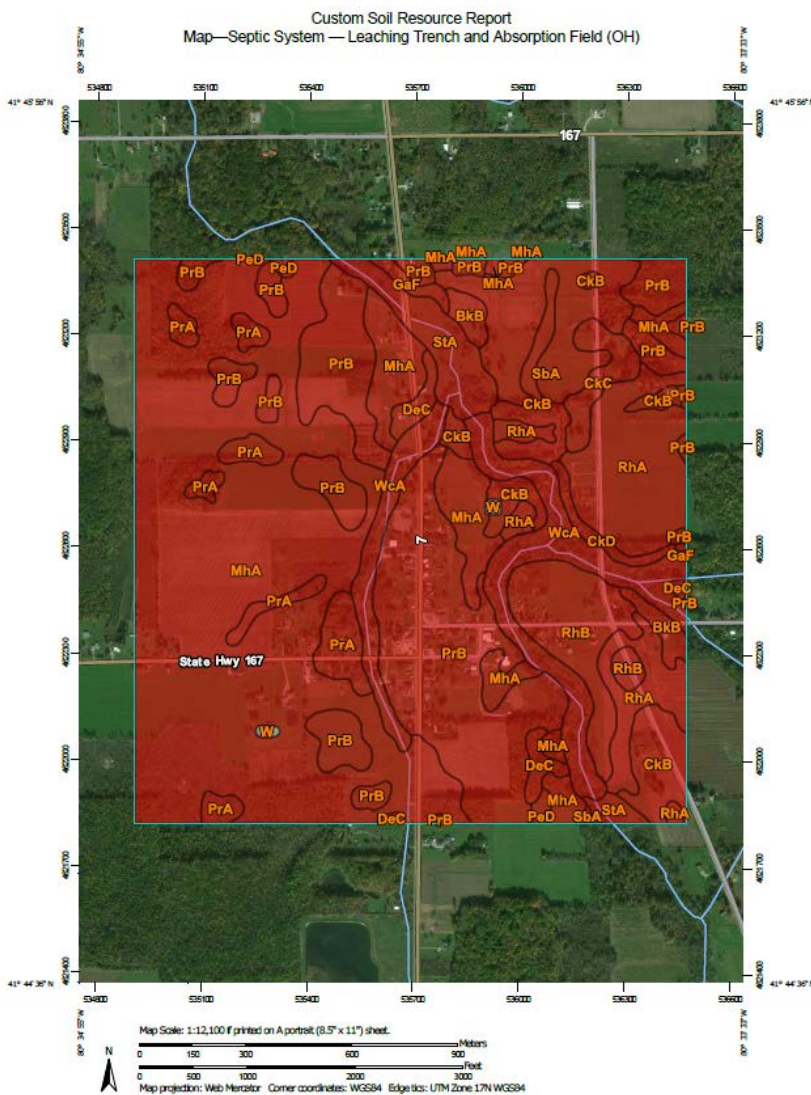


Figure 13. Suitability of downtown Pierpont soils for septic systems. 2001. Red indicates a rating of “very limited” for leaching trench and absorption field uses. NRCS Web Soil Survey. Soil Survey of Ashtabula County, Ohio 2001. USDA, Soil Conservation Services, Ohio Department of Natural Resources, Division of Lands and Soil, The Ohio Agricultural research and Development Center

#### **5.3.4. Ashtabula County Health Department household sewage treatment systems permit timeline**

The Ashtabula County Health Department has developed a timeline to ensure all county household sewage treatment systems meet County and state of Ohio Health Department standards.

On March 23, 2017, the Ashtabula County combined Health District Advisory Council [which includes county townships] accepted and unanimously approved the Operation and Maintenance Permit Program with the following time line:

- 2017 Conduct Operation & Maintenance activities on all home sewage treatment systems permitted since January 1, 2007.
- 2019 Conduct Operation & Maintenance activities on all existing home sewage treatment systems involved with proposed residential building additions.
- 2020 Conduct Operation & Maintenance activities on all lot splits involving a dwelling with an existing home sewage treatment system.
- 2022 Conduct Operation & Maintenance activities on all home sewage treatment system requested real estate inspections.
- 2025 Conduct Operation & Maintenance activities on all aeration treatment units more than 25 years old.
- 2027 Conduct Operation & Maintenance activities on all aeration treatment units that are less than 25 years old that are not included in other operation and maintenance categories.
- 2030 Conduct Operation & Maintenance activities on all non-aerobic treatment units that discharge and are less than 35 years old.
- 2032 Conduct Operation & Maintenance activities on all non-aerobic treatment units that discharge and are more than 35 years old.
- 2034 Conduct Operation & Maintenance activities on 50% of non-discharging home sewage treatment systems no included in other operation and maintenance categories.
- 2037 Conduct Operation & Maintenance activities on remaining 50% of non-discharging home sewage treatment systems not included in other operation and maintenance categories.

### 5.3.5. Downtown Pierpont commercial business

While the Ohio Department of Health through the Ashtabula County Health Department oversees residential waste treatment for one, two or three family dwellings, the Ohio Environmental Protection Agency (Ohio EPA) governs all others. The Ohio EPA, per ORC 6111.44, is charged with complying with the Federal Clean Water Acts' goal of maintaining and protecting the chemical, physical and biological integrity of Ohio waterways. **Any new or expanding business in Pierpont is required to be approved by the Ohio EPA before construction is begun.**

Waste systems can be either discharging or non-discharging. If the outflow of the designed system can be absorbed by the soil with no run-off it is non-discharging. If this can not be achieved due to volume, lack of area or poor soil type the system will be discharging. Discharging systems require certified operators, frequent effluent sampling and a National Pollutant Discharge Elimination System (NPDES) permit. All of this starts with an **Antidegradation Review** by Ohio EPA to examine the following:

- A) Location of the nearest sanitary sewer system
- B) Suitability of soils for soil-based treatment
- C) Area for land application
- D) Adequate receiving stream available (seasonal streams will not work)
- E) Site topography
- F) Economics and costs associated with various treatment methods

Once the Ohio EPA in conjunction with a sanitary engineer determine the best course, design can begin. Once design has been completed and approved and an NPDES permit granted, the EPA can issue a Permit To Install (PTI) and construction can begin.

**Many commercial lots in Pierpont do not have the size or soil qualities to install an on-site non-discharging system. Additionally those same lots also don't have the size to develop a discharging system or access to an adequate receiving stream.** Because of its large lawn area, The Wright Building where Williams-Ducro is located was able to install a new non-discharging system in 2014 with subsurface pressurized emitters. The ability to triple the emitter field was planned in.

Below is a table that gives average design flow values of effluent volume and strength for a home and various businesses. Many of these businesses rated very high as desirable for Pierpont based on the 2018 community survey. The Wright Building design required 3500 sq ft. of emitter area to handle a projected 998 gal per day discharge (equalization tanks were installed to eliminate the "surge" caused by large funerals). Take the example of a restaurant at 3500 gal per day. That would require an emitter field of 0.3 acre of reasonably permeable, undisturbed soil. There are few locations in downtown Pierpont that can provide this. **This is strong evidence that bringing business back to Pierpont will require a public sewage system.**

**Table 1. Design Flow Requirements Wastewater Treatment Plants & Collection Systems less than or equal to 100,000 gpd (gallons per day)**

Business	Potential design flow (gpd)	Waste strength (BOD <sub>5</sub> mg./l)
Convenience store & GS	580 gpd [2 employees; 10 parking spaces]	200-280
Retail business/general merchandise store	375 gpd [9 employees; 20 parking spaces]	200-280
Coffee shop	180 gpd [2 employees;30 seats]	200-280
Take out-pizza & salad	200 gpd [5 car spaces]	400-600
Restaurant (not 24 hr)	3500 gpd [100 seats]	400-600
Gas station	500 gpd [per pump island]	200-280
3-bedroom home	360 gpd	200-280
Town Hall w kitchen	730 gpd [2 employees; 100 seats]	200-280
Beauty shop	400 gpd [two basins]	200-280

The Ohio EPA offers an excellent guide to sewer regulation and design in their “Green Book” at [www.epa.ohio.gov/portals/35/documents/greenbook\\_2013.pdf](http://www.epa.ohio.gov/portals/35/documents/greenbook_2013.pdf)

### **5.3.6. Ohio Revised Code 6117 and Ashtabula County Sanitary Engineering Code**

**Ohio Townships do not have authority to establish their own sanitary sewer district** without the Board of County Commissioners authorizing the establishment of the district. The 107<sup>th</sup> Ohio General Assembly in 1917 authorized counties to establish sewer districts anywhere in the unincorporated area of the county. County commissioners have the authority under Ohio law (ORC Chapter 6117) to establish county sewer districts to preserve and promote the public health and welfare. To establish a sewer district the county commissioners must adopt a resolution and describe the area included within the district. When establishing districts the commissioners may have a professional engineer do survey work to determine the appropriate boundaries of a district. Each district must be given a name or number in the resolution establishing the district. Ashtabula County Sanitary Engineering Code Section 101 (September 1997) claims ORC Section 6117.01 in adopting, publishing, and administering county “rules for the construction, maintenance, protection, and use of sewers and sewer improvements in its County outside of municipal corporations...” Sewers and sewage treatment works constructed in the county outside of municipal corporations must submit plans and specifications to the Board of County Commissioners for approval; and construction shall be done under the supervision of the County Sanitary Engineer.

In the case of sewage disposal, commissioners are encouraged to establish sewer districts to serve residential subdivisions in the unincorporated areas of the county when on-lot treatments and devices cannot be used because of soil conditions<sup>iv</sup>. There are also those situations where a local health department or the Ohio EPA want the county to take over certain water supply or sewage disposal operations which are operated by other entities who are having management or financial problems. In other

circumstances **counties that have decided not to establish a sewer district may find that they are ordered by Ohio EPA to either provide a public water supply, or more frequently, public sewage collection and treatment facilities. Under ORC Sections 6103.17 and 6117.34, the Director of OEPA may issue such “findings and orders” to Boards of County Commissioners.**

### **5.3.7. Assessment of the situation and search for effective and affordable solutions.**

The 2018 downtown Pierpont wastewater disposal and treatment situation is a barrier for drawing new business and new residents and a health and safety concern for many current residents. In looking to the future of our Township and downtown as our economic and social center, the committee has carefully assessed **1) the status of our current downtown household sewage and wastewater disposal systems; 2) our soils capacity to handle waste effluents; 3) Ashtabula County Health Department 2017 Operation and Maintenance Schedule for county household sewage systems; 4) Ohio EPA wastewater rules for commercial businesses; and 5) increased public concern, monitoring and enforcement of Ohio water quality of streams that empty into Lake Erie and exacerbate lake pollution levels.**

**Our Township rivers, designated as Ohio Scenic Rivers,** are the headwaters of the Ashtabula River which directly flow into Lake Erie. The quality of our water is important to Pierpont and we desire to be proactive in continuing to protect it as we look to our future. It is one of our most important assets. The Pierpont Revitalization committee at this point in time, does not intend to claim impaired water as the “reason” for requesting Ohio Public Works or EPA funds to construct a downtown sanitary sewer. But, **we believe that a public sanitary sewer system is necessary not only to assure that new businesses and growing existing business have capacity to handle their waste materials but to ensure the East Branch of the Ashtabula River which runs through downtown is not degraded by new businesses and residences.** Our soils are not conducive to easy percolation and water degradation could easily occur without vigilance and proactive efforts by the community.

Considerable time has been invested evaluating information and discussing the issues and our options. This included efforts to obtain information, talking to sanitary engineers, water district supervisors and directors, and public officials to learn from other rural Ohio communities similar in size to Pierpont that have recently faced a situation similar to ours and constructed and funded a public sewer system. County leadership and experts, including meetings and correspondence with the Ashtabula County Community Services and Planning director, Janice Switzer and Ashtabula County Environmental Services director, Nick Sanford were valuable in providing information and guidance. The cost of sewer construction is particularly high for poor and moderate income rural communities without a large business to partner in sharing the cost. Affordability and how costs are shared present a high barrier for the construction of a sewer system in downtown Pierpont. A common feature of small rural Ohio communities was that their sewers were built under EPA “findings and orders”,



meaning they were in violation of federal and state Clean Water laws. As a result, funding was more readily available to these communities through grants and zero cost interest loans to their county water district.

In May, 2018 a preliminary engineering plan for downtown Pierpont was funded locally in order to realistically assess the costs of a sewer system before moving forward. Robert Rabell, certified sanitary engineer from Albion, Pa was engaged to produce a preliminary engineering map including: proposed plant location, mains, individual tap-ins, manholes, pump stations and pressure lines, technical information on daily capacity, future growth projections and project construction costs. Figure 15 shows the proposed footprint.

Exploration regarding downtown Pierpont sewer feasibility continued into late summer 2018 by meeting with Ashtabula County Environmental Services director Nick Sanford, sanitary engineers from CT Consultants, and county commissioners. Preliminary downtown Pierpont sewer designs and general location options were discussed. A county-township partnership was proposed; and a process was agreed upon for going forward to explore design, costs, feasibility and funding strategies. Following this meeting, the Pierpont Township trustees at their regular meeting voted unanimously to submit to the Ashtabula County commissioners a request to work together in exploration of a downtown Pierpont sewer system. The county agreed to pay initial design costs and contracted with CT engineers to develop a general plan to meet Ohio Environmental Protection Agency (OEPA) funding requirements and to work with the Township to develop a funding strategy for a sewer system based on cost estimates. Before continuing forward on this path, a community meeting will be held to 1) present the design footprint, construction and maintenance, costs to residents and costs to the county, and funding strategies, and 2) seek community input. This development plan will be used to seek economic development grants and loans from public sources and private foundations that would co-finance the downtown Pierpont sewer system.

### **5.3.8. Downtown Pierpont sanitary sewer system potential funding sources.**

Preliminary cost estimates for a sewer system based on Figure 14 footprint run from \$2 M to \$4 M, with a most likely cost estimate of ~ \$2.4 M. No one funding source will cover the entire cost of a public sewer for a rural community. Thus, funding will be sought from multiple Federal and State grant and loan programs. **The individual cost burden of service laterals and home hookup to low and moderate income households is a particularly large concern.** We will be working with the county to identify and write infrastructure grants from the Community Development Block Grant (CDBG) Residential Public Infrastructure Program that funds construction of sanitary sewer systems in low and moderate income communities. This application requires an income survey of downtown residents, owner-occupied and renters to verify that Pierpont is a low-moderate income community and thus eligible for these grant dollars. Economic development jobs grants are also available if we can provide evidence that new businesses will be coming in and the number of jobs that will be created. For example, one grant assigns \$10,000 per new job, so a total of 10 new jobs would garner \$100,000. Three additional sources of grants and loans are: Ohio Public Works Commission (OPWC) program that has grants that cover up to 50% for new

infrastructure as well as low interest loans; USDA Rural Development has wastewater grants and matching loans; EPA offers wastewater treatment grants for green infrastructure and innovative approaches to achieve environmental, social and economic goals; US Army Corps of Engineers (USACE) may be a source of dollars for full engineering design. Appalachian Regional Commission (ARC) offers grants for wastewater construction projects up to \$250,000 with requirements of a match and no more than 80% of the total project cost. These and other options are being explored.

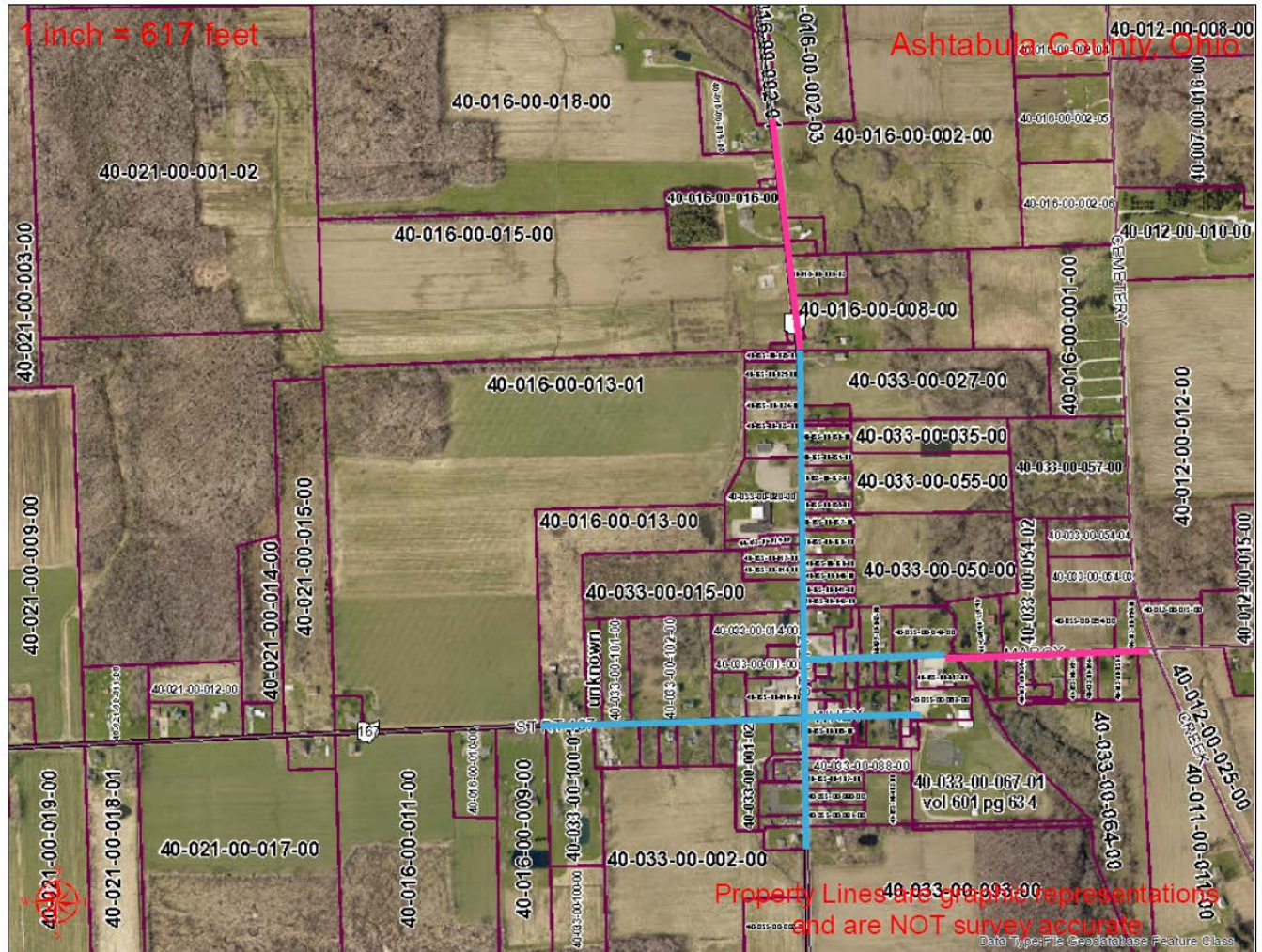


Figure 14. Potential footprint of sewer main lines in downtown Pierpont (2018)

**5.4. Water is essential for all life.** Up to this point we have discussed the development of a public sewer system for downtown Pierpont and the potential for broadband service in Pierpont Township. If these come to fruition and business and residential growth are stimulated, our next need will be a public water system. Pierpont has a history of relatively safe and abundant water supplied by individual wells. There is some evidence that properties West of Route 7 have better wells than East of Route 7. The implementation of a public sewer system would in fact improve the quality of individual

wells. The pinch point occurs when several businesses wish to locate “downtown” and they don’t have the space to drill or the water capacity to serve their needs (think laundromat, car wash or food processing).

There are two types of water systems in Ohio, private and public. Private systems, are defined as systems with less than 15 service connections; and do not regularly serve an average of at least 25 individuals daily for at least 60 days each year. Private systems are regulated by the Ohio Department of Health and the County Health Department. Public systems are regulated by the Ohio EPA and include systems with at least 15 service connections or regularly serve an average of at least 25 people at least 60 days per year. These public systems fall into three categories based on where the water is consumed.

**A private water system** has less than 15 service taps and does NOT serve at least 25 people for 60 days or more per year. These systems are composed of wells, springs, ponds, cisterns and hauled water.

They may serve 1, 2 or 3 family dwellings; multiple dwellings on adjacent properties; buildings including barns, small businesses, churches, etc., small manufactured home parks and campgrounds.

Regulation and technical assistance are provided by the Ohio Department of Health and the Ashtabula County Health Department employing the Ohio Revised Code 3701.344 to 3701.347 and Ohio Administrative Code 3701-28. Final determination as to whether a system is private or public is made by Ohio EPA.

**A public water system** has 15 or more service connections or DOES serve 25 or more people for 60 days or more per year. A water system can fall in one of three categories:

- 1) Community Water System based on where people live including towns, cities, mobile home parks and nursing homes;
- 2) Non-Transient, Non-Community Water System based on serving 25 or more of the same people over 6 months per year such as where people work or attend school; or
- 3) Transient, Non-Community Water Systems where people visit such as parks, hotels, restaurants, gas stations and churches.

The Wright Building housing the Williams-Ducro Funeral Home is the only licensed Public Water System in Pierpont Township (Transient, Non-Community). Regulation and technical assistance are provided by Ohio EPA under the Safe Drinking Water Act of 1974.

**5.4.1. Deciding What Direction to Take.** If one, two or three businesses wish to locate in downtown Pierpont, their needs could probably be met by individual wells depending on the nature of their business. A sales office or insurance agency with six employees could operate with a private system. A Dollar General, however, because of its

customer count would probably require construction and the subsequent monitoring of a Transient, Non-Community System like the Wright Building. A nursing home or assisted care facility would require a community water system. If the need does arise, then efforts would be made to find a water source and design a treatment and distribution system. There are many sources of water but the Ohio EPA very much encourages the use of groundwater wells for small systems and specifies a procedure for system development.

**Development of an approved ground water system** would entail the following:

- 1) Contact Northeast Ohio District EPA Division of Drinking and Ground Waters office to request an evaluation of the proposed well site, requirements, design criteria and project responsibilities
- 2) Submit a well site application
- 3) Obtain a well site inspection
- 4) Arrange for EPA certified laboratory to perform required analysis of water after well is drilled (OAC 3745-9-09)
- 5) Have a professional engineer or water supply specialist prepare plans for the system including well, treatment, storage and distribution (OAC 3745-9)
- 6) Submit detailed plans to EPA
- 7) Perform a pumping test
- 8) Submit pumping test results and sample analysis to EPA
- 9) Wait for formal approval letter to begin distribution

**Funding** is always an issue, much like our discussions on a public sewer system it will require some form of outside funding to make a public water system come into being. Grant and reduced interest money are available from a number of sources such as the EPA, USDA and various Ohio programs. The one big difference is that water systems are not as heavily regulated as sewer, have more options for construction and generally cost less.

Information sources include: Ashtabula County Health Department; Ohio EPA Division of Drinking and Ground Waters, Northeast District; Ohio Administrative Code; Ohio Revised Code; Ohio State University College of Food, Agriculture and Environmental Sciences; and Ashtabula County Soil and Water Conservation District.

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*This Revitalization Plan, like Pierpont is a work-in-progress. Errors can be corrected (please call them to our attention). This document can be amended and revised as we continue to learn together, reassess and re-direct our priorities, resources and energies.*

## Appendix A

### **Pierpont Revitalization and Planning Committee resolution and charge**

2018 January-April. Ad hoc citizen group informally met to discuss how to revitalize and grow Pierpont; and how to develop a shared vision and community support. The group met with Ashtabula County Community Services & Planning Director, Janice Switzer to explore township demographics, assets, and actions for moving forward. The group identified assets and barriers to economic growth; developed a working vision, explored infrastructure (sewers, water and broadband for downtown Pierpont), discussed options, met with Ashtabula County, Holmes Co, and Columbiana Co engineers, staff and elected officials, to learn best practices associated with rural sewer construction and financing.

2018 April. Pierpont ad hoc citizen group requests Pierpont Trustees create Pierpont Revitalization, Planning and Development Committee

2018 April 17 Pierpont Trustees create by resolution the Pierpont Revitalization, Planning and Development Committee, unanimously approved.

### **Pierpont Revitalization, Planning, and Development Committee Resolution**

*Whereas*, Pierpont Township, in Ashtabula County, Ohio has a legacy of economic vibrancy and community spirit, abundant natural resources and unrealized future economic potential. This rural township in NE Ohio grew 17 % between 2010-2016, has two Ohio Scenic Rivers (the East and West branches of the Ashtabula River), is proximate to Lake Erie, Pymatuning Lake, the Northeast Ohio (NEO) County Airport, and is connected by major highways to Great Lakes ports at Conneaut and Ashtabula as well as large metropolitan cities Erie, PA, Cleveland and Youngstown, Ohio.

*Whereas*, Pierpont Township has numerous agricultural and non-agricultural enterprises with potential to grow and expand the economic base of the township.

*Whereas*, downtown Pierpont, the social and market center of the township is at risk with loss of local businesses, aging housing and commercial buildings, and inadequate infrastructure to grow existing businesses and draw new residents, business and services. A revitalized downtown Pierpont will stimulate the township economy, strengthen social ties and renew the community.

*Be it resolved* that a Pierpont Revitalization, Planning, and Development committee be created with the charge to look forward to 1) discover the aspects of our community that we value and would like to strengthen and restore; 2) identify key infrastructure, economic and environmental areas we could improve; 3) explore new opportunities and potentials, and 4) encourage actions and investments that can revitalize our community.

**Leadership 2018-2019.** Lois Wright Morton, chair; Duane Marcy; Kim Marcy; Marty Holden; Cameron Wright; Jake Hudson; Kelly Kanicki. Pierpont Township trustees. Bob Jackson, chair; Gaylord Millard (2018); Graydon Hoover (2019); and Barb Culp. Township fiscal officer. Bette Brent.

## Appendix B

### Inventory of current enterprises and business in Pierpont Township 2018 November 16

#### Enterprise categories

Local food & products, wholesale & retail (blue)

Local agriculture & natural resource production, wholesale & retail (green)

Service businesses (red)

Manufacturing/transportation/construction (purple)

Arts & antiques/entertainment/retail/other (orange)

#### Pierpont West of S.R. 7

##### Stanhope-Kelloggsville Rd (East side)

84 Hudson Communications, LLC

1355 Stan Hofka & Son, Inc.

1550 Smokin' T's (Neczeporenko)

##### Beckwith Rd (south side)

5802 Mehlen Woodworking

5848 Bennies Blacksmith

##### Lewis Rd

1211 Harmon Electric (also SR 7, downtown Pierpont)

##### S.R. 167 West

4877 Holden Hay

4671 Jackson Construction

5070 Hillside Craft & Variety

5310 Millard Dairy

5395 Millers' Roofing & Construction (Menno Miller)

5851 S & C Machine Shop (Steve Gagat)

5922 Hudson Maple Syrup (Leroy Hudson)

##### Schramling Rd

5433 Al's Towing (Alvin Williams)

4820 Burdicks Logging

5740 Yoder's Greenhouse

##### Anderson Rd

5157 Hanson Horse Training

**S.R. 7**

773 TV Land Rte 7 South  
1114 AW Taylor Lumber Inc. Rte 7 South  
1251 Yoder Transportation Rte 7 North

**S.R. 7 Downtown Pierpont**

1199 Western RSV Animal Clinic  
1071 Williams-Ducro Funeral Home  
1041 Twigs 'N Crows (Wanda Williams)  
34 Reiter Insurance (Jim Reiter)  
38 Richcreek's Shell gas station (Bob Richcreek)  
981 Ashtabula Port Authority (former Jamboree)  
990-1009 Marcy Tractor & Equipment, LLC

**Winship Ave. (Whey Alley)**

5991 Northeast Holdings (Cory Jones, real estate, 2010)

**Beckwith Rd**

2403 Ringbyre Jerseys LLC Beckwith & Rte 7  
6525 EP Custom CNC (machining)

**Pierpont East of S.R. 7**

**S. R. 167 East**

5981 Amtrac Machining  
6928 Wright Farms Ltd

**Marcy Rd**

5969 Artistic Woodworks (barn quilts, woodcraft, Jeff & Rachel Scribben)  
6275 Teter Trucking (Johnie Teter)  
6293/6309 DOC Transportation (Michael Teter, 2013)  
6611 Marcy Tractor & Equipment, LLC

**Turner Rd**

7131 Apex Electric Inc (Mark Sanford, 1999)  
6620 Mechling Maple Syrup (Snowy Oaks Farms)  
Penn Line Farm U-Pick Blueberries (Carol Wiese Powers)  
7290 Sardella Woodworking (Ryan Sardella)

**Hall Rd**

6244 Milton Ring Custom Floors (hardwoods)

**S.R. 6 (north side)**

6018 Senita Construction Co LLC (gen contracting K Brenlzer, 2016)  
7081 Farm Drainage Ltd (Wm Hofka)

**Creek Rd**

1361 Ginger Whitehead Massage Therapy  
925 Rustler Ranch (Phil Dietrich)  
690 Sunset Metal Roofing Manufacturing (Neil Miller)  
539 Miller Custom Leather  
129 Outwash Terrace Farm (blueberries, L Wright Morton)

**Middle Rd**

1959 Rocky Ridge Hardscapes (D Mott, landscaping 2018  
Robert Miller's Sawmill (Middle & Beckwith)

2150 HDT Global (generators, shelter sys, military units)

2697 HLH Trucking

**Pennline Rd**

1007 McCowien Drilling

**N State Line Rd (Ohio side)**

697 KSWC, Inc (Ind control sys; water treatment sys, mfg)

1227 LB Trucking



## Appendix C Soils of downtown Pierpont

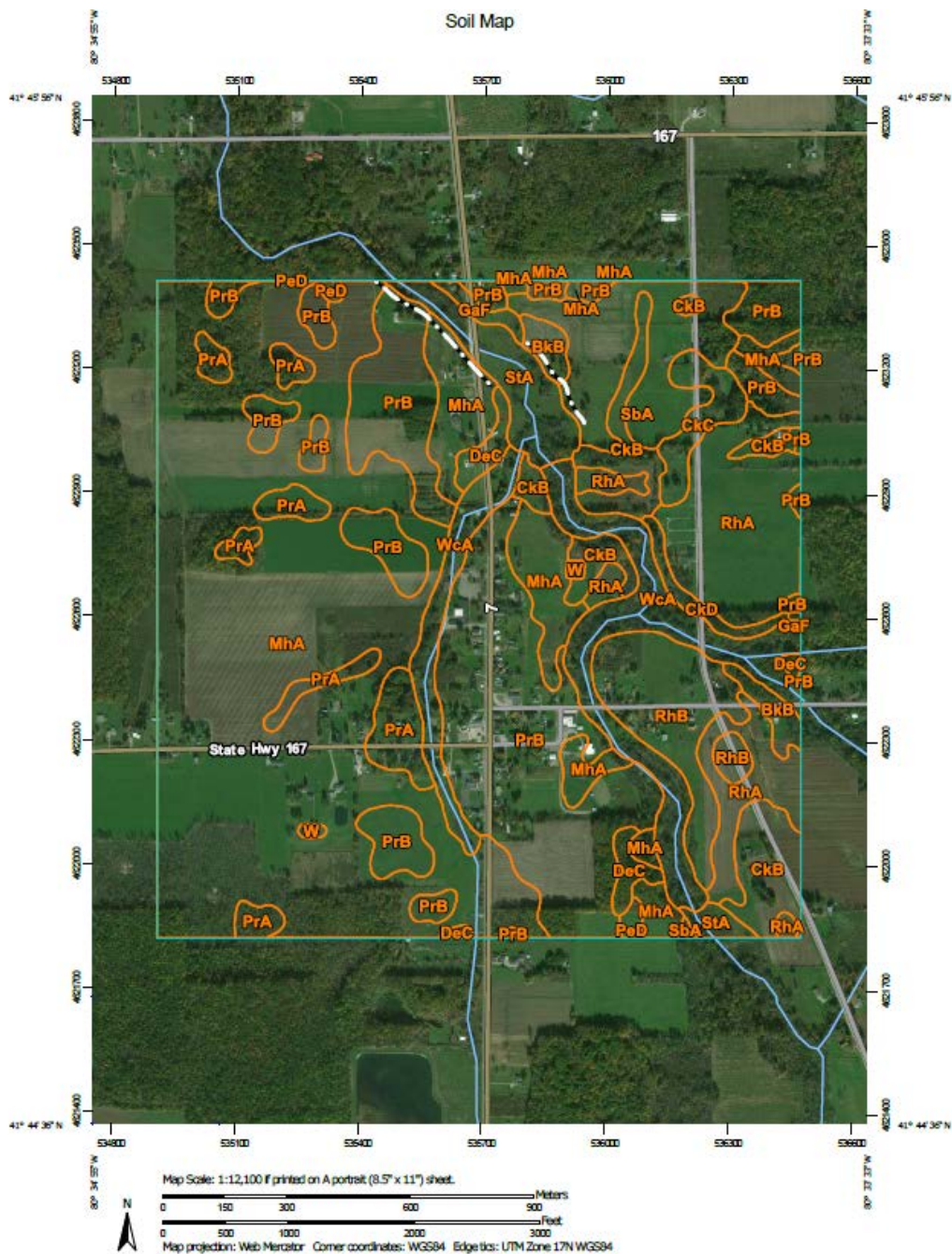


Figure C.1 Soils of downtown Pierpont. NRCS Web Soil Survey. Soil Survey of Ashtabula County, Ohio 2001. USDA, Soil Conservation Services, Ohio Department of Natural Resources, Division of Lands and Soil, The Ohio Agricultural research and Development Center.

## Appendix D Criteria for installing private septic systems

Ashtabula County Health Department by law requires home sewage treatment permits for all homes in the county. Installation and selection of the type of system that will effectively treat waste disposal are based on three basic criteria:

1. Adequate lot size. If lot sizes are too small there is not space for conventional septic system (2 to 3 lateral ~100' apiece); A different type of system such as an aerobic treatment unit can work on a small lot.
2. Soils that drain well; i.e. allow effluent to filter; water table not too high
3. Undisturbed soil for infiltration/leach field

### Types of septic systems

**Conventional.** Tank with trench or subsurface wastewater infiltration drainfield; a gravity system with a relatively large footprint (parcels need room for two to three 100' laterals and well drained soils). \$15,000-\$25,000. Maintenance pump every 2-5 years.

**Aerobic treatment unit.** Used in homes on smaller lots, inadequate soil conditions and areas where water table is too high. Oxygen injected into the treatment tank, some systems have pretreatment tank and final treatment tank for disinfection. \$15,000-\$25,000. Life time maintenance, regular parts replacement, electrical components with air compressor. Check every six months; has an alarm.

**Mound system.** Areas of shallow soil depth, high ground-water; sand mound contains the drainfield trench. Effluent from the tank flows to a pump chamber where it is pumped to the mound in prescribed doses. Requires substantial space and periodic maintenance.

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## Endnotes

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Pierpont Township Hall Office. 1109 SR Pierpont, Ohio 7440-577-1015  
Website. [pierponttownship.com](http://pierponttownship.com)

<sup>ii</sup> Local food references food that is sold based on “nearby” source of origin. They are typically marketed as 1) food products that are raised, produced and processed in close proximity to the locality or region where they are marketed and consumed 2) food products that are transported using more direct or shorter supply chains, using fewer levels of intermediaries compared to conventional marketing channels, and 3) local foods specifically identify the physical original of the product in labeling and advertising so buyers and consumers can recognize the food as “local” Dumont et al. 2017.

<sup>iii</sup> FCC performance measures on the quality of broadband use three metrics: 1) speed-actual download and upload speeds as advertised, and consistency of speed, 80/80. ie. the minimum actual speed experienced by at least 80% of consumers during the 80% peak usage period, 2) latency-the time it takes for a packet of information to travel across a network from one point on the network to another (affects interactive services such as internet phone calls, video chat or online multi-participant calls), and 3) packet loss-the rate at which data packets in a stream of data fail to be delivered to the intended destination.

<sup>iv</sup> Ohio County Commissioners Handbook. April, 2015. Chapter 28. County Sewer Districts: the provision of water, sewer, drainage, and storm water prevention and replacement facilities. <https://ccao.org/wp-content/uploads/HBKCHAP028%204-2-15.pdf>