

LAGRANGE COUNTY TOGETHER

THE COMPREHENSIVE PLAN FOR OUR COMMUNITIES
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VOLUME 4: FOUNDATION

Technical Analysis Memo | Comprehensive Plan
for the Communities of LaGrange County

DRAFT | NOVEMBER 2021



VOLUME 4
FOUNDATION

TECHNICAL ANALYSIS MEMO | COMPREHENSIVE PLAN
FOR THE COMMUNITIES OF LAGRANGE COUNTY

SEPTEMBER 2021

The following report provides the initial analysis of three topics: roads & transportation, infrastructure, and broadband. This report and its accompanying presentation are the last in a series of four analysis memos that provide a summary of the baseline conditions and trends in support of the LaGrange County Comprehensive Plan Update. For questions on this report, please contact the project manager for LaGrange County Together, Logan Stang, planner with planning NEXT, at logan@planning-next.com.

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1. ROADS & TRANSPORTATION

The following is a memorandum describing the existing conditions of the transportation systems in LaGrange County, Indiana and the communities of LaGrange, Shipshewana, and Topeka. The review includes input from area public administrative and engineering professional, as well as data provided by INDOT, Indiana LTAP, LaGrange County, and other public sources. While the overall transportation network is well positioned to facilitate population growth, a number of critical issues threaten to hinder growth and sustainability throughout the county and in the communities Shipshewana, Topeka, and LaGrange.

KEY FINDINGS

- **VEHICULAR CONGESTION**

While congestion in LaGrange County is not a systemic issue, some areas experience congestion during specific hours or days of the week. Flea market and tourist traffic causes issues seasonal and day-of-the-week congestion in Shipshewana. Shift change and freight movements cause short-duration daily congestion near some area factories and in Topeka. Further, some congestion is common along Central Avenue (US-20) through the Town of LaGrange.

- **SAFETY**

Five years of crash data was reviewed to identify the County's highest frequency crash locations. The highest frequency crash locations were Central Avenue (US-20) and Detroit Street (SR-9) in LaGrange and US-20 and Van Buren St (SR-5) in Shipshewana. A subset of this data was also evaluated to understand where crashes involving vulnerable road users such as buggies, pedestrian and bicyclist crashes are occurring. While uncommon, buggy-involved crashes most often occurred at a number of intersections along US-20 and SR-5 in the western half of the county. Crashes involving pedestrians or bicyclists were much less common, but occurred most frequently in several intersections in Shipshewana and at a number of rural intersections. Beyond the crash data, crops and landscaping elements placed too close to the road limit sight distance and introduce hazards which may increase crash risks for area motorists.

- **ROADWAY AND BRIDGE MAINTENANCE**

Pavement and bridge conditions are an issue of concern, creating a substantial backlog of needed repairs, though local agencies are using available funding to reconstruct roads and, in some cases, improve drainage and pedestrian facilities on local roads. Beyond the backlog, a substantial issue is managing damage caused by buggies—specifically groves, rutting, and pavement failure caused by steel horseshoes and buggy wheels.

- **FREIGHT TRAFFIC**

There is a significant amount of freight traffic in LaGrange County, including both local and cross-county trips. The prevalence of small factories and agriculture activities generates a substantial amount of freight trips, with most trips beginning or ending on local roads not designed to support heavy loads. Beyond these local trips, cross-county truck travel has increased in recent years on US-20, likely resulting from an increase in toll fees for trucks to use the Indiana Toll Road (I-80/I-90) which runs parallel to US-20. The high amount of truck traffic is a concern for maintenance and the safety of vulnerable road users.

- **PEDESTRIANS, BICYCLISTS, AND BUGGIES**

Walking and biking are common in LaGrange County despite being predominantly rural in character. The Census Bureau estimates 4.5 percent of workers walk to work, and 7.8 percent bike—both substantially higher than the national average of 2.5 and 0.5 percent respectively. Further, a substantial number of community members travel by horse-drawn buggy. Infrastructure to support these users is limited to sidewalks located along some streets in area communities, the Pumpkinvine shared-use trail, and a number of wide asphalt-paved shoulders commonly called buggy lanes. Progress is being made, including the addition of new and improved sidewalks along local street projects in most communities, a DNR grant awarded to study developing a second rail-trail between Wolcottville and Topeka, and complete street improvements to Van Buren Street (SR-5) in Shipshewana.

- **FLOOD MANAGEMENT**

The southwestern portion of LaGrange County is prone to flooding due to the area's soils and high-water table. A network of drain tiles or culverts have been built over the years to provide positive drainage. For Topeka, the town manager expressed concern about the condition of the tile which serves the town and the potential for flooding if the tile fails. Beyond the reach of the tile system, some local roads are covered by standing water for a time after storm events— hindering travel and potentially damaging the road itself. The County Engineer is evaluating how a lack of cross-road culverts and private driveways contribute to areas of localized flooding.

- **PARKING**

The availability of parking is an issue in LaGrange as well as Shipshewana. In recent years, demand for parking in downtown LaGrange has increased but the amount of available parking has not. Parking availability has long been an issue in Shipshewana, but progress has been made to encourage private businesses to allow at least some of their lots to be open to the public. In LaGrange, Shipshewana, and Topeka, public parking areas with hitching posts are provided for buggies, and in a few locations parking is provided for bicyclists.

- **PLACEMAKING**

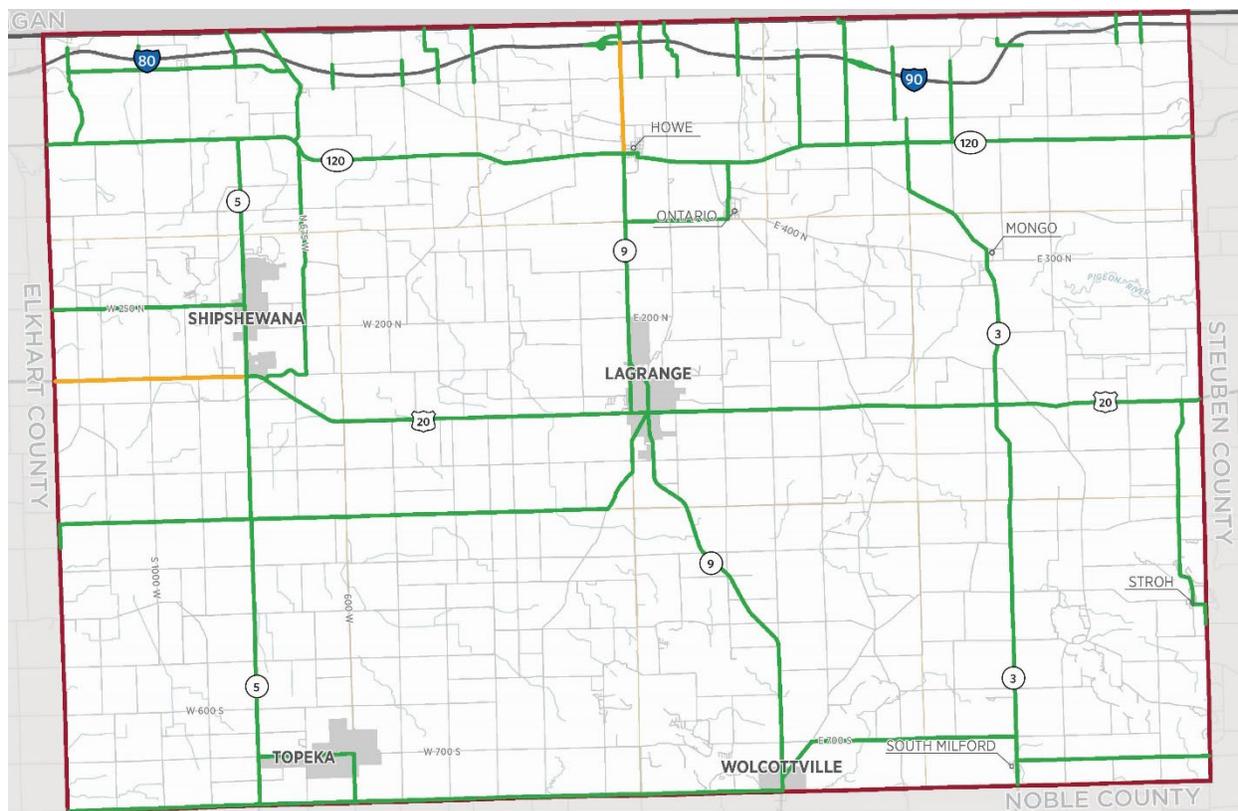
In terms of placemaking, Shipshewana, LaGrange, and Topeka each have their own character, aesthetic, and challenges. For Shipshewana, the community is built along a SR-5—a spine of commercial activity that can be very congested and is not the friendliest to pedestrians.

INDOT's planned improvements to SR-5 will help, but it will be important for the place's character to leave a larger impact than the town's congestion. LaGrange downtown features numerous storefronts and is mostly walkable, yet its streetscape on Detroit Street (SR-9) has a dated feel, and the lack of street trees and some unnecessarily long crosswalks may hinder pedestrian comfort. Topeka town center is quaint and intimate, yet struggles to accommodate semi-tractor trailer traffic through the intersection of Lake and Main, where buildings on three corners are built up to the curb line.

1.1 VEHICULAR CONGESTION

When local officials were asked about congestion, most indicated it’s mostly a localized issue, occurring during certain times of the day or certain days of the week. On days when the flea market is open in Shishewana, the influx of visitors places an immense strain on all the town’s roads, especially Van Buren Street (SR-5)—the main north-south corridor through town. With a permanent population of fewer than 1,000, the impact of visitors—more than 1 million a year, is substantial. INDOT will soon start a construction project to improve the road, widening Van Buren from two lanes to three lanes between US-20 to Middlebury Street. Other areas of congestion include a number of intersections near area factories, such as Lake Street (W 700 S) and Hawpach Drive, and Lake and Main streets in Topeka. Similarly, some streets near area schools will also get congested for 10-20 minutes per day. With exception to Shishewana, most congestion is inconvenient short-lived disruptions.

Figure 1: Corridor Quality Level of Service Analysis in LaGrange County



Beyond interviews with local officials, a planning-level corridor quality level of service (QLOS) analysis was used to screen area roads for systemic traffic congestion (Figure 1). This analysis classifies roadway Level of Service as C or better, D, E, or F, where C or better represents little to no congestion and travel occurring at or near the speed limit, and F representing bumper to bumper, stop and go traffic. To perform the analysis, planners compared the existing daily traffic volumes against listed volume thresholds for each LOS designation, which vary based on roadway characteristics such as the number of travel lanes, presence of median and/or left turn lanes at critical intersections. All segments

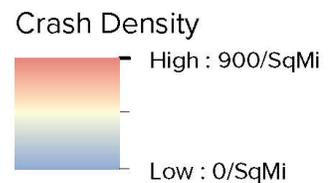
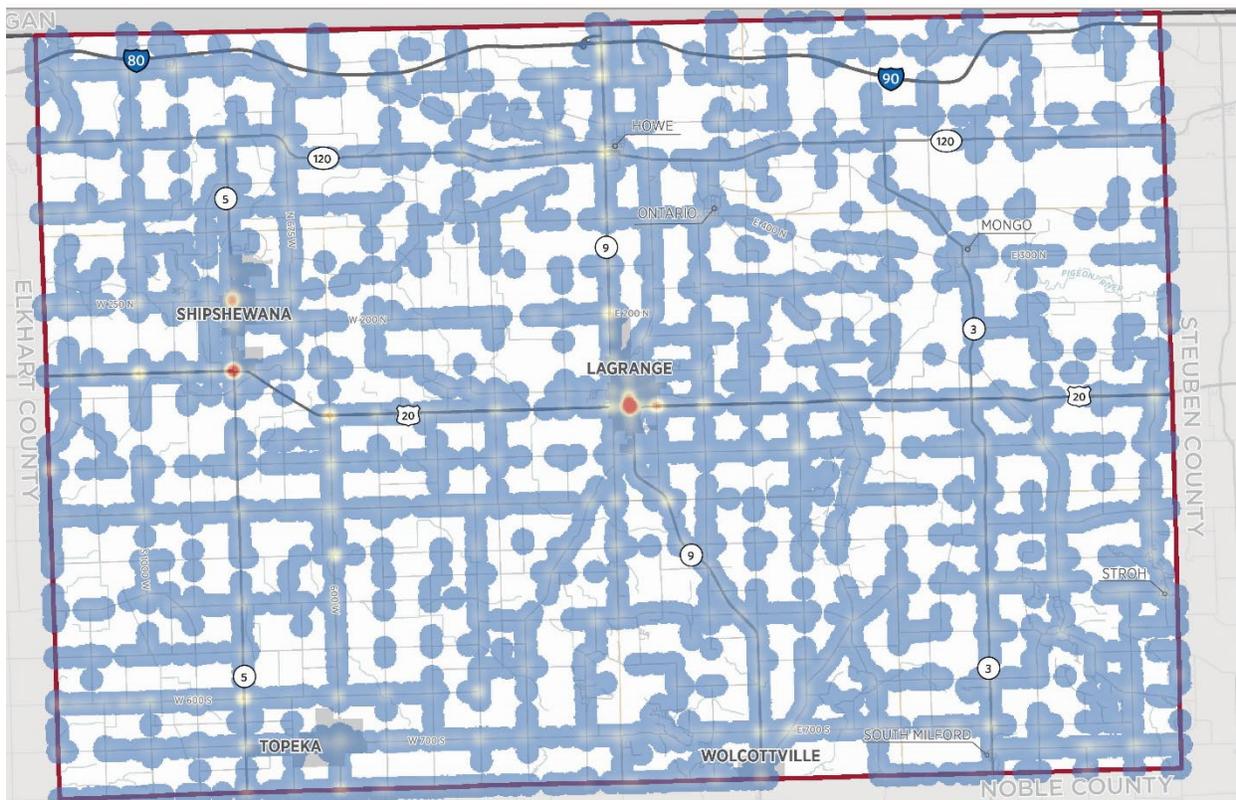
- QLOS Capacity Analysis**
- LOS C or Better
 - LOS D
 - LOS E or Worse (no segments)

analyzed appear to operate at LOS C or Better, except for two segments: US-20 from the Elkhart County line to SR-5, and SR-9 from SR-120 to the Indiana Toll Road (I-80/I-90). Exhibit X shows the result of this analysis.

1.2 SAFETY

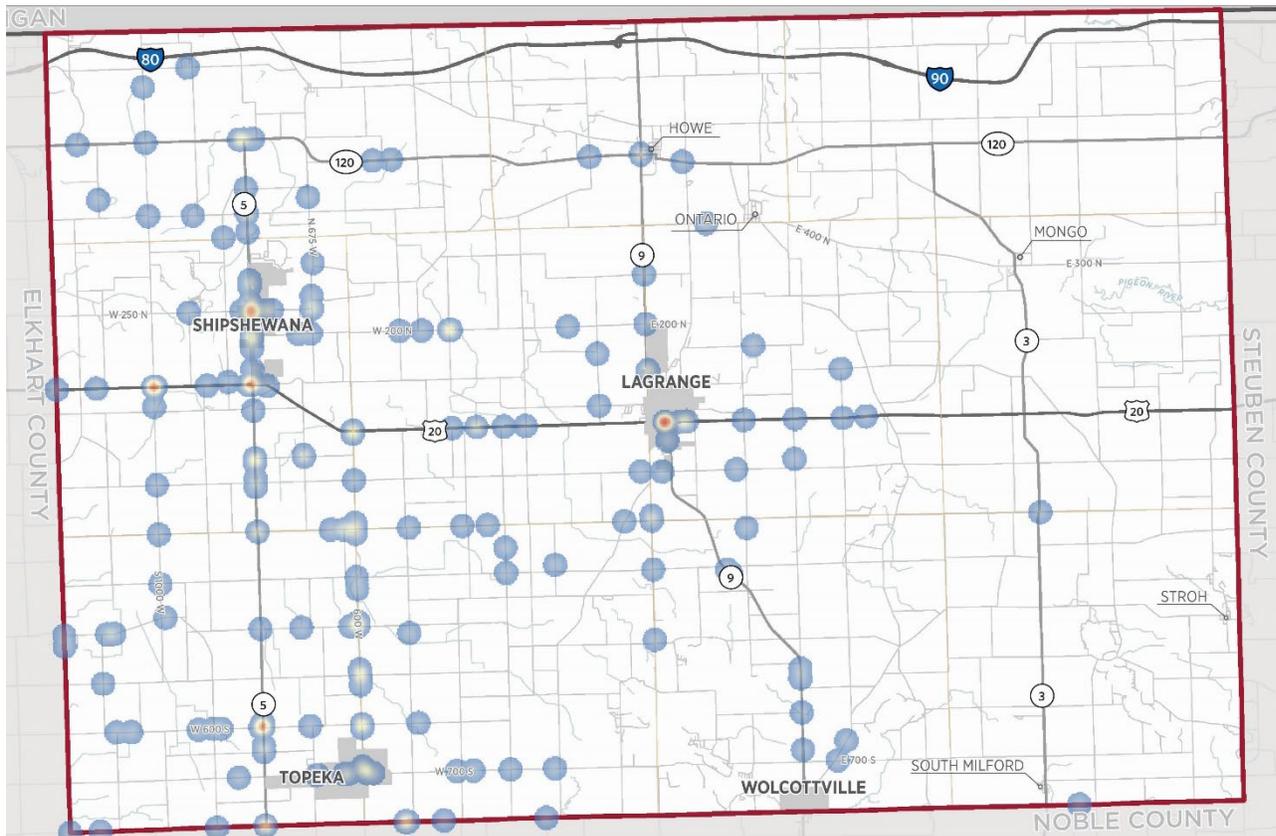
A review of INDOT crash data shows that a number of intersections around LaGrange County have a high frequency of crashes. INDOT crash data from the years 2016 through 2020 (five years) was evaluated to identify high-frequency crash locations. This data was requested from Indiana LTAP and, as part of this request, LTAP staff coded crash data to indicate whether vulnerable road users (VRUs) were involved, including buggies, bicyclists, and pedestrians. During the five-year period, there were 7,570 reported crashes. Of these, 205 crashes involved buggies (2.7%), 33 involved bicyclists (0.4%), and nine involved pedestrians (0.1%).

Figure 2: All Crashes in LaGrange County



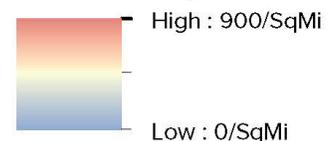
Buggy-Involved Crashes

Figure 3: Buggy Crashes in LaGrange County



While buggy-involved crashes only comprised 2.7% of all reported crashes, these are a particular concern because buggy operators and occupants are particularly vulnerable in a crash and, as such, may be more likely to experience serious injury or a fatality. As shown in Figure 3, the intersection of Hawpatch Street and W Central Avenue (US-20) in the town of LaGrange had nine crashes over the five year period—the highest frequency of crashes reported at any one intersection. Other intersections with a high frequency of crashes include Middlebury and Van Buren (SR-5) streets, US-20 and Van Buren Street (SR-5), and US-20 and CR W 1000—all in and around Shipshewana. In addition, the intersection of SR-5 and CR W 600 west of Topeka.

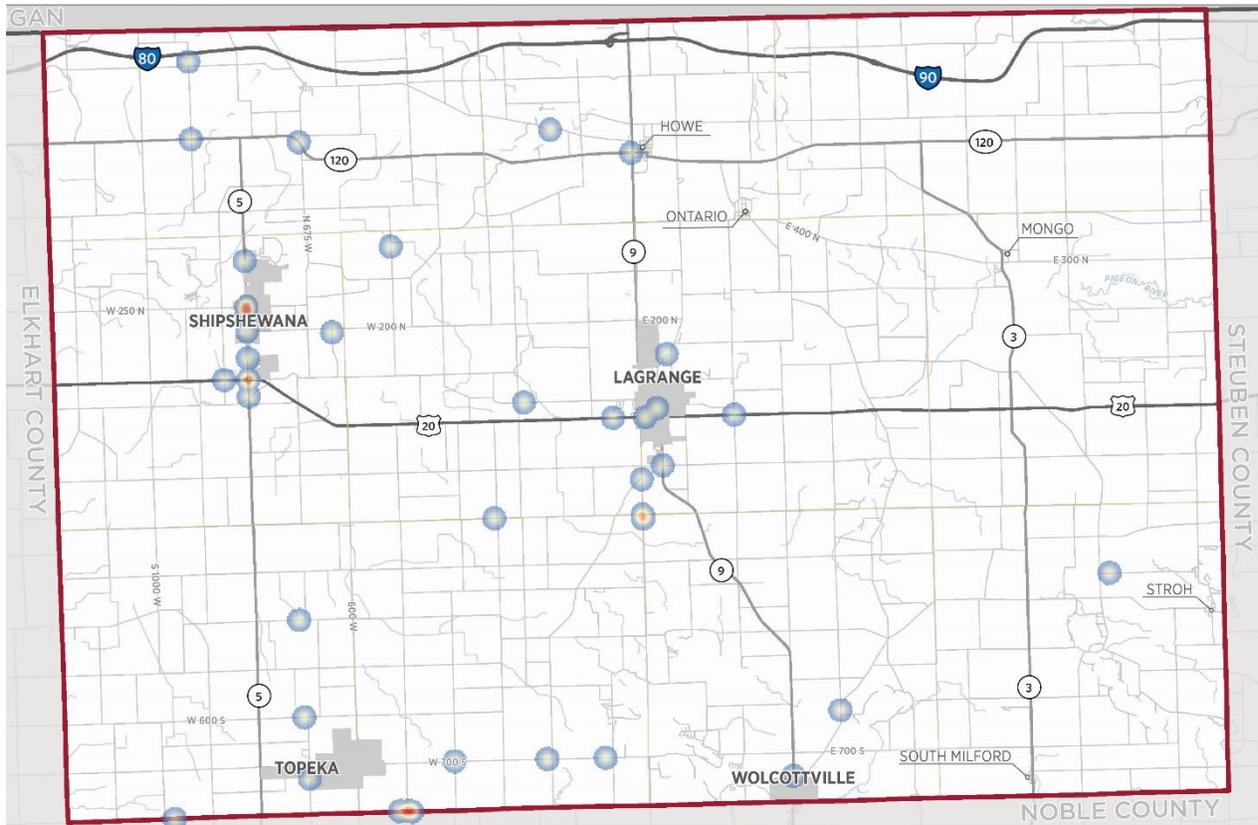
Crash Density



Pedestrian and/or Bicyclist-Involved Crashes

Over the five-year period, just 42 crashes involved either a pedestrian or bicyclist. The intersection with the most incidents was Middlebury St and SR-9 in Shipshewana with 12 crashes, followed by US-20/SR-5 in Shipshewana, CR S 500 W / CR E 800 S (county line) southeast of Topeka, and CR 200 S/S Townline Rd.

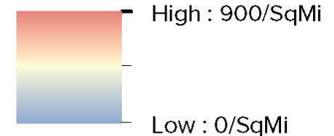
Figure 4: Bicycle and Pedestrian Crashes in LaGrange County



Other Safety Concerns

In addition to the crash data, Tharon Morgan, the LaGrange County Engineer expressed that she is concerned about safety issues arising from encroachments, which are private improvements placed within the right-of-way or county-regulated property containing the road, road shoulders, and utilities. Of note, some farmers are planting crops right up to the edge of the road, greatly limiting sight distance in some places. Further, some property owners are placing boulders and other fixed objects within the right-of-way. Fixed objects, if hit by a motorist who drives off the road, could cause a serious injury or fatality crash. Most local roads have a right-of-way width of 40 feet and, where a road is built in the center of the right-of-way, this means the right-of-way extends 20 feet from the centerline, or about 6-10 feet from the edge of pavement.

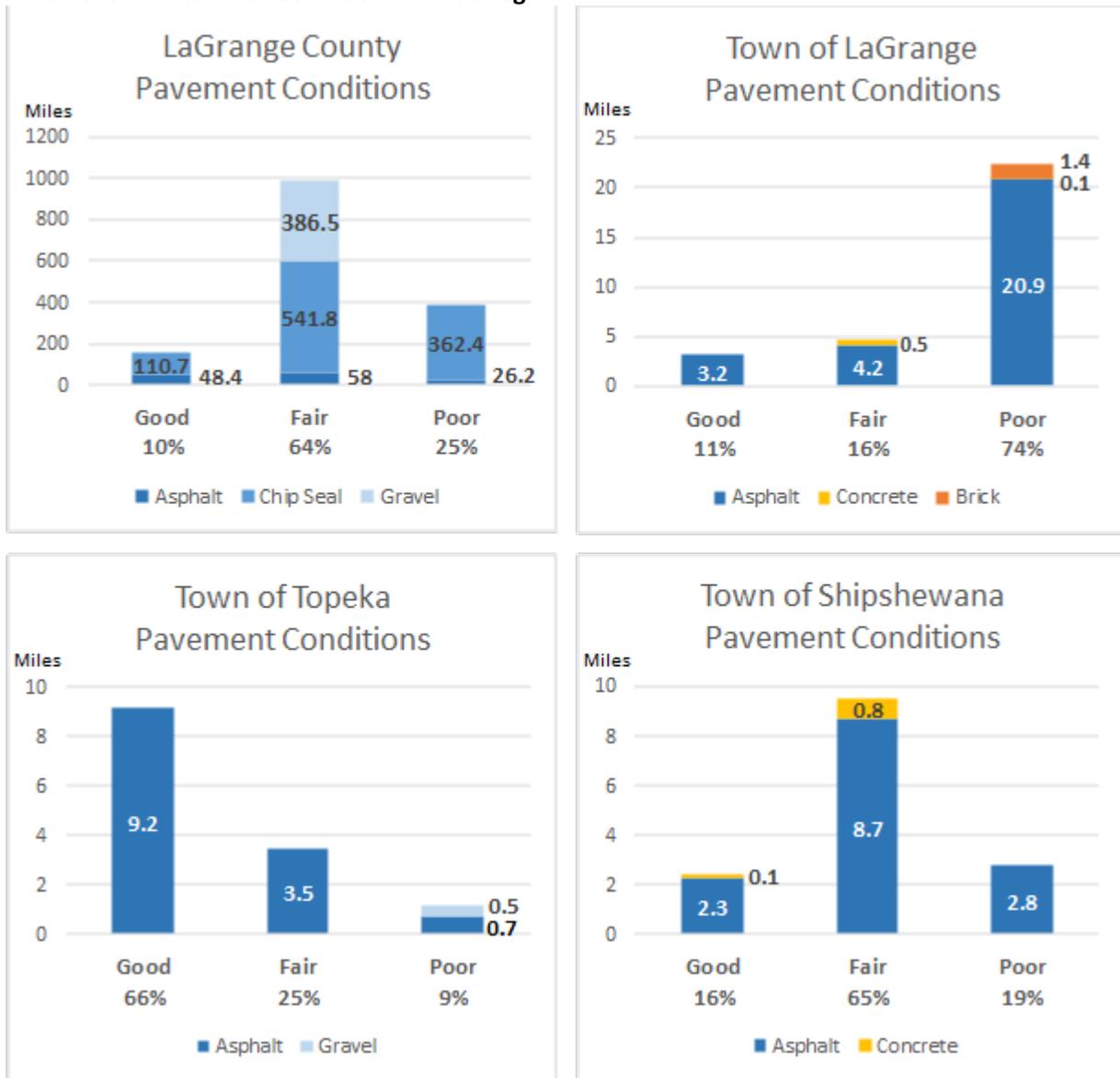
Crash Density



1.3 ROADWAY AND BRIDGE MAINTENANCE

A review of pavement and bridge condition data shows that the County and area towns have substantial maintenance backlogs. To calculate the backlog, roadway and bridge condition data was obtained from Indiana LTAP and the INDOT bridge condition database, and deferred maintenance backlogs were estimated based planning-level cost to repair or replace data provided by INDOT.

Pavement Maintenance Condition and Backlog



To understand how this condition data translates into cost, the current maintenance backlog for asphalt and chip seal roads has been calculated for each jurisdiction. The backlog represents the cost for each jurisdiction to bring their roads up to good condition in one year. Comparing a system's backlog from year to year is an indicator for whether maintenance funding levels are sufficient to improve overall system's condition rating. To estimate each agency's backlog, INDOT planning-level pavement repair activities and their cost for asphalt and chip seal pavements were averaged by condition rating¹. Next, these values were multiplied times the number of lane miles² per condition category. Finally, the total was calculated, plus a 20% contingency to account for other potential project costs. Maintenance backlogs for asphalt and chip seal roads maintained by each agency are as follows:

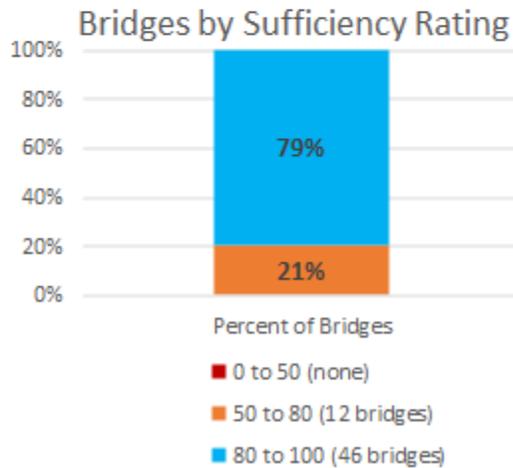
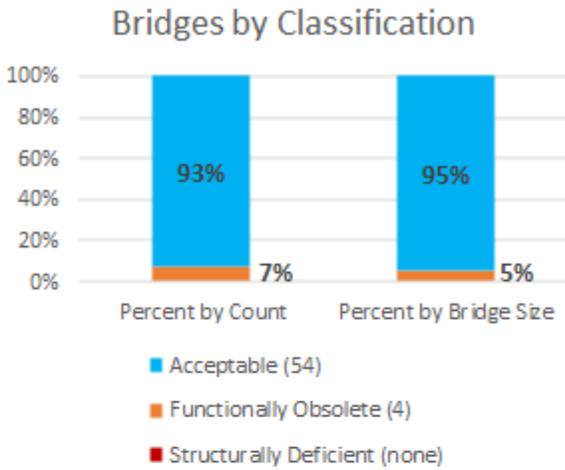
- **LaGrange County—Backlog estimate: \$120M**
Of this total, \$102M is estimated as the cost to overlay or reconstruct approximately 362 lane-miles of chip seal roadway with poor PASER ratings. For some of these roads, it may be more cost effective to convert them to gravel roads.
- **Town of LaGrange—Backlog estimate: \$6M**
This number is effectively the cost to overlay or reconstruct approximately 21 lane-miles of poor-condition asphalt streets.
- **Town of Shippshewana—Backlog estimate: \$940,000**
This is driven by the cost to overlay or reconstruct 2.8 lane miles of local streets.
- **Town of Topeka—Backlog estimate: \$280,000**
This cost is primarily driven by the need to overlay or rehabilitate approximately 0.7 lane miles of local streets.

These above estimates are based on the number of lane miles in each jurisdiction, assuming a standard lane width (e.g. 12 feet). Some roads have lane widths which are substantially wider than 12 feet as they also include on-street parking or wide paved shoulders. As such, the cost to repair those streets will be higher than shown as this is not accounted for in the backlog estimate.

Upon checking with LTAP, each local agency has submitted a pavement asset management plan, a requirement to submit Community Crossings Matching Grant requests to help pay for projects.

Impact of Buggies on Pavement Conditions

Beyond normal wear and tear, a substantial maintenance challenge is pavement damage caused by buggies. The narrow steel wheels used on most buggies and steel horseshoes can quickly create substantial grooves, wear of the pavement surface, and rutting. Repair of this damage is typically performed by milling and overlaying the damaged section of asphalt, and such repairs are often needed well before the rest of the roadway needs to be resurfaced. The cost of performing these repairs greatly exceeds the revenue collected from registration fees for buggy license plates. Beyond the physical damage, another issue of concern is the management of horse manure on area roadways, which are essentially impractical to keep clean.



Bridge Condition

In general, the condition of county-owned and maintained bridges is good, though continued funding is needed to maintain these structures.

Similar to the pavement analysis, condition data for county-maintained bridges³ was obtained from INDOT’s Bridge Inspection Application System (BIAS) in order to get a better understanding of the system’s condition and current maintenance backlog. Bridge condition is typically classified as being acceptable, structurally deficient⁴, or functionally obsolete⁵. The chart “Bridges by Classification” shows the share of bridges by classification.

In terms of bridge condition, inspectors calculate a sufficiency rating to communicate the overall condition of the structure. These ratings range from zero to 100, where the rating of 100 is the best possible. The chart “Bridges by Sufficiency Rating” shows the percent of bridges with sufficiency ratings within specific ranges. Generally bridges with ratings between 0 and 50 are in such poor condition that full reconstruction is recommended. By contrast, bridges with ratings between 50 and 80 may only need a rehabilitation. Bridges with ratings

between 80 and 100 do not require substantial interventions.

An estimated backlog of bridge maintenance was developed based on bridge sufficiency ratings, the typical remediation activities, INDOT planning-level unit costs for bridge reconstruction and rehabilitation, and a 20% contingency to account for the potential unknowns. All combined, the backlog is estimated to be approximately \$6.14M.

Improvement Efforts and Projects

In recent years, most area communities have used Community Crossings Matching Grant funds to help pay for local road repair and rehabilitation projects, often also including sidewalk, accessibility, and drainage improvements.

Over the next few years, the most transformative project will likely be INDOT’s minor widening, sidewalk and drainage project on Van Buren Street (SR-5) from US-20 to Middlebury Street. This project will standardize the roadway section from two lanes with some turn lanes to a consistent three-lane section, including a center turn lane. The addition of sidewalk and drainage improvements

should make it easier for visitors to walk to destinations along the corridor. At present, the project is expected to go to construction in 2023.

1.4 FREIGHT TRAFFIC

LaGrange County and its communities see a substantial amount of local and cross-county freight traffic, resulting in localized operational impacts, and systemic maintenance and safety impacts. With respect to local trips, many freight trips are tied to the recreational vehicle (RV) industry and suppliers, other local factories, and agricultural uses spread throughout the community. In addition, cross-county freight movements have become more common along the US-20 corridor following increases in tolls for trucks to use the Indiana Toll Road (I-80/I-90).

Local issues are most acute in Topeka, where a high concentration of factories create a substantial number of freight trips. Key issues include congestion and delay during shift changes at the intersection of W Lake Street and Hawpatch Drive, and difficulty accommodating turning trucks at the intersection of Lake and Main streets.

In LaGrange, the issues are primarily concentrated along Central Avenue (US-20), where the number of trucks substantially adds to congestion at the signalized intersections of Central Avenue and Detroit Street (SR-9), and Central Avenue and Townline Road. Further, in spite of restrictions, truck drivers routinely “jake” or air brake coming into town, causing a substantial amount of noise to area residents.

Systemically, two issues rise to the top—road maintenance and safety impacts. Most local roads were not built to support a high number of truck trips and, as such, have substantial pavement damage. Further, the prevalence of trucks and vulnerable road users such as buggies, bicyclists, and pedestrians is a safety concern shared by some in the local community.

1.5 BICYCLE AND PEDESTRIAN

Walking and biking are common ways some travel around the community in spite of the lack of accommodations for pedestrians and bicyclists. According to the Census Bureau⁶, an estimated 4.5 percent of workers walk to work, and 7.8 percent bike—both substantially higher than the national average of 2.5 and 0.5 percent respectively. A majority of those who walk or bike to work are thought to likely be members of the Amish community as noted by several town and county staff members interviewed.

Given the county’s rural character, there are essentially no sidewalks or bike lanes outside of area towns. Some roads do have wide paved shoulders, often used by buggy operators and known locally as buggy lanes. These may provide some accommodation; however, the ruts caused by buggy traffic may be prove hazardous to those biking. At present, there is one shared-use trail—the Pumpkinvine Nature Trail which starts in Shipshewana and continues west into Elkhart County. *LaGrange County Trails*, a local advocacy group, is trying to advance the Hawpatch Trail, a rails-to-trails project to connect Wolcottville with Topeka and then eventually Middlebury in Elkhart County.

In LaGrange, most local streets have sidewalk and most which do not have low traffic volumes and speeds conducive to pedestrians and bicyclists sharing the road. The main thoroughfares—Central

Avenue (US-20) and Detroit Street (SR-9) both have sidewalk for the majority of their length through town but stretches of both streets toward the edge of town lack sidewalks. Townline Road, reported as being a common cut-through for traffic, does not have sidewalk. In downtown LaGrange, there are a number of marked crosswalks across Detroit Street (SR-9); however, substantially more could be done to make the crosswalks more noticeable to motorists, encourage motorist yielding to pedestrians, and potentially shorten some crosswalks to make the area more pedestrian friendly. While there are no bike specific facilities in LaGrange, most streets beyond Detroit, Central, and Townline have low enough traffic volumes and speeds to all bicyclists to comfortably biking with traffic.

With exception to Van Buren Street (SR-5), walking and biking conditions in Shipshewana are fairly decent. Most local roads have sidewalks and those which do not have low traffic volumes and speeds to allow pedestrians and bicyclist to share the road with traffic. On most days, these facilities are largely sufficient except on flea market days when the volume of pedestrians can exceed the capacity of most standard-width sidewalks. On Van Buren Street, some portions of the corridor between US-20 and North Street have sidewalk on one side street and other portions have no sidewalk making it difficult for some visitors to walk between attractions, lodging, and the flea market. INDOT's planned improvements to Van Buren Street include sidewalks on both sides of the street between US-20 and just south of Middlebury Street. These improvements will not address conditions between Middlebury and North streets, three blocks to the north.

In Topeka, sidewalks are largely present on Lake and Main streets, the main thoroughfares through town. About half of local residential streets have sidewalks and the remainder do not but are conducive to walking and biking with traffic. On the west end of town, near area factories, there generally are no sidewalks on Lake Street or Hawpatch Drive and, as such, those walking to work or to grab lunch must either walk on the grass, paved shoulder (where present), or share the road with trucks and passenger cars.

Each community we spoke with noted that they are actively pursuing Community Crossings Matching Fund grants to reconstruct local roads, add or complete sidewalks which are accessible per Americans with Disabilities Act (ADA) standards.

1.6 FLOOD MANAGEMENT

Management of stormwater and drainage is a challenge in areas throughout LaGrange County, causing a number of local roads to be covered by standing water after substantial rain events. These issues are most acute in the southwest portion of the county which has been described as marsh-like with a high water table and poorly draining soils. To help address this issue, a network of drain tiles have been built to help lower the water table and convey stormwater; however, the reach of this drainage system is limited and relies upon over-land sheet flow of water to reach it. Further, most roads are built slightly above grade and without ditches, stormwater flows off the road and into adjacent fields. This practice often keeps roads dry in high areas and directs over-land sheet flow to run along the road until it can cross under the road via a culvert, if and where provided.

As described by the County Engineer, a common reason for localized flooding are private driveways being constructed at a higher grade than the road so that the driveway won't flood. While effective, the water still has to go somewhere and often this causes water to flow into the road,

either crossing it or running around the end of the driveway. Potential regulatory changes include requiring driveways to be built below the grade of the road to allow flood waters to sheet-flow across the driveway instead of the road, or to require the installation of a culvert to convey water under the driveway or under the road at these locations.

Beyond these localized issues, other systemic issues are likely. First, the narrow width of local road rights-of-way, typically 40 feet, provide little space to construct sufficiently sized ditches to convey large amounts of stormwater. Second, the County's tile drainage system may simply lack the reach needed to address all areas needing enhanced drainage. The tile system is owned, maintained, and funded by fees collected by the LaGrange County Drainage Board. This board is supported by the County's surveyor who inspects issues and recommends maintenance and other actions to the board.

Concerning this system, a major concern to Topeka is the condition of the tile which conveys stormwater away from the town. Topeka town officials have reported signs of failure such as water flowing in the wrong direction and a sinkhole forming outside of the retention pond it drains to in West Park. The town is concerned that if the tile fails, portions of the town may experience flooding. Drainage is also an issue in Shipshewana as most of the town lacks access to a nearby tile. In LaGrange, a stream runs through the town, allowing an outlet for the town's stormwater system.

1.7 PARKING

The availability of public parking is predominantly an issue in the towns of Shipshewana and, to a lesser extent, LaGrange.

In Shipshewana, area attractions and the flea market can draw thousands of visitors on some days and over a million visitors a year. While most establishments along Van Buren Street (SR-5) have their own parking lots, there are several public parking lots in the vicinity of Van Buren and Middlebury streets. These lots, which allow visitors to park once and walk between nearby destinations, quickly fill up. The town has come to an agreement with the Blue Gate Theatre and Restaurant to designate 170 private parking spaces as public parking to help satisfy the demand.

In recent years, demand for parking in downtown LaGrange has increased but supply has not. Town officials note that several downtown restaurants are fairly popular and, combined with second-floor residential uses, have put a strain on available parking at certain hours of the day.

Beyond Shipshewana and LaGrange, parking is not much of an issue in Topeka or the rest of the county.



Figures 1, 2 — As shown on the left, a bike rack which only supports the parked bicycle by the front tire. If the bike is pushed or starts to fall over, the front wheel may be bent and require replacement. At right, a number of “inverted-u” racks are provided, which are designed to support a parked bike with two points of contact with the bike’s frame. Bikes properly parked at such racks are much less likely to be damaged.

1.8 PLACEMAKING

In terms of placemaking, Shippshewana, LaGrange, and Topeka each have their own character, aesthetic, and challenges.

Shippshewana’s street character varies through the community from improved local streets on the north end of town, to the rural character strip of Van Buren Street (SR-5) where most of the town’s tourist attractions are located. The lack of sidewalks and streetscape elements is noticeable and may discourage some from walking between attractions. INDOT’s planned improvements should help better accommodate pedestrians between US-20 and Middlebury Street, but will not address similar needs from Middlebury north to North Street.

By contrast, downtown LaGrange has decently wide sidewalks and on-street parking, framed by mixed-use buildings built on the right-of-way line. Combined, these characteristics form a place where one may want to visit to shop, eat, or even meet others. This being said, the lack of street trees or vegetation on most street block faces is noticeable and, in some places, crosswalks across Detroit Street (SR-9) are longer than necessary, potentially making it more difficult for some to cross the street.

Like LaGrange, downtown Topeka also has decently wide sidewalks and on-street parking, framed by lower density buildings built on the right-of-way line. Yet, the downtown area has more of a small town feel, is much smaller, and has much less vehicular traffic. Some adjacent buildings have roofs that have been built over a portion of the sidewalk—though these improvements at least one building,

Topeka Hardware, block use of the sidewalk. Like LaGrange, the lack of street trees and vegetation makes the streetscape look barren, save for a few small planters placed in the right-of-way by adjacent businesses.

2. INFRASTRUCTURE

The infrastructure section describes the public services and facilities offered in LaGrange County. These include utility provision, public safety services, and libraries.

KEY FINDINGS

- **Water and wastewater systems are provided for many communities.** Incorporated towns operate services for residents and businesses while the LaGrange County Regional utility District provides services to lake communities and unincorporated areas.
- **Alternative energy is growing across the county.** Large solar farms have been discussed in neighboring counties while LaGrange County has seen a recent growth in residential and commercial installations.
- **Police and fire services are available, but limited.** While many towns have police departments, all seven fire departments are volunteer based with some recently being consolidated.

2.1 UTILITIES

Water and Wastewater

LAGRANGE

The Town of LaGrange operates Water and Wastewater services for residents and businesses within the incorporated area. Since some residents are able to procure water on site through a private well, they have the option to apply for “Sewer Only” metering.¹

SHIPSHEWANA

Shipshewana is home to a class II Wastewater Treatment Plant with a capacity of 375,000 gallons of wastewater per day. An expansion to the plant was recently completed and is intended to support expansion for the next six to ten years.²

TOPEKA

The Town of Topeka is served by a class III Water Treatment facility that produces up to 750,000 gallons of water per day. The town also has three wells that can produce 900 gallons per minute. Due to natural fluoride occurrence in the well water, the town does not supplement its water with this mineral.³

Topeka has two water towers that hold a combined total of 600,000 gallons of water. The town operates 425 domestic water service connections and 123 fire hydrants.⁴

¹ <https://lagrangein.org/wp-content/uploads/2016/09/Sewer-Only-Service-Notes.pdf>

² <https://shipshewana.org/town-government-services/>

³ <https://topeka-in.gov/water/>

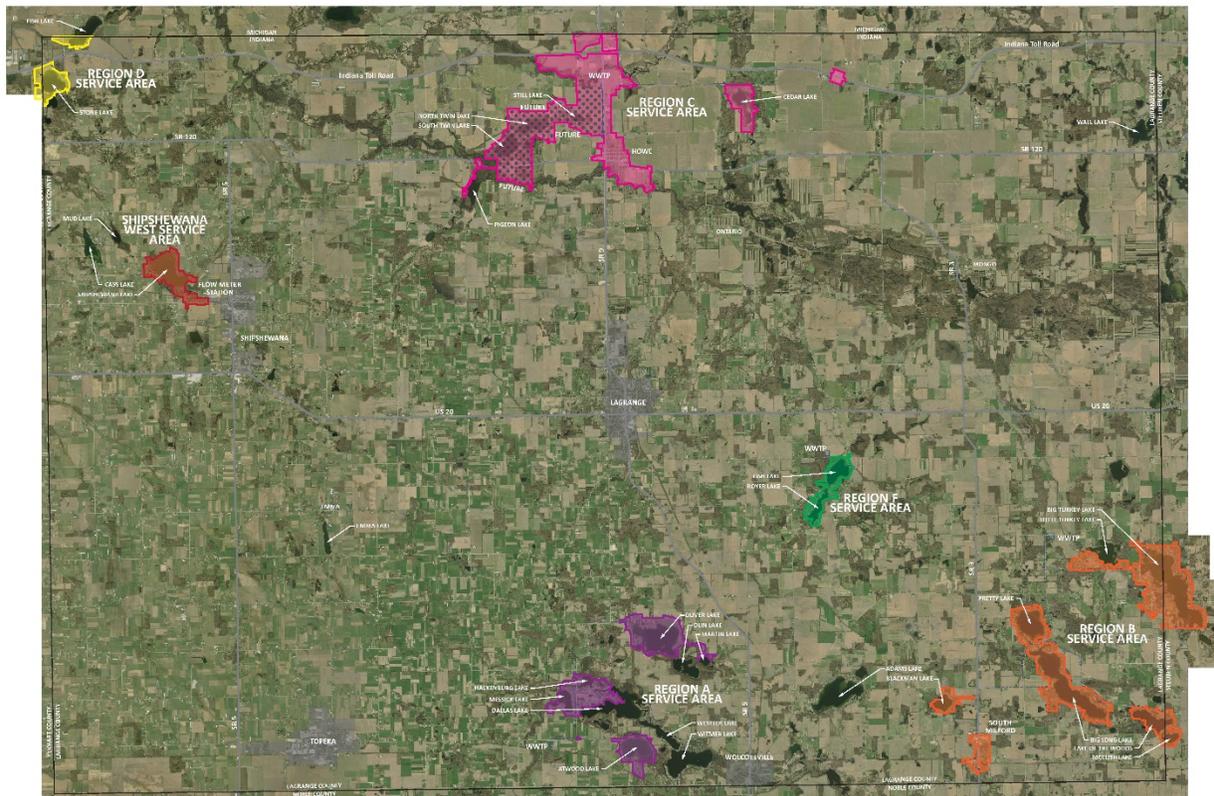
⁴ Ibid.

WOLCOTTVILLE

Wolcottville operates a Water and Sewer Department that serves Witmer Lake.⁵

UNINCORPORATED

The **LaGrange County Regional Utility District (LCRUD)** provides water and sewer services to many of the lakes and unincorporated areas of LaGrange County. This regional district is its own government entity that was formed in 1990 for the purpose of providing sewer services to the unincorporated areas of the county.⁶ The District is currently responsible for 3,800 connections, 100 miles of pipe, and three treatment plants.⁷



LAGRANGE COUNTY REGIONAL UTILITY DISTRICT

OVERALL MAP
JANUARY 2018



Figure 5: LCRUD Service Areas

The service area for Phase II of the septic removal project includes North Twin Lake, South Twin Lake, Pigeon Lake, and Still Lake. The project will add 327 new connections that will contribute approximately 65,000 gallons of wastewater per day. The District’s engineering committee has recommended installing a Pressure Sewer Collection System and expanding the Region C Wastewater Treatment Plant in order to

⁵ <https://www.facebook.com/109727620603406/posts/town-of-wolcottville-sewer-and-water-department-is-still-up-and-running-making-s/129950245247810/>

⁶ <https://www.lagrangecountywatersewer.com/about-us>

⁷ https://drive.google.com/file/d/1DmsZx9p0DpPogdAbgUKbVZ3HSoJat_u/view

accommodate this growth. The project will require nearly 12 additional miles of pipe, 256 grinder stations, and cost over \$11.5 million. Construction is expected to begin in April 2022.⁸

The **Adams Lake Regional Sewer District** serves the residents of Adams Lake, and the **Steuben Lakes Regional Waste District** serves parts of Wall Lake and Green Lake. When Phase II of the septic removal program of LCRUD is complete, less than ten lakes will remain on individual sewer.

WELLS AND SEPTIC

Residents who are not serviced by municipal water and sewer or the utility district rely on private wells and septic systems. Thousands of residents use private wells for drinking water, yet LaGrange County has no water well ordinances. The County Health Department recommends testing private water supplies annually for the chemical nitrate and for coliform bacteria, potentially disease-causing bacteria. They provide free sample bottles that can be picked up from the Health Department during business hours and returned before noon on Tuesdays. Testing and courier services require a fee.⁹ Permits are not required for drilling water wells, but drillers must follow the state Department of Health and Department of Natural Resources guidelines to prevent contamination.¹⁰

Septic systems are also common throughout the county but decreasing as more residents have been connected to the town or county sewer systems. To receive a septic permit, residents must have a soil evaluation completed by a soil scientist and comply with a variety of other requirements, including the provision of a site plan. The systems must also pass a final inspection after installation.¹¹

Stormwater

Elements of stormwater management include flood management and pollution control. Municipalities collaborate with the Indiana Department of Environmental Management (IDEM) to ensure the safety and quality of stormwater flow.

The Indiana Finance Authority and the Indiana University Public Policy Institute published the “Financial Needs for Stormwater Infrastructure and Programming in Indiana (2017-2036)” in 2018. The study estimates the public costs required to meet capital and programming needs for stormwater management at the county level.¹² These costs do not include estimates for combined sewer overflows (CSOs), which are addressed separately. CSOs are not present in LaGrange County.¹³

Figure 6: Project Stormwater Needs

	20-year stormwater capital needs	20-year stormwater programming needs	TOTAL 20-year stormwater needs
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⁸ https://drive.google.com/file/d/1IDmsZx9p0DpPogdAbgUKbVZ3HSoJat_u/view

⁹ <https://lagrangecountyhealth.com/index.php/programs/water-testing/>

¹⁰ <https://lagrangecountyhealth.com/index.php/programs/septic-information/>

¹¹ Ibid.

¹² <https://www.in.gov/ifa/files/Financial-Needs-for-Stormwater-IUPPI-Aug-2018.pdf>

¹³ <https://www.in.gov/iurc/files/IN-Advisory-Commission-November-2016-Financial-Needs-for-Water-and-WW-2015-2034.pdf>

LaGrange County	\$10,110,000	\$24,990,000	\$33,320,000
Median	\$7,000,000	\$17,300,000	

The **LaGrange County Drainage Board** plays a role in storm water management oversight across the county.¹⁴ In conjunction with the County Surveyor, the board oversees the construction and maintenance of regulated drains in the county as required by Indiana state law.¹⁵ These drains may be open ditches, tile drains, or a combination of both, and their purpose is to direct surplus water to avoid flooding.

Flooding around some of the lakes, particularly in the southeast part of the county, is a considerable concern during storm events. A recent study, initiated by the **St. Joseph River Basin Commission (SJRBC)**, acknowledges the flooding in these areas and concludes that it is predominantly the “product of basin geology and climate.”¹⁶ The study finds that intensive flood reduction methods are likely to be cost-prohibitive and/or may cause negative impacts elsewhere. They propose a set of recommendations to adapt to a “new normal” of high lake levels and flood patterns. These recommendations include:

- “1. Develop and adopt location-specific Smart Growth flood resilience strategies
2. Update stormwater and floodplain regulations
3. Encourage consideration of agricultural drainage impact mitigation measures
4. Investigate the feasibility of and construct a 2-stage ditch system along a 4-mile reach of Henderson Lake Ditch through and near Kendallville
5. Consider initiating additional studies and models to better understand the groundwater/surface water interaction
6. Preserve the existing USGS gages and commission additional gages
7. Consider requiring a higher flood protection grade when permitting new construction
8. Maintain periodic communication and outreach with Stakeholders”

The study specifically notes that, while Oliver Lake has not recorded flooding that exceeds the expected high-water elevation, it would be wise to increase the Flood Protection Grade (FPG) for new buildings within and near the floodplain by 0.5 feet.

¹⁴ <https://www.lagrangecounty.org/index.php/docs-downloads/superior-court/878-lagrange-zoning-ordinance-update/file>

¹⁵ https://www.infarmbureau.org/docs/default-source/document-library/public-policy/drainage-school/the-county-drainage-board---indiana-code-book.pdf?sfvrsn=e76ed9e8_0

¹⁶ <http://www.sjrbc.com/docs/news/Final%20NBER%20Report%20-Oct%202020.pdf>

Electricity

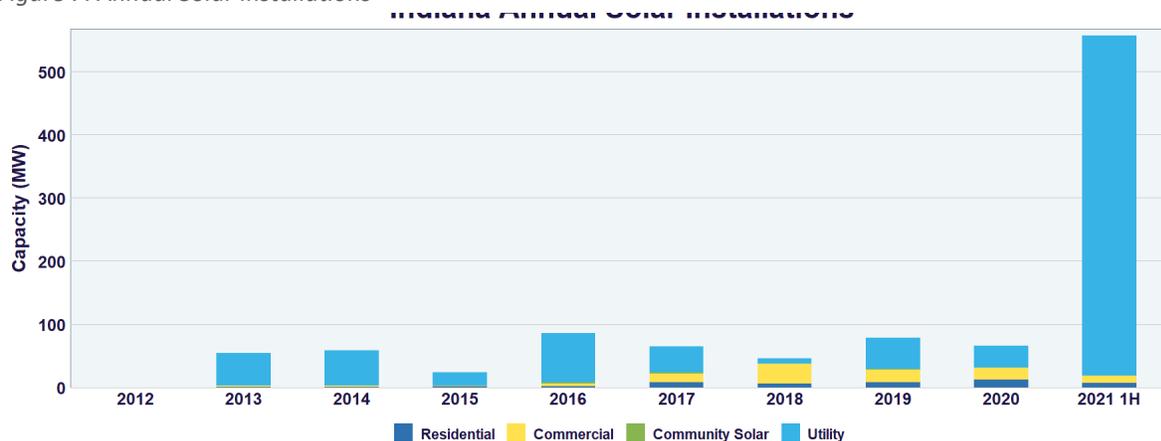
The **LaGrange County Rural Electric Membership Cooperative (REMC)** provides services to just under 7,000 customers in LaGrange County. The Cooperative purchases power from the Wabash Valley Power Alliance (WVPA), a generation and transmission cooperative based in Indianapolis.¹⁷ A large portion of the county is also served by Northern Indiana Public Service Company (NIPSCO) Electric,¹⁸ with a few small segments of the population that receive electric service from REMCs in Steuben and Nobel counties.

The REMC supports Co-op Solar, a community solar program started by the Wabash Valley Power Alliance. This program does not install rooftop panels; rather, co-op members can purchase “blocks” of solar power from a network of solar arrays around the Midwest to increase their use of renewable energy.

Several LaGrange County companies will install solar panels on residences and businesses, and they offer either grid-tied or off-grid options. Wellspring Components in Shipshewana has installed solar panels on several prominent properties, including the Davis Mercantile building and Our Front Porch gift shop.¹⁹ Solect Energy is located in LaGrange and offers services in electrical contracting, renewable energy, and off-grid living. Although the Amish do not typically connect to the electrical grid, many in LaGrange County have adopted on-site solar energy generation for various purposes, both residential and commercial.

Solar energy installation in Indiana has increased exponentially this year, with more than 5 times the capacity installed in the first half of 2021 than in any previous year.²⁰ This expansion has more than doubled total capacity, and much of this growth is occurring due to large solar farms in Northeast Indiana, particularly in Nobel and DeKalb counties. NIPSCO is contracting with solar developers to produce renewable energy, and County Commissioners in DeKalb are considering a solar ordinance to regulate issues such as setbacks, design standards, and decommissioning procedures.²¹

Figure 7: Annual Solar Installations



¹⁷ <https://www.lagrangeremc.com/about-us>

¹⁸ <https://www.neindianarealtors.com/community-links/utilities-info/>

¹⁹ <https://wellspringsolar.com/projectcategory/commercial/>

²⁰ <https://www.seia.org/state-solar-policy/indiana-solar>

²¹ https://www.fwbusiness.com/fwbusiness/article_12d650ca-006b-58ec-82ba-d5d54d497a28.html

The LaGrange County Zoning Ordinance defines a Solar Panel Array as “a freestanding configuration of solar panels for residential or light commercial use, which configuration shall not exceed nine hundred (900) square feet in area.”²² Solar Panel Arrays are only permitted in Agricultural Zones and are restricted to relatively small sizes that serve private homes or light commercial uses. Large scale solar farms are not currently permitted in the zoning ordinance.

The county was considered for a wind energy generation project based on testing that showed feasibility in the southwest corner of the county, but the project was not pursued.²³

Natural Gas

The **Northern Indiana Public Service Company (NIPSCO)** provides natural gas service to LaGrange County, with a few exceptions along the eastern and southeastern border of the county that fall outside the coverage area.²⁴ Propane gas service is also available through several providers: Honeyville Propane in Topeka, Hoosier Propane of Shipshewana, and Billman Propane in LaGrange. Propane is used around the county for residential, commercial, and agricultural purposes such as home and water heating, cooking, refrigeration, and powering farm or industrial equipment.

2.2 PUBLIC SAFETY AND SERVICES

Police

LAGRANGE COUNTY

The LaGrange County Sheriff’s Department is led by the Sheriff and Chief Deputy. Staff also includes a Director of Communications, Jail Commander, Chief Detective, two Detectives, and additional officers. The department manages the physical jail structure and confinement of the jail population and operates a 911 dispatch.²⁵ Officers in the Wolcottville Police Department are dispatched by the LaGrange County Sheriff’s Department.²⁶

The department also operates the **LaGrange County Water Operations Team (LWOT)** to provide professional water rescue and recovery. Five fire departments across the county are members of the team as well. With more than 72 water bodies in the county, a SCUBA rescue team is essential. The team hopes to expand their services to include education and drowning prevention programs.²⁷

²² <https://www.lagrangecounty.org/index.php/docs-downloads/878-lagrange-zoning-ordinance-update/file>

²³ <http://www.indianadg.net/wind-farm-plan-dropped-for-lagrange-county-because-of-lack-of-landowner-interest/>

²⁴ <http://www.hoosiersites.com/wp-content/uploads/Natural-Gas-Service-Territory-Map.pdf>

²⁵ <https://www.lagrangesd.com/>

²⁶ <https://www.facebook.com/Wolcottville-Police-Department-877539918966112/>

²⁷ <https://www.lagrangesd.com/index.php/programs/dive-team>

LAGRANGE

The LaGrange Police Department is made up of a Town Marshall, four deputies and eight reserve officers who aim to provide a safe environment for all people who “live in, work in, visit or pass through our city.”²⁸

SHIPSHEWANA

The Town of Shipshewana is served by four police officers and ten reserve officers. Although the town has just over 600 full time residents, tourists in the summer can increase the population to 20-30 thousand people. Other law enforcement agencies in the county provide support during some of these busiest times.²⁹

TOPEKA

The Topeka Police Department consists of a Town Marshall and a Sergeant.

Fire

All fire departments in LaGrange County are volunteer departments that have ambulance, fire suppression, and emergency medical services (EMS).³⁰ The departments are listed below, with additional details as available:

- **LaGrange Fire Department** – 25 total members, serving the Town of LaGrange and Bloomfield and Clay Townships. The department is a community service organization that participates in search and rescue, cleanup, and other assistance needed during disasters, vehicle crashes, or other emergencies.
- **Johnson Township Fire Department** – Located in Wolcottville.
- **Mongo Fire Department** - 28 members.
- **Topeka Fire Department** – 35 members.
- **Stroh Fire Department**
- **Howe Fire Department**
- **Shipshewana Fire Department**

Additional countywide EMS and medical transport are located at Parkview LaGrange.

While volunteer fire departments offer some financial savings in staffing costs, they also present several challenges and may not be the best option for the county in the long-term. In general, it is becoming increasingly difficult to recruit and train volunteers, and the current volunteer force is beginning to age out.³¹ In LaGrange, consolidation of fire departments has led to increased response times. The lack of a dedicated hazmat response group and traffic concerns also pose challenges to the response times and may affect public safety.

²⁸ <https://lagrangein.org/departments/police-department/>

²⁹ <https://shipshewana.org/police-department/>

³⁰ <https://www.countyoffice.org/in-lagrange-county-fire-departments/>

³¹ <https://www.fireandemfund.com/why-there-is-a-volunteer-firefighter-shortage/>

Libraries

The LaGrange County Public Library system has three locations within the county: LaGrange, Shipshewana, and Topeka. The LaGrange branch is open to the public Monday-Saturday, and the Shipshewana and Topeka branches are open Tuesday-Saturday.

Each branch of the library also offers curbside service, where cardholders may place holds online, by phone, or fax, and then pick up their items during designated hours.

The library system also offers a variety of online services. Wi-Fi service is always available and may be accessed on library patios or parking hours even when the library is closed. The facilities have computers that are available for use with one hour time limits. The system is also part of a larger network called OverDrive, a service through which cardholders may borrow eBooks and eAudiobooks on their personal devices. The library's newest service is called Hoopla, an online platform that gives free access to eBooks, eAudiobooks, movies, TV, music, and comics.

In addition to the materials that may be used at or borrowed from the library, the system also hosts a variety of meetings and activities for community members of all ages. The libraries host Storytime, Homeschool Groups, LEGO Challenges, Book Clubs, and Move Nights for children. They offer Board Game nights, Book Clubs, and Crafts for teens. And they host Yoga, Book Club, crafts, and free (non-credit) online courses from Hillsdale college for adults.

3. BROADBAND

The broadband section describes the current state of broadband internet in the county, current and upcoming projects to expand this coverage, and the value of high-speed internet.

KEY FINDINGS

- **Limited access to high-speed internet.** 75 percent of the county has no access to speeds of 100/10 Mbps which is becoming standard for residents and businesses.
- **Significant efforts underway to expand internet access.** The Rural Electric Membership Cooperative (REMC) is currently installing backbone loops to connect various parts of the county to high speed fiber-optic networks.
- **Internet connectivity is essential for agriculture.** Access to high-speed internet is essential for operating equipment used in the agricultural industry.

3.1 CURRENT COVERAGE

Lack of access to high-speed broadband internet is a major obstacle for residents in LaGrange County. The COVID-19 pandemic accentuated this challenge as more residents attended school virtually, worked remotely, and participated in online meetings, finding their internet access inadequate.³²

While 100% of the county has at least some access to internet

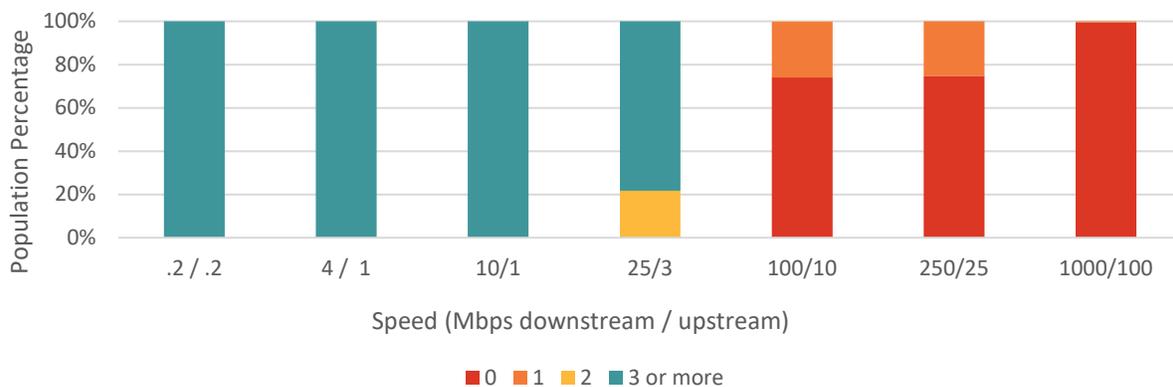
DEFINITIONS

Broadband internet: a general term for internet access that is always on and is faster than traditional dial-up.

Fiber-optic internet: one specific form of broadband internet that transmits data through light rather than electricity. Fiber optic typically offers higher speeds and better quality than cable internet, which relies on copper wiring.

Mbps: megabits per second indicates upload and download speeds. Download speeds of 25 Mbps are considered fast and are typically able to support multiple devices with tasks including video streaming and conferencing.

Number of Fixed Residential Broadband Providers



³² <https://www.lagrangeremc.com/broadband>

speeds of 25/3 Mbps (downstream/upstream), more than 20% of residents have access to only two providers that offer broadband at those speeds. Furthermore, these speeds are rarely adequate for current internet customers, especially in households with multiple users. For networks with 3-5 devices connected to the internet, download speeds of at least 50-100 Mbps are recommended. Nearly 75% of the county has no access to speeds of 100/10 Mbps or above,³³ and approximately 4,000 people in the county have no access to wired internet.³⁴ Around 37% of residents have multiple, wired options for internet providers.³⁵

3.2 CURRENT AND UPCOMING PROJECTS

Rural Electric Membership Cooperative (REMC)

In late 2020, the LaGrange County council members and commissioners approved a \$5 million request from the **LaGrange County Rural Electric Membership Cooperative (REMC)** to help finance a new fiber-optic network. In addition to the \$5 million from the county, REMC has already leveraged \$15 million to build out the new network which will capitalize on its access to rights-of-way and utility poles. The project started in early 2021 and to take two years to complete.³⁶

If the project goes as intended, the basic plan will provide symmetrical service (equal upload and download speeds) of 50 Mbps at \$60 per month. Additional tiers of service with speeds up to 1 Gigabit per second will also be available.³⁷

As of September 2021, the REMC had identified 22 service areas where they are gathering interest for services, and they have pre-registered 2,633 residents. Backbone construction began in late July with the two main fiber backbone loops; one on the east and another on the west side of the county. Initial construction is expected to be completed before Thanksgiving 2021. Once the backbone construction is finished, distribution cables will be connected, branching off the backbone and going down every road of the identified service area. Home service installations are expected to begin in 2022. Fiber drops may be buried or strung on poles overhead; the delivery method will be discussed with each individual subscriber.

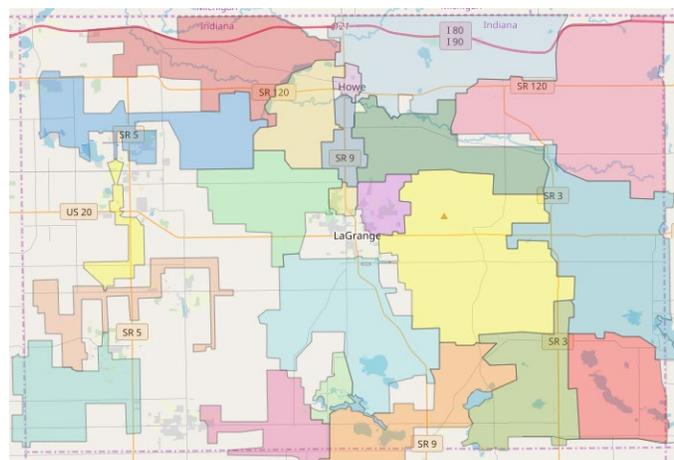


Figure 8: REMC Broadband Service Areas

³³ [Area Summary | Fixed Broadband Deployment Data | Federal Communications Commission \(fcc.gov\)](#)

³⁴ [Top 7 Internet Providers in Lagrange, IN \(Sep 2021\) \(broadbandnow.com\)](#)

³⁵ Ibid.

³⁶ https://www.kpcnews.com/newssun/article_91d1be80-1428-5eba-8bc4-248f295e0abe.html

³⁷ <https://www.lagrangeremc.com/broadband>

The service areas identified by the REMC focus on the unincorporated regions of the county. The incorporated towns have either chosen other providers or have not yet paid for REMC services; the cooperative expects to expand its service areas after the initial phase is complete.³⁸

LigTel

Board members in Shipshewana have granted a permit to LigTel, a communications company based in Noble County, to install fiber optic cables in the town's rights-of-way. The company will bring several options for high-speed internet to town residents, and it is expected to complete the \$2 million project within one year of starting construction. LigTel also has begun a project to bring fiber into Topeka and has also purchased property in the town of LaGrange; the company is expected to complete a fiber-optic network there sometime in the beginning of 2022.³⁹

3.3 VALUE OF HIGH-SPEED INTERNET

The addition of a fiber-optic network in the county would bring many benefits. High-speed internet enables opportunities such as:

- Working from home
- E-learning
- Telemedicine
- Home-based businesses
- Entrepreneurship
- Home entertainment
- Home security

Furthermore, a recent study from Purdue University also showed that rural broadband expansion can yield a 4:1 return on investment. According to this estimate, the REMC project in LaGrange County has the potential to bring a \$100 million benefit to the local economy.⁴⁰

Internet and Agriculture

The United Soybean Board published a report entitled "Rural Broadband and the American Farmer." The report outlines challenges faced by farmers nationwide due to limited internet access and highlights the advantages to agricultural economic output that come with increased internet availability.

60% of farmers reported slow internet speeds and that they don't have enough connectivity to run their businesses. 33% said that lack of internet has affected their equipment purchases (\$13 billion annually). Less than half (49%) of farmers believe that their fixed office connections are sufficient for their business management.⁴¹

³⁸ Personal interview with Mark Leu, CEO of the REMC

³⁹ https://www.kpcnews.com/newssun/article_bf73e4fa-dd96-5123-8ce4-25a88dc717bf.html

⁴⁰ <https://www.lagrangeremc.com/broadband>

⁴¹ [58546-1-ruralbroadband-whitepages-final.pdf \(unitedsoybean.org\)](#)

Farmers use internet for many essential tasks, such as pricing information, ordering parts, filling out tax forms, monitoring soil moisture, autosteer, and field mapping. The report notes that “Technological advances have helped farmers improve efficiency and save input costs... Farmers respond more quickly and effectively to markets, address problems in their fields and gather data for future improvement.” This data is helpful in making better decisions, improving efficiency, and increasing cost savings. However, lack of speed, access, and/or reliability often inhibit farmers from making full use of available data.⁴²

Discussions with county residents also noted that the limited number of cell towers poses a challenge to their work. In LaGrange County, there are seven active cell towers which are primarily located in the western and northern parts of the county. These are registered with the Federal Communications Commission (FCC) and can provide antenna access to multiple carriers such as Verizon, AT&T, etc. (A cell tower is a structure that is exclusively used for a cellular antenna; an antenna tower can be any structure on which a cellular antenna is placed). There are three types of cell tower in the county today which refer to the construction and includes standard cell towers, guyed towers, and lattice towers. Standard towers are built on a single structural pole also referred to as monopoles that typically stand between 100 to 200 feet tall. Guyed towers are a taller version of a standard tower which are supported by wire lines to allow for extended heights of more than 300 feet. Lattice towers are built with a three or four-sided structure allowing for heights between 200 and 400 feet. The map below identifies the locations of all active towers in the county with the southeastern portion having limited connectivity. By comparison, LaGrange County has less cell connectivity than some neighboring counties with Elkhart County containing more than 14 towers and Steuben County containing nine active cell towers.

⁴² Ibid.

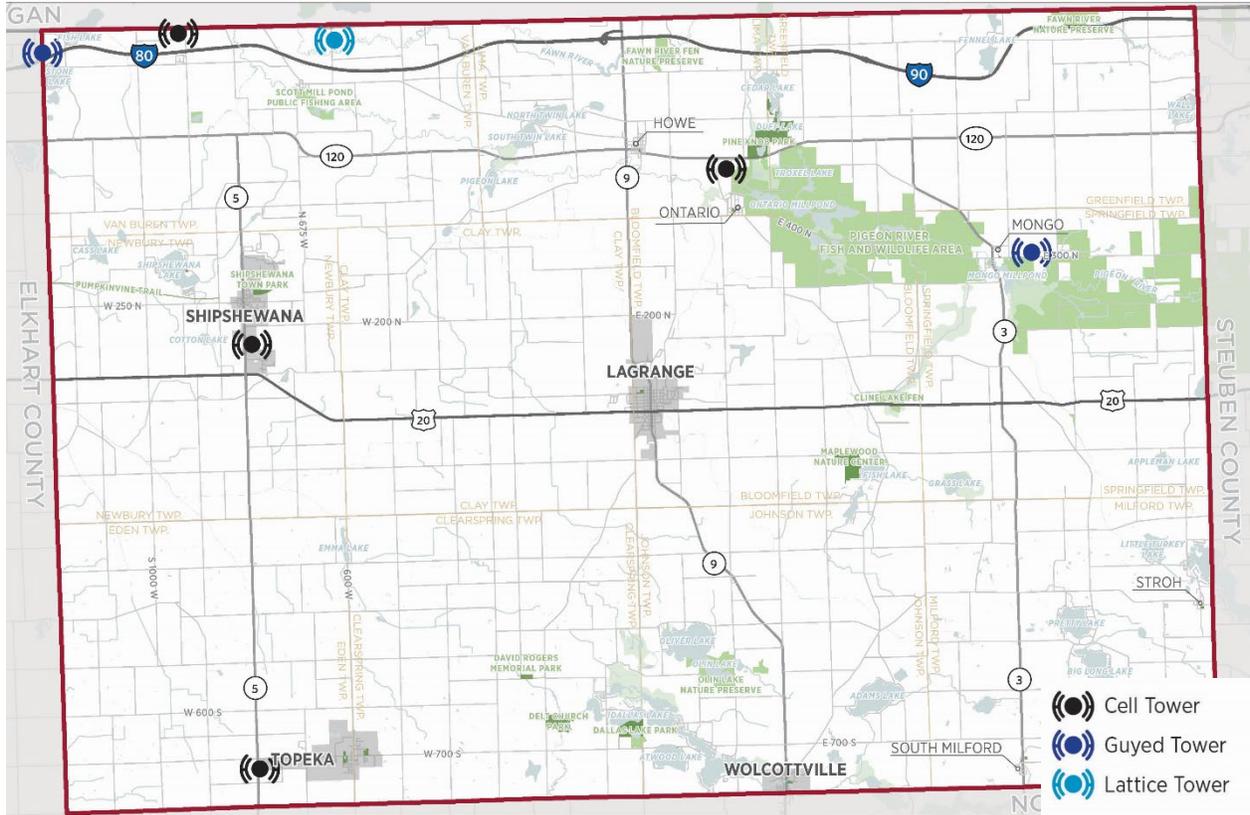


Figure 9: FCC Registered Cell Towers

Continuing to improve connectivity in the county has the potential to serve a major industry and contribute to economic output of agriculture. Adding new cell towers and antenna towers may also facilitate the work of farmers by increasing the cell coverage areas.