



6

INFRASTRUCTURE

Maximize the best use of existing facilities and systems and support expansion where needed to promote the economy and growth while providing exceptional public services for the citizens, businesses, and industry in Greenville County.

In this chapter:

- Introduction*
- Water and Sewer*
- Energy*
- Broadband*
- Waste Management*
- Strategies*



Introduction

Greenville County is a community in transition. The next 20 years are full of potential due to the significant infrastructure investments that are being made to prepare for future economic opportunities. In addition to having access to a highly developed transportation network, Greenville County is experiencing other infrastructure developments that are introducing new economic possibilities to the area. The challenge Greenville County will face in the next few decades will be to manage the timing of their growth in order to continue to provide adequate public services to both citizens and industry, attract and sustain businesses that will provide the amenities to support the needs of the residents and workforce, and develop policies that balance the potential of these changes with the remaining agricultural industry and prized rural character.

Greenville County


Greenville 2040 Comprehensive Plan: Infrastructure




ENERGY

ENERGY AND POWER PROVIDERS:


- 1 MECKLENBURG ELECTRIC COOPERATIVE
- 2 DOMINION ENERGY
GREENSVILLE COUNTY POWER STATION



2018
FIRST YEAR OF
POWER
GENERATION



1.3 billion
COST TO BUILD GAS-FUELED
CLEAN TECHNOLOGY
POWER PLANT



400,000
ESTIMATED AMOUNT OF
HOMES TO BE GENERATED

ACTIVE PIPELINES



67.5

APPROXIMATE MILES
OF GAS PIPELINES

14.7

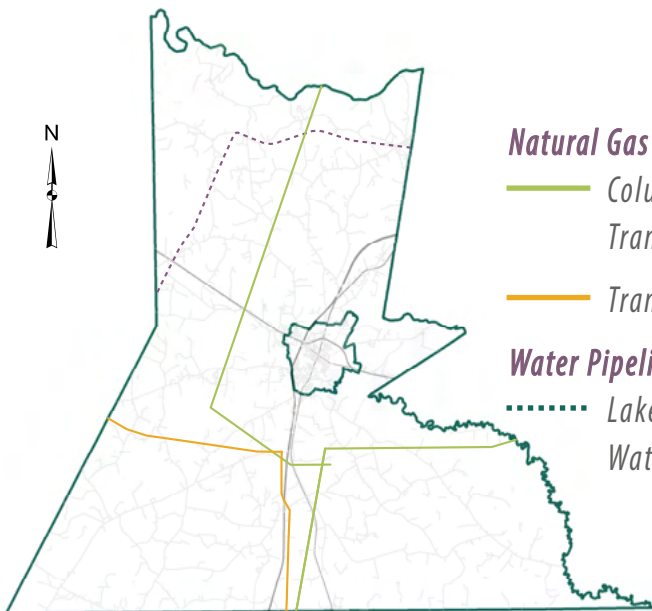
APPROXIMATE MILES
OF WATER PIPELINE

Natural Gas Pipelines

- Columbia Gas Transmission Co.
- Transcontinental Gas PL

Water Pipeline

- - - - Lake Gaston / VB Water Pipeline



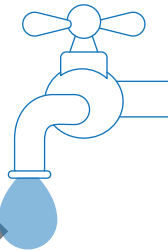
WATER & SEWER

2

WATER TREATMENT PLANTS

70.9

TOTAL MILES OF
WATER LINES



4

SEWER TREATMENT PLANTS

63.5

TOTAL MILES OF
SEWER LINES



WASTE



11

MANNED REFUSE
DISPOSAL SITES

10

YEARS LEFT TO
MAX CAPACITY
OF LANDFILL

200

DAILY INTAKE
LIMIT IN TONS

BROADBAND



61.9

PERCENT OF
HOUSEHOLDS
WITH BROADBAND
INTERNET SERVICE

25.2

PERCENT OF HOUSEHOLDS
WITH ACCESS TO MORE
THAN 25 mbps
(MODERATE SPEED AND
ABOVE-AVERAGE SERVICE)

Water & Sewer

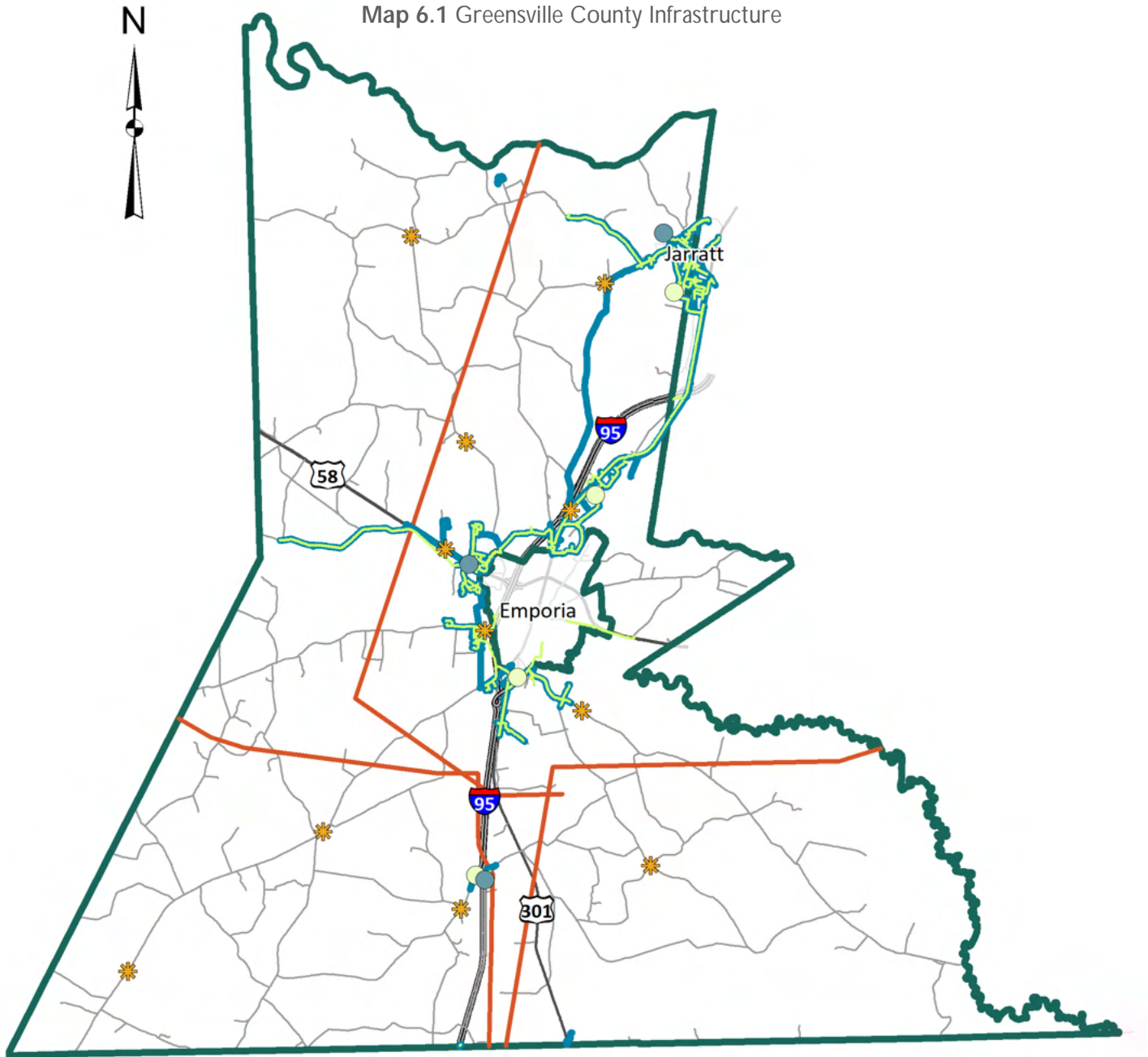
The Greenville County Water & Sewer Authority (GCWSA) is charged with the acquisition, construction, operation, and maintenance of water systems, sewer systems, and sewage disposal for all of Greenville County, portions of Sussex County, the entire Town of Jarratt, and portions of the City of Emporia. Greenville County has made a conscious decision to prioritize water and sewer service expansion and facility renovation to meet the current and future needs of the citizens and businesses. There have been significant improvements in the last 15 years, many of which were capacity and supply improvements. The next step of the county's service improvement plan should be to focus on priorities necessary for residential service improvements: 56% of the citizens surveyed in 2020 said the current infrastructure was not sufficient.

The county's ongoing commitment to meet its infrastructure goals is evidenced by the GCWSA's expansion efforts that have been undertaken since the 2008 comprehensive plan. The recent improvements are detailed below in Table 6.1 and include work on existing facilities and multiple improvements to service new industry – including water service to the new \$1.3 billion Dominion Energy facility and sewer service for the new Mid-Atlantic Advanced Manufacturing Center (MAMaC).

Table 6.1 Recent Water and Sewer Improvements

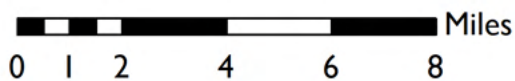
58 West Utility Extensions		
Item	Length/Capacity	Description
Miles of New Potable Water Line	13.5 Miles	14" & 16" Lines
Miles of New Sewer Line	5.25 Miles	8" & 10" Lines
New Potable Water Pump Stations	2	
New 301 Pump Station	1,300 Gallons Per Minute	Capable of pumping water from either the existing 301 - 12" water line or the new 16" Otterdam Road Water line.
New 58 Pump Station	1,200 Gallons Per Minute	Capable of Pumping water from either Emporia or GCWSA. Provides additional treatment to Emporia water.
Westover Hills Tank		Modified the piping to fill from the top and withdraw from the bottom of the tank. Increased the size of the lines, overflow and vent on the tank.
Elevated Water Tank	500,000 gallon	New tank located on Rogers Road.
New Roger's Road WW Pump Station	800 Gallons Per Minute	Capable of pumping 400,000 gallons per day of Dominion's waste water to the City of Emporia for treatment.
Computer Control System		Installed a new computer monitoring and control system at the new facilities and existing Water Plant.
Source Water Improvements		
Item	Length/Capacity	Description
New Intake Pump Station	12 million gallons per day	Replaced GCWSA's 1935 intake pump station on the Nottoway River
Raw Water Mains from the Intake to the Reservoir and to the existing Water Treatment Plant.	1.7 Miles	18" & 24"
Reservoir and Intermediate Pump Station	1 Billion Gallon	Capable of storing one billion gallons of raw water and pumping 4,167 gallons per minute (6 mgd) to the existing water treatment plant.
Phase II Computer Control System		Integrated the source water improvement facilities into the new control system for the Water Treatment Plant.
MAMaC Sewer Improvements		
Item	Length/Capacity	Description
Gravity Sewer Line	2mgd	1 mile of new 18" & 24" gravity sewer line (between Otterdam & 301)
Sewer Force Main	2mgd	0.5 miles of 12" force main (along Otterdam Road)
Skippers WWTP Project		
Item	Length/Capacity	Description
New WW Treatment Plant	100,000 gallon per day	Replaced a 1973, 36,000 gallon per day treatment plant. (Skippers)
Sewer Force Main	1mgd	3 miles of 8" force main (along Moore's Ferry Rd & 301)
Moore's Ferry Road Water Line Extension		
Item	Length/Capacity	Description
Water Line Extension	0.5 mile	Extended the water line to assist citizens with failing wells
Ground Storage Tank	10,000 gallon	Added an additional storage tank to this system.

Map 6.1 Greenville County Infrastructure



Legend

- Greenville County
- County Roads
- Refuse Collection Sites
- Water Treatment Plant
- Sewer Treatment Plant
- Public Sewer Lines
- Public Water Lines
- Natural Gas Lines



Water & Sewer - Land Use

In many rural communities, especially those that have a significant area in which the soils are not suitable for traditional septic systems, such as Greenville County (see more in the *Natural Resources* chapter), public water and sewer service is necessary for quality development. These services can become a development driver, and effective delivery of service is directly related to economic growth. When a community has enacted clear land use policy with supporting regulation, this natural sewerage limitation, when coordinated with public service planning can also help the community carry out their future land use plan effectively while protecting the soil and water quality necessary for the remaining agriculture community and rural residents. Greenville County has taken steps to coordinate land use planning and public water and sewer service delivery by establishing a designated Urban Services Area and a Rural Development Area. Water and sewer resources are directed toward these areas. Providing sufficient services within these boundaries are top priority.

Urban

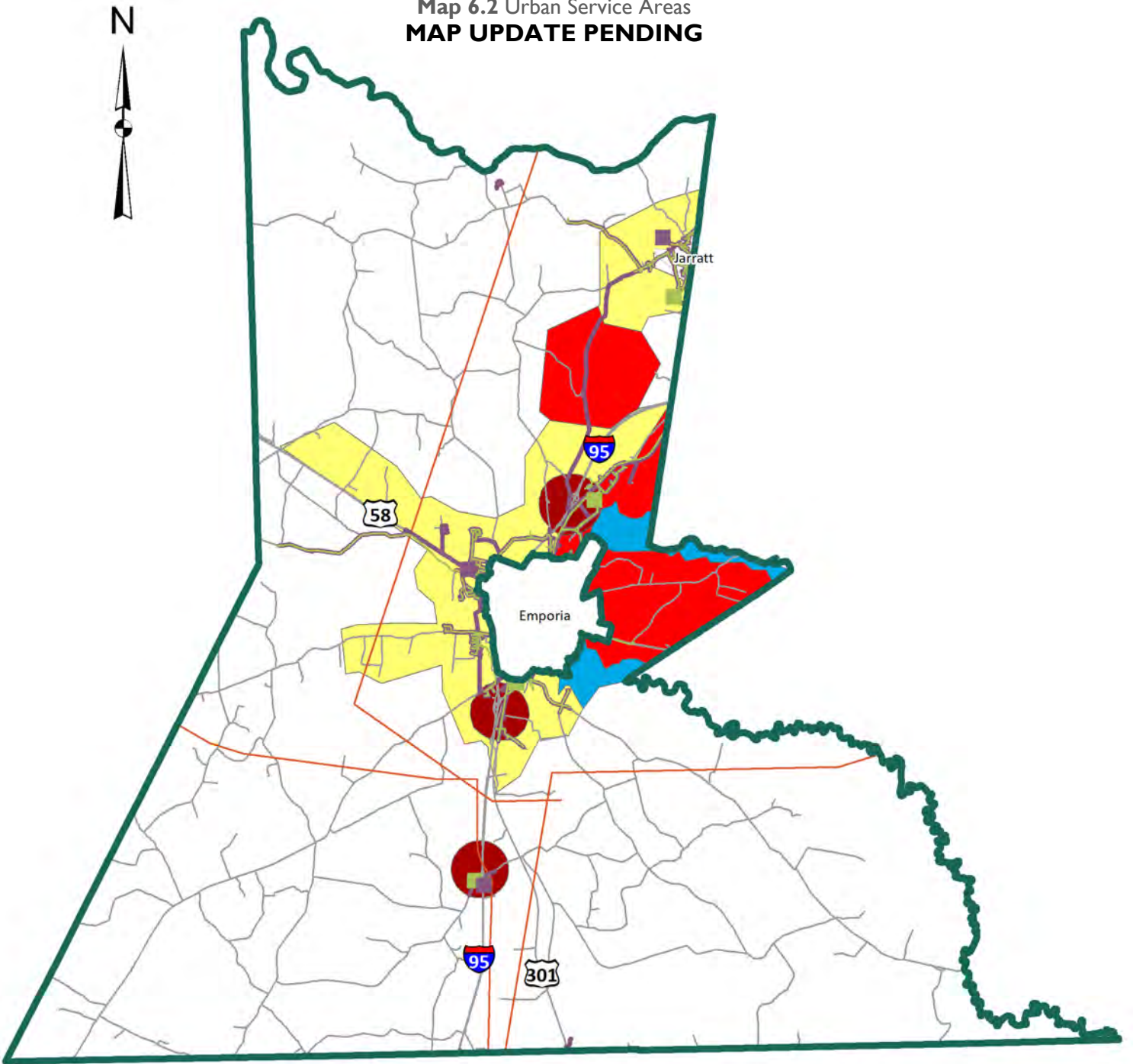
The goals outlined in the 2008 comprehensive plan sought to direct growth to the designated service areas around urban areas that were served by public water and sewer. The 2020 community input clearly indicates that the county officials and citizens wish to continue that trend into 2040. This service area is officially designated as the Urban Services Area (see Map 6.2) and encompasses the vicinity along the major transportation corridors around the city of Emporia and Town of Jarratt. Development in these areas is managed through regulatory measures outlined in the Greenville County Zoning Ordinance, and there are specific development standards applied to the areas around I-95 exits – called Highway Commercial Development Hub Overlay Zones. This urban area is broken into categories to specify what type of land use the services can accommodate. Public investment in water and sewer services should be focused in and around these designated development areas to help deter scattered development in the rural areas of Greenville County and to efficiently utilize public service dollars by concentrating development in these areas most desirable for growth.

Rural

A large portion of the soils in Greenville County will not support efficient development of septic systems. As part of their land use plan to preserve rural areas, Greenville's current policies do not support nonessential water and sewer development into rural areas. However, in Greenville's designated Rural Development Area (see Map 6.3), some small rural communities have been recognized as having secondary development needs and future potential worthy of investment. Development guidelines for what is considered appropriate development in and around these rural communities is outlined in the current Zoning Ordinance through the Rural Community Development Management Hub Overlay Zones.

The GCWSA water/sewer development is intentionally coordinated with the county's land use planning efforts as is demonstrated with the newly completed wastewater treatment plant in Skippers, constructed to support growth near I-95, exit four. GCWA is also exploring options for public water service in and around that area to promote development in the Commercial Hub near Skippers.

Map 6.2 Urban Service Areas
MAP UPDATE PENDING



Legend

Greenville County

County Roads

Water Treatment Plant

Sewer Treatment Plant

Public Sewer Lines

Public Water Lines

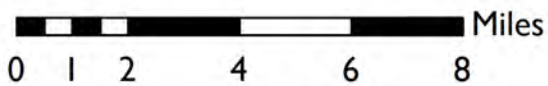
Urban Service Boundaries

Residential

Commercial

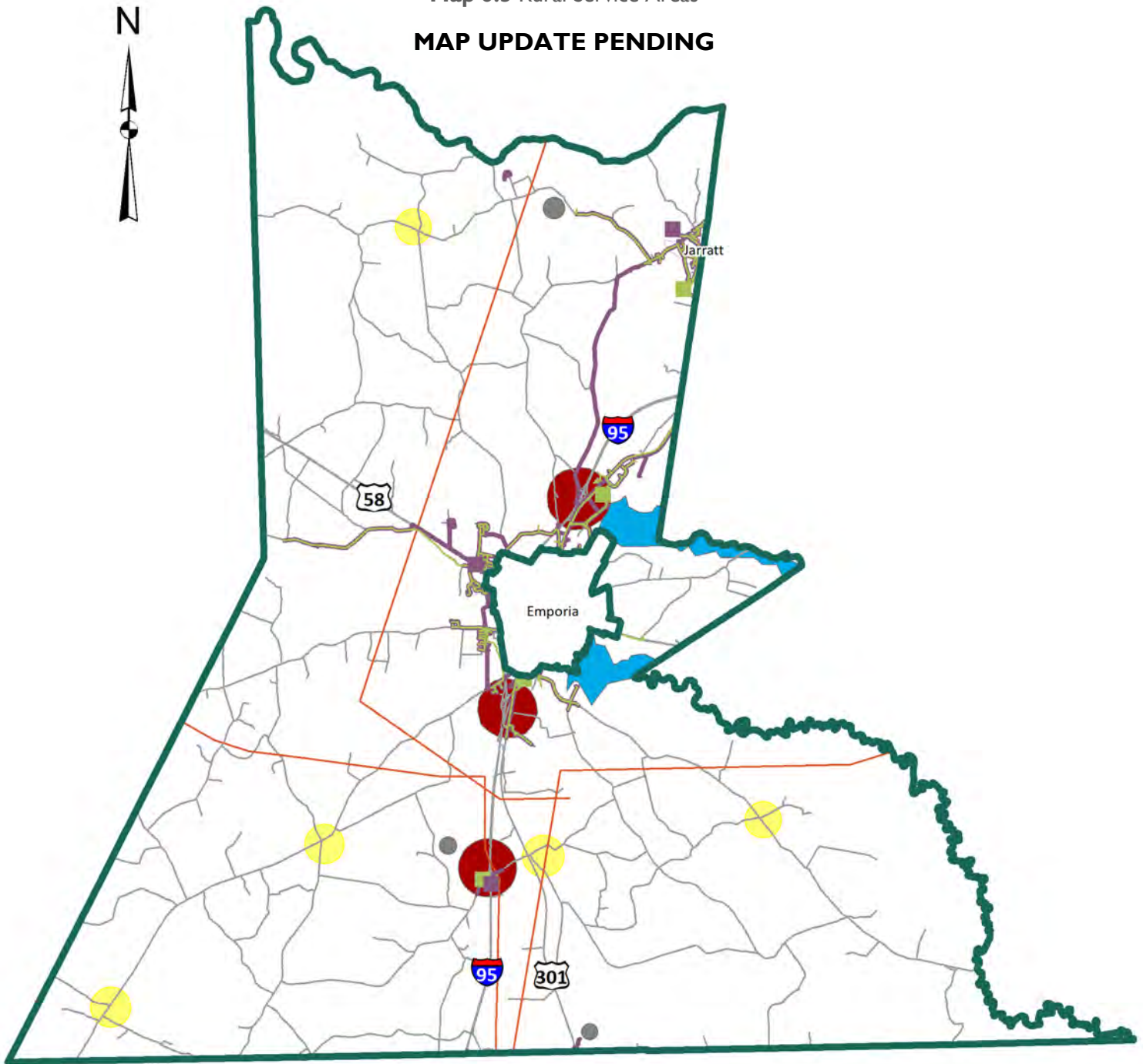
Conservation

Commercial Hub



Map 6.3 Rural Service Areas

MAP UPDATE PENDING



Legend

Greenville County

County Roads

Miles
0 1 2 4 6 8

Water Treatment Plant

Sewer Treatment Plant

Public Sewer Lines

Public Water Lines

Rural Service Areas

Rural Community Hub

Conservation

Commercial Hub

Industrial Sites



Energy

Meeting energy demand through local infrastructure improvements is usually a community's primary energy related concern. In Greenville County, energy plays a much larger role in the overall economy. As the whole mid-Atlantic region has seen a fundamental shift from agriculture to more energy-intensive commercial enterprises, the energy demand has increased. Greenville County has, for several reasons, become an attractive location for energy production to help supply that need. Dominion Energy and Mecklenburg Electric Cooperative are the primary providers that deliver energy to Greenville County.

Natural Gas

The Trans Continental Natural Gas Pipeline and the Interstate Columbia Gas Pipeline run through Greenville County. This natural gas infrastructure is likely one of the biggest catalysts of change in Greenville County in the last 10-20 years. In part due to the accessibility of natural gas, Dominion Energy chose Greenville County as the site for their new \$1.3 billion gas-fueled clean technology power generation plant. The facility started generating power in December 2018 and will add enough power to the grid to supply an estimated 400,000 homes, which Dominion reports will reduce rates. The new power production also offers benefits to industry, as the typical industrial rate in the area is expected to be more than 30% lower than the national average. The county is hopeful that this will be another incentive for new industry to locate in the MAMaC industrial park. The ongoing job production from the Dominion plant includes approximately 75 jobs, and the tax benefits to the county are an ongoing resource that Greenville County can use to continue to improve services in the community. Dominion Energy is also currently constructing a gas line to provide service to the Greenville Correctional Center near Jarratt and will be providing gas service to the MAMaC industrial park. Residential service is a priority to the citizens of Greenville County, and Greenville County is researching the feasibility and challenges of negotiating this level of service to the area.

Solar

With the new Dominion power plant and associated electricity infrastructure that has been installed in Greenville County, along with the relatively flat terrain and abundance of open land, Greenville County is generating significant interest from the solar industry as a prime location for the construction of utility-scale solar projects. The close proximity to the Dominion power grid offers solar developers a relatively low cost for delivery to the transmission lines necessary to carry solar energy to the power grid. There are currently six solar sites (see Map 6.4) in various stages of completion in Greenville County, totaling 369 megawatts and 4,753 acres:

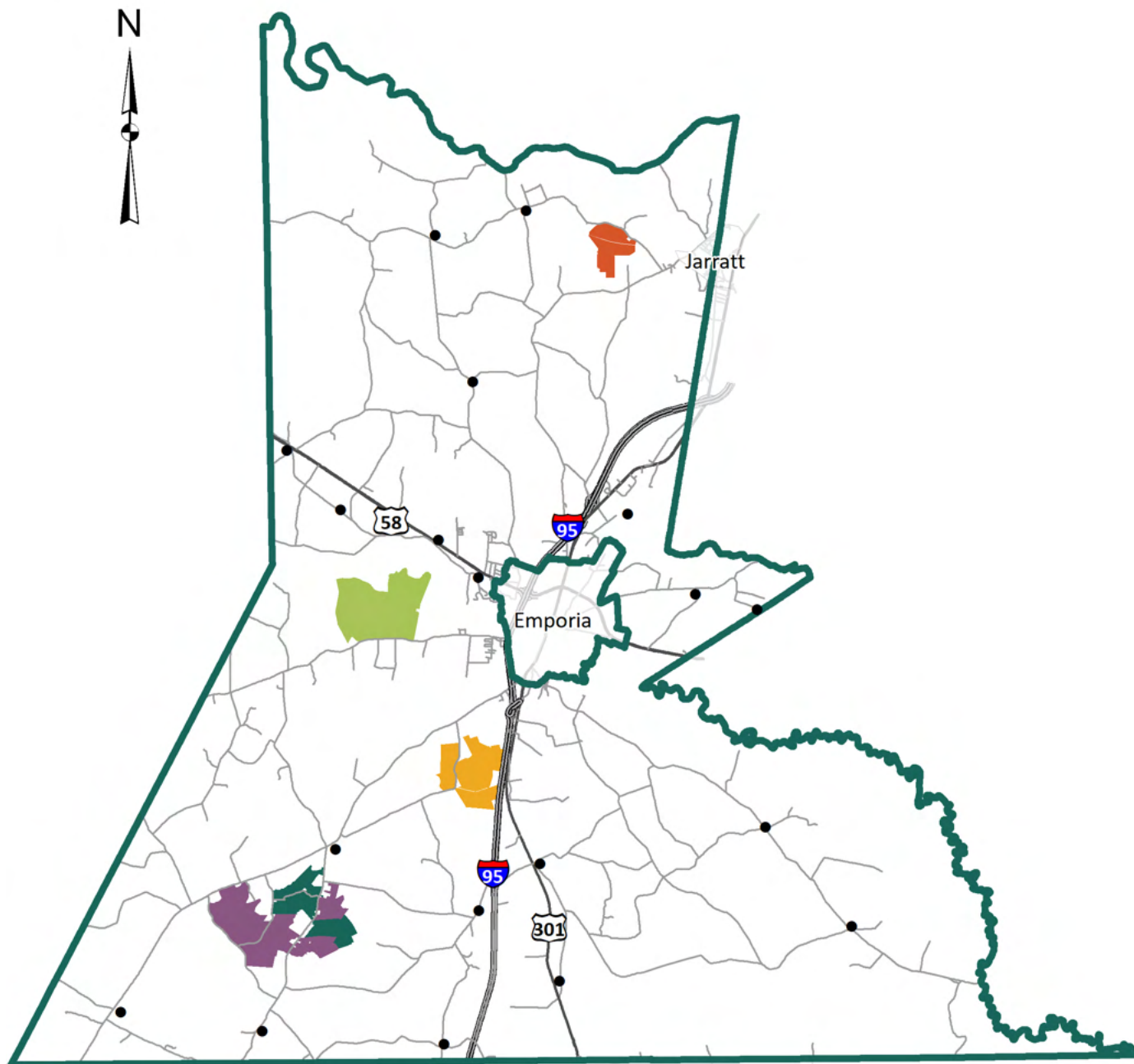
- Pumpkinseed Solar (formerly Meherrin Solar) - 60 megawatt photovoltaic solar energy facility, 836 acres
- Greenville Solar - 80 megawatt photovoltaic solar energy facility, 1,125 acres
- Sadler Solar - 100 megawatt photovoltaic solar energy facility, 1,490 acres
- Jarratt Solar - 49 megawatts photovoltaic solar energy facility, 500 acres
- Fountain Creek Solar - 80 megawatt photovoltaic solar energy facility, 802 acres

Utility-scale solar projects leave a large footprint on the landscape and do not directly contribute to the local economy or provide jobs for the community. But, it can be argued that the projects do contribute to the power grid and may reduce overall rates, can be designed for minimal visual and environmental impact, and can be decommissioned with little permanent impact on the site. The projects can also generate significant tax revenue that can be used to fund other projects in the community that may contribute to the overall quality of life. Guidance for facility siting is discussed further in the *Land Use* chapter (9).



Source: Torch Clean Energy

Map 6.4 Utility-Scale Solar Facility Sites



Legend

Greenville County

County Roads

Greenville Communities

Miles
0 1 2 4 6 8

Pumpkinseed Solar (60MW)

Greenville Solar (80MW)

Sadler Solar (100MW)

Jarratt Solar (49MW)

Fountain Creek Solar (80MW)

Broadband

Broadband is the newest type of infrastructure that is essential to quality of life and a competitive business and educational advantage. Broadband internet availability promotes sustainability and growth of communities by providing access to health care, particularly through the introduction of telemedicine, increasing educational opportunities through distance learning, and encouraging an entrepreneurial economy where new and existing home-based and small businesses are able to compete globally.

The US Census Bureau reports that just under 80% of Greenville County's population has a computer, and 61.9% of households have a broadband internet subscription. According to BROADBANDNOW, 97.4% of the City of Emporia has access to internet speeds of 25 or more megabytes per second (mbps), which is considered adequate service speed, while only 25.2% of Greenville County has access to 25+ mbps coverage. In comparison, 90.8% of Virginians have access to speeds of 100 mbps or faster. Rural areas are typically limited to DSL, which is service that is transmitted over standard telephone lines or satellite providers that do not require the hard-wired infrastructure like broadband. Greenville County is served by two primary satellite providers and small areas are covered by DSL. While the download speeds (pulling data from the internet) for these types of services are up to the 25 mbps standard, service providers acknowledge that service is sometimes unstable and can be problematic for school or work as the upload speeds (saving data to the cloud or other networks) are much slower and video can be interrupted. As citizens become more reliant on fast, reliable internet services, broadband service is seen as the best option.

Like most rural areas, the challenge is being able to develop the broadband infrastructure to serve rural populations where the limited number of user fees do not justify the investment from providers. Commonwealth Connect, Virginia's comprehensive effort to achieve universal broadband access, has identified this as the "math problem" and are providing grants to make providing broadband to rural communities more financially feasible. To ensure localities are involved in such buildouts and incorporate each project into a larger plan for universal coverage, state broadband grants require applicants to be a partnership between a unit of local government (county, city, EDA, etc.) and a private sector broadband provider. This type of support was utilized by EMPOWER Broadband, a subsidiary of Mecklenburg Electric Cooperative (MEC), the electric provider for Greenville County. More specifically, EMPOWER was issued a grant from the Virginia Tobacco Commission to build a 135-mile fiber backbone across southern Virginia. They have completed 96% of the fiber backbone project through Pittsylvania, Halifax, Charlotte, Mecklenburg, Brunswick, and Greenville Counties. This primary infrastructure provides middle-mile capacity, retail high-speed internet service, as well as voice over IP telephony, high-speed data services, and advanced cloud-based solutions to the area. Offshoots of this main backbone will be constructed to serve the businesses and residents along this path. The following construction schedule for Greenville County was recently released from EMPOWER. The County has also applied for CARES Act and Virginia Technology Initiative (VATI) funding to support fiber-to-the-premise coverage for all unserved and underserved areas.

Table 6.2 EMPOWER Broadband Service Schedule

EMPOWER Broadband Service Schedule		
Barley Rd to Brink Rd to Brink School	Complete, Accepting Applications	Service Available
Brink Store to Pine Log Rd and Brink Substation	Design Staking Complete, Make Ready Underway	March 2021
Rockbridge Rd to Highway 301	Fiber Installed, Scheduling Splicing	June 2021
Highway 301 to Emporia Substation at Belding Hausman	Fiber Installed, Scheduling Splicing	March 2021
Emporia Substation to 58 at Sadler's Truck Plaza/95 Interchange to MEC Office	Fiber Installed, Scheduling Splicing	March 2021
Truck Plaza to 301 North to Reese Street to County Industrial Park	Fiber Installed, Scheduling Splicing	June 2021

In some areas with broadband service in Greenville County, only 13% of the potential customers have signed up for service. While local research concerning broadband use is not available, national research has shown that smartphones and broadband subscription cost are the two primary hurdles for not purchasing broadband service. In 2019, The Pew Research Center found that 37% of Americans primarily got online using their smartphone, stating this as a reason they did not need broadband; this number increases to 58% for 18-to 29-year-olds. In addition, 80% of these non-broadband users said they were not interested in getting high-speed connections at home. However, the 2020 pandemic has changed the way people use the internet. In 2020, The Pew Research Center asked Americans how important the internet has been for them during the coronavirus pandemic: 87% of adults say the internet has been at least important for them personally during the coronavirus outbreak, including 53% who describe it as essential. Smartphone service cannot be used consistently for telework or online classes. This, paired with evidence to suggest a housing shift to rural and suburban areas with larger homes and more outdoor space, suggest that the demand for service may increase. A local survey may be warranted as local officials work to provide access to broadband to the community.

Fiber is the foundation of the broadband solution, but cellular and other wireless technology are important as well. Some rural areas have strict regulations on telecommunication towers that limit the ability to provide service. Zoning regulations should be reviewed and updated, as appropriate, to balance this important community need. As technology evolves and new options, such as small cell wireless and neighborhood internet service providers, become available, Greenville County is committed to using innovative solutions to meet the changing needs of the community. There also may be new opportunities to utilize CARES Act funding to implement computer labs in rural centers of community (e.g., churches), support computer mentors that can lead classes on topics such as online genealogy research, GIS and social media, or to teach volunteers to rehab computers for community use and distribution. Continued partnerships, incentives, and support for additional internet access and cellular service will bolster Greenville's economy and quality of life.

Waste Management

Greenville County citizens can dispose of their household trash for free at the Greenville County Landfill located just northwest of Emporia. There are also eleven manned refuse disposal sites throughout the county, all of which offer recycling (See Map 6.1). The landfill only takes waste from Greenville County and Emporia. The site is permitted to take in 200 tons per day, an increase from 85 tons per day authorized through a DEQ permit modification issued in 2019. The landfill also accepts, institutional, industrial, municipal, and commercial waste. It is currently estimated that there is 10 years of capacity left on the land fill. A study is underway to determine future operation needs and capacity improvements. The county is conscientious of the environment and makes efforts to recycle and incinerate waste to increase the anticipated service life of the landfill.



Strategies to Improve Infrastructure

1. Support public infrastructure investments that promote economic and community development in an efficient, fiscally responsible manner.
2. Continue to coordinate public water/sewer expansions within the designated Urban Service Area with funding in this area as first priority.
3. Invest in public water/sewer services to Rural Service Areas as second priority.
4. Support GCWSA's capital improvement program, which is updated on an annual basis, to ensure quality and provide expanded service.
5. Support GCWSA efforts to identify and remedy areas where stream and groundwater systems are negatively impacted by inadequately treated household wastewater.
6. Work with partners, such as EMPOWER Broadband, to plan for and achieve reliable, effective, and affordable internet access in all homes.
7. Support siting of telecommunications structures and conduct code updates, as needed, to improve cellular service and coverage, with a preference for collocation and attached structures.
8. Explore innovative solutions to increase internet connectivity, such as equipping school buses with WiFi, computer labs/hotspots in rural churches and community centers, and advertising hotspot locations throughout the county.
9. Conduct a community broadband interest survey.
10. Continue to study feasibility of providing natural gas service to business and residential customers.
11. Support the extension of natural gas to the MAMaC site to increase the marketability of the site for industrial development.
12. Implement recommendations from the landfill capacity study.
13. Continue recycling services and pursue opportunities to expand recycling and composting, where feasible.
14. Develop a recycling education and awareness program through the County website, mailings, and social media to increase local knowledge.
15. Explore siting agreement options for utility-scale solar projects located in opportunity zones compatible with the future land use plan that can assist with the deployment of broadband and other county services.
16. Encourage new development to occur within areas that are already served by necessary public utility and infrastructure systems or where systems can be realistically expanded.
17. Invest in and provide good stewardship of existing infrastructure to maintain the current level of service and provide timely and cost-effective replacement.



7 ECONOMY

Leverage community assets to promote economic growth and attract industry and small business that will create economic diversity and provide exceptional quality of life for all of Greenville County's citizens.

In this chapter:

- *Introduction*
- *Economic Drivers*
- *Key Industries*
- *Jobs, Workforce, and Wages*
- *Strategies*



Introduction

Greenville County is open for business. With significant investments to advance its infrastructure, readily available land, and a highly accessible transportation network, the community is poised to accommodate business growth. As it looks to the future, Greenville is preparing for well-planned and diverse commercial and industrial development. Greenville understands that strong, thriving communities need diverse employment opportunities and amenities and seeks to balance and support all types of investment – from large-scale manufacturing to highway commercial to small business. The community also continues to support a workforce necessary to sustain new industry and actively works to promote high quality of life and services for workers, such as public transportation and easily accessible services.

Greenville County

Greenville 2040 Comprehensive Plan: Economy



JOBS

3,102

JOBS IN GREENSVILLE COUNTY

(2018 U.S. CENSUS BUREAU)

21.5%

OF JOBS FILLED BY GREENSVILLE COUNTY RESIDENTS
(2018 U.S. CENSUS BUREAU)

\$887

AVERAGE WEEKLY WAGE
(2019 OCEW ANNUAL AVERAGES)

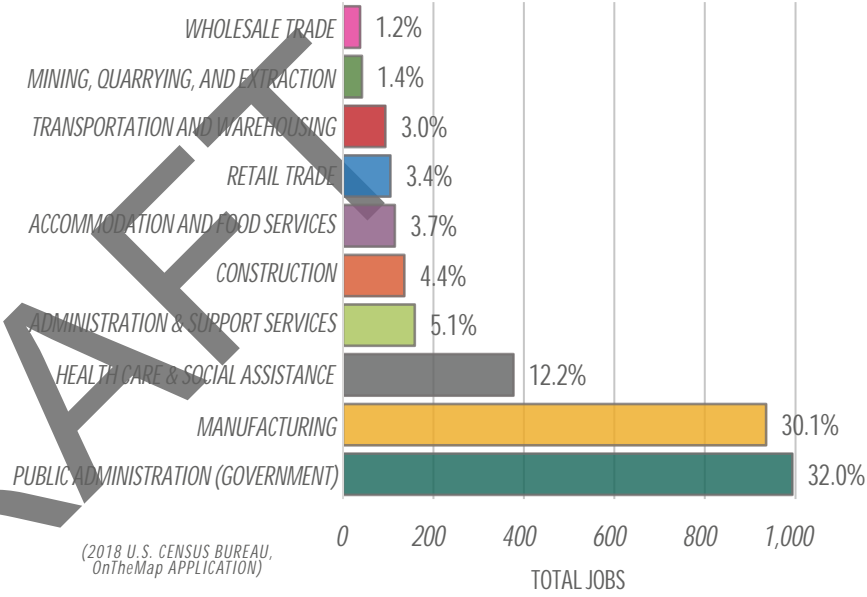
935

TOTAL MANUFACTURING JOBS
(2018 U.S. CENSUS BUREAU)

TOP EMPLOYERS

1. Boars Head Provisions Company
2. Greenville Correctional Center
3. Greenville County Schools
4. Jackson Field Homes
5. Oran Safety Glass Inc
6. County of Greenville Administration
7. Steelfab
8. Dominion Virginia Power
9. Armor Correctional Health
10. Delicatessen Services Company, LLC

(2020 OCEW 2nd QUARTER)



WORKFORCE

4,307

LABOR FORCE RESIDING IN GREENSVILLE COUNTY
(2018 U.S. CENSUS BUREAU)

668

RESIDENTS LIVE AND WORK IN GREENSVILLE COUNTY
(2018 U.S. CENSUS BUREAU)

63.5%

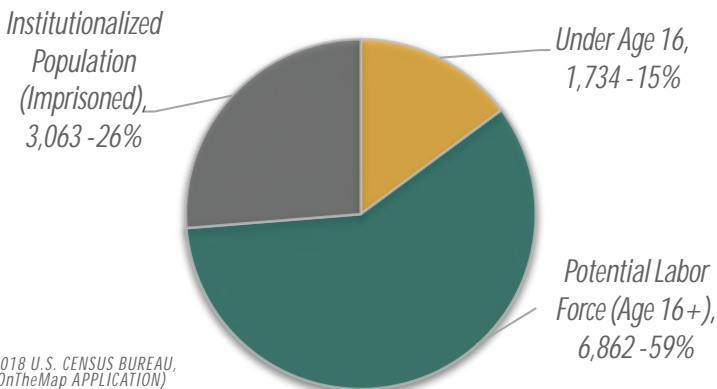
LABOR FORCE PARTICIPATION RATE
(2018 U.S. CENSUS BUREAU)

3.4%

UNEMPLOYMENT RATE
(2019 BLS LOCAL UNEMPLOYMENT)

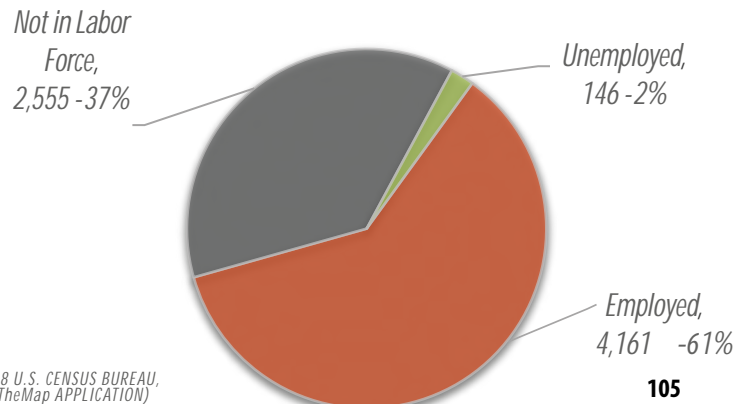
Workforce Potential

(Total Population: 11,659)



Labor Force

(Ages 16+ : 6,862 , In Labor Force: 4,307)



COMMUTING

15.0%

EMPLOYED GREENSVILLE COUNTY RESIDENTS WORKING IN COUNTY
(2018 U.S. CENSUS BUREAU)

78.5%

OF JOBS IN GREENSVILLE COUNTY FILLED BY WORKERS RESIDING ELSEWHERE
(2018 U.S. CENSUS BUREAU)

24.3%

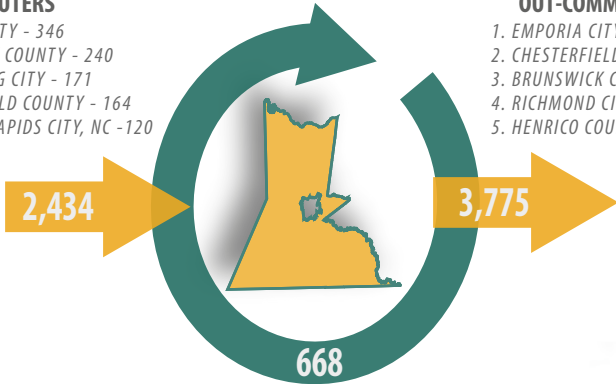
WORKERS RESIDING IN GREENSVILLE COUNTY COMMUTE TO EMPORIA
(2018 U.S. CENSUS BUREAU)

IN-COMMUTERS

1. EMPORIA CITY - 346
2. BRUNSWICK COUNTY - 240
3. PETERSBURG CITY - 171
4. CHESTERFIELD COUNTY - 164
5. ROANOKE RAPIDS CITY, NC - 120

OUT-COMMUTERS

1. EMPORIA CITY - 1,080
2. CHESTERFIELD COUNTY - 233
3. BRUNSWICK COUNTY - 153
4. RICHMOND CITY - 141
5. HENRICO COUNTY - 126



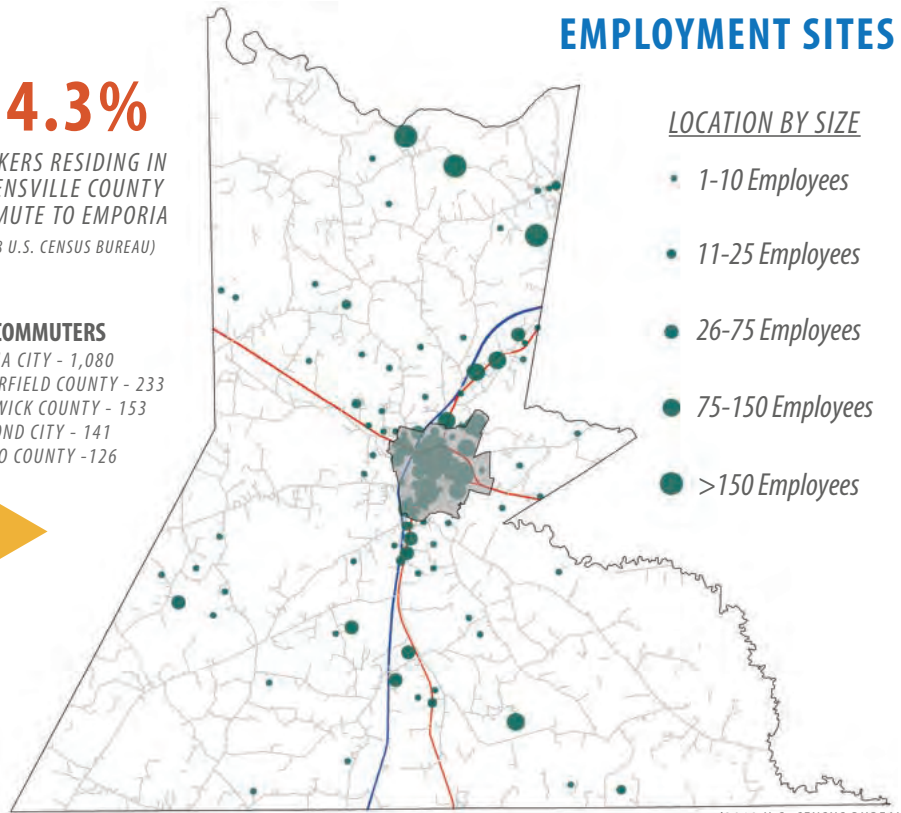
EMPLOYED AND LIVING IN GREENSVILLE COUNTY

(2018 U.S. CENSUS BUREAU, OnTheMap APPLICATION)

EMPLOYMENT SITES

LOCATION BY SIZE

- 1-10 Employees
- 11-25 Employees
- 26-75 Employees
- 75-150 Employees
- >150 Employees



(2018 U.S. CENSUS BUREAU, OnTheMap APPLICATION)

INDUSTRY

10

NUMBER OF MAJOR MANUFACTURING ESTABLISHMENTS
(2019 QCEW ANNUAL AVERAGES)

x 3.4

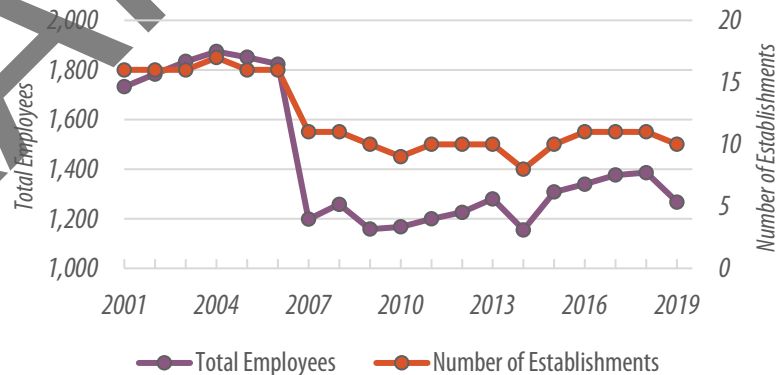
RATE OF MANUFACTURING EMPLOYMENT COMPARED TO NATIONAL AVERAGE
(2019 QCEW ANNUAL AVERAGES)

1,600 acres

SIZE OF MAMaC INDUSTRIAL MEGASITE AVAILABLE FOR DEVELOPMENT

\$43,818

AVERAGE ANNUAL WAGES PER MANUFACTURING EMPLOYEE
(2019 QCEW ANNUAL AVERAGES)



(QCEW ANNUAL AVERAGES)

AGRICULTURE

150

NUMBER OF OPERATIONAL FARMS
(2017 U.S. CENSUS OF AGRICULTURE)

28.7%

TOTAL LAND AREA DEDICATED TO OPERATING FARMS
(2017 U.S. CENSUS OF AGRICULTURE)

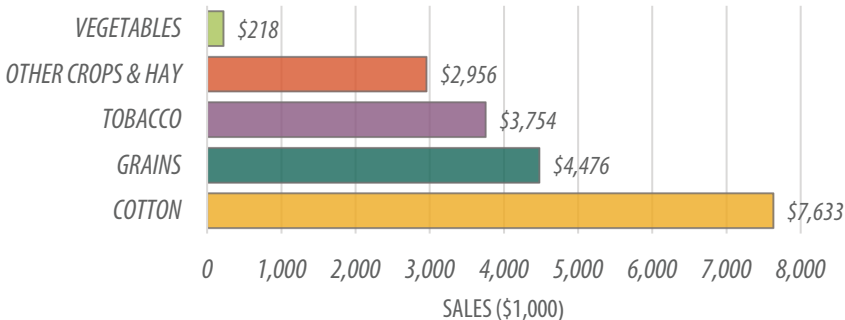
\$19.4 million

ANNUAL MARKET VALUE OF AGRICULTURAL PRODUCTS SOLD
(2017 U.S. CENSUS OF AGRICULTURE)

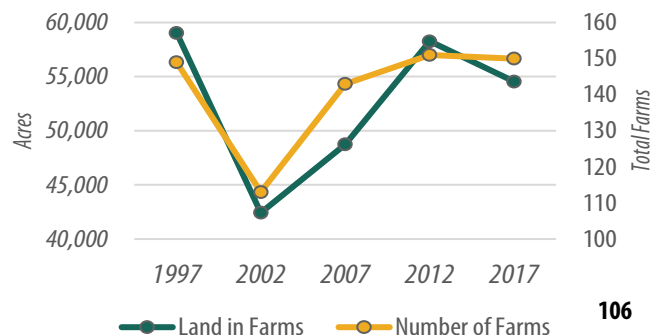
98%

SHARES OF AGRICULTURE SALES FROM CROPS
(2017 U.S. CENSUS OF AGRICULTURE)

Top Agricultural Products Sold



County Agriculture Trends



Economic Drivers

The elements required to support economic development are well known: sufficient and suitable land, transportation access, appropriate and adequate infrastructure, a business friendly development environment, and an available and trained workforce. Greenville County offers each of these resources in abundance. Key economic drivers are as follows.

Available Sites

Greenville County has ample land to accommodate new growth and industry. Most significant is the new 1,600-acre Mid-Atlantic Advanced Manufacturing Center, which is a tier 4-certified megasite. With I-95 frontage, CSX main line rail access, and a direct route to Virginia ports, the site boasts easy access to both national and international markets via road, rail, and sea. Additional details on this facility are described under Key Industries.

The county also has an existing, developed industrial park and is also exploring the feasibility of developing another industrial park to accommodate light industrial or manufacturers needing 25–50-acre development sites.

Map 7.1 MAMaC Site



Source: VirginiaBusiness.com; Mark Rhodes

Transportation

Greenville County fronts 17 miles of Interstate 95 (I-95), one of the busiest north/south transportation corridors in the country. While this alone is not necessarily an absolute asset, Greenville County is fortunate to have access to five I-95 exit ramps (exits 4, 8, 11, 12 & 13) that attract economic prospects into the county. This in combination with proximity to other transportation hubs in Richmond, the state capital, 65 miles to the north; the port of Norfolk 80 miles east; and Raleigh, North Carolina 95 miles southwest, along with local rail access and the crossroads of US Route 58 and US Route 301, creates a transportation network that serves as a major economic driver in Greenville County. This transportation network places the community within a 60-mile drive of a workforce of more than 980,000¹.



Infrastructure

Greenville County has long recognized that while transportation is key to progress, other infrastructure is necessary to support growth and achieve its potential as a prime location for commercial and industrial growth. Greenville County prioritized infrastructure expansion around urban areas and major corridors and has established the basic planning policy necessary to direct development in ways that utilize transportation assets while supporting the rural culture. This has allowed them to draw and retain industry reliant on transportation/distribution such as Boars Head, Oran Safety Glass, Steelfab, Heyco-Werk, and most importantly for the future of Greenville, the location of the new Mid-Atlantic Advanced Manufacturing Center (MAMaC), a 1,600-acre industrial park with I-95 frontage, CSX main line rail access and a direct route to Virginia ports. See the *Infrastructure* chapter (6) for more information.



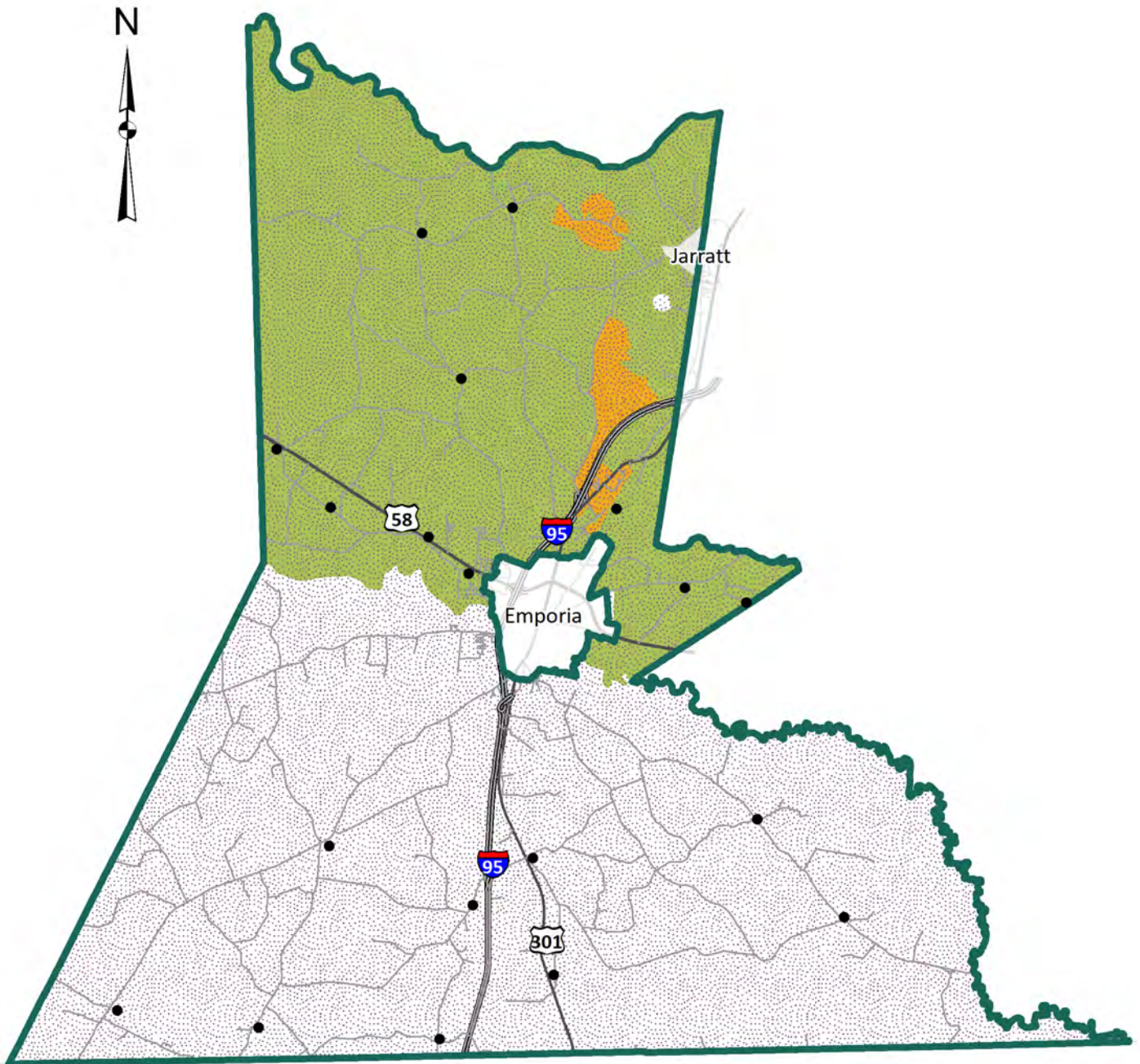
Business Friendly Government

Economic development in the county is led by a dedicated Director of Economic Development and the Industrial Development Authority. The county is also a part of the Crater Planning District Commission, the Southern Development Corporation, Crater Regional Partnership, and the Virginia Manufacturing Region – entities dedicated to promoting regional cooperation in community economic development. During community outreach, stakeholders commented on Greenville County's supportive and business friendly environment. The county maintains efficient permitting processes and offers many incentives to businesses – as detailed in the following section.



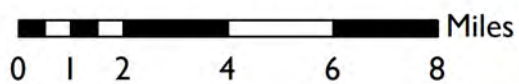
¹ YesVirginia.org

Map 7.2 Business Incentive Areas



Legend

-  Greenville County
-  County Roads
-  Greenville Communities
-  Tobacco Indemnification & Revitalization Area and HUB Zone
-  Enterprise Zone
-  Opportunity Zone



Business Incentives

Many resources and incentives are available through federal, state, and regional programs to promote business development and investment in Greenville County. In addition to local incentives including a program to offset capital investment and competitive tax structure, investors also take advantage of countless regional incentives offered through *Virginia's Manufacturing Region (VMPR)* and statewide incentives offered through the *Virginia Economic Development Partnership (VEDP)*. For the extra financial boost in building a business case, VMR can develop an incentive proposal for companies to take advantage of some of the following incentives for new and expanding businesses.

- **Opportunity Zone** – The northern half of Greenville County is a federally-designated Opportunity Zone. Under the 2017 Tax Cuts and Jobs Act, this designation provides an economic and community development tax benefit to investors with capital gains. It is designed to encourage long-term private investment in low-income census tracts.
- **Enterprise Zone** – The Virginia Enterprise Zone program encourages job creation and private investment in designated areas throughout the state. The program includes two grant-based incentives, the Job Creation Grant (JCG) and the Real Property Investment Grant (RPIG), to qualified investors and job creators within those zones, while the locality provides local incentives.
- **HUB Zone** – All of Greenville County also qualifies as an SBA HUB Zone until December 2021. This designation helps small businesses in gain preferential access to federal procurement opportunities.
- **Tobacco Regional Opportunity Fund** – Greenville County is also located within the Tobacco Indemnification and Revitalization footprint which makes the area eligible for Tobacco Regional Opportunity Fund grants (TROF). The TROF program provides discretionary incentives based on the number of new jobs being created, average wage of new jobs, and amount of new capital investment. Qualifying companies must invest a minimum of \$1 million and create at least 10 jobs over 36 months to be eligible.
- **Major Business Facility Job Tax Credit** – Qualified companies locating or expanding in Virginia are eligible to receive a \$1,000 income tax credit for each new full-time job created over a threshold number of jobs. Companies locating in an economically distressed locality, or an Enterprise Zone are required to meet a 25-job threshold; all other locations have a 50-job threshold. Greenville County meets this lower job threshold requirement.

Local Enterprise Zone Incentives

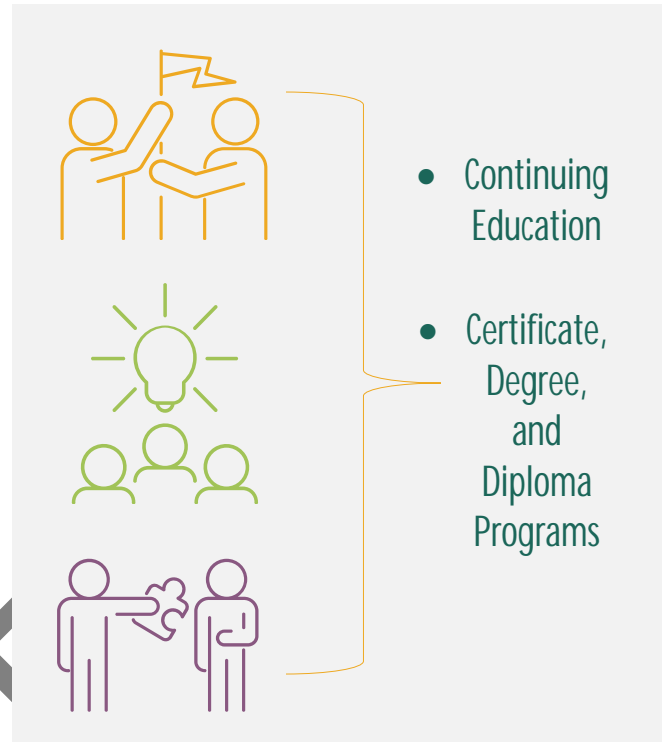
Greenville County offers robust local incentives as part of the Greenville-Emporia Enterprise Zone Program, including:

- Building/ Zoning Permit Fee Waiver
- Water and Sewer Tap Fee Waiver
- Machinery & Tools Tax Grant
- Real Estate Tax Grant
- Industrial Land Buy Down
- Industrial Utility Service Improvements
- Façade Improvement Grant
- Business Incubation Grant
- BPOL Grant
- Business Personal Property Investment Grant



Workforce Development

Greenville County invests in its future workforce. The county schools offer dual enrollment and paid tuition for first-year students at the Southside Virginia Community College (SVCC). SVCC is working to address the current needs for workforce training with options such as the Fast Forward Credentialing Program and SVCC Workforce Development Services (WDS), which aligns education and economic development to extend workforce development courses, training, and programs into the community. There is also an enormous amount of potential for the Southside Virginia Education Center that is located in the Greenville County Office Park. This facility includes 16 classrooms, 3 large instruction labs, computer labs, a resource lab in addition to the Virginia Employment Offices and Longwood University programs; the facility offers critical industrial training and certification. Customized training programs are available to industrial clients in the community. While participation in these programs is not consistently high, there has been a strong track record of performance and enrollment when a direct pipeline to jobs is available. Strategic marketing and more direct job placement services may be necessary to improve program participation in the community.



Source: Southern Virginia Community College

Key Industries

Agriculture and manufacturing have been a significant part of life in Greenville County for generations. The county has been successful utilizing its prime assets, transportation, and prime agricultural soils, to support these industries and sustain the economic needs of the area. As 2040 approaches, Greenville County will continue adapting to the new ways of doing business that come with the technological changes, innovations, and changing markets of the future.

Agriculture

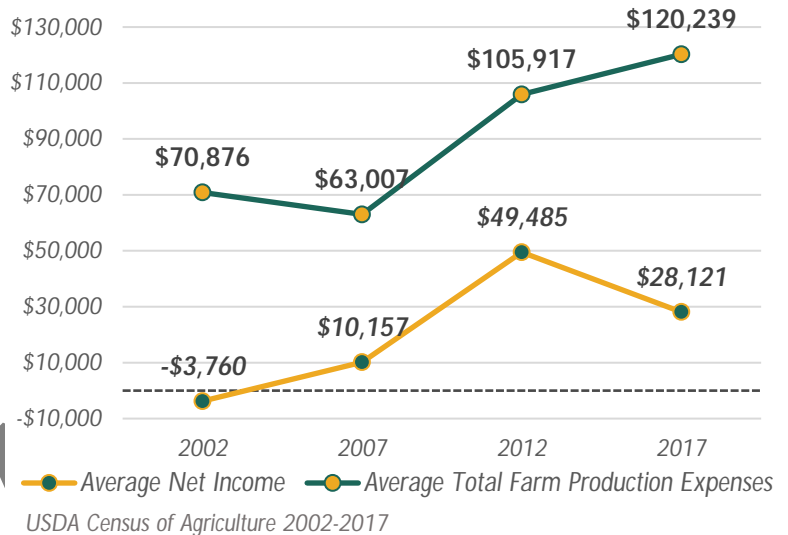
Historically, Greenville County has been a rural, agriculture-based community. The prevalence of prime agriculture soils and good growing conditions have been a key economic resource for centuries. In recent years, due to pressures on the agricultural community, such as reduction in tobacco production, fluctuating demand for cotton and soybeans, an overall drop in commodity prices, and severe weather events, the economy is shifting away from agriculture and toward industry and professional services.

The latest USDA Agricultural Census from 2017 shows some fluctuations in the number of farms and farm sizes in Greenville County since 2007, although the changes are minimal. There were seven more farms and 6,000 more acres being farmed in 2017 as compared to 2007. Any increase is good news for the agricultural community and even better news is that cropland acreage increased 7% from 2012 to 2017, which may show that farmers are adapting to changing markets. The increase in net income per farm showed significant increases in recent years, though the increase in production costs has also steadily increased. This increase in costs is one reason for the national trend toward an increase in very large farms (that can afford to modernize) and diminishing mid-sized operations as they are pushed out of operation. While there has been some decrease in the mid-sized farms (50-179 acres) in Greenville County, the minimal fluctuation in the number of farms of all sizes (as noted above) demonstrates the resiliency of the local farmers. In most rural areas, smaller farmers are being forced to reduce the size of their operation and seek supplemental income through outside employment. If this happens, the employment opportunities supplied by the manufacturing industry have been shown to be a good fit for this population, as their educational and vocational attainments fit the skills necessary for these jobs and the swing shift work allows farmers to be on the farm during daylight hours.

The next 20 years will be a time when farmers who want to continue to farm will need to continue to draw on their resilient nature. With Greenville County's proximity to major markets and exceptional transportation network, there are potential opportunities for farmers to shift their focus and adapt to modern markets. Due to the new focus on local food, healthy eating, sustainable farm practices, and organic and fresh foods, there are urban food markets to satisfy. Greenville farmers may be able to supply this need and take advantage of Virginia's growing agritourism industry with new uses, such as farm weddings, craft breweries, and distilleries.

Some challenges for farmers will be to identify the markets, adapt their operations, and coordinate their harvest times and delivery to a new kind of customer. Assistance with these important tasks can be accomplished through food systems planning, a new approach to farm assistance that tracks the demand and production for certain areas and matches producers with customers while keeping track of time of production and facilitating transportation. Some rural communities are using grants to fund non-profit organizations that provide these services for their agricultural communities.

Figure 7.1 Average Income and Expenses of Farms in Greenville County





Industry

A primary goal identified for Greenville 2040 is to attract and retain new manufacturing and industry. Greenville County strives to become a commerce and industry center. Greenville County welcomes domestic and international companies that are planning to expand, relocate existing operations, or establish new facilities. Because Greenville County lies in the center of the “wood basket”, it is an ideal location for forestry and wood products. The county also targets the logistics industry due to the ideal location for transport and original equipment manufacturers who can benefit from the transportation and access to the Commonwealth Center for Advanced Manufacturing, a world class applied research collaboration. With the new high-quality redundant fiber network with a 400 gigabit-per-second backbone and abundant electrical capacity, the county is also now targeting data center developers.

Completion of the new 1,600-acre Mid-Atlantic Advanced Manufacturing Center (MAMaC) is an important priority as it offers significant potential for major employers. The county made significant infrastructure investments in this facility in hopes of a substantial return on their investment in the form of jobs and economic growth. Although there is more work to be done, the MAMaC facility currently has the necessary utilities for development to begin. This facility can house major manufacturers and hopes to attract multiple industries that would require 200–500-acre parcels. Regional economic impact analysis estimates that the facility will have a regional economic benefit of \$2.8 billion and could ultimately bring 2,500–3,000 jobs to the region. Although this facility is in a prime location, one key to success will be strategic marketing of the facility, which will require close coordination and funding collaboration between Greenville County Economic Development and Virginia's Growth Alliance (formerly, the TransTech Alliance), a regional organization that includes the counties of Brunswick, Charlotte, Greenville, Lunenburg, Mecklenburg, and Nottoway, and the City of Emporia. The Alliance facilitates investment attraction and economic growth in the region and is currently the primary conductor of marketing for the facility.

An additional, smaller industrial park is located on US 301, two miles north of Emporia. That park is nearly developed to capacity so the county is exploring the feasibility of developing another industrial park to the north of the existing park that would accommodate light industrial or manufacturers needing 25–50-acre development sites, smaller than those available in MAMaC. The existing park is just off I-95 and is supplied with natural gas, industrial capacity water/sewer from GCWSA, high speed internet (fiber), and is in close proximity to an electric substation for ample electric supply.

Commercial Development & Small Business

Attracting and retaining commercial development and small business is also important to Greenville County. With the expansion of high-speed internet services and the new e-commerce trend, now is a prime time for Greenville to focus on supporting the diversification of small businesses. According to public feedback, citizens feel there is a need for more local retail and service businesses.

Although long-time residents are accustomed to driving to larger urban areas for goods and services, one of the ways the community could improve local quality of life is to expand the unique local business community (particularly retail and restaurants) to further the friendly, small-town appeal of Greenville County. This would not only serve the current residents but also attract prospective residents who may have an opportunity to relocate to Greenville County with employment opportunities. The dilemma with this goal is that without new residents, the area likely cannot support new retail/restaurant/service businesses, and without a unique selection of these businesses, it is more difficult to attract new residents.

Small businesses need commitment and support from local clientele to be sustained. It may be possible to gradually build a more robust local business community if the current local population actively supports new small businesses. One of the obstacles identified with small business expansion in Greenville County is that the local population is not accustomed to supporting the “buy local” movement. The community has expressed interest in rejuvenating efforts to assist entrepreneurs and small business owners with such ideas as a small business incubator, a business mentoring program, and “buy local” marketing initiatives. There are also some incentives available for small business expansion, though these opportunities are not highly utilized. This was evidenced with the low application rate for the COVID-19 Cares Act grant monies that were available to small businesses, even after extensive distribution of information.

86% of survey respondents felt that the area's shopping opportunities do not meet their needs.



While the Greenville County Government cannot directly improve retail needs of the community, it does recognize that a prosperous retail community serving citizens with shopping, restaurants, and fee for service businesses is important to the overall satisfaction of the community. 86.4% of Greenville 2040 survey respondents said Greenville's current shopping opportunities do not meet their needs. Since Greenville is relatively close to larger markets and urban areas, big box or chain store may not see the market in Greenville County as financially viable except those catering to the I-95 visitors around the commercial/transportation hubs. This, along with the current trend toward purchasing daily goods through e-commerce may make the expansion of retail difficult in the area. However, with the cooperative relationship between Greenville County and the City of Emporia along with Emporia's Main Street Program, the area has the opportunity expand highway commercial development and revitalize the downtown district into a unique retail and restaurant area. When a rural community has a strong, profitable central business district, more businesses are drawn in to take advantage of the retail focused traffic.

Jobs, Workforce, & Wages

This section describes various job and employment-related conditions in Greenville County. There are 3,201 jobs in Greenville County according to 2018 Census Bureau data. U.S. Census Bureau, County Business Patterns data for 2018 logs 104 firms (or business organizations) in Greenville County employing paid employees with a total annual payroll of \$73,523,000. There were another 388 establishments that do not employ paid employees other than the owner; these are typically small businesses and independent contractors.

Employment Sectors

Greenville County's job market is fairly diverse in that there are several mid-sized employers rather than one large employer as in many rural areas. According to the 2018 U.S. Census Bureau's Center for Economic Statistics, the industry sector providing the most jobs in Greenville County is the public administration sector. The Greenville Correctional Center, Southside Regional Jail, the Greenville County School system (which incorporates the City of Emporia), and the government offices associated with Greenville County, the City of Emporia, and the Town of Jarratt contribute to the 32% of local public administration jobs; this sector has seen a 10% increase since 2008. Manufacturing is a close second and, according to the US Census Bureau, accounts for just over 30% of the jobs in Greenville County.

Manufacturers, such as Boars Head Provisions, Oran Safety Glass, Steelfab (pictured to the right), and Delicatessen Services Company, are reliant on the exceptional transportation infrastructure of Greenville County for movement of goods. This success is evidence that the area is ideal for the future industry Greenville County hopes for. Georgia Pacific was also once a major employer in Greenville County, but the closure of one plant in Jarratt and one in Skippers has shifted the location of that company's approximately 400 jobs inside the City of Emporia. This could account for some of the manufacturing job fluctuation shown in the county job data between 2008 and 2018. Even with the fluctuations, the sector share has hovered around the 30% rate.



Although administration and support services only accounts for a little over 5% of the jobs, this sector has steadily increased and saw a 563% increase from 2008-2018 – the biggest increase by far. The Transportation and Warehousing job sector has decreased 86% during this time, and there was also a 55% decrease in retail trade jobs, which could reflect the rise in e-commerce. However, the new access to broadband internet service in the area may create new employment opportunities. The 2020 pandemic has accelerated the rate at which businesses are transitioning to online services and virtual workers. The local workforce can work from any location as long as they have sufficient internet service. There is also opportunity for entrepreneurs, as they can operate from rural locations and still access large markets and workforce from anywhere.

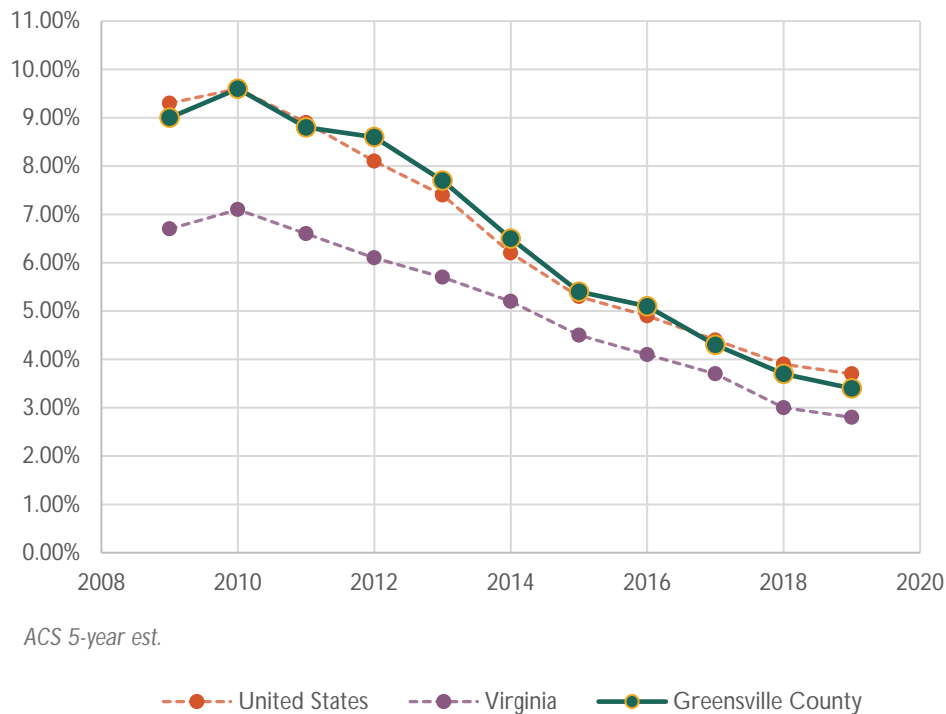
Workforce

The Greenville County labor force participation rate of 63.5% is about the same as that of Virginia and a few points higher than the national rate. Like many other rural communities, maintaining a skilled workforce could be a challenge for Greenville County depending on the number and types of industry that choose to locate here. The fact that only 21.5% of jobs in the area are filled by county residents, along with the large number of in commuters and out commuters could reflect a mismatch between the jobs and the skills of the workforce. At the same time, these statistics highlight the symbiotic relationship between the City of Emporia and Greenville County, as well as the surrounding localities in the region. Industries benefit from the highly trained and accessible workforce, not only in Greenville but throughout the region. In addition, the previously discussed training programs offered by SVCC have successfully addressed workforce development and training needs for new industries that choose to locate and expand in Greenville and surrounding areas.

Unemployment

There was a consistent decrease in unemployment in Greenville County from 2009 through 2018, consistent with the national rate according to the VA Employment Commission. In 2019, the unemployment rate was 3.4%. Then, in April 2020, the Greenville unemployment rate skyrocketed to 8.5% due to the global pandemic. However, the Greenville unemployment rate during pandemic was still lower than the VA rate (10.8%) and the national rate (14.4%) that same month.

Figure 7.2 Annual Unemployment Rates



Commuting

As in most rural areas, commuting to work in a personal automobile is the most common form of transport to work. However, the Greenville Emporia Transit System provides public transportation to the area and assists with travel to work. While major employers in the area have expressed appreciation for the service, there is interest in further coordination of efforts between the transit system and local industry to meet the needs of the local workers in terms of transport to work and access to services, such as daycare facilities on the way to work.

A significant amount of in and out commuting occurs in Greenville. Only 15% of employed Greenville residents work in the county, while 78.5% of the workers in Greenville County commute from another locality. Granted, approximately 20% commute from the City of Emporia, but that leaves a significant number of jobs in Greenville County that are being filled by workers from outside the community – highlighting the need for continued efforts to create pathways to local employment for residents.

Wages & Income

The Quarterly Census of Employment and Wages (QCEW) indicated that the average annual wages of all jobs in Greenville County was \$44,096 in 2019. This average pay lags behind QCEW estimates for the U.S. (\$59,209) and Virginia (\$60,200) in 2019. Similarly, the median household income based on U.S. Census Bureau's 2019 estimates was \$50,300 in Greenville County compared to \$68,703 nationwide and \$74,222 for Virginia. This local discrepancy in wages and income follow nationwide trends where average rural wage and salary employment in rural areas lags behind urban areas. While cost of living does help to make up for some of the discrepancy in pay and lower wages can act as an incentive for new industry, better employee wages are still an area of needed growth in the county.

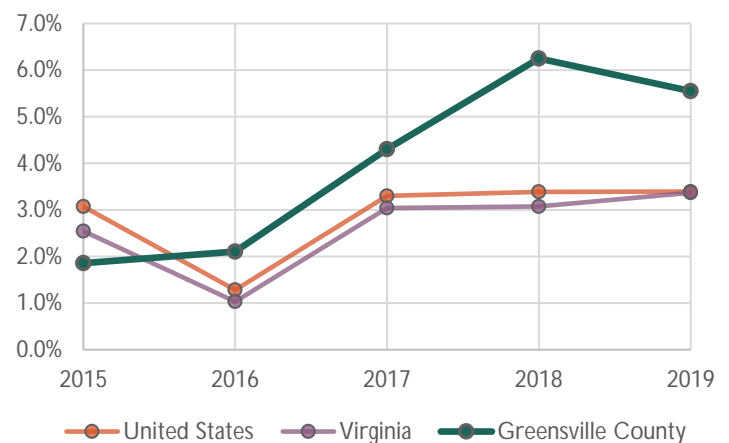
Presently, wages in the predominant industry sectors based on employment in Greenville County all have wages close to the county average. The manufacturing, health care and social assistance, and public administration sectors all have average annual wages between \$40,000 and \$45,000 annually. The administrative and support services sector appears to have annual wages above the local average (\$62,000) while the transportation, retail trade, and construction sectors all have wages below the local average.

Despite the discrepancy in wages and income compared to the state and nation, recent trends in average annual wages in Greenville County indicate positive progress. The average annual growth in annual wages in Greenville County has surpassed both Virginia and the United States in the most recent 3-year, 5-year, and 10-year periods extending to 2019. While the current average annual wage value still trails both state and national levels, recent increases in wages indicate faster growth in annual wages in Greenville County. This suggests that Greenville County should promote economic development opportunities that continue to move annual employee wages closer to the state and national averages.

Table 7.1 Annual Wage Comparisons

	Greenville County	United States	Virginia
2019 Average Annual Wages	\$44,096	\$59,209	\$60,200
3-Year Average Change	5.4%	3.4%	3.2%
5-Year Average Change	4.0%	2.9%	2.6%
10-Year Average Change	3.8%	2.7%	2.2%

Figure 7.3 Annual Percent Growth in Annual Wages



Strategies to Encourage Economic Development

1. Explore feasibility of food system planning to assist the agricultural community in taking advantage of new markets.
2. Coordinate across government departments to ensure that incentives and marketing information is made available to potential businesses and developers.
3. Continue supporting workforce development and quality of life improvements and partnerships as a foundation for economic success.
4. Coordinate and expand strategic marketing of the MAMaC facility.
5. Continue to explore opportunities for the creation of a second Greenville County Industrial Park and implement, if feasible.
6. Partner with City of Emporia and Main Street Program to develop the downtown business/commercial district and support revitalization efforts.
7. Continue to support commercial expansion efforts in the commercial hubs along I-95 in order to fully utilize this economic/transportation asset.
8. Consider developing a shared (co-working) office space, business incubator, or business coaching/mentoring programs for local entrepreneurs.
9. Formulate a “buy local” educational/marketing initiative to support local retail, restaurant, and farm market businesses.
10. Continue to work with EMPOWER to support expansion of broadband services that would increase educational and telework opportunities for residents.
11. Evaluate whether local educational opportunities include trainings targeted at telework job opportunities and identify ways to connect residents to telework jobs.
12. Consider a local study to evaluate the employment changes that have occurred with local residents since the COVID pandemic and attempt to address specific needs identified, such as extended childcare, need for broadband, or new workforce education needs.
13. Review zoning regulations to ensure regulations support economic development goals.
14. Develop internship / job shadowing program with school students and local employers to create a deeper tie between employers at county residents
15. Recognize the education and employment profile of the current county workforce as a guide for focusing on target industries.



8

TRANSPORTATION

Fully utilize and maintain current road and rail networks while expanding public transportation opportunities and upgrading pedestrian infrastructure to ensure safe and efficient movement of goods, services, and citizens throughout Greenville County and beyond.

In this chapter:

- *Introduction*
- *Local Travel Patterns*
- *Existing Transportation Network*
- *Land Use and Planning Assumptions*
- *Transportation System Needs Assessment*
- *Strategies*



Introduction

A well-functioning transportation system is essential for ensuring the efficient movement of people and goods, enhancing quality of life, and facilitating economic growth. This chapter focuses on improving transportation safety, efficiency, and accessibility and provides guidance for transportation decisions that support the growth and development goals of the *Land Use* chapter of this Plan.

The Greenville County transportation system is comprised of multiple elements, including an interstate, principal arterial highways, secondary neighborhood and rural roads, sidewalks, parking, public transit, railroads, and a regional airport. The automobile will likely continue to be the dominant mode of travel locally, but public transit also remains an important component of the local transportation system. As such, the county is committed to providing viable transportation options for motorized vehicles while also integrating alternative transportation facilities into the road network. The county also supports access to major rail corridors to maintain the flow of resources and goods, which is a critical component of economic development in the county.

Together, each element of the county's transportation system is complementary to one another and serves the community as an integrated network. Continued maintenance, upgrades, replacement, and additions to the network ensure reliable transportation service throughout the community. Because Greenville County does not maintain any roadways, a cohesive transportation plan requires cooperation from the Virginia Department of Transportation (VDOT). This chapter serves as a guide for cooperation with VDOT as well as with neighboring localities, the Crater Planning District Commission, and other regional and state agencies.

Transportation Planning Partners

Crater Planning District Commission

The Crater Planning District Commission (CPDC) assists localities in meeting transportation challenges by providing a spectrum of transportation planning services. CPDC is responsible for regional long-range transportation planning and may also assist localities with transportation studies, plan updates, technical assistance, and administration.

Virginia Department of Transportation

The Virginia Department of Transportation is responsible for building, maintaining, and operating the state's roads, bridges, and tunnels. Greenville County is a part of VDOT's Hampton Roads District. The district includes nine counties and eleven cities with Greenville County being the westernmost locality in the district. The district includes 720 miles of primary roads, 4,000 miles of secondary roads, and 160 miles of interstates.

Greenville County

Greenville 2040 Comprehensive Plan: Transportation



ROADS

44,000

ANNUAL AVERAGE DAILY TRAFFIC ESTIMATE ON I-95 IN GREENVILLE COUNTY
(2019 VDOT)

18%

PROPORTION OF TRUCK TRAFFIC ON I-95
(2019 ACS)

15,000

ANNUAL AVERAGE DAILY TRAFFIC ESTIMATE ON US 58 IN GREENVILLE COUNTY
(2019 VDOT)

84.8%

SHARE OF RESIDENTS DRIVING ALONE TO WORK
*STATE: 79.3%
(2019 ACS)

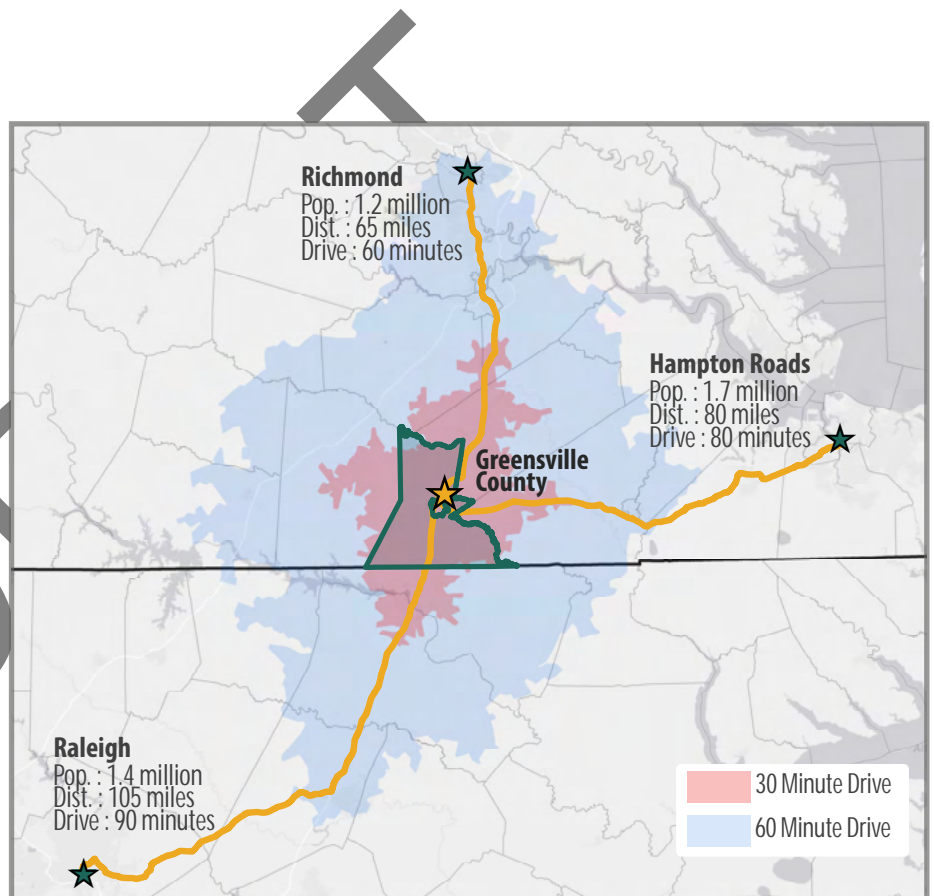
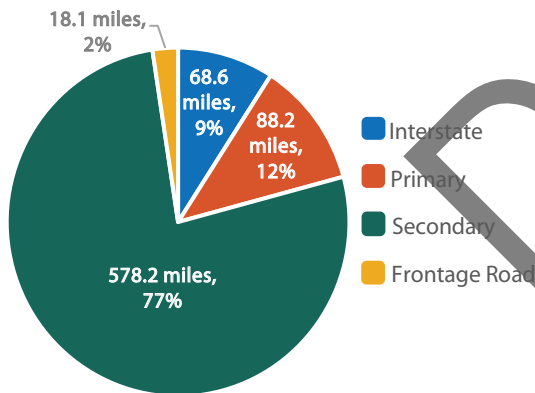
753

VDOT MAINTAINED LANE MILEAGE
(2019 VDOT)

79

TOTAL NUMBER OF BRIDGES
(2019 ACS)

VDOT MAINTAINED LANE MILEAGE BY ROAD TYPE



*DISTANCES AND TRAVEL TIMES MEASURED FROM GREENVILLE COUNTY GOVERNMENT COMPLEX

OTHER MODES

16

TOTAL ROUTE MILES OF ACTIVE FREIGHT RAILROAD
(2019 VA DRPT)

8.8%

PROPORTION OF COUNTY HOUSEHOLDS WITH NO VEHICLE AVAILABLE
*STATE: 6.1%
(2019 ACS)

7,825

RIDERSHIP ON GREENVILLE-EMPORIA TRANSIT IN FY 2019
(2019 VA DRPT)

897

ANNUAL FLIGHTS AT EMPORIA-GREENVILLE REGIONAL AIRPORT IN 2020
(2019 FAA)

Local Travel Patterns

Commuting patterns and socioeconomic factors are important considerations for the local transportation system. As documented in the *Economy* chapter, only 668 individuals both live and work in Greenville County. Approximately 3,775 county residents commute outside of Greenville County for work, primarily to the City of Emporia, while 2,434 individuals commute into Greenville County from the surrounding region. Also, as noted in the *Housing* chapter, the county population ages 65 and over is projected to grow by about 12.4% through 2040, which will influence future transportation needs.

Currently, driving is the primary mode of local transportation in Greenville County. An estimated 92.7% of workers in Greenville County relied on a motorized vehicle (drove alone or carpooled) to get to work. The remaining percentage of county residents relied on other means of transportation. Recent changes initiated by the Covid-19 pandemic may have further increased the amount of local workers opting to work from home. These commuting pattern changes are not yet documented in the most recent version of the ACS 2019 data. Additionally, the percentage of households in the county without a vehicle (8.8 percent) is slightly higher than the state average. These socioeconomic trends suggest the need for a variety of mobility options in Greenville County. In higher density areas, this includes supporting improved pedestrian and bicycle facilities to access community amenities as well as improvements to the local public transit system to expand access.

Table 8.1 Means of Transportation to Work of Greenville County Residents

Means of Transportation to Work	Greenville County	Virginia	City of Emporia
Car, Truck, or Van-Drove Alone	84.8%	79.3%	82.0%
Car, Truck, or Van-Carpooled	7.9%	9.0%	6.6%
Public Transportation	0.5%	2.9%	0.5%
Walked	0.2%	1.8%	2.2%
Other Means (Taxi, Motorcycle, Bicycle)	5.8%	1.7%	7.2%
Worked From Home*	0.8%	5.3%	1.5%

Source: ACS 2019 5-Year Est.

Table 8.2 Share of Greenville County Households with Vehicles Available

Households with Vehicles Available	Greenville County	Virginia	City of Emporia
No Vehicles Available	8.8%	6.1%	21.2%
1 Vehicle Available	27.0%	30.1%	35.5%
2 Vehicles Available	28.6%	38.1%	28.3%
3 or More Vehicles Available	35.6%	25.7%	15.0%

Source: ACS 2019 5-Year Est.

Existing Transportation Network

Roadway Network

The primary mode of transportation in the county, driving, depends on access to private vehicles and the county road network. As of 2020, Greenville County contained 752.4 lanes miles of roads in the VDOT system (See Table 8.3). For a rural community, Greenville County has relatively few unpaved publicly maintained roads. However, the county has a large amount of unpaved private driveways, access roads, and 4WD roads accessing parts of the county where publicly maintained roads are not present.

Functional Classification

VDOT, in cooperation with the Federal Highway Administration, has classified all public roads and highways in Greenville County into six categories: interstate, other freeway, principal arterial, minor arterial, major collector, and minor collector. All other unclassified roads in the county are considered local access, which provides direct connections to adjacent land uses and facilitate short-distance travel. VDOT provides design standards to guide the development of any public roadway based on the proposed road's classification and use.

Table 8.3 Lane Mileage of Greenville County Road Network

Greenville County Lane Mileage 2020	
Interstate Highway	68.56
Primary Highway (Arterials)	88.19
Frontage Roads	17.88
Secondary Roads (Collectors)	577.3
<i>Hard Surfaced</i>	558.6
<i>Unpaved</i>	18.7
Total Lane Mileage	752.4

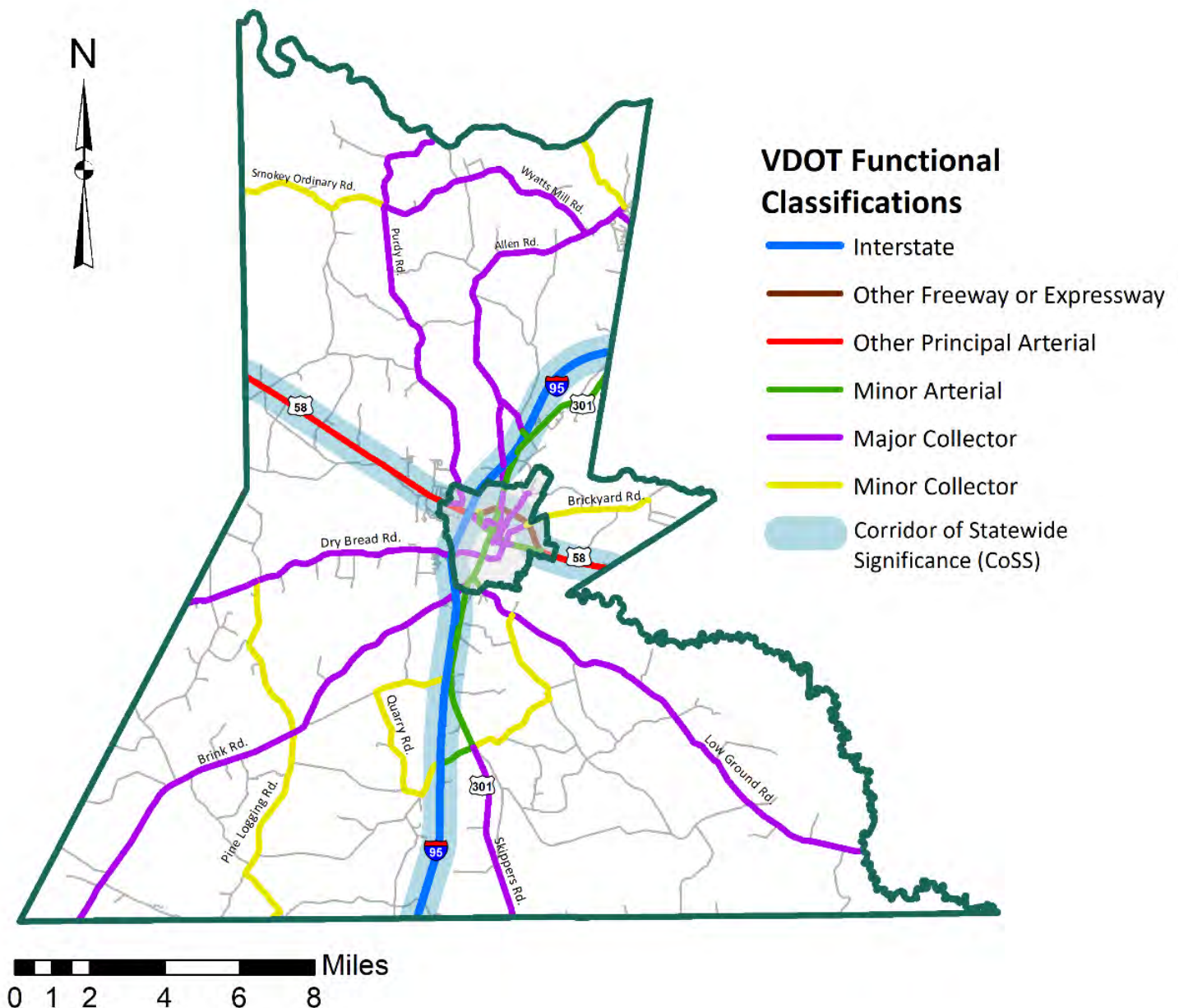
- **Interstate Highways:** Designed to carry a large volume of through-traffic to and from large cities. They form a national network of multi-lane, limited-access highways that carry traffic at relatively high speeds.
 - *Example:* Interstate-95
- **Other Freeway:** Carry large volumes of traffic along a divided, limited-access highway. These are often bypasses that keep through traffic off of local roads.
 - *Example:* US Route 58 Bypass through Emporia
- **Principal Arterials:** Serve a substantial amount of traffic of moderate trip length as well as connecting smaller local routes. These routes are typically four lanes in width.
 - *Example:* US Route 58
- **Minor Arterials:** Part of a highway network that links towns, activity centers, and other traffic generators. They also connect to principal arterials and/or interstates.
 - *Example:* US Route 301
- **Major Collectors:** Provide connections to towns and activity centers and serve as intra-county travel corridors.
 - *Examples:* Allen Road, Brink Road, Dry Bread Road, Low Ground Road, Purdy Road, Skippers Road, Wyatts Mill Road
- **Minor Collectors:** Collect traffic from local access roads, rural hubs, and local traffic generators and connect to a major collector
 - *Examples:* Brickyard Road, Pine Logging Road, Smokey Ordinary Road

Corridors of Statewide Significance

Corridors of Statewide Significance (CoSS) are defined as “an integrated, multimodal network of transportation facilities that connect major centers of activity within and through the Commonwealth and promote the movement of people and goods essential to the economic prosperity of the state.” COSS are an important component of the statewide multimodal transportation plan – VTrans.

1. **Washington to North Carolina Corridor (I-95):** As the primary corridor for the East Coast of the United States, the corridor serves as one of the state’s main through corridors for passengers and freight. I-95 is a four-lane highway in Greenville County and CSX also provides rail transportation along the corridor. As a parallel corridor to I-95, US 301 is also considered a part of the Washington to North Carolina Corridor.
2. **Southside Corridor (US 58):** The corridor runs east to west for more than 500 miles in southern Virginia, making US 58 a major corridor for this portion of the state. The corridor provides connections to all of Virginia’s major north-south corridors. The corridor also provides access to Virginia’s port facilities.

Map 8.1 Functional Classification of Greenville County Road Network



Traffic Volumes

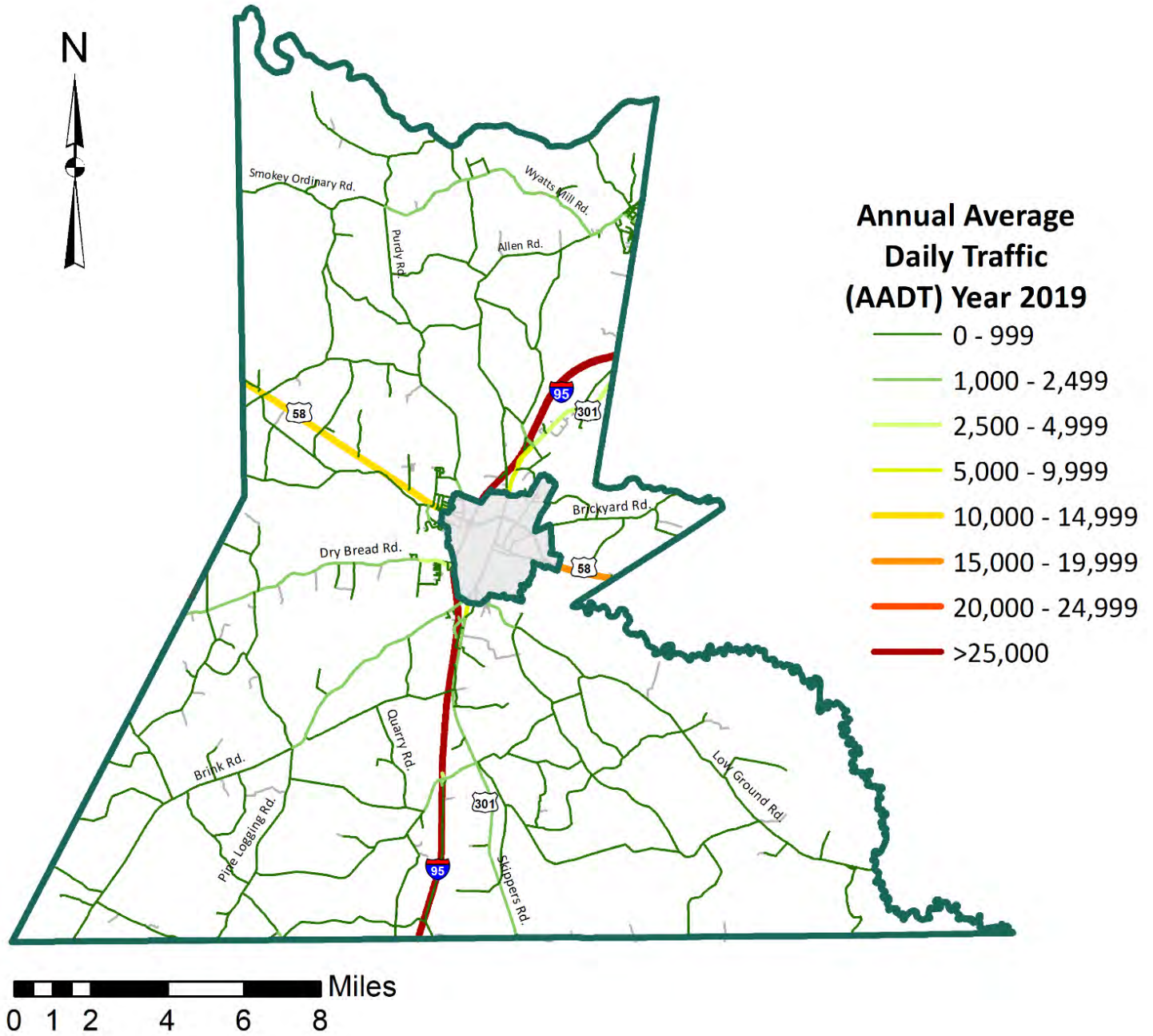
Generally, traffic volumes throughout Greenville County are minimal to moderate, and roadway congestion is infrequent. (See Transportation System Needs Assessment). For the purpose of this chapter, traffic volumes are measured in units of Average Annual Daily Travel (AADT), using the 2019 Virginia Department of Transportation Daily Traffic Volume Estimates. In 2019, the highest average traffic volumes in Greenville County were on I-95 and the segment of US 58 directly to the east of Emporia. Additionally, the Daily Vehicle Miles Traveled (DVMT), which estimates the total mileage driven on county roads each day, was 893,419 miles in 2019. Based on the DVMT data, 73% of the daily miles driven by vehicles in Greenville County occur on interstate highways (I-95). The remaining DVMT was divided into 14% of all miles driven on primary roads and 13% of all miles on secondary roads.

Table 8.4 Annual Average Daily Traffic (AADT) 2019 of Greenville County Road Network Residents

Road	AADT Volume (*AADT represents most traveled segment)				% Change, 2005-2019
	2005	2010	2015	2019	
Interstate					
I-95	39,000	40,000	43,000	44,000	12.8%
Principal Arterial					
US 58	16,000	16,000	14,000	15,000	-6.3%
Minor Arterial					
US 301	6,100	5,900	6,500	5,800	-4.9%
Major Collector					
Dry Bread Rd (SR-611)	3,900	3,300	2,600	2,600	-33.3%
Slagles Lake Rd (SR-610)	2,400	2,200	2,200	2,200	-8.3%
Brink Rd (SR-627)	2,300	2,300	2,000	1,900	-17.4%
Moore's Ferry Rd (SR-629)	1,400	1,400	1,800	1,800	28.6%
Wyatts Mill Rd (SR-608)	1,300	1,100	1,500	1,500	15.4%
Low Ground Rd (SR-730)	1,600	1,500	1,300	1,300	-18.8%
Otterdam Rd (SR-614)	840	750	1,200	1,200	42.9%
Purdy Rd (SR-619)	1,200	1,100	1,100	1,100	-8.3%

VDOT AADT Data (Estimates-May not reflect actual traffic counts)

Map 8.2 Annual Average Daily Traffic (AADT) 2019 of Greenville County Road Network

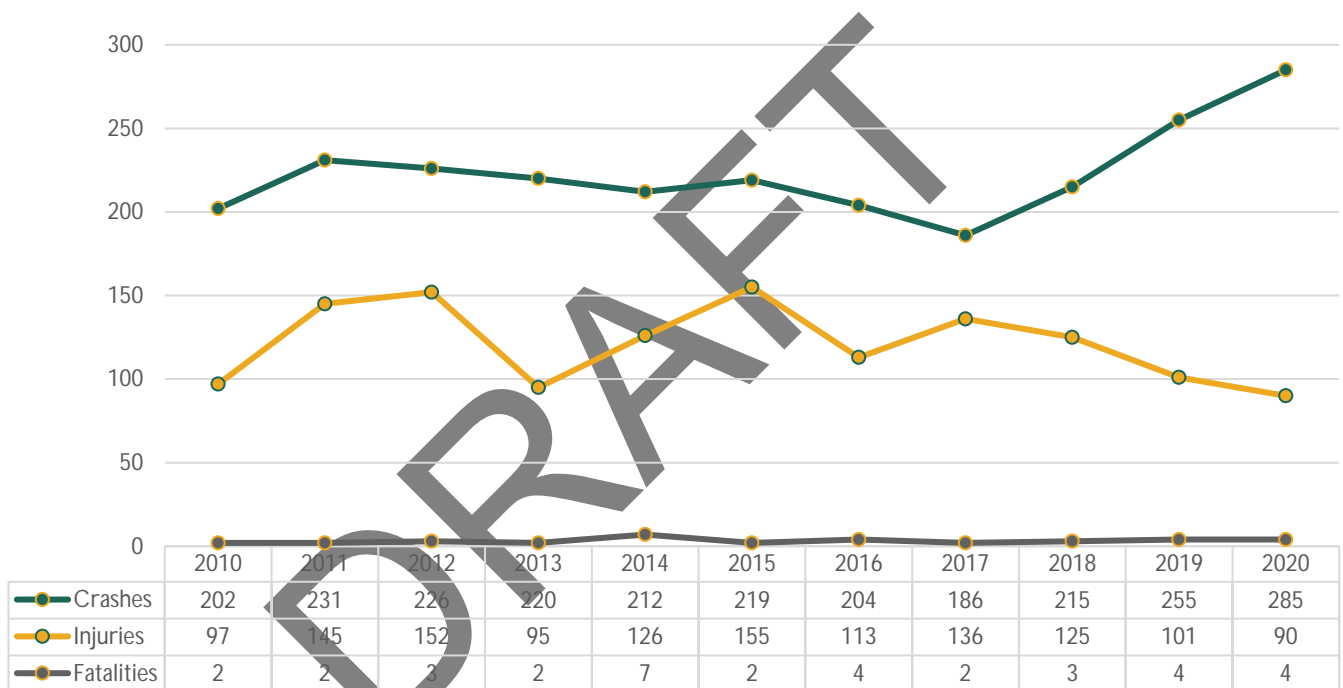


Safety

Local crash data from the Virginia Department of Motor Vehicles (DMV) reports a recent increase in the number of crashes occurring in the county since 2017. The number of crashes with injuries or fatalities, however, has not increased. Since 2010, Greenville County has had an average of 223 traffic crashes annually, including 121 crashes with injuries and three (3) with fatalities. This recent increase in traffic crashes follows similar statewide trends.

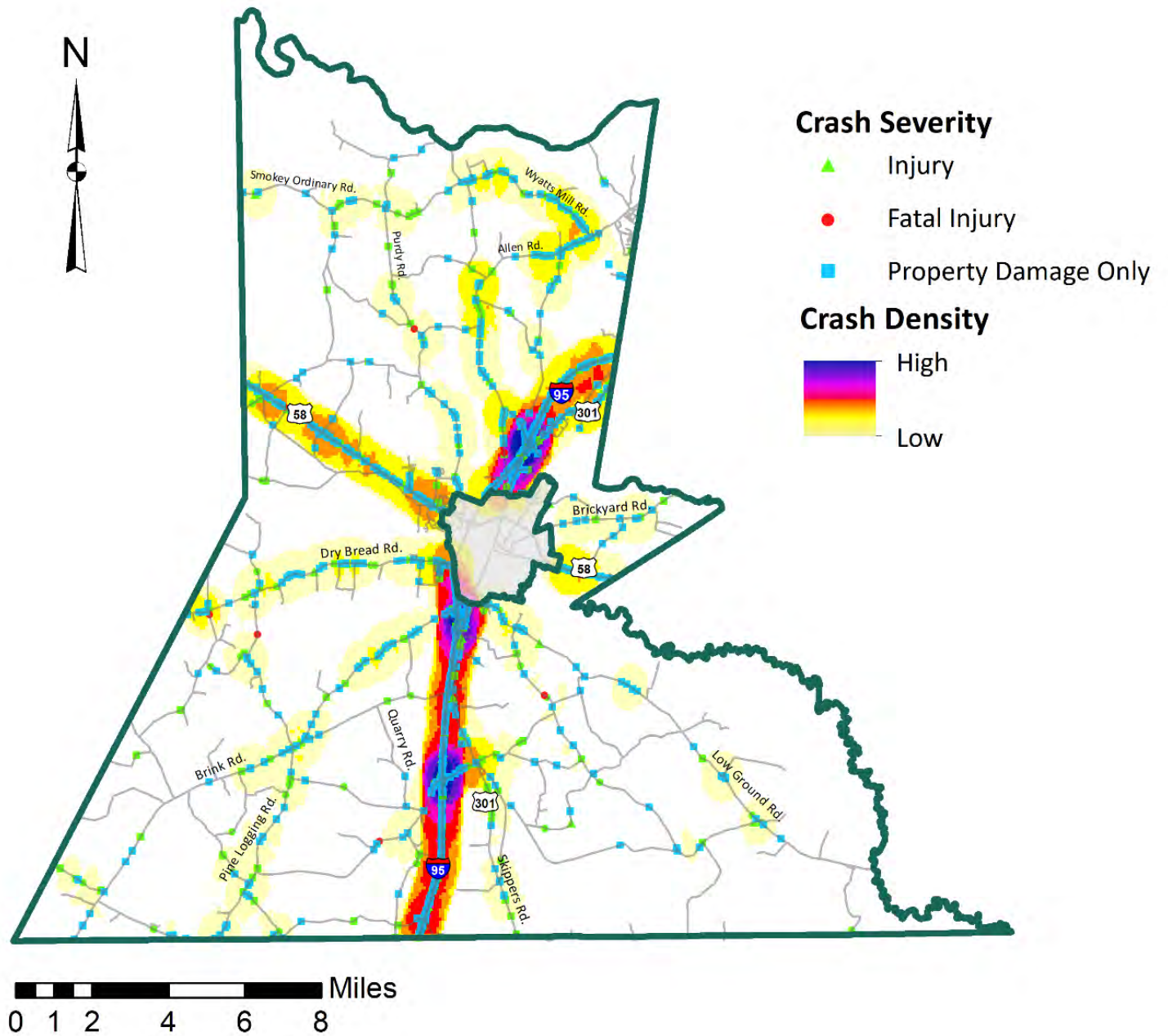
VDOT traffic crash data shows that most crashes are concentrated on the interstate and primary network, which are the county's most traveled roads. I-95 in Greenville County sees the highest frequency of major crashes, often involving trucks and other heavy vehicles. Beyond the interstate system, crashes and incidents in the county also cluster around larger intersections and rural collector roads with higher volumes. These areas are visible in the density map (See Map 8.3).

Figure 8.1 Annual Traffic Crashes on Greenville County Roads



Source: Virginia State Police

Map 8.3 Location and Density of Traffic Crashes in Greenville County

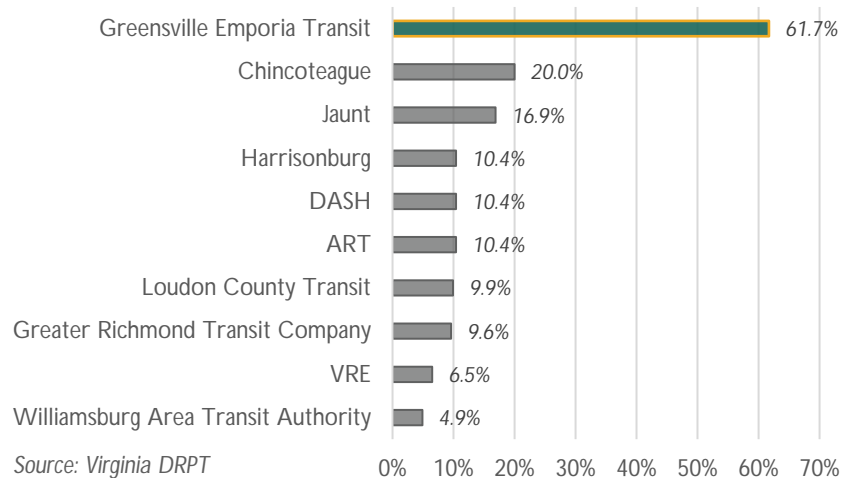


Public Transit

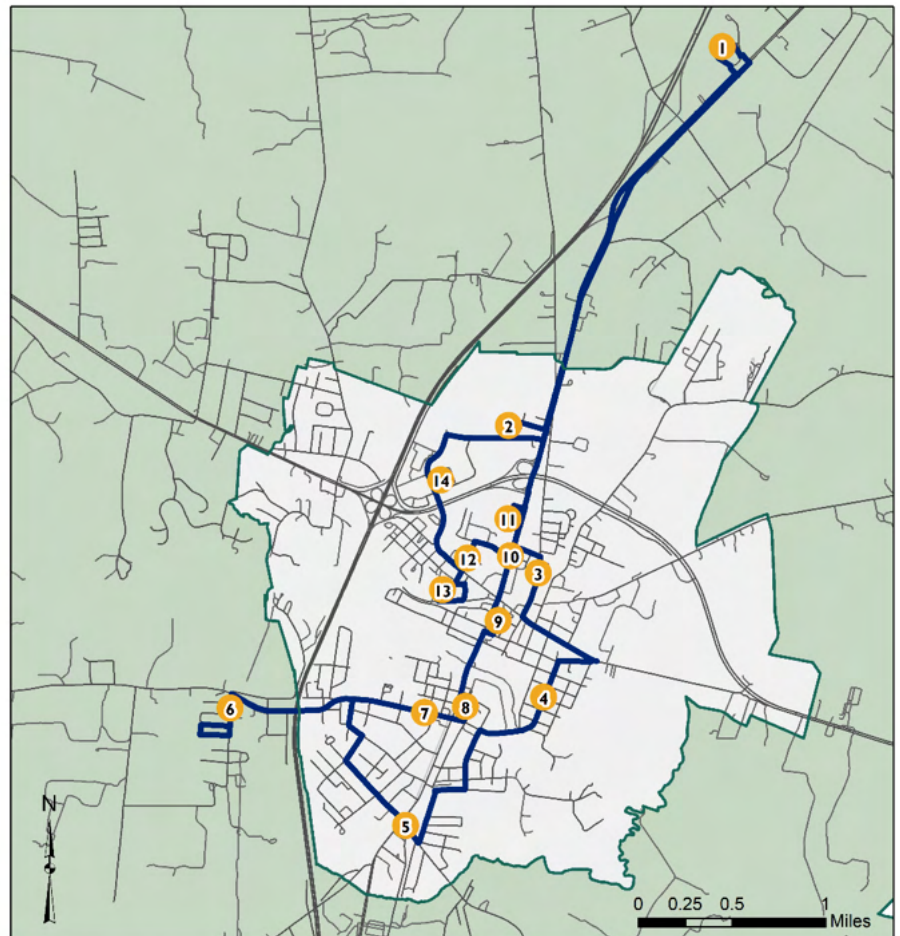
The Greenville Emporia Transit system (GET) provides public transportation in Greenville County and the City of Emporia. The Greenville County Department of Public Transportation, in partnership with the City of Emporia, operates the transit system, which opened in 2017. Bus service operations serve a 20-mile fixed route that circulates hourly on weekdays from 7:00 a.m. to 7:00 p.m. to connect various destinations within Emporia and nearby Greenville County to the Greenville County Government Center. According to the Virginia Department of Rail and Public Transportation (DRPT), ridership on the GET was 3,946 in FY 2018 (8 months of operation) and 7,825 in FY 2019. Ridership in FY 2020 was impacted dramatically by the Covid-19 pandemic, however through February of 2020, GET experienced a 61.7 percent increase in transit ridership, which was the largest increase of any transit agency in Virginia.

Despite the challenges created by the pandemic, public transportation should continue to be a priority in Greenville County and the City of Emporia. Ridership trends have demonstrated strong yearly growth and should continue to be tracked. Opportunities to expand bus service and offer demand-response service have been explored in Greenville County in the past and should be reconsidered as ridership grows. This includes adding service to high residential density areas and activity centers near Emporia like the Brook Ridge Apartments and the Greenville County Industrial Park. Additionally, the county should continue to actively market this transportation service and ensure that all maps and schedules are up to date and available for residents.

Figure 8.2 Top 10 Transit Agencies in Virginia with FY 2020 Ridership Increases



Map 8.4 Greenville Emporia Transit System Route Map



Greenville Emporia Transit System Route Map

- | | |
|--|--------------------------------------|
| 1. Greenville Gov. Complex (:00) | 8. Richardson Memorial Library (:32) |
| 2. Trinity Woods (:06) | 9. Emporia Police Department (:34) |
| 3. Halifax St./Harris St. (:10) | 10. Southside Surgical (:37) |
| 4. Lee St./Cleveland Ave. (:15) | 11. SVMC (:41) |
| 5. Low Ground Rd./Main St. (:19) | 12. Goodwill (:45) |
| 6. Washington Park at Easter St. (:27) | 13. Carriage Run Apartments (:48) |
| 7. School St./Brunswick Ave. (:31) | 14. Food Lion (:52) |

Pedestrian/Biking

Like most other rural counties, Greenville County has only a limited number of sidewalks and designated bikeways. The county has recently made sidewalk improvements to connect neighborhoods and schools to existing sidewalks in the City of Emporia. Sidewalks along US 301 and Slagles Lake Road currently connect Greenville Elementary School and Edward Wyatt Middle School with the City of Emporia. As of 2021, a new sidewalk along US 301 from Greenville Elementary School north to Crescent Road is almost complete. Recent improvements in the Washington Park neighborhood also include sidewalks along Easter Street and Dry Bread Road, which connect to existing sidewalks in Emporia. Greenville County has received funding to construct a sidewalk along US 301 from the Brook Ridge Apartments north to the City of Emporia. The Town of Jarratt also has a small network of sidewalks in residential neighborhoods and the commercial district on Jarratt Avenue.



Bicycle usage in Greenville County is hindered by a lack of on-road facilities and safety concerns. VDOT's inventory of statewide bicycle facilities only designates a small section of the paved shoulder of US 58 west of Emporia in Greenville County as a bicycle facility. While some of the county's quiet rural roads are well suited for advanced cyclists, there are no dedicated bike trails available within the county. VDOT and the Department of Conservation and Recreation have, however, recommended the development of the Beaches-to-Bluegrass (Tobacco Heritage Trail) multi-use trail along the Virginia Beach-Lake Gaston water pipeline through the county. More information on this trail is located in the *Quality of Life* chapter.



Source: Paul Perry via Airport-Data

Airport

The Emporia-Greenville Regional Airport (EMV) is a publicly owned airport located in Greenville County three miles east of the Emporia corporate limits on US Route 58. The airport is owned by Greenville County and the City of Emporia and is operated and maintained by the Emporia-Greenville Airport Commission. The airport features one lighted, hard-surface runway 5,044 feet long by 100 feet wide. The Virginia Air Transportation System Plan classifies the airport as General Aviation Regional (GR), meaning that the airport can serve a large market area and offers the full range of services and facilities necessary for general aviation activity including jet fuel, full-service fixed based operators, hangars, and a general aviation terminal building.

The airport averages approximately 1,000 general aviation operations (flights) annually. Though 2020 saw a slight decline to 897 operations, the Virginia Air Transportation System Plan forecasts that the airport will have around 2,000 annual aviation operations by 2037. To accommodate for growth, the airport recently opened a new hangar in 2020 that was jointly funded by the Federal Aviation Administration (FAA), the State of Virginia, Greenville County, and the City of Emporia. The construction of this hangar will allow the airport to maintain at least 10 based aircraft at the airport which will qualify the airport for annual entitlement money from the FAA. If additional services are needed, airports in Richmond (1 hour away), Norfolk (1.5 hours away), and Washington, D.C. (3 hours away) can accommodate a wide range of air transportation needs.

Overall, the airport serves an important role in helping to sustain and attract businesses to the area. Currently, traffic at the airport includes visiting executives of companies with a presence in the area, such as Dominion Energy. The county should continue to support the maintenance of the airport and market its presence as an asset for new and existing businesses in Greenville County.

Rail Transportation

Railroads are an important part of the history of Greenville County and the founding of Emporia. Today, access to a major railroad corridor running through the county remains an important economic asset. The CSX "A" Line Railroad, which dates back to the Petersburg Railroad originally constructed in 1833, runs approximately 16 miles north and south through the county parallel to US 301. The railway runs the length of the east coast and supports significant freight train traffic as well as daily Amtrak passenger trains. The closest passenger train stations to the county are in Petersburg and Rocky Mount, North Carolina. The county also has multiple active rail spurs serving the freight needs of local businesses in the Greenville County Industrial Park and Skippers Quarry. With the exception of a 6.5-mile single-track section from the Greenville Industrial Park south to the City of Emporia, most of the railroad through Greenville County is double-tracked. To ensure the safe and reliable movement of freight and passenger trains, these rights-of-way should be maintained and protected from intrusion by neighboring developments.



In the extreme southeastern portion of the county, a small section (0.25 miles) of a CSX railway that spurs off the main CSX "A" Line in Roanoke Rapids, North Carolina, to Norfolk, Virginia provides freight connection to the Port of Virginia. The county previously had a railway operated by Norfolk Southern running west to east through the county from Lawrenceville in Brunswick County directly to the ports in Norfolk. A 54-mile section of the railway west of the City of Franklin through Greenville County was discontinued in 2014 due to declining traffic and growing bridge rehabilitation costs. Greenville County should collaborate with neighboring localities, Norfolk Southern, and the Virginia Department of Rail and Public Transportation to maintain and protect the railroad right-of-way for the potential return of rail service or as a greenway.

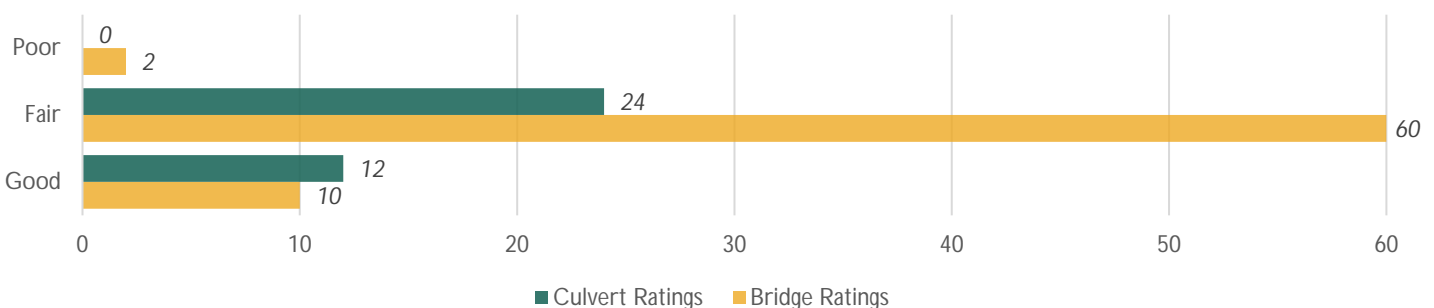
Bridges

There are 72 bridge structures and 36 culverts in Greenville County, including many "low-water crossings". This also includes 14 bridges built before 1940, with the oldest bridge in the county being the Skippers Road (US 301) bridge over Fountain Creek that was built in 1928. The age of the county's bridge and culvert network adds an additional challenge in maintaining and upgrading the county's road system. With some bridges that are old and past their intended use period as well as other low-water bridges that are covered by water several times per year, bridges will continue to need frequent inspections and replacement throughout the county.



Poor Bridge Ratings (2):
 -Moonlight Road (616) over Three Creek
 -Moore's Ferry Road (629) over I-95

Figure 8.3 Bridge and Culvert Ratings in Greenville County



Source: VDOT

Land Use and Planning Assumptions

The scale and character of future growth and change in the county directly impacts the functionality of the local transportation network. Changes in land use, demographics, employment, and demand for public facilities all help to inform potential improvements to the transportation system. The land use, growth, and demographic assumptions used to identify the transportation needs in the following section are outlined in previous chapters of the Comprehensive Plan. The following background land use and planning information helps to identify transportation needs in the county:

VTrans 2045

General

- Greenville County and VDOT have not identified any Urban Development Areas (UDA).
- Greenville County has two (2) Corridors of Statewide Significance (CoSS) (I-95 and US 58).
- Greenville County has ten (10) business-ready sites identified as Industrial and Economic Development Areas (IEDA) of at least Tier 3 or higher that may require transportation improvements if developed.

Economic Profile

- Potential industrial development (specifically the Mid-Atlantic Advanced Manufacturing Center-MAMaC) could require expanded traffic capacity and intersection improvements on secondary roads.
- Greenville County's proximity and accessibility to three large urban areas with large airports and ports offer a local economic advantage for future business development.

Population and Demographics

- Limited projected population growth through 2040 is unlikely to drive growth in local transportation demand.
- Greenville County has a sizable senior and low-income population that may depend on improved public transit and other modes of affordable and accessible transportation.

Commuter Characteristics

- Many Greenville County residents commute to and from the City of Emporia.
- Greenville County residents often travel to larger market areas for shopping, healthcare, and entertainment facilities.
- Expanding broadband access throughout the County may make telecommuting more viable for county residents

Land Use

- Greenville County will remain largely a rural community with limited residential and commercial development outside of defined growth areas.
- Greenville County has experienced limited residential or commercial growth in the past decade.
- Most new development will occur around the City of Emporia, in the Town of Jarratt, and in the County's rural hubs.
- Interstate interchanges and major arterial roads is where commercial development is most viable.

Public Input

- Road maintenance is the most pressing transportation need in the County.
- Trail connectivity, public transit, and sidewalks were all identified as important needs in the County.
- Signage and wayfinding improvements can help to capitalize on traffic passing through the County.
- The lack of mowing and vegetation clearing along rural roads is a concern.

Recent Plans and Studies

Recent plans, studies, and initiatives that inform local transportation planning decisions include:

VTrans

VTrans is Virginia’s statewide transportation plan that provides a general vision for transportation in the Commonwealth. VTrans 2045 is currently being developed with both Mid-term needs (0-10 years) and Long-term needs (0-20+ years) to help guide local transportation investment based on ongoing trends, challenges, and opportunities.

Interstate 95 Corridor Improvement Plan

This study will be completed in June 2021 by the Commonwealth Transportation Board, VDOT, and the Department of Rail and Public Transportation. The study focuses on identifying key problem areas along the statewide I-95 corridor and proposes potential solutions and areas for additional review and study. An Interim Corridor Improvement Plan has been available since January 2020, and the final plan will be released in June 2021.

US 58 Arterial Management Plan

Completed in September 2018 by VDOT, this plan emphasizes ensuring safety and preserving capacity along the 70 miles of the US 58 corridor from Greenville County to the City of Suffolk. The plan provides specific recommendations for each intersection and segment of US 58 in Greenville County to mitigate safety deficiencies and improve capacity along the roadway.

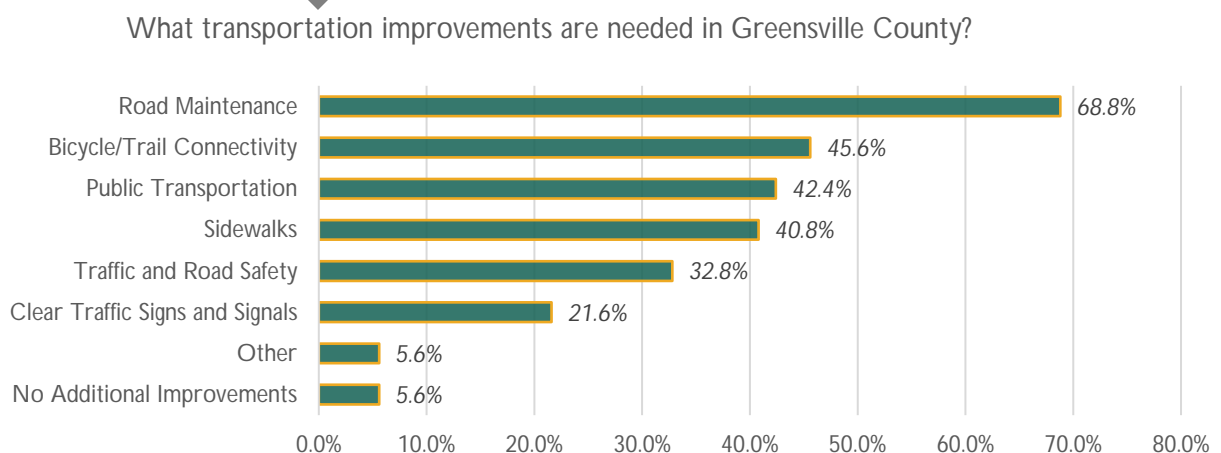
Beaches-to-Bluegrass Trail Master Plan

This plan was completed in January 2015 by VDOT and the Department of Conservation and Recreation. It recommends a trail route for transportation and recreation purposes for non-motorized users such as walkers, joggers, hikers, bicyclists, and equestrians. The long-term goal of the plan is to establish a multi-use trail from Virginia Beach through Greenville County to Cumberland Gap. The plan proposes an off-road route along the Virginia Beach pipeline right-of-way as well as an interim on-road route through Greenville County.

Crater Planning District Commission Rural Long Range Transportation Plan

This plan was completed in 2012 by the Crater Planning District Commission and VDOT and provides specific transportation recommendations for the transportation system within the rural areas of the region. It identifies specific transportation deficiencies in Greenville County. Some of these deficiencies have been addressed while others are still outstanding.

Figure 8.4 Public Survey Response to Transportation Improvements



Transportation System Needs Assessment

This section compares the existing transportation network, network deficiencies, and proposed improvements with future land use policies to anticipate future transportation system needs. Specific transportation deficiencies are based on current conditions, public input, and projected future conditions. This is followed by a list of recommended projects to address transportation needs. Understanding existing and future conditions of the transportation system helps to identify specific improvements that may be needed in the next twenty years.

Transportation System Needs

The various needs that are expected to arise are detailed below.

Safety Deficiencies

Roads in Greenville County include a variety of safety deficiencies. The presence of the interstate and two major arterial roads means that there is a concentration of crashes along specific corridors in the county. Beyond the interstate and highway system, traffic incidents are clustered at major intersections and along rural roads with safety deficiencies. For example, many rural roads are narrow and lack adequate signage that may pose a safety risk. VTrans identifies multiple road segments throughout the county with safety improvement needs that should help guide the local prioritization of future transportation projects. Road widening, signage, and wayfinding improvements along rural roads can also improve safety and the reliability of travel throughout the county.

Traffic Generators and Attractors

Key traffic generators and attractors in Greenville County are medium to large employers, recreation facilities, schools, and shopping centers. As the county considers developing the MAMaC site and constructing or renovating the high school, transportation infrastructure must also be a consideration. This also includes the ten (10) Industrial and Economic Development Areas (IEDA) sites identified by VTrans 2045 as business-ready locations that may need transportation improvements. Creating, improving, and maintaining transportation routes from IEDA sites to Corridors of Statewide Significance remains an important focus of future transportation improvements in VTrans 2045. If an IEDA site is developed for industrial or commercial use, then transportation improvements to the surrounding area will be a priority for the county. Accordingly, the county should focus future transportation infrastructure improvements in and around the key employment areas to increase the economic development potential and allow for safe and efficient movement of people and goods.

Freight Transport

Industry, manufacturing, logging, and agriculture are all central components of the local economy that require the movement of raw materials and produced goods. The recent decommissioning of the Norfolk Southern railroad in Greenville County places increased pressure on truck traffic along US 58 to connect Greenville County with the Port of Virginia. Additionally, expanding and maintaining railroad spur connections to the CSX railroad remains a challenge due to the high amount of train traffic along the corridor. To maintain the viability of local industries, the county must maintain adequate connections to rail and highway connections to continue the flow of goods in and out of the county.

Access Management

With a few main transportation corridors and intersections that support most of the major activity areas in the county, access management techniques ensure that traffic can move smoothly and there are fewer vehicle conflicts. In coordination with VDOT, access management policies help to preserve the functionality of the local roadway system. Strategies to consider when approving new developments can include:

- *Increased spacing between signals and interchanges*
- *Appropriate driveway location and spacing*
- *Exclusive turning lanes that remove stopped vehicles from through traffic*
- *Median treatments*
- *Use of service roads to connect local uses*
- *Limit right-of-way access to highways*

Bike and Pedestrian Facilities

The county has limited on-street pedestrian facilities (sidewalks) and no dedicated bike paths. While there are some sidewalks in the Town of Jarratt and a growing network of sidewalks around the City of Emporia, public input prioritized better sidewalks and trail connectivity. In addition to providing more options for residents to travel local destinations, these facilities help to promote health and wellbeing in the community. ADA accessibility further serves as a reason to improve and construct sufficient paths and sidewalks.

VDOT's requirement for subdivision streets to be included in the state secondary system means sidewalks must be included in all new subdivision streets. However, the county in partnership with VDOT, the Town of Jarratt, and the City of Emporia should work to develop an alternative transportation network. Additionally, there are very few crosswalks and pedestrian signals even where sidewalks are present. Across major roads (US 58 and US 301) and near public schools, investment in crosswalks and signals will significantly improve safety for pedestrians in high risks locations.



Public Transit

Greenville County has a new transit system with growing ridership, however most of the county is not served by the public transit system. In both the public survey and workshops, the community also expressed the desire for alternative transportation options, such as taxis and on-demand public transportation. Furthermore, a growing senior population in the county will create a demand for transportation services that provide on-demand personal, medical, and recreation trips. Promoting ridesharing and exploring public transportation options, such as carpools, vanpools, park and ride, for areas beyond the City of Emporia area will benefit many residents of the county. Additionally, the county and the City of Emporia lack any intercity bus or rail service to nearby urban areas. Partners in this effort to improve public transit can include the Crater PDC, the City of Emporia, neighboring counties, and the Virginia DRPT.

Maintenance

County residents have expressed the lack of maintenance and poor visibility along many rural roads in the county. This includes potholes and overgrown vegetation in the road right-of-way. Additionally, a review of the county's inventory of bridges and culverts shows that many of the structures are past their projected use period. Inspections of several VDOT bridges have also revealed that some are in poor condition, and many others are in fair condition. While the county has worked with VDOT to reconstruct some bridges, bridge replacement and road maintenance should remain a priority not only for vehicle safety but also to maintain reliable emergency vehicle access. Ongoing repairs and fixes of road surfaces should also be considered part of routine maintenance in the county.

Autonomous, Shared-Use, and Electric Vehicles

The technology of transportation is quickly changing and is a relevant component of future transportation improvements. Autonomous (self-driving), shared-use, and electric vehicles all represent new technologies that Greenville County should accommodate. For example, with a large amount of traffic passing through the county, future improvements to expand electric vehicle charging capabilities will likely be necessary. Also, as the county continues to rely on the movement of freight in and out of the area, accommodating autonomous vehicles may improve local business opportunities. Finally, shared-use vehicles may also provide opportunities to improve mobility for residents.

Programmed Projects

The county works with VDOT and other transportation planning agencies in the region to identify roadway deficiencies and necessary improvements. The county annually analyzes transportation priorities to meet the short- and long-term goals of the community. VDOT’s Six-Year Improvement Program (SYIP) outlines planned spending for transportation projects proposed for construction or study within a six-year horizon. Projects currently programmed in the SYIP for Greenville County are shown in the table below.

Table 8.5 Programmed SYIP VDOT Project FY 2022

UPC	Description	Estimate	Previous	FY22	FY23-27	Balance
		(Values in Thousands of Dollars)				
103584	US 301(N) sidewalk from Crescent Road to Greenville Elementary (<i>Pursuing TAP Funds</i>)	\$833	\$833	\$0	\$0	\$0
115507	US 301(S) sidewalk to Brookridge Apartments (<i>Pursuing SMART Scale</i>)	\$577	\$0	\$50	\$527	\$0
12993	Bridge replacement on Otterdam Rd (Rte. 614) (<i>Complete</i>)	\$3,283	\$3,283	\$0	\$0	\$0
104362	Reconstruction of 4.2 mile segment of Otterdam Rd (Rte. 614) north of I-95 (<i>Complete</i>)	\$8,709	\$8,709	\$0	\$0	\$0
84027	Reconstruction of 0.5 mile segment of Independence Church Rd (Rte. 633) near Brink Rd	\$1,017	\$1,932	\$32	\$161	-\$1,108



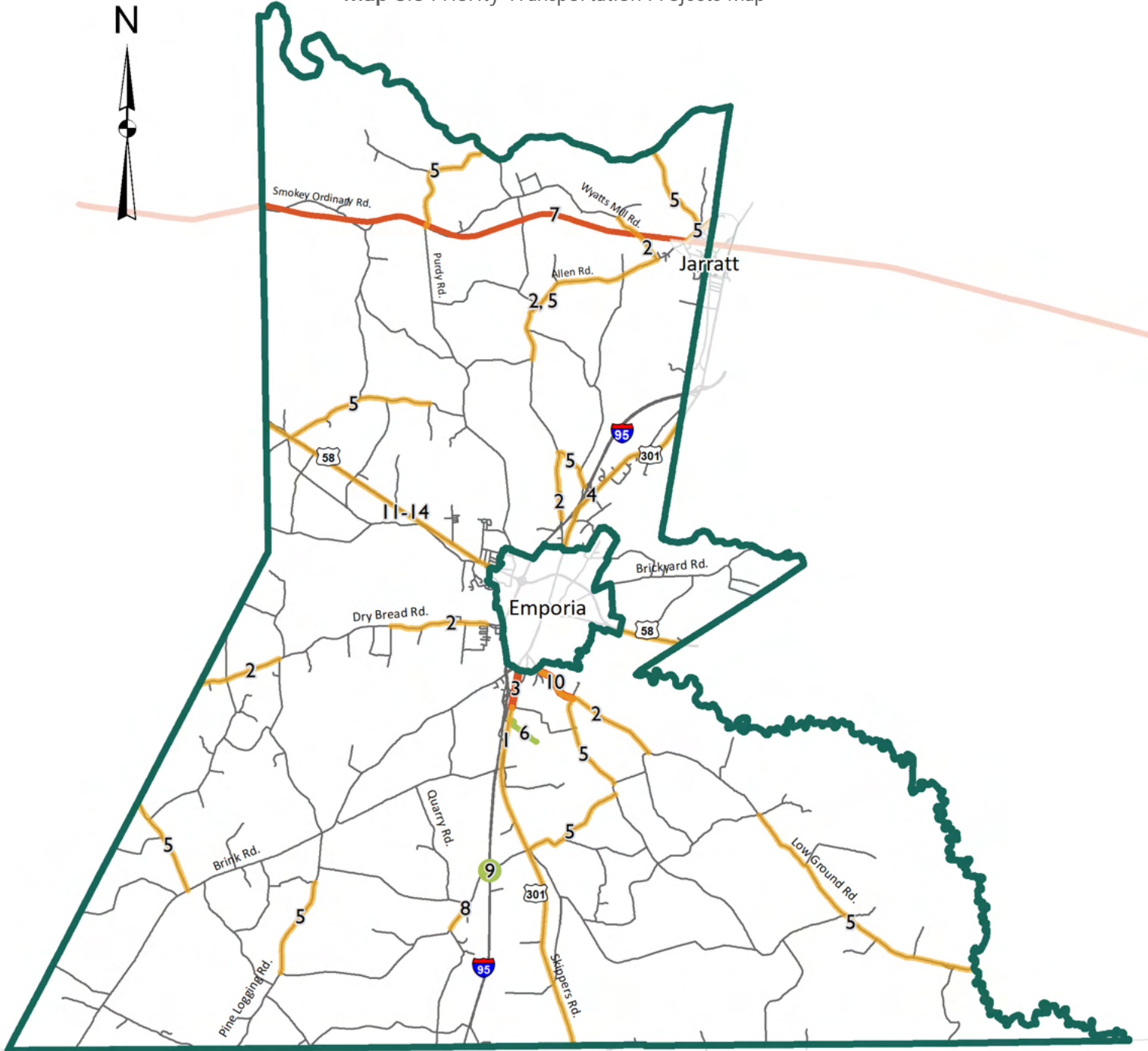
Priority Transportation Projects

In addition to the strategies in this chapter, the projects in Table 8.6 consider Greenville County's existing and future transportation needs. The transportation system recommendations for Greenville County are divided into three phases (Short-term, Mid-term, Long-term).

Table 8.6 Priority Transportation Projects

Map ID	Project	Time	Improvement Type	Location (Route)	Road System	Source
1	Install intersection safety improvements at problem locations	Short-term	Safety	US 301	Arterial	Crater PDC Rural Transportation Plan
2	Install improved pavement markers and warning signs	Short-term	Safety	608, 610, 611, 730	Collector	Crater PDC Rural Transportation Plan
3	Construction of sidewalk along the westside of US 301	Mid-term	Pedestrian	US 301	Arterial	Crater PDC Rural Transportation Plan
4	Assess the intersection for signalization	Mid-term	Safety	US 301, 614	Arterial	Crater PDC Rural Transportation Plan
5	Road improvement for paving, widening, alignment, and/or drainage	Mid-term	Safety	600, 606, 610, 614, 617, 619, 622, 629, 630, 633, 730	Collector	Crater PDC Rural Transportation Plan; Secondary Six-Year Plan
6	Construct extension of Liberty Road to provide an additional exit.	Mid-term	Accessibility	657	Collector	Secondary Six-Year Plan
7	Construct a multi-use "Beaches to Bluegrass" trail along the Norfolk and Western/Virginia Beach-Lake Gaston Water pipeline right-of-way	Long-term	Pedestrian & Bike Facilities	n/a	n/a	Beaches to Bluegrass Trail Master Plan
8	Repair Moore's Road bridge over Fountain Creek	Long-term	Safety	629	Collector	Greenville County
9	Improve Exit 4 interchange on Interstate 95 at Skippers to support increased commercial and industrial traffic.	Long-term	Accessibility	I-95	Interstate	Greenville County
10	Construct a sidewalk along Low Ground Rd. from Emporia City limits	Long-term	Pedestrian & Bike Facilities	730	Collector	Greenville County
11	Reconfigure intersections of US 58 with Ruritan Rd., Westover Dr., Sadler Dr., and West Dr.	Long-term	Safety	US 58	Arterial	US 58 Arterial Preservation Plan
12	Lengthen existing left and right turn lanes along US 58	Long-term	Safety	US 58	Arterial	US 58 Arterial Preservation Plan
13	Remove identified crossovers on US 58	Long-term	Safety	US 58	Arterial	US 58 Arterial Preservation Plan
14	Reconfigure identified crossovers and intersections to permit left-ins only	Long-term	Safety	US 58	Arterial	US 58 Arterial Preservation Plan

Map 8.5 Priority Transportation Projects Map



Legend

Greenville County

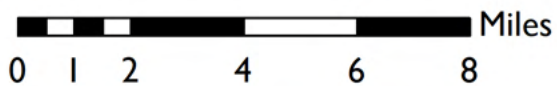
County Roads

Priority Transportation Projects

Safety

Pedestrian/ Bike

Accessibility



*Numbers denote Map ID in Table 8.7

Strategies to Improve & Expand Transportation and Mobility

1. Coordinate with the Virginia Department of Transportation (VDOT) to confirm that transportation improvement projects are consistent with the county's needs and statewide transportation plans, such as Virginia's Long-Range Multimodal Transportation Plan (VTrans).
2. Pursue funding and grants to implement the priority transportation projects identified in this Plan.
3. Designate Urban Development Areas to increase competitiveness for state funded transportation programs in high growth areas.
4. Update and maintain a database of current and proposed projects, tracking progress and aligning vision projects with funding opportunities.
5. Partner with VDOT and the Crater PDC to prioritize improvements to bridges with poor ratings or are susceptible to flooding.
6. Work with VDOT to address safety deficiencies (narrow roads, poor visibility, lack of adequate signage) and improve accessibility along higher-volume local corridors.
7. Update subdivision standards to reflect road standards necessary for VDOT inclusion into the State System of Highways.
8. Consider adopting a dangerous roadside vegetation ordinance (Virginia Code § 15.2-2009.1) to require property owners to maintain trees, tree limbs, shrubs, and high grass that could endanger drivers.
9. Pursue VDOT landscaping grants to enhance the Exit 4 interchange and welcome driver's entering the first exit in Virginia.
10. Designate entrance corridors in the Greensville County zoning ordinance and create streetscape standards for those corridors.
11. Partner with the Town of Jarratt and the City of Emporia to develop a community wayfinding and signage plan.
12. Encourage the development of major regional traffic and freight generators near interstate interchanges as these locations are best suited to carry regional traffic while minimizing impacts on local streets.
13. Consider and encourage best design standards and access management strategies for future development or redevelopment of land and transportation facilities near main intersections and interchanges.
14. Develop land use strategies that consider development near rail infrastructure and protect corridors from encroachment.
15. Support the Emporia Greensville Airport Commission in efforts to maintain the airport facility, particularly pavement, airfield lighting, and facility maintenance.
16. Pursue opportunities for the growth and expansion of aviation-related businesses both on the airfield and within the community.
17. Support walking and biking options between and within communities. Crosswalks, pedestrian signals, and ADA compliant ramps should be located at or near major activity centers and sidewalks should be located along any new or reconstructed streets in commercial areas.
18. Promote Safe Routes to Schools by continuing to encourage the construction of pedestrian and bicycle facilities within a two-mile radius of elementary and middle schools.
19. Continue to work with VDOT to develop, fund, and construct multi-use paths and designate shared use bike routes.
20. Promote and encourage commuting alternatives, such as transit, carpooling, rideshares, telecommuting, and other options to typical commuting patterns.

21. Coordinate with the DRPT and the City of Emporia to expand public transit services in the county. This should include increased fixed-route transit connecting more neighborhoods in Greenville County and additional on-demand transit services in the more rural areas.

22. Publish a system-wide bus route map online and in print for public access.

23. Support the development and siting of e-vehicle charging stations and facilities to support the transition to lower emission vehicles and bring visitors into the county.

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9

LAND USE

Concentrate new business and residential development in and around urban centers and major transportation intersections while allowing rural uses that promote the expansion of the agricultural economy and maintains the rural character and open space of Greenville County.

In this chapter:

- Introduction
- Background
- Future Land Use
- Strategies



Introduction

The *Land Use* chapter establishes the framework for Greenville County's physical growth and development. It provides direction and guidance on a range of development, conservation, and land use compatibility issues. It also describes the competing priorities that must be considered when making development decisions. This chapter includes the future land use map, which depicts the recommended development patterns for the county over the next twenty years.

The *Land Use* chapter lays out policies to improve economic strength and security, enhance the built and natural environment, and build livable communities. Land use policies seek to accommodate growth and change by enhancing development in existing areas while preserving natural areas. Often, the strategies directly tie to the policies of other Plan elements. Transportation, economic development, cultural and environmental resources, and community facilities policies must be compatible with the overarching land use policies to ensure that the county develops as envisioned. The *Land Use* chapter establishes policies for the physical development of the county at appropriate densities and locations. The chapter includes guidelines that describe the character and quality of future development and the preferred future development pattern.

Greenville County

Greenville 2040 Comprehensive Plan: Land Use



CURRENT LAND USE

297

TOTAL SIZE OF COUNTY
IN SQUARE MILES

190,000

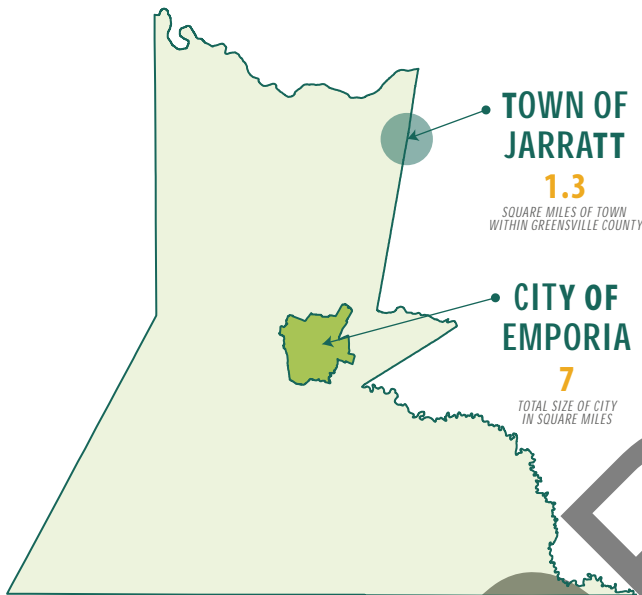
TOTAL SIZE OF COUNTY
IN APPROXIMATE ACRES

150

TOTAL FARMS IN COUNTY, PER
2017 CENSUS OF AGRICULTURE

4,753

TOTAL ACREAGE OF
UTILITY-SCALE SOLAR



ZONING DISTRICTS

- Agricultural **1**
- Residential **5**
- Commercial **2**
- Industrial **1**
- Floating & Overlay **8**

FARM TYPES WITHIN GREENVILLE COUNTY

	Crop	72
	Beef & Cattle	22
	Grain	17
	Other	17
	Vegetable	11
	Sheep & Goat	7
	Floriculture	3
	Fruit & Nut	1

FUTURE LAND USE

FUTURE LAND USE CLASSIFICATIONS



RURAL

- Rural Residential & Conservation
- Rural Hubs
- Flood Hazard



PUBLIC

- Public / Semi Public
- Parks and Recreation



RESIDENTIAL

- Low-Density Residential
- Medium-Density Residential



ACTIVE DEVELOPMENT

- Industrial
- Commercial
- Mining Extraction

Background

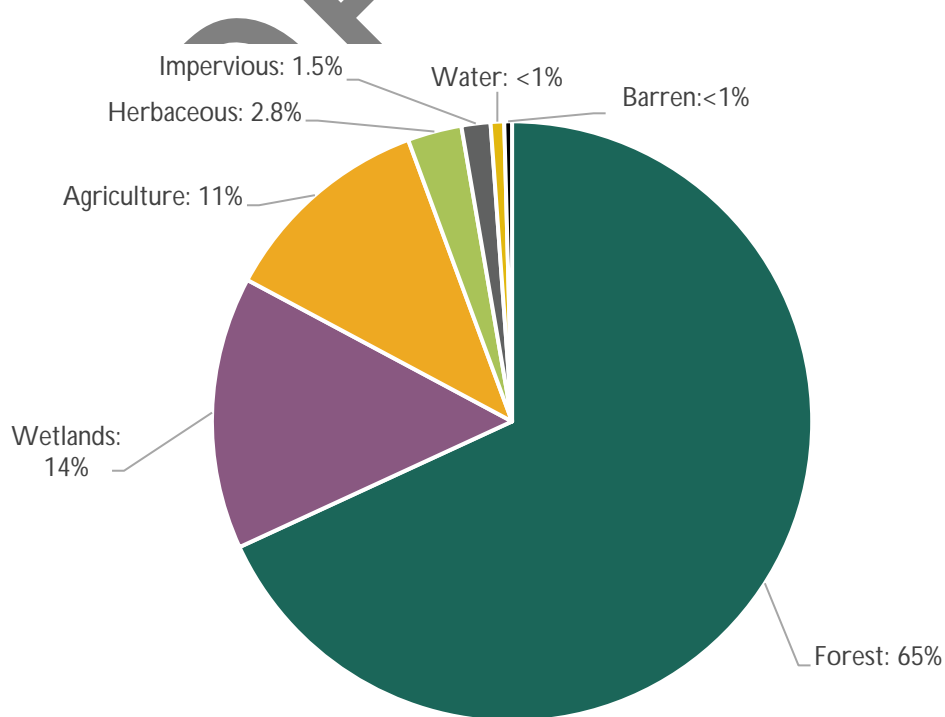
This section provides background information, analysis, and discussion of challenges and opportunities related to land use in Greenville County. The existing character and land use pattern of Greenville County is one of a rural community with specific areas of growth and development in strategic locations. The existing conditions and land use considerations help to inform the future land use strategies and policies of this chapter.

Existing Land Use

Greenville County's current land use pattern is the result of its history and location. Historically, the county was agrarian in nature, with small rural communities developing at the crossroads. The total land area within the boundaries of Greenville County is approximately 297 square miles (190,000 acres). Independent from Greenville County, the City of Emporia covers about seven square miles (4,400 acres) in the middle of the county. The City of Emporia, chartered in 1967, continues to function as the business, commercial, service, and cultural center of Greenville County. Many of the county's facilities are located within Emporia and are shared by the two localities. The Town of Jarratt also serves as an activity center in the northeastern portion of the county. The Town of Jarratt encompasses approximately 1.3 square miles (800 acres) within Greenville County



Figure 9.1 Distribution of Land Cover Categories in Greenville County





Agriculture, Forestry, and Open Space

The general land use pattern of the county has not changed greatly over the past 40 years. Greensville County is still largely rural, with the predominant land uses being forests and agriculture¹ (see Figure 9.1). Accordingly, agriculture and forestry remain major contributors to Greensville County's economy. According to the 2017 Census of Agriculture, Greensville County had 150 farms totaling 54,544 acres. These farms include crop and pastureland, orchards, animal feeding operations, and small tracts of timber. Most of the undeveloped land in the county is privately owned.

Residential, Commercial, and Industrial Development

While most of the land in the county is open space, the major type of developed uses, which include residential, commercial, and industrial, have increased gradually over the last several decades. Most of the commercial development has taken place along the US 58 and US 301 corridors as well as at exit interchanges of I-95. Residential development is most concentrated in the Town of Jarratt and directly around the City of Emporia, while large family farms and estates in other parts of the county have occasionally been subdivided to accommodate additional single family development along rural roads.



Utility-Scale Solar

Utility-scale solar facilities have emerged as a new form of industrial development in certain rural portions of the county. With large amounts of affordable and undeveloped land in close proximity to electric transmission lines, there has been interest in the construction of utility-scale solar in the county in an effort to meet Virginia's directive to transition to renewable energy. Greensville County currently has six utility-scale solar facilities in various stages of development and operation. Upon completion, these six facilities will occupy close to 5,000 acres.



¹ 2016 Virginia Land Cover Dataset

Zoning

Greenville County has enacted a zoning ordinance to implement the land use plan. Specifically, new development in Greenville County is regulated by the zoning ordinance and the official zoning map. Zoning controls the types of uses permitted on the land, the density of development, and requirements for minimum lot sizes, lot widths, and building setbacks, among other criteria.

The zoning ordinance includes districts designated for conservation, agricultural, residential, commercial, and industrial uses. Greenville County has nine primary zoning districts, three special floating districts, and five special overlay districts. The entire jurisdiction of Greenville County is classified into primary zoning districts. The floating zone districts apply to special types of development projects, and overlay zoning districts apply to areas in the county with unique physical characteristics. The A-1 Agricultural District is the predominant zoning district, covering over 80% of the county.

It is important to note that the zoning map and future land use map are not always the same. Future land use designations and maps in this Plan have no immediate effect on an individual parcel of land but are used to guide future zoning changes. Future zoning changes should conform with established future land use designations and maps.

Primary Zoning Districts		Floating Zoning Districts		Overlay Zoning Districts	
A-1	Agricultural District	PUD	Planned Unit Development	ASD	Airport Safety Overlay District
R1-A	Single Family Dwelling District	MHP	Manufactured Home Park District	FPD	Floodplain Protective district
R1-B	Single Family Dwelling District	MHS	Manufactured Home Subdivision District	NROD	Natural Resource Overlay District
R1-C	Single Family District			HUB/C	Highway Commercial Development
R2-A	Town House Dwelling District			HUB/R	Management Hub Rural Community Development
R2-B	Multiple Family District				
B-1	Retail Business District				
B-2	General Commercial District				
M-1	Industrial District				

Planning Considerations

In the future, Greenville County will experience change that will create both opportunities and challenges. The county's development and land use policies should provide adequate public services while encouraging growth that contributes to the current and future quality of life of residents. Below is a summary of relevant planning considerations that will influence future land use decisions in Greenville County. These considerations are explored in more detail in the preceding chapters of this Plan.

55% of survey respondents indicated that they most valued the rural character and open space of Greenville County



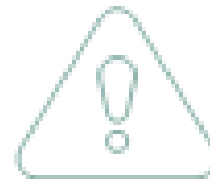
Rural Character Preservation

Rural character and open space were identified as Greenville County's most valued qualities during the public engagement process. As a result, preserving the rural character from development should remain a priority of future land use decisions in the county. The potential development of residential, commercial, industrial, and solar developments in rural areas must be carefully planned to avoid loss of open space and important natural resources.



Cost of Public Services

Public service and infrastructure demand could increase if development in the county extends beyond existing service areas. Balanced growth strategies that encourage efficient service and facility delivery should guide new development to appropriate areas where utilities are readily available. Additionally, planning for future land use changes should also help to inform where system expansions and upgrades will be necessary elsewhere in the county over time. Future land use should consider realistic and sustainable service goals and expectations.



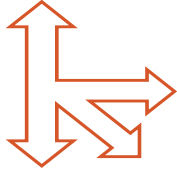
Development Constraints

Some of the physical characteristics of Greenville County limit where development can occur. Due to soil conditions, not all parcels are suitable for well and septic systems. Where the soil conditions are unsuitable for the approval of a conventional septic system, an alternative on-site wastewater disposal system may be necessary or multiple lots may have to be combined to acquire the necessary land for a conventional septic system. Additionally, the presence of floodplains throughout the county limits the ability to construct permanent buildings in certain areas.



Environment

Greenville's natural resources could be threatened or lost as areas develop across the county. Water quality, air quality, natural habitats, stormwater management, and economic opportunity are all relevant reasons to protect the natural environment from unnecessary development. The natural environment can be supported by encouraging compatible land use strategies that prevent landscape fragmentation, prioritizing the preservation of areas rich in natural resources, and supporting agricultural and forestry businesses. Mitigation measures to protect source waters and avoiding activities that lead to erosion and sedimentation are also necessary to support water quality.



Transportation Access and Congestion

Increased growth and development can add vehicular traffic on major routes and small rural roads. Since most county residents travel by private automobile, future land use decisions should consider transportation access, level of service, and road capacity. Many locations in the county do not currently have adequate roads to support increased density. New commercial and medium-density residential developments should also support alternative transportation options. Future land use strategies should also consider ongoing and proposed transportation system improvements.



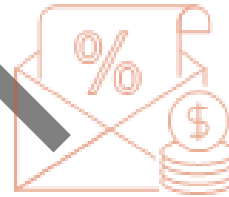
Character of the Built Environment

Greenville should encourage quality design in new developments and community improvements to support the viability and attractiveness of the county. In addition to considering the location of various land uses, development standards, including architectural design, building setbacks, and site maintenance, are all relevant considerations of future land use. Integrating the built environment with the natural landscape through well-planned site design can preserve existing vegetation, contribute to site appearance, and reinforce the community's rural character.



Economic Opportunity

Increased economic development, especially within development areas with existing infrastructure, is a priority of this Plan. Economic and commercial development can have many benefits in the community but should be balanced with potential negative impacts on transportation and community character.



Fiscal Responsibility

Fiscally sustainable growth should support a balance of residential and business uses that will bring economic opportunity to the county. This growth should be directed toward areas that can be most responsibly provided with infrastructure. Additional growth can benefit the community but should be managed so that Greenville County it still able to provide high-quality facilities and services to all of its residents.

Future Land Use

The future land use component of the Comprehensive Plan is intended to guide growth, development, and change within the county over the next 20 years by identifying areas for conservation, new development, and existing development. The future land use categories and future land use map will aid county decision-makers when considering land use decisions and capital improvements.

Future Land Use Classifications

Future land use classifications describe the type and intensity of uses planned for different areas within the county. This includes residential, commercial, industrial, and agricultural uses as well as overlay designations, such as floodplains. Land use classifications are general indications of what the community would like to see in the future. They are not the same as zoning classifications. Zoning designations are more detailed and site specific and carry the power of law. The land use categories are set forth in this Plan as a guide for future zoning map amendments and review of rezoning requests.

The land use classifications shown on Map 9.1 Future Land Use Map are based on the planning considerations mentioned in this chapter and the issues discussed in other chapters of the Plan. The future land use map builds upon previous Comprehensive Plans and shows the general location of different land use classifications. The land use classifications, described below, guide future planning efforts as well as land use policies and decisions.

The future land use classifications are divided into four categories: *Rural*, *Residential*, *Active Development*, and *Public*, as shown below. Overlay designations are also included in these categories. *Solar* future land use policies are classified separately from the other land use classifications.

Each land use classification includes the following considerations for development:

- Land use determinants describing **common characteristics** for consideration in each classification.
- **Appropriate land uses** within each designation.
- **Design guidelines** with basic standards for development.



Rural Areas

Rural areas contain a mix of agricultural, forestal, open space, and low-density residential use. Rural areas are inappropriate for high density residential development, high intensity commercial, and/or industrial uses. Small-scale local services that are compatible with low density residential and agricultural land uses may be appropriate and should be considered on a case by case basis.

Rural Residential/Conservation

This classification includes land areas in the rural portions of the county where agricultural and forestal uses are the dominant land use. These areas provide ecological benefits such as open space and watershed protection while also playing a role as an economic and environmental resource of major importance. This is the most common land use category in the county. Large lot single family development may exist within some of these areas. Future development of these properties at densities higher than allowed by the current agricultural zoning is not encouraged.

These rural regions are generally stable and require a high degree of protection to preserve agricultural, forestal, recreational, and open space areas. Water and sewer are generally provided by on-site wells and septic systems. The rural areas are not intended to be developed to full subdivision potential.

Land Use Determinants:

Existing Land Use Pattern – Locations where agricultural, recreational, and forestal uses are predominant and are encouraged to be protected.

Rural Residential Areas – Locations where limited, very low-density residential uses are allowed.

Resource Protection – Locations where valuable and irreplaceable resources such as open space, water supply impoundments, rivers, streams, lakes, productive agricultural land, prime agricultural soils, woodlands, slopes, historical and archeological sites, and unique natural areas exist.

Rural Services – Rural activity centers located at key crossroads outside the urban service area.

Primary Land Use Types:

Agricultural Production and Services – The production of crops, plants, vines, trees, livestock, poultry, eggs, and similar products. Services that support agricultural production, such as soil and crop preparation, veterinary services and landscape and horticultural care. This also includes agritourism, farm stands, bed and breakfasts, and short-term rentals that make use of the agricultural setting.

Forest and Wood Products – Tree farms, forest nurseries, and reforestation services.

Parks and Outdoor Recreation Facilities – Large regional parks and other recreation facilities that are designed to preserve environmentally sensitive lands and protect them from more intense land uses.

Rural Residential – Single family residential generally averaging a gross density of one unit per 1.5 acres. Accessory dwelling units (ADUs) and home businesses are also appropriate.

Design Principles:

1. Development should incorporate cluster design and conservation design principles to preserve resources and minimize conflict with farming and forestry.
2. Residences should be buffered from adjacent agricultural uses.
3. Increases in floor area and/or lot coverage should be discouraged where the existing lot size, drainfield size and separation distances, and environmental protection are below current standards.
4. Conservation easements, agricultural/forestal overlay districts, and protective agricultural zoning should be considered in this area.

Rural Hubs *(Overlay)*

This classification includes areas where limited development activity has historically occurred and would be appropriate in the future. These small concentrations of rural businesses located at key crossroads have historically served as the primary service areas for rural residents and farmers. They typically have a small collection of service, institutional, or commercial uses with a small residential population. They typically have a historic place name and are focal points of the rural landscape.

Rural hubs should be semi-rural in nature and include uses that serve the local community and tourists. Development intensity in these areas should maintain a modest scale, with up to five to ten commercial buildings that are loosely clustered at the intersection of major roadways. They should have a clear edge and transition into the surrounding rural landscape. The five (5) rural hubs in the county are Barley, Brink, Claesville, Purdy, and Skippers.

Land Use Determinants:

Existing Land Use Pattern – Locations where very low density residential, institutional, and service uses have developed.

Access – Locations served by an existing improved rural road or rural arterial highways and often situated at the crossroads of two rural roads.

Rural Services – Locations outside the urban service area. Sewer treatment will need to be provided on-site, and wells will be necessary for water. Lot sizes should be adequate to provide both for any proposed uses.

Primary Land Use Types:

Agricultural Production and Services – Livestock, orchards and crop productions, landscape and horticultural services, veterinary services, farm labor and farm management services. Generally including all activities that support land-based uses.

Rural Residential – Low-density single family residential generally averaging one unit per acre. Accessory dwelling units (ADUs) and home businesses are also appropriate.

Small Scale Commercial – Limited commercial operations that serve the local, rural community. Included would be personal services and retail convenience stores. Residential uses may also be permitted above established businesses.

Community Activity Centers – Uses that serve area residents, including schools, medical facilities, childcare services, religious assembly facilities, recreational and park facilities, community meeting areas and clubs.

Design Principles:

1. Cluster development of residential uses should be encouraged.
2. New structures should be of a scale and type that are consistent with existing structures and built in a style and with enduring materials that are compatible with the local architecture.
3. New buildings should be oriented toward the street.
4. Parking and service areas should be screened from off-site views with low walls and hedges.
5. Sidewalks, street furniture, shade trees, and other conveniences are desirable.
6. Community open space should be encouraged.

Flood Hazards *(Overlay)*

This classification includes areas located within 100-year floodplains based on FEMA flood risk maps. These areas are subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A, AE, or X on the official Flood Insurance Rate Map (FIRM). Due to the low-lying nature, high groundwater table, and periodic flooding, future development in these areas should be prohibited or extremely limited. Many of these areas are also wetlands with rich natural resources that should be preserved. Most of the areas in the Flood Hazard overlay are classified as Rural Residential/Conservation.

Land Use Determinants:

Floodplains – Any areas within the 100-year floodplain based on FEMA flood risk maps.

Primary Land Use Types:

Natural Resource-Based Uses – Forestry, hunting, and outdoor recreation may be appropriate if site characteristics permit.

Resource Preservation – Conservation easements and other measures that preserve and protect environmental integrity

Design Principles:

1. Development should be prohibited or extremely limited.
2. Wetlands should be preserved.

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Residential Areas

The primary goal of the Land Use Plan is to guide future development in a manner that preserves the overall rural character of the county while providing adequate housing, services, facilities, and amenities to the residents. The plan, therefore, seeks to concentrate residential development in compact growth areas to minimize the cost of public services.

Low-Density Residential

This classification generally represents areas of single family homes in large lot suburban patterns of development. This includes areas where larger lot residential development is encouraged, as a transition between the county's rural and medium density residential areas. These areas are intended primarily for detached, single family development. Manufactured homes, apartment complexes and other types of high-density residential development are discouraged. These areas may be served by public water and sewer but may also be served by individual wells or private water systems and septic systems. Residential development should be limited to one to five (1-5) units per acre.

Land Use Determinants:

Existing Land Use Pattern – Locations where limited density residential subdivisions have been platted or developed. Infill development opportunities on undeveloped lots are available in existing neighborhoods and should be a focus of new residential development.

Expansion Areas – Locations where the expansion of the existing development pattern is logical.

Infill Development – Locations where infill areas complement the surrounding development pattern.

Access – Locations served by a local street system.

Urban Services – Locations served by urban services or can support septic systems.

Primary Land Use Types:

Single Family Residential – Attached and detached housing at a reasonable density that is not significantly higher than the existing residential development in the area. Accessory dwelling units (ADUs) and home businesses with minimal external impacts are also appropriate.

Community Activity Centers – Uses that serve area residents, including schools, medical facilities, childcare services, religious assembly facilities, recreational and park facilities, community meeting areas, and clubs.

Institutional Uses – Religious assembly facilities, schools, fire and rescue stations, post office, and clubs.

Design Principles:

1. Buildings within a neighborhood should be sufficiently varied while providing compatible scale, height, and architectural style.
2. Cluster development of residential uses should be encouraged.
3. Community facilities should be closely linked to residential areas by public roads as well as greenways, bike trails, and pedestrian paths.

Medium-Density Residential

This classification allows a greater density and variation of housing type, but only comprises a small portion of the county's total land area. Medium density residential areas include small lot single family developments as well as apartment and townhouse developments. Future uses generally include apartment buildings and complexes, townhouses, condominiums, or other forms of multi-family development. This range of housing density provides for different housing opportunities. These areas also include manufactured and mobile home parks where a high concentrations of housing units already exists. All medium density residential areas are served by public or private water and public sewer. Residential development should be allowed up to 8 units per acre. Residential areas around Emporia and along the major thoroughfares (i.e. US 58, US 301) are most conducive for medium-density residential development.

Land Use Determinants:

Utility Availability – Locations where water and sewer services exist or are scheduled to serve the area.

Environmental Capacity – Locations where natural land features, including topography, provide optimum opportunity for residential development.

Access – Locations which have or can provide direct access to a major street.

Public Facilities Capacity – Locations where public facilities are adequate to handle the increased population density. This includes schools, parks and recreation, and fire and rescue facilities.

Primary Land Use Types:

Single Family Residential – Single family developments on conventional lots. Includes attached, detached and zero-lot line housing options. Also, single family developments with reduced lot sizes may be allowed to accommodate the clustering of housing with common open space.

Multi-Family Residential – Developments of 6-12 units per acre. Clustering is encouraged.

Planned Residential Development – Mixed housing types at a gross density range of 4-8 units per acre. Includes conventional housing, cluster housing, zero lot-line housing, townhouses, and garden apartments.

Community Activity Centers – Uses that serve area residents, including schools, medical facilities, childcare services, religious assembly facilities, recreational and park facilities, community meeting areas and clubs. These activity centers should be linked to residential areas by greenways, bike, and pedestrian trails.

Design Principles:

1. Buildings within a neighborhood should be sufficiently varied while providing common scale, height, and architectural style.
2. The size, scale, and placement of a building should be relative to the size of the lot; larger buildings are setback further from lot lines and located on larger parcels compared to smaller buildings.
3. Attached and multifamily developments should incorporate usable open space, landscaping, and other amenities.
4. Interconnected street networks and defined open spaces should be encouraged.
5. Mixed use development should be walkable with necessary services, amenities, and housing.
6. Opportunities for different modes of transportation, including pedestrian crosswalks, walking, biking, and public transit should be provided.
7. Street furniture, shade trees, street lighting, and other amenities are desirable for public convenience.
8. Community open space should be encouraged.

Active Development Areas

The Land Use Plan focuses on three active development categories: commercial, industrial, and mining and extraction establishments. Each of these uses plays a large role in the county's economy and current trends. Future development plans indicate that these uses will continue to exist and, in some cases, expand.

Commercial

This category designates areas where commercial developments have occurred and where future commercial developments are encouraged. Public water and sewer are generally available or planned for these areas. The commercial land use category consists of areas where the wholesale and retail sale of goods and services is the primary activity. These areas are intended to accommodate employment generating commercial uses.

Land Use Determinants:

Existing Land Use Pattern – Locations where commercial uses exist.

Access – Locations served by an arterial street system and have properties with direct frontage.

Population Center – Locations within close proximity to the projected population concentrations.

Urban Services – Locations served by urban services.

Primary Land Use Types:

Offices – Planned office parks and independent facilities in park-like surroundings are encouraged.

Commercial Retail – Planned and clustered retail uses. This includes restaurants, retail stores, services, and hotels and lodging.

Design Principles:

1. A high degree of architectural design and environmentally sensitive site design is encouraged.
2. Developments should reflect coordinated site design, architecture, signage, and lighting.
3. Buildings, including franchise architecture, should incorporate high-quality, enduring materials.
4. Parking lots should be screened from off-site views with low walls or hedges.
5. Perimeter buffers should be incorporated adjacent to residential and institutional land uses.
6. Access management and/or inter-parcel connections should be provided for development that is located along Minor Arterial, Principal Arterial, or Freeway/Highway roadways.
7. Opportunities for different modes of transportation, including pedestrian crosswalks, walking, biking, and public transit should be provided.
8. Street furniture, shade trees, street lighting, and other amenities are desirable for public convenience.

Industrial

This category shows areas where major industrial activities exist or are planned. A variety of industrial uses are encouraged to locate in these areas, including warehousing, manufacturing, and research and development uses. These types of operations provide jobs and other economic benefits to the county. These industrial uses require suitable highway access because they may generate a significant number of vehicle trips, particularly in the morning and evening peak hours. Central water and sewer should be available to support the needs of industrial users, along with appropriate communication technology and utility services.

Industrial areas should be established at targeted locations near major highways to accommodate a variety of industrial uses. New development should be well designed to limit impacts on surrounding development, including but not limited to sustainable stormwater management practices, local roads, and open spaces.

Land Use Determinants:

Existing Land Use Pattern – Locations where industry has historically developed.

Economic Opportunity Areas – Locations identified by Greenville County as an economic opportunity area.

Resource Protection – Locations that can be developed in such a way as not to threaten valuable natural resources.

Transportation Access – Locations within proximity to rail, airport and major roads. Served by an adequate public street system that does not direct traffic through existing residential neighborhoods.

Primary Land Use Types:

Agricultural Services – Industries which involve the manufacturing, storage, marketing, and wholesaling of agricultural products.

Industrial – Conventional freestanding industrial uses, warehouses, wholesalers, storage yards, and data centers.

Industrial Parks – Large tracts of land that are subdivided, developed, and designed according to a unified plan. These parks are employment centers and may include mixed land uses, including supporting retail and services.

Manufacturing – Industries that involve the on-site production of goods by manufacturing.

Design Principles:

1. Developments should reflect coordinated site design, architecture, signage, and lighting.
2. Noise, dust, or odors should be mitigated to avoid impacts on nearby residential and commercial uses.
3. Perimeter buffers should be incorporated adjacent to residential and institutional land uses.
4. Naturalized and manicured open spaces should unify sites and promote a quality appearance.
5. Parking lots should be screened from off-site views with low walls or hedges.
6. Fleet vehicle parking should be located to the rear of the property.
7. Access management and/or inter-parcel connections should be provided for development that is located along Minor Arterial, Principal Arterial, or Freeway/Highway roadways.
8. Outdoor storage and activities should be screened with solid fences, walls, or dense landscaping.
9. Pollution prevention and water conservation are a high priority.
10. Opportunities for different modes of transportation, including pedestrian crosswalks, walking, biking, and public transit should be provided.
11. Street furniture, shade trees, street lighting, and other amenities are desirable for public convenience.

Mining and Extraction Establishment

Mining operations have been located in the county for many years. Over time, these operations have reduced their capacity, and in some cases, ceased operation. For example, the Iluka Resources Brink Mine for titanium is now completing the decommissioning phase and is no longer categorized as a mining establishment in the future land use map. The Land Use Plan allows for small growth of the existing mines in Greenville County. New and expanded mines have additional oversight because they typically require general permits from the Virginia Department of Environmental Quality.

Land Use Determinants:

Natural Resource Availability – Locations with unique and rare resources that offer economic opportunity to the county.

Transportation Access – Locations with proximity to rail and major roads. Served by an adequate public street system to support truck traffic.

Existing Land Use Pattern – Away from existing residential and commercial developments.

Primary Land Use Types:

Mining and Extraction Establishments – These facilities locate according to the availability of natural resources. This includes active mining operations, which includes surface and open-pit mining. Uses may include processing and sorting equipment that may be associated with a mining operation. Forestry as a form of resource extraction is classified in the Rural Residential/Conservation classification and is not included in the mining and extraction establishment classification.

Design Principles:

1. Noise, dust, or odors should be mitigated to avoid impacts on nearby residential and commercial uses.
2. Perimeter buffers should screen the use from off-site views.
3. Pollution prevention and water conservation are a high priority.

Public Uses

This category includes land areas that serve a unique role in supporting the local quality of life in the county. This includes government administrative buildings, schools, utility infrastructure, fire and rescue facilities, and correctional facilities. This also includes areas for public use such as parks and recreational facilities.

Public/Semi-Public

This classification includes lands for institutional uses, public building or uses, government facilities. These uses provide necessary services to the community and should be protected accordingly. It includes properties owned by Greenville County, State of Virginia, and the Federal Government. Public schools accounts for the largest percentage of acreage in this classification.

Land Use Determinants:

Neighborhood Proximity – Locations with access and proximity to county residents to fully enjoy amenities.

Access - Locations which have or can provide direct access to a major street.

Level of Service – Locations that will provide the highest level of service for residents in a sustainable, equitable manner.

Primary Land Use Types:

County, State or Federally Owned Facilities – Government facilities that serve the interests of local residents, provide employment opportunities, or are necessary for the safety and security of the surrounding region.

Semi-public Uses – Private institutional uses, such as private schools, higher education institutions, hospitals, assisted living, and other institutional uses.

Design Principles:

1. Developments should reflect coordinated site design, architecture, signage, and lighting.
2. Institutional buildings may be larger and more elaborate than surrounding structures.
3. Perimeter buffers may be appropriate adjacent to residential and institutional land uses.
4. Parking lots should be screened from off-site views with low walls or hedges.
5. Opportunities for different modes of transportation, including pedestrian crosswalks, walking, biking, and public transit should be provided.
6. Street furniture, shade trees, street lighting, and other conveniences are desirable for public convenience.

Parks and Recreation

Parks and recreational facilities are designed to preserve the rural landscape and provide recreational opportunities to residents and visitors of Greenville County. This may include both public and privately owned and managed facilities. Large regional recreational facilities, such as greenways and bike trails and private recreational developments, are included in this classification. This is not intended to exclude locally serving parks and recreation facilities from being integrated into other land use classifications in this Plan.

Land Use Determinants:

Natural Resource Availability – Locations with unique and rare resources that offer recreational opportunity to the county.

Neighborhood Proximity – Locations with access and proximity to county residents to fully enjoy amenities.

Primary Land Use Types:

Greenways and Bike Trails – Large-scale bike trails and greenways that may function as both a transportation and recreational facility.

Active Recreation – Country clubs, golf courses, swimming pools, skating rinks, hunting clubs and lodges, and other similar uses that provide recreational opportunity and serve as a local attraction.

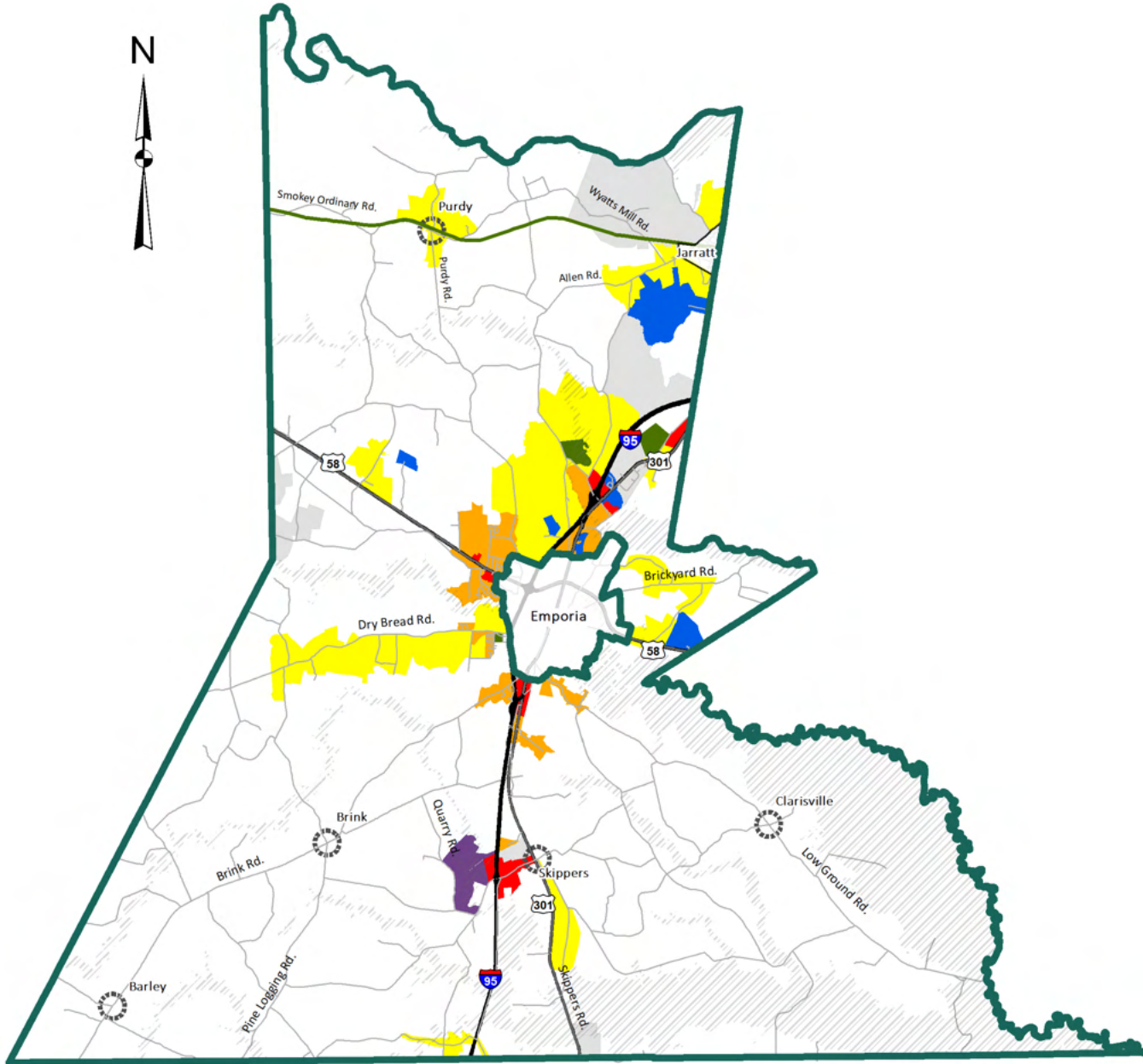
Local/Regional/State Parks – Parks, including local, regional, or state parks, that may also serve a conservation role or recreational asset.

Design Principles:

1. Opportunities for different modes of transportation, including pedestrian crosswalks, walking, biking, and public transit should be provided.
2. Street furniture, shade trees, street lighting, and other amenities are desirable for public convenience.

Future Land Use Map

Map 9.1 Greenville County Future Land Use Map

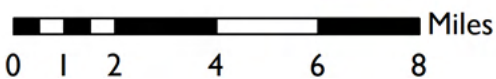


Legend

- Greenville County
- County Roads

Future Land Use

- Rural Residential
- Low Density Residential
- Medium Density Residential
- Parks and Recreation
- Public/Semi-Public
- Commercial
- Industrial
- Mining and Extraction Establishment
- Rural Hubs (Overlay)
- Flood Hazard (Overlay)



Map prepared by the Berkley Group on July 28, 2021.

Additional Future Land Use Considerations

Utility-Scale Solar Facilities

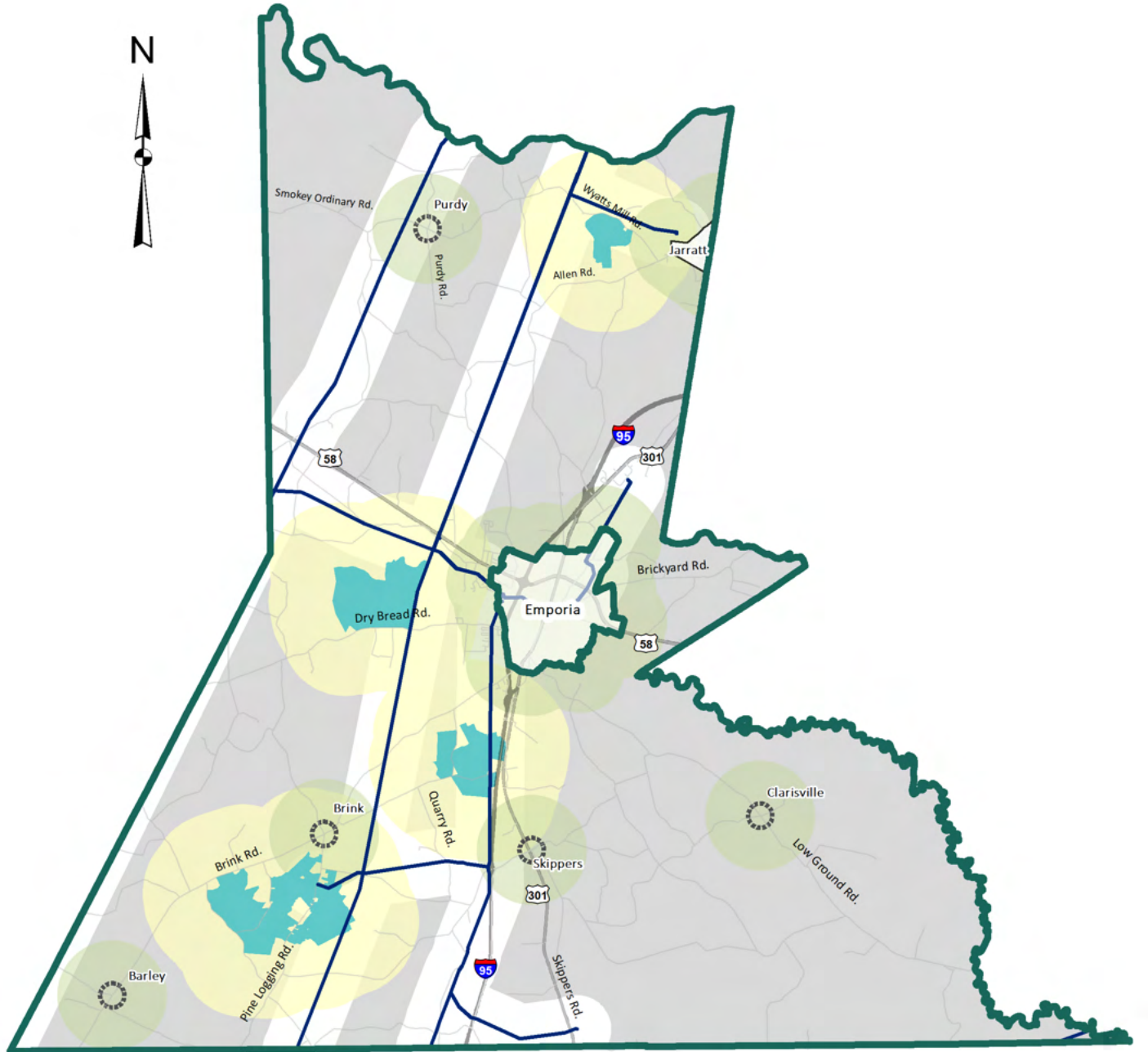
A relatively new land use to Greenville County is the emergence of utility-scale solar facilities. As used in this Comprehensive Plan, a utility-scale solar facility is a facility that generates electricity from sunlight that will be used to provide electricity to a utility provider or a large private user with a generating capacity in excess of one megawatt (1 MW). Greenville's abundant agricultural and forest land combined with its electrical infrastructure and transportation system appear to be attractive to the solar industry. These facilities are an industrial scale land use that occupy significant acreage. Many utility-scale solar facilities are located on agricultural or forested land that may have had other future land use potential or land use classifications.

The county will consider solar facilities in districts zoned agricultural, industrial, or commercial (based on project size) with preference for brownfields. In addition to the utility-scale solar requirements within the zoning ordinance (See Map 9.2), the following criteria must be evaluated and addressed to mitigate the potential negative impacts of utility-scale solar facilities on county land use patterns as part of the evaluation of a Special Use Permit (SUP) application:



- 1) Located outside growth areas.
- 2) Proximity to residences; historic, cultural, recreational, or environmentally sensitive areas; and scenic viewsheds.
- 3) Utility-scale solar projects greater than 20 MW may only be considered acceptable in agricultural zoned districts.
- 4) Utility-scale solar projects greater than 5 MW and less than 20 MW may only be considered acceptable in industrial and commercial zoned districts.
- 5) A decommissioning plan shall be provided by the owner of utility-scale projects to ensure to proper dismantling of the project.

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



Map 9.2 Utility-Scale Solar Siting Considerations



Legend

-  Greenville County
-  County Roads

Solar Development Guidelines

-  Transmission Lines
-  Greater Than 1 Mile From Transmission Line
-  Less Than 1 Mile From Transmission Lines
-  Existing / Permitted Solar Facility
-  1 Mile Buffer (Village, Town, City)
-  1.5 Mile Buffer (Existing Solar Facilities)

Strategies to Support Future Land Use Development and Protection

1. Review and amend the zoning and subdivision ordinances to ensure that development aligns to the policies and design principles in this Plan.
2. Review the zoning ordinance, and amend as necessary, to allow for a wider mix of use types, including accessory dwellings and mixed-use buildings.
3. Consider adopting an entrance corridor overlay district with design standards that create a strong impression of community character from Greenville County complex into Emporia.
4. Encourage infill development in developed areas so that existing infrastructure can be more efficiently used, and rural lands will be protected from development.
5. Discourage inappropriate development and land uses that may have detrimental impacts to prime farmland, rich natural habitats, and water quality.
6. Identify opportunities to connect neighborhoods through sidewalks, shared use paths, and trail improvements and require such connections in new development or redevelopment proposals.
7. Enhance the county's online GIS tools to incorporate the Future Land Use Map and additional zoning information at the parcel level.
8. Increase communication and coordination between county and City of Emporia planning staff on long-range plans to achieve regional land use goals.
9. Encourage flexibility in site design, such as cluster housing, to encourage the preservation of unique natural resources and open space.
10. Use high quality architectural features and character in addition to creative landscape design to develop sites that are sensitive to the environment and respect the unique land features of the site.
11. Encourage planned residential, commercial and industrial centers that utilize coordinated access points, parking and signage and common design themes.
12. Work with various state agencies/facilities, especially correctional centers, to ensure cooperation and the compatibility of new development on adjacent properties.
13. Evaluate land use applications for rezonings and special use permits against the criteria contained within this Comprehensive Plan.



10 | IMPLEMENTATION

In this chapter:

- *Using the Comprehensive Plan*
- *Tools for Implementation*
- *Implementation Matrix*

Using the Comprehensive Plan

The *Greenville 2040* Comprehensive Plan is Greenville County's guiding document for the growth and development. It is intended to be a dynamic document that can change and evolve to reflect the needs of the community. Accordingly, to ensure it is properly implemented, the Planning Commission and Board of Supervisors should refer to the Comprehensive Plan and consider its vision prior to making recommendations and decisions.

Code of Virginia § 15.2-2232 states that the Comprehensive Plan "shall control the general or approximate location, character, and extent of each feature shown in the plan." Effective implementation of the Plan depends on a consistent measure of each land use application and budgetary decision with the long-range vision of the Comprehensive Plan.

Greenville County should strive to assess the Plan's effectiveness by reviewing and monitoring specific issues that impact the goals and action strategies outlined within this document. When appropriate and necessary, the Plan should be amended periodically. The Board of Supervisors should carefully consider whether specific amendments are congruent with the Plan's overarching vision. Any modifications should be considered with long-term policy implications.

Tools for Implementation

There are a variety of tools that can help to implement the long-range vision set forth in the Comprehensive Plan. The following tools are the most important to ensuring the successful implementation of this Plan.



Annual Budget

The Board of Supervisors and staff should keep the recommendations of the Comprehensive Plan in mind when preparing the annual budget. The budget works in conjunction with the Comprehensive Plan to move the county towards a thriving and more resilient future.



Capital Improvement Plan

A Capital Improvement Plan (CIP) coordinates the location, timing, and financing of capital improvements over a multi-year period. Capital improvements refer to major, non-recurring physical expenditures such as land, buildings, public infrastructure, and equipment. The CIP includes a description of proposed capital improvement projects ranked by priority, a year-by-year schedule of expected project funding, and an estimate of project costs and financing sources. The CIP is a working document and should be reviewed and updated annually to reflect changing community needs, priorities, and funding opportunities. The community benefits and the long-range vision is achieved when the priorities of the CIP and updates to ordinances align with the Comprehensive Plan.



Land Use Regulations

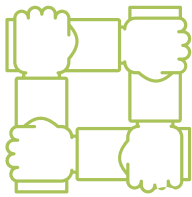
The zoning ordinance; subdivision regulations; landscaping, parking, and signage standards; and other land use and development standards and procedures are at the forefront in implementing the Comprehensive Plan. As legal documents, zoning and subdivision regulations outline what property owners may do with their land and how buildings and sites must be designed. Aligning land use regulations to the policies in this Comprehensive Plan is a critical step toward implementation. Many of the objectives in the Plan include strategies that suggest revisions to the zoning ordinance and other land use regulations. These regulatory mechanisms work to enact the goals and vision of the Plan over time.

Land Use Actions



The process for development approvals, including rezoning and special use permits, are central to the implementation of the Comprehensive Plan. The Comprehensive Plan should serve as a strong guide for decisions on all land use applications. Land use applications should be measured against the Comprehensive Plan, including the specific action strategies and the future land use map, to ensure consistency. In rare cases where unforeseen uses or changes in market conditions may warrant deviation from the adopted Plan, Planning Commission and the Board of Supervisors should review and consider amendments to the Comprehensive Plan to ensure that the document remains current, relevant, and responsive to the community's needs.

Intergovernmental Cooperation



Greenville County's geographic location emphasizes the importance of local and regional cooperation. Ecological, environmental, transportation, equity, education, tourism, community facilities, job and workforce development and many other issues covered in this Comprehensive Plan are all issues that are best solved through cooperation. Specifically, Greenville County shares many facilities and services with the City of Emporia, and many of the existing conditions and needs in the county reflect similar trends in the City. As a result, successful implementation of this Plan will require collaboration with the City of Emporia as well as the Town of Jarratt. Moreover, successful implementation of the strategies in this Plan will require continued regional cooperation with the Crater Planning District Commission and numerous state agencies responsible for overseeing various facilities, services, and programs implemented across the state.

Annual Review and Necessary Update



Continuous review and progress monitoring holds everyone accountable to the community's long-range vision. The Code of Virginia § 15.2-2230 requires that Comprehensive Plans be reviewed, and updated if needed, every five years. In addition to the five-year review and update, annual reviews and revisions of ordinances and plans is considered a best practice. Reviewing the Plan regularly helps measure success in achieving Plan goals. It also provides an opportunity to propose and integrate strategic initiatives and policy changes that can be incorporated into the annual budget process, if necessary. This annual review helps set budgetary priorities that are consistent with the community's vision and ensures that monitoring is systematic and planned.

Implementation Matrix

The implementation matrix provides the specific direction to make this Plan a reality. The matrix builds on the strategies included in each plan element by identifying tools, responsible parties, and anticipated timeframes for completion. The matrix also correlates strategies with specific policies, goals, and values set forth in the Plan. The implementation matrix should be reviewed annually as part of the county's budgeting process to set budgeting priorities as well as measure progress towards meeting the county's vision for the Greenville of 2040. The key to the Plan's success will be a proactive approach by the Planning Commission in cooperation with the Board of Supervisors, county departments and boards, residents, businesses, and community institutions and organizations. The Matrix includes the following information:

MATRIX ELEMENTS

Implementation Strategy

- Specific action item

Type of Implementation Categories

- Regulation Updates and Enforcement
- Community Outreach and Education
 - Partnerships
 - Capital Projects
- Programs and Services
 - Plans and Studies
- Land Use Application Review

Responsible Agency

The organization(s) responsible for administering, managing, and/or implementing the specific action item.

These organizations include:

- Greenville County Staff/Board of Supervisors
- Nonprofit Organizations
- Regional and Institutional Partners
- Citizen Boards and Committees
- State and Federal Agencies
- Local Business Partners

Priority

Each strategy is assigned a priority level ranging from low-medium-high

- *High* (1-3 years) — High priority actions should be completed within 3 years of the Plan's adoption.
- *Medium* (3-5 years) — Medium priority actions may be initiated within 3 years but will be completed by 5 years from the Plan's adoption.
- *Low* (5+ years) — Low priority actions may be initiated between 3 and 5 years from the Plan's adoption but will be completed beyond the first five years of the Plan's adoption.
- *Ongoing* — ongoing actions should continue for the life of the Plan

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NATURAL ENVIRONMENT

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 3 – Natural Environment				
1	Increase public access to Greenville County's water bodies where environmental conditions and road access allow.	Partnerships; Capital Projects	Greenville County Government	Medium
2	Develop a source water protection plan (SWPP) to ensure protection of the region's drinking water supply.	Plans & Studies	Greenville County Government; Regional & Institutional Partners	High
3	Work with neighboring localities and the Department of Conservation and Recreation to pursue the Scenic River Designation of the Nottoway River.	Partnerships	Greenville County Government; Regional & Institutional Partners	Medium
4	Update the county floodplain management ordinance to the most recent guidance from the Department of Conservation and Recreation from 2017.	Regulation Updates & Enforcement	Greenville County Government	High
5	Continue to work closely with neighboring jurisdictions in efforts to improve the effectiveness of the region's watershed management program.	Partnerships; Programs & Services	Greenville County Government; Regional & Institutional Partners	Medium
6	Encourage the use of green infrastructure principles and stormwater best management practices to reduce the impact of runoff and better incorporate developed areas into the natural environment.	Land Use Application Review	Greenville County Government	Medium
7	Encourage erosion and sediment reduction practices in all river basins to assist in maintaining water quality. Existing riparian vegetation along streams and riverbanks should be retained by limiting nearby development to provide fisheries and wildlife habitat, minimize erosion, and slow water velocities.	Land Use Application Review	Greenville County Government	On-going

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 3 – Natural Environment				
8	Work with state and regional partners to develop a plan for assessing septic systems and remediating failing systems throughout the county.	Partnerships; Programs & Services	Greenville County Government; Regional & Institutional Partners	High
9	Ensure that appropriate mitigation for environmental impacts is clearly defined and considered during the development proposal evaluation process.	Regulation Updates & Enforcement; Land Use Application Review	Greenville County Government	High
10	Designate areas of the county that have been used traditionally for agricultural purposes or are designated prime agriculture lands and are at least one acre in size as agricultural lands of local importance.	Plans & Studies	Greenville County Government	Medium
11	Explore working with landowners to develop Agricultural and Forestal Districts (AFD) to protect and enhance agricultural and forested lands as an economic and environmental resource of major importance.	Community Outreach & Education; Regulation Updates & Enforcement	Greenville County Government	Medium
12	Provide for the preservation of agricultural and forestry uses by supporting conservation and open space easements.	Partnerships; Community Outreach & Education	Greenville County Government	Medium
13	Improve and develop landscaping requirements and standards that encourage the use of native plants and trees in landscape designs for public and private projects as well as along major highway corridors.	Regulation Updates & Enforcement	Greenville County Government	Medium
14	Facilitate and support landowner access to carbon markets as programs become available from the state and the Crater Planning District Commission.	Partnerships	Greenville County Government; Regional & Institutional Partners	Medium
15	Work with and educate landowners about tax incentives and monetization opportunities that support and enhance the agriculture and forest conservation.	Community Outreach and Education	Greenville County Government	Medium
16	Incorporate wildlife planning principles and green infrastructure policies into the zoning ordinance that reserves portions of developed land as open space to encourage landscape connectivity.	Regulation Updates & Enforcement	Greenville County Government	Medium
17	Promote environmental justice by identifying and providing incentives for economic activities that combine the goals and principles of economy, ecology, and social equity.	Programs & Services	Greenville County Government	On-going
18	Implement sustainability practices into the daily operations of county government and encourage local sustainability efforts of local businesses and residents. This includes promoting public transportation, e-vehicle charging station placement, enacting a government vehicle idling policy, planting trees, and promoting recycling and composting.	Programs & Services	Greenville County Government	Medium



HOUSING

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 4 – Housing				
1	Promote grant programs and partner with local organizations and businesses to educate homeowners about building systems, maintenance, and energy-saving features suitable for existing buildings.	Community Outreach and Education	Greenville County Government; Regional & Institutional Partners	On-going
2	Evaluate opportunities to develop and expand tax relief programs to prevent displacement and encourage major home rehabilitation projects.	Programs & Services	Greenville County Government	Medium
3	Identify affordable housing at risk from expiring affordability restrictions; expand preservation and support construction efforts.	Programs & Services	Greenville County Government; City of Emporia	High
4	Review the zoning ordinance to consider allowing accessory dwelling units by-right to provide affordable rental options and ease cost burden for homeowners.	Regulation Updates & Enforcement	Greenville County Government	High
5	Review the zoning and subdivision ordinances to expand housing opportunities for senior, elderly, multigenerational households, and special needs populations, both with and without care.	Regulation Updates & Enforcement	Greenville County Government	Low
6	Create a local blight watchlist and consider enacting Spot Blight Abatement Ordinances and land banking, as needed, to help take action against blighted properties and improve value of surrounding properties.	Regulation Updates & Enforcement	Greenville County Government	Medium
7	Examine opportunities to streamline residential permitting processes and timelines.	Regulation Updates & Enforcement	Greenville County Government	High

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 4 – Housing				
8	Support neighborhood investments (lighting, sidewalks, crosswalks, roads) that allow Greenville County residents to improve neighborhood safety and walkability and promote aging in place. CBDG funds may be accessed to fund some of these projects.	Capital Projects	Greenville County Government; Regional & Institutional Partners	High
9	Encourage home ownership by helping residents to access available grants and resources, such as Virginia Housing Homebuyer Program and the USDA Guaranteed Rural Housing Program.	Community Outreach and Education	Greenville County Government	Medium
10	Promote the use of “green” building technologies, including weatherization and low impact development, to provide energy conservation benefits and increase community resilience.	Community Outreach and Education	Greenville County Government	Medium
11	Plan and zone for a sufficient supply of developable land near the county’s existing developed areas where public utilities are available with a range of housing types and densities.	Land Use Application Review	Greenville County Government	Medium
12	Consider publishing home improvement educational guidelines and fact sheets to maintain and improve property values avoid deterioration.	Community Outreach and Education	Greenville County Government	High
13	Evaluate the local implementation of the Rent and Mortgage Relief Program created by the CARES act during the COVID-19 pandemic to better identify and understand ways to avoid eviction and foreclosure in the future.	Programs & Services	Greenville County Government	High
14	Support the development of affordable and moderate cost housing, including multifamily and senior housing, particularly as new major employers locate to Greenville County.	Land Use Application Review	Greenville County Government	Low
15	Encourage the development of housing for older residents in appropriate locations to allow residents to remain within the community in which they have lived and been active.	Land Use Application Review	Greenville County Government	Medium
16	Take maximum advantage of federal, state, and private funding for assisting income eligible county renters in achieving home ownership and aiding county homeowners in repairing housing structures.	Programs & Services	Greenville County Government	High
17	Update ordinances to address new technologies, market trends, and resident needs – such as short-term rentals, alternative housing, tiny homes, and clean energy.	Regulation Updates & Enforcement	Greenville County Government	Medium
18	Expand partnerships with area institutions to address regional housing need.	Partnerships	Greenville County Government; Regional & Institutional Partners	High



#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 5 – Quality of Life				
1	Provide adequate levels of public facilities to all people of the county as efficiently and economically as possible.	Capital Projects	Greenville County Government	High
2	Continue internal, local, and regional partnerships for the efficient and sustainable provision of shared services and facilities.	Partnerships	Greenville County Government; City of Emporia; Regional and Institutional Partners	Medium
3	Work with the regional board, The Improvement Association, Inc., to enhance community quality of life, reviewing coordination between all of the regional boards to identify opportunities for service improvements and partnerships.	Partnerships	Greenville County Government; Citizen Boards and Committees	Medium
4	Develop a comprehensive maintenance schedule for county and school facilities to prevent potential deferred maintenance issues.	Capital Projects	Greenville County Government & School Board	Medium
5	Expand accessibility and availability of government information through methods, such as town hall meetings, newsletters, and social media.	Community Outreach and Education	Greenville County Government	Medium
6	Increase online services to residents, such as online permitting and payments.	Programs & Services	Greenville County Government	Medium / In Progress
7	Create opportunities for student engagement in local government, such as job shadowing and student involvement on local boards to teach the value of civic engagement	Community Outreach and Education	Greenville County Government & School Board	Low

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 5 – Quality of Life				
8	Develop and implement a plan to reconsolidate elementary school students into a single school facility.	Capital Projects	Greenville County Board of Supervisors & School Board	High
9	Finalize and implement the findings of the Greenville County High School Feasibility Study.	Capital Projects	Greenville County Board of Supervisors & School Board	High
10	Incorporate community recreation and enhanced sports facilities as part of future school facility plans.	Capital Projects	Greenville County Board of Supervisors & School Board	High
11	Continue and expand support and resources for programs that will improve student outcomes, such as Career and Technical Education (CTE), community college payment assistance, and day care assistance.	Programs & Services	Greenville County Board of Supervisors & School Board	High
12	Evaluate school capacity, technology, and programs on a five-year basis and develop specific action strategies to address identified service gaps.	Plans & Studies	Greenville County Board of Supervisors & School Board	Medium
13	Work with Economic Development and Chamber of Commerce to enhance business/industry partnerships with schools.	Partnerships	Greenville County Government; School Board; Local Business Partners	Medium
14	Conduct a recreation interest survey, and/or needs assessment, to gauge interest in different types of recreational and sports activities and guide future park investment.	Plans & Studies	Greenville County Government	High
15	Work with agencies, such as Central Virginia Health Planning Agency and Virginia Department of Conservation and Recreation, to seek grants, donations, and easements to increase recreation opportunities, trails, and river access.	Partnerships	Greenville County Government; Regional & Institutional Partners	High
16	Develop a linear park along the Virginia Beach Pipeline and former railroad right-of-way.	Capital Projects	Greenville County Government; State & Federal Agencies	Low
17	Integrate new amenities and accessibility into park and facility design to provide parks and playgrounds that are safe and inclusive for users of all ages and abilities.	Capital Projects	Greenville County Government	Medium
18	Conduct a retail and recreation market study to identify need and incentivizes for small commercial businesses and recreation providers that would support the quality of life in the community.	Plans & Studies	Greenville County Government	Low
19	Conduct a public safety assessment to examine fire, rescue, and emergency service needs and provide a long-term plan to maintain level of service.	Plans & Studies	Greenville County Government; Volunteer Fire & Rescue Organizations	Medium
20	Collaborate with local stakeholders to conduct health events and promote health awareness and education to improve health outcomes for county residents.	Partnerships	Greenville County Government, Health Department, YMCA, Hospital	Low



#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 6 – Infrastructure				
1	Support public infrastructure investments that promote economic and community development in an efficient, fiscally responsible manner.	Capital Projects	Greenville County Government	On-going
2	Continue to coordinate public water/sewer expansions within the designated Urban Service Area with funding in this area as first priority.	Capital Projects	Greenville County Government	High
3	Invest in public water/sewer services to Rural Service Areas as second priority.	Capital Projects	Greenville County Government	Low
4	Support GCWSA's capital improvement program, which is updated on an annual basis, to ensure quality and provide expanded service.	Capital Projects	Greenville County Government; Regional & Institutional Partners	On-going
5	Support GCWSA efforts to identify and remedy areas where stream and groundwater systems are negatively impacted by inadequately treated household wastewater.	Capital Projects	Greenville County Government; Regional & Institutional Partners	Medium
6	Work with partners, such as EMPOWER Broadband, to plan for and achieve reliable, effective, and affordable internet access in all homes.	Capital Projects	Greenville County Government; Regional & Institutional Partners	High
7	Support siting of telecommunications structures and conduct code updates, as needed, to improve cellular service and coverage, with a preference for collocation and attached structures.	Land Use Application Review; Regulation Updates & Enforcement	Greenville County Government	High
8	Explore innovative solutions to increase internet connectivity, such as equipping school buses with WiFi, computer labs/hotspots in rural churches and community centers, and advertising hotspot locations throughout the county.	Programs & Services	Greenville County Government	Medium
9	Conduct a community broadband interest survey.	Plans & Studies	Greenville County Government	Medium

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 6 – Infrastructure				
10	Continue to study feasibility of providing natural gas service to business and residential customers.	Plans & Studies	Greenville County Government	Medium
11	Support the extension of natural gas to the MAMaC site to increase the marketability of the site for industrial development.	Capital Projects	Greenville County Government	High
12	Implement recommendations from the landfill capacity study.	Capital Projects	Greenville County Government	High
13	Continue recycling services and pursue opportunities to expand recycling and composting, where feasible.	Programs & Services	Greenville County Government	Medium
14	Develop a recycling education and awareness program through the county website, mailings, and social media to increase local knowledge.	Community Outreach and Education	Greenville County Government	Medium
15	Explore siting agreement options for utility-scale solar projects located in opportunity zones compatible with the future land use plan that can assist with the deployment of broadband and other county services.	Programs & Services	Greenville County Government	Medium
16	Encourage new development to occur within areas that are already served by necessary public utility and infrastructure systems or where systems can be realistically expanded.	Land Use Application Review	Greenville County Government	On-going
17	Invest in and provide good stewardship of existing infrastructure to maintain the current level of service and provide timely and cost-effective replacement.	Capital Projects	Greenville County Government	On-going



ECONOMY

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 7 – Economy				
1	Explore feasibility of food system planning to assist the agricultural community in taking advantage of new markets.	Plans & Studies	Greenville County Government	Medium
2	Coordinate across government departments to ensure that incentives and marketing information is made available to potential businesses and developers.	Community Outreach & Education	Greenville County Government	High
3	Continue supporting workforce development and quality of life improvements and partnerships as a foundation for economic success.	Programs & Services	Greenville County Government	On-going
4	Coordinate and expand strategic marketing of the MAMaC facility.	Community Outreach & Education	Greenville County Government	High
5	Continue to explore opportunities for the creation of a second Greenville County Industrial Park and implement, if feasible.	Plans & Studies	Greenville County Government	High
6	Partner with City of Emporia and Main Street Program to develop the downtown business/commercial district and support revitalization efforts.	Partnerships	Greenville County Government; Regional & Institutional Partners	Medium
7	Continue to support commercial expansion efforts in the commercial hubs along I-95 in order to fully utilize this economic/transportation asset.	Land Use Application Review; Regulation Updates & Enforcement	Greenville County Government	On-going
8	Consider developing a shared (co-working) office space, business incubator, or business coaching/mentoring programs for local entrepreneurs.	Programs & Services	Greenville County Government	Medium

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 7 – Economy				
9	Formulate a “buy local” educational/marketing initiative to support local retail, restaurant, and farm market businesses.	Community Outreach & Education	Greenville County Government; Crater PDC; Local Business Partners	Low
10	Continue to work with EMPOWER to support expansion of broadband services that would increase educational and telework opportunities for residents.	Partnerships	Greenville County Government; Regional & Institutional Partners	On-going
11	Evaluate whether local educational opportunities include trainings targeted at telework job opportunities and identify ways to connect residents to telework jobs.	Plans & Studies	Greenville County Government	High
12	Consider a local study to evaluate the employment changes that have occurred with local residents since the COVID pandemic and attempt to address specific needs identified, such as extended childcare, need for broadband, or new workforce education needs.	Plans & Studies	Greenville County Government	Low
13	Review zoning regulations to ensure regulations support economic development goals.	Regulation Updates & Enforcement	Greenville County Government	Medium
14	Develop internship / job shadowing program with school students and local employers to create a deeper tie between employers at county residents	Programs & Services; Partnerships	Greenville County Government & School Board; Local Business Partners	Low
15	Recognize the education and employment profile of the current county workforce as a guide for focusing on target industries.	Plans & Studies	Greenville County Government	On-going



TRANSPORTATION

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 8 – Transportation				
1	Coordinate with the Virginia Department of Transportation (VDOT) to confirm that transportation improvement projects are consistent with the county's needs and statewide transportation plans, such as Virginia's Long-Range Multimodal Transportation Plan (VTrans).	Partnerships; Capital Projects	Greenville County Government; VDOT	On-going
2	Pursue funding and grants to implement the priority transportation projects identified in this Plan.	Partnerships; Capital Projects	Greenville County Government	High
3	Designate Urban Development Areas to increase competitiveness for state funded transportation programs in high growth areas.	Plans & Studies	Greenville County Government	Medium
4	Update and maintain a database of current and proposed projects, tracking progress and aligning vision projects with funding opportunities.	Plans & Studies	Greenville County Government	High
5	Partner with VDOT and the Crater PDC to prioritize improvements to bridges with poor ratings or are susceptible to flooding.	Partnerships; Capital Projects	Greenville County Government; VDOT; Crater PDC	High
6	Work with VDOT to address safety deficiencies (narrow roads, poor visibility, lack of adequate signage) and improve accessibility along higher-volume local corridors.	Partnerships; Capital Projects	Greenville County Government; VDOT	High
7	Update subdivision standards to reflect road standards necessary for VDOT inclusion into the State System of Highways.	Regulation Updates & Enforcement	Greenville County Government	Medium
8	Consider adopting a dangerous roadside vegetation ordinance (Virginia Code § 15.2-2009.1) to require property owners to maintain trees, tree limbs, shrubs, and high grass that could endanger drivers.	Regulation Updates & Enforcement	Greenville County Government	Medium
9	Pursue VDOT landscaping grants to enhance the Exit 4 interchange and welcome driver's entering the first exit in Virginia.	Partnerships; Capital Projects	Greenville County Government; VDOT	Low

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 8 – Transportation				
10	Designate entrance corridors in the Greenville County zoning ordinance and create streetscape standards for those corridors.	Regulation Updates & Enforcement	Greenville County Government	High
11	Partner with the Town of Jarratt and the City of Emporia to develop a community wayfinding and signage plan.	Capital Projects	Greenville County Government; Regional & Institutional Partners	Low
12	Encourage the development of major regional traffic and freight generators near interstate interchanges as these locations are best suited to carry regional traffic while minimizing impacts on local streets.	Land Use Application Review	Greenville County Government	High
13	Consider and encourage best design standards and access management strategies for future development or redevelopment of land and transportation facilities near main intersections and interchanges.	Land Use Application Review	Greenville County Government	Medium
14	Develop land use strategies that consider development near rail infrastructure and protect corridors from encroachment.	Regulation Updates & Enforcement	Greenville County Government	Medium
15	Support the Emporia Greenville Airport Commission in efforts to maintain the airport facility, particularly pavement, airfield lighting, and facility maintenance.	Partnerships; Capital Projects	Greenville County Government; Airport Commission	Medium
16	Pursue opportunities for the growth and expansion of aviation-related businesses both on the airfield and within the community.	Partnerships	Greenville County Government; Airport Commission	Medium
17	Support walking and biking options between and within communities. Crosswalks, pedestrian signals, and ADA compliant ramps should be located at or near major activity centers and sidewalks should be located along any new or reconstructed streets in commercial areas.	Capital Projects; Land Use Application Review	Greenville County Government	Medium
18	Promote Safe Routes to Schools by continuing to encourage the construction of pedestrian and bicycle facilities within a two-mile radius of elementary and middle schools.	Capital Projects; Land Use Application Review	Greenville County Government; City of Emporia; VDOT	Medium
19	Continue to work with VDOT to develop, fund, and construct multi-use paths and designate shared use bike routes.	Partnerships; Capital Projects	Greenville County Government; VDOT	Medium
20	Promote and encourage commuting alternatives, such as transit, carpooling, rideshares, telecommuting, and other options to typical commuting patterns.	Community Outreach and Education	Greenville County Government	Medium
21	Coordinate with the DRPT and the City of Emporia to expand public transit services in the county. This should include increased fixed-route transit connecting more neighborhoods in Greenville County and additional on-demand transit services in the more rural areas.	Programs & Services	Greenville County Government. Department of Rail and Public Transportation	High
22	Publish a system-wide bus route map online and in print for public access.	Community Outreach and Education	Greenville County Government, Department of Rail and Public Transportation	High
23	Support the development and siting of e-vehicle charging stations and facilities to support the transition to lower emission vehicles and bring visitors into the County.	Land Use Application Review	Greenville County Government	High



#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 9 – Land Use				
1	Review and amend the zoning and subdivision ordinances to ensure that development aligns to the policies and design principles in this Plan.	Regulation Updates & Enforcement	Greenville County Government	High
2	Review the zoning ordinance, and amend as necessary, to allow for a wider mix of use types, including accessory dwellings and mixed use buildings.	Regulation Updates & Enforcement	Greenville County Government	Medium
3	Consider adopting an entrance corridor overlay district with design standards that create a strong impression of community character from Greenville County complex into Emporia.	Regulation Updates & Enforcement	Greenville County Government	Medium
4	Encourage infill development in developed areas so that existing structures can be more efficiently used, and farmlands will be protected from development.	Land Use Application Review; Regulation Updates & Enforcement	Greenville County Government	On-going
5	Discourage inappropriate development and land uses that may have detrimental impacts to prime farmland, rich natural habitats, and water quality.	Land Use Application Review; Regulation Updates & Enforcement	Greenville County Government	Medium
6	Identify opportunities to connect neighborhoods through sidewalks, shared use paths, and trail improvements and require such connections in new development or redevelopment proposals.	Capital Projects; Land Use Application Review	Greenville County Government	High
7	Enhance the county's online GIS tools to incorporate the Future Land Use Map and additional zoning information at the parcel level.	Programs & Services	Greenville County Government	High

#	Implementation Strategy	Implementation Type	Responsible Agency	Priority
Chapter 9 – Land Use				
8	Increase communication and coordination between county and City of Emporia planning staff on long-range plans to achieve regional land use goals.	Partnerships	Greenville County Government; City of Emporia	High
9	Encourage flexibility in site design, such as cluster housing, to encourage the preservation of unique natural resources and open space.	Land Use Application Review; Regulation Updates & Enforcement	Greenville County Government	High
10	Use high quality architectural features and character in addition to creative landscape design to develop sites that are sensitive to the environment and respect the unique land features of the site.	Land Use Application Review	Greenville County Government	Medium
11	Encourage planned residential, commercial, and industrial centers that utilize coordinated access points, parking and signage and common design themes.	Land Use Application Review	Greenville County Government	Low
12	Work with various state agencies/facilities, especially correctional centers, to ensure cooperation and the compatibility of new development on adjacent properties.	Partnerships; Land Use Application Review	Greenville County Government; State & Federal Agencies	High
13	Evaluate land use applications for rezonings and special use permits against the criteria contained within this Comprehensive Plan.	Land Use Application Review	Greenville County Government	On-going

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