



Section 6

CAPITAL IMPROVEMENT PLAN

This section includes a description of the major capital achievements of fiscal year 2019 and the programs that make up the 2020 – 2025 Capital Improvement Plan. Included are program descriptions and a listing of the budgeted appropriations by project category.

COMMUNITY SERVICES

CAPITAL IMPROVEMENT PLAN

The Capital Improvement Plan for the Department of Community Services is comprised of projects that help provide a comprehensive and coordinated system of facilities for the provision of high-quality recreational, educational, health and human services, and other services to Gwinnett County residents. Projects include the construction and/or renovation of senior centers, community centers, and parks and recreational facilities. Parks and recreation projects involve providing quality parks and recreational facilities such as passive and active park land, sports fields, tennis complexes, aquatic centers, multi-use trails, playgrounds, picnic pavilions, and other park amenities.

2019 Capital Achievements

In 2019, the Department of Community Services completed several park projects:

- Bethesda Aquatic Center PoolPak dehumidifier replacement
- Club Drive Park Phase II
- Alexander Park Phase II
- Hudson Nash Farm House relocation
- Rhodes Jordan aquatic play structure replacement
- Yellow River Park Trail re-route and bank stabilization; 1,128 square yards and 110 tons of rock
- Freeman's Mill Park mill access and site improvements
- Harmony Grove Park soccer field drainage and lighting project
- Lucky Shoals Park Atlanta Hawks and State Farm outdoor court renovation and indoor teen learning center and gaming room
- Rhodes Jordan Park football field renovation and conversion to synthetic turf
- Road and trail paving projects in seven parks
 - Collins Hill Aquatic Center trail repairs and resurfacing; 6,435 square yards
 - Harmony Grove Soccer Complex parking seal coating and line striping; crack-fill 4,620 linear feet and seal coat 10,829 square yards
 - Lenora Park trail repairs and resurfacing; 5,478 square yards
 - Mountain Park Park repairs and resurfacing; 21,282 square yards
 - Rhodes Jordan Park entrance/exit repairs and resurfacing; 2,315 square yards
 - Rhodes Jordan Park trail repairs and resurfacing; 2,392 square yards
 - Sweet Water Park trail repairs and resurfacing; 403 square yards

At the end of 2019, the following park and greenway projects were underway:

- Tribble Mill Park greenway connection (Harris Trail)
- Alexander Park Master Plan update
- Alexander Park security cameras
- Best Friend Park Hudlow Tennis Center building renovation
- Bethesda Park playground at soccer field
- Bogan Park Aquatic Center water slide structure
- Collins Hill Aquatic Center roof replacement design
- Collins Hill Aquatic Center boiler water heaters and rooftop HVAC replacement
- Dacula Park multipurpose field renovation and conversion to synthetic turf
- Dacula Park senior wing, gymnasium additions, and site improvements
- Freeman's Mill Park interpretive exhibits
- George Pierce Park Community Center patio settlement solution
- George Pierce Park - Ivy Creek trail and playground trailhead
- Isaac Adair House sign and survey
- Peachtree Ridge Park baseball field 1 reconfiguration and playground replacement
- Peachtree Ridge Park Lake Louella Dam renovations
- Ronald Reagan Park playground replacement
- Shorty Howell Park multipurpose field conversion and playground replacement
- Singleton Park revitalization to a neighborhood park with gathering area, comfort station, playground, and trailhead for the greenway Tribble Mill Park Chandler Road entry and parking
- Yellow River Post Office Hudson-Nash House relocation and historic restoration
- Discovery Park Site Master Plan and Construction Document development
- Elisha Winn House improvements including new restroom building, ADA trail, and improvements to sight lines and electrical needs
- 2020 Comprehensive Parks and Recreation Master Plan

2020 – 2025 Capital Improvement Plan

The 2020 capital budget and 2021 – 2025 Capital Improvement Plan for Community Services totals approximately \$73.1 million. Projects include:

- Greenways: Construction of Harris Trail at Harbins Park; Ivy Creek Greenway - F. Wayne Hill WRC and Section 2 design and construction; Singleton Greenway design and construction; Shorty Howell to McDaniel Farm Park Greenway design work; and Rabbit Hill Park to Dacula Park Greenway design work
- Asset management
- Land acquisition
- Gwinnett Environmental and Heritage Center Adaptive Tree Canopy Experience
- Gwinnett Environmental and Heritage Center expansion
- Synthetic turf multipurpose field renovations: Shorty Howell Park, Lenora Park, and Rock Springs Park
- Park expansions: Dacula Park gymnasium and senior wing addition to activity building and Lenora Park Community Center
- New park construction: Beaver Ruin Park and Discovery area park site
- Tribble Mill Park Chandler Road entrance construction with parking, restroom, and trail connections
- New Comprehensive Parks and Recreation Master Plan

COMMUNITY SERVICES CAPITAL IMPROVEMENT PLAN

Project Category	2020	2021	2022	2023	2024	2025	Total 2020 – 2025
Community Services Administration	906,000	—	—	—	—	—	906,000
Community Services Miscellaneous/ Contingencies	85,400	375,870	26,010	79,591	578,560	1,392,178	2,537,609
Environmental and Heritage Center	—	—	6,963,845	4,136,155	—	—	11,100,000
Fleet Equipment	387,000	998,070	1,287,495	865,415	1,375,501	3,343,132	8,256,613
Greenway/Countywide Trails Master Plan	2,750,000	800,000	2,117,570	—	—	—	5,667,570
Parks and Recreation	13,421,645	15,148,000	7,038,000	6,198,000	1,398,000	1,398,000	44,601,645
Total Community Services	17,550,045	17,321,940	17,432,920	11,279,161	3,352,061	6,133,310	73,069,437



GENERAL GOVERNMENT

CAPITAL IMPROVEMENT PLAN

The General Government Capital Improvement Plan is a diverse group of projects that will enhance and/or improve general government services such as information technology, courts, and the construction and maintenance of general government facilities. Also included within the general government CIP are public safety and community services capital projects that are managed by the Department of Support Services.

Information Technology projects involve upgrading and enhancing the business systems and technology infrastructure to support the County's information and computing needs. Projects in this category include acquisition of new and replacement of end user computers, peripheral equipment, and business software applications, as well as upgrades to the systems, storage, servers, networking, and telecommunications infrastructure.

2019 Capital Achievements – Support Services

Major Construction Projects

The following are highlights of major capital projects managed by the Department of Support Services in 2019.

- General Government:
 - Bicentennial Trail and Plaza: This project included the construction of a new public plaza to honor Gwinnett County's Bicentennial on the former site of Fire Station 15 in Lawrenceville. The project also includes a new sidewalk and trail system along Constitution Boulevard connecting the Gwinnett Justice and Administration Center with the Lawrenceville Lawn. Construction was completed in 2019, and the project was funded by the General Government Capital Fund.
 - GJAC Courthouse Addition and New Parking Deck: The expansion of GJAC will provide additional space for the County's judicial functions. The project includes a new courthouse building of approximately 180,000 square feet and a new parking deck for approximately 1,500 vehicles. The building will house a jury assembly space, courtrooms, holding areas, and shell space for future growth. The first phase of the parking deck opened in March 2019, and the second phase opened in December 2019. This project is funded by the 2009 SPLOST program and the General Government Capital Fund.
 - Gwinnett Entrepreneur Center: This project is to create an Entrepreneur Center to aid small business startups by providing resources and services including physical space, coaching, common services, and networking connections. The project includes renovation of a 6,285-square-foot space in a County building previously occupied by the Sheltering Arms Day Care Center in downtown Lawrenceville. Planning and conceptual design were completed in 2019, and preparation of construction documents began in late 2019. This project is funded by the General Government Capital Fund.



- One Justice Square Third and Fourth Floor Renovations: This project includes the renovation and buildout of approximately 53,000 square feet of office space on the third and fourth floors of One Justice Square for the Departments of Transportation and Planning and Development. Design was completed in 2019, and construction will start in early 2020. This project is funded by the General Government Capital Fund and the Development and Code Enforcement Capital Fund.
- Voter Registrations and Elections Space Renovation: This project includes interior renovation and reconfiguration for improved early voting activities, a new entryway, improved exterior finishes, and improved parking. Design was completed in 2019, and construction was substantially complete in December 2019. This project is funded by the General Government Capital Fund.
- New Juvenile Courtroom Buildout: This project includes the buildout of a new courtroom for Juvenile Court services, a judge’s chamber, and accompanying holding cells. The 14,000-square-foot space is on the fourth floor of the Courts Annex facility. Design was completed in 2019, and construction began in late 2019. This project is funded by the General Government Capital Fund.
- Library Branches of the Gwinnett County Public Library System:
 - Norcross Branch Library Relocation: This project includes the construction of a 22,000-square-foot facility and parking structure in partnership with the city of Norcross. This project is designed to achieve a LEED Certified rating. Design was completed in 2019, and construction will start in early 2020. This project is funded by the 2005, 2009, and 2014 SPLOST programs and funding from the city of Norcross.
 - Duluth Branch Library Relocation: This project includes the construction of a new Duluth Branch Library in partnership with the city of Duluth. The new facility is 22,000 square feet and is designed to achieve a LEED Certified rating. Design was completed in 2019, and construction began in late 2019. This project is funded by the 2009 and 2014 SPLOST programs.
 - Snellville Branch Library Relocation: This project includes the construction of a new Snellville Branch Library and parking deck in partnership with the city of Snellville. The County worked with the city regarding design concepts for the library facility and parking deck in 2019. This project is funded by the 2017 SPLOST program.
- Public Safety:
 - Bay Creek Police Precinct and Alternate E-911 Center: This project included the design and construction of a new 12,117-square-foot police precinct and a 6,236-square-foot alternate E-911 center. The facility is located on Ozora Road at the entrance to Bay Creek Park. The new precinct will serve nine cities and enable the Police Department to increase police presence and reduce response times in this area of the county. The E-911 center will provide reliable communication during critical incidents and serve as backup to the E-911 center in Lawrenceville. Construction was completed in December 2019. This project was funded by the 2009 and 2014 SPLOST programs.
 - Fire Station 13: This project is to construct Fire Station 13 at a permanent location at the intersection of Westbrook Road and Buford Highway. Design will be completed in January 2020 with construction to follow. The 10,788-square-foot facility will include three drive-through apparatus bays, offices, and living and training accommodations. The project is funded by the 2017 SPLOST program.

- New Georgia State Patrol Facility: This project is the development of a new State Patrol Post located at a former rest stop on I-85, accessed from Old Peachtree Road. The facility will be 10,780 square feet and includes living and office space for Georgia State Patrol staff as well as touch down space and vehicle space for Highway Emergency Response Operators units, known as HEROs. Construction began in 2019 and will be completed in 2020. The project is funded by the Public Safety Capital Fund.
- High Intensity Drug Trafficking Area Facility Renovation: This project is a space renovation to serve as the Atlanta HIDTA office. Construction was completed in December 2019. This project is funded by federal grants administered by the White House Office of National Drug Control Policy.
- Crime Scene Investigation Processing Laboratory: The project includes the renovation of the former morgue space within the Police Headquarters facility to be used as evidence storage and processing space. Design and construction were completed in 2019. This project was funded by the Public Safety Capital Fund.
- Community Services:
 - Norcross Senior Center: This project was an extensive renovation and expansion of the existing facility located in the Norcross Health and Human Services Center. Construction was completed in 2019. This project was funded by the 2014 and 2017 SPLOST programs.
 - Day Reporting Center: A lease securing a permanent facility for the Georgia Department of Community Supervision Day Reporting Center was finalized in 2018, and buildout of the 9,395-square-foot space was completed in 2019. Services will include onsite cognitive programs, education, and job training. This project was funded by the Georgia Department of Community Supervision.

Capital Maintenance Projects

The following Capital Maintenance projects were completed in 2019.

- General Government:
 - GJAC auditorium carpet and seating replacement
 - Replacement of access control systems at multiple County facilities
 - GJAC cafeteria and dining area improvements
 - Renovation of GJAC public restrooms on the east side first floor
 - Construction of a new monument sign incorporating the County's new branding at the Government Annex
- Public Safety:
 - Replacement of control room bulletproof glass and repair and replacement of control panel field devices at the Comprehensive Correctional Complex
 - Roof Replacements at Fire Station No. 6 and Police South Precinct
 - Fire alarm replacements at Fire Station Nos. 4, 19, 20, 21, and 22; Fire Administration; and Fire Logistics
 - HVAC replacements at Fire Stations Nos. 6 and 11 and at Fire Facilities Management
- Community Services:
 - HVAC replacement at Centerville Library and Community Center
 - Permanent generator and automatic transfer switch installation at Voter Registrations and Elections
 - Refurbishment of parking lots at Mountain Park, Collins Hill, Dacula, and Centerville Branch Libraries
 - Replacement of HVAC equipment at Jones Bridge and Peachtree Ridge Park concession stands



2019 Capital Achievements – Information Technology

Achievements in 2019 pertaining to the Department of Information Technology Services include the following:

- Redesigned the Licensing and Revenue online options, including payments and renewals for occupational tax certificates, alcohol license, hotel/motel, motor vehicle and excise tax reporting, which reduced the time and overall cost for processing renewals, as forms are no longer required to be mailed.
- Created an online credit card option that allows residents to make a one-time payment using the existing website for the Fiscal and Solid Waste Management Division, which resulted in fewer walk-ins, reduced call center interaction with residents, and increased convenience for Gwinnett County residents.
- Migrated to the new Driver Record and Integrated Vehicle Enterprise System, DRIVES, which enhances the title and vehicle registration functions of the Department of Revenue. The Georgia DRIVES system uses modern technology to streamline existing processes and enables more online services, including an integrated cashier system to receive payment and automatic invoice clearing.
- Implemented additional upgrades to the microwave network, which connects all radio tower sites for the Motorola 800 MHz Radio system. The upgrade is a critical part of the communications network for public safety and other County departments that use the system.
- Implemented enhancements to the design of Gwinnett County websites, including improvements that allow residents to use additional web functionalities on desktops, laptops, and mobile devices.
- Installed 495 video surveillance cameras at multiple sites throughout Gwinnett County including the Gwinnett Justice and Administration Center, Comprehensive Correctional Complex, and Sheriff's Office. The cameras and video monitoring will serve to ensure the safety and security of Gwinnett County residents, inmates, and Sheriff's Office.
- Completed the deployment of mobile data terminals to 400 police officers. The new devices are ruggedized tablets with attachable keyboards that are more durable, reliable, and usable for field personnel. The devices also contribute to better continuity of service and support.
- Continued the deployment and upgrade of public safety Motorola subscriber radios for Fire and Emergency Services, Police, Sheriff, Corrections, and the District Attorney's Office, totaling 200 radio units in 2019. These new radios provide enhanced interoperability with other jurisdictions and address the aging systems that were at "end-of-life."



2020 – 2025 Capital Improvement Plan

The 2020 capital budget and 2021 – 2025 Capital Improvement Plan for General Government totals approximately \$276.7 million.

Support Services

Major Construction Projects

The following major construction projects are scheduled for design and/or construction in 2020.

- General Government:
 - One Justice Square Third and Fourth Floors Renovations: This project includes the renovation and buildout of approximately 53,000 square feet of office space on the third and fourth floors of One Justice Square for the Departments of Transportation and Planning and Development. Construction will start in early 2020. This project is funded by the General Government Capital Fund and the Development and Code Enforcement Capital Fund.
 - GJAC Courthouse Addition and New Parking Deck: Construction of the courthouse building started in 2019, and the courthouse and security node will be substantially complete in December 2020 with construction complete in early 2021. This project is funded by the 2009 SPLOST program and the General Government Capital Fund.
 - Records Management Center: This project includes the purchase and renovation of a facility or land acquisition, design, and construction for a new facility for a Records Management Center. Planning for the facility will begin in 2020. This project is funded by the General Government Capital Fund.
- Public Safety:
 - Fire Station 13: This project is to construct Fire Station 13 at a permanent location at the intersection of Westbrook Road and Buford Highway. Design will be completed in January 2020 with construction to follow. The 10,788-square-foot facility will include three drive-through apparatus bays, offices, and living and training accommodations. The project is funded by the 2017 SPLOST program.
 - Fire Services Headquarters Renovation: This project is to renovate the Fire Services Headquarters building. The project includes building expansion to accommodate additional personnel and replacement of flooring, lighting, furniture, and bathroom and kitchen fixtures. This project is funded by the Fire and EMS Capital Fund.
 - Police Fleet and Facility Maintenance Building: This project will provide 6,825 square feet of office space for current and future staff, three covered vehicle bays for installation and repair of equipment in vehicles, and storage space. This project is funded by the Police Capital Fund.
 - Police Training Center 50-Yard Firing Range Buildout: This project will complete the buildout of the 50-yard range within the Firing Range building at Police Training. The additional 15 firing lanes will increase the capacity for training officers and recruits. This project is funded by the Police Capital Fund.
 - Police Training Center Expansion: This project will expand the Police Training Facility to accommodate the increase in recruits per class. This project is funded by the Police Capital Fund.
- Community Services:
 - Duluth Branch Library Relocation: This project includes the construction of a new Duluth Branch Library in partnership with the City of Duluth. Construction is scheduled for completion in 2020. This project is funded by the 2009 and 2014 SPLOST programs.
 - Norcross Branch Library Relocation: This project includes the construction of a library building and parking structure in partnership with the City of Norcross. Construction will start in early 2020. This project is funded by the 2005, 2009, and 2014 SPLOST programs and funding from the City of Norcross.
 - Snellville Branch Library Relocation: This project includes the construction of a new Snellville Branch Library in partnership with the City of Snellville. The City and County will manage the design in 2020. This project is funded by the 2017 SPLOST program.



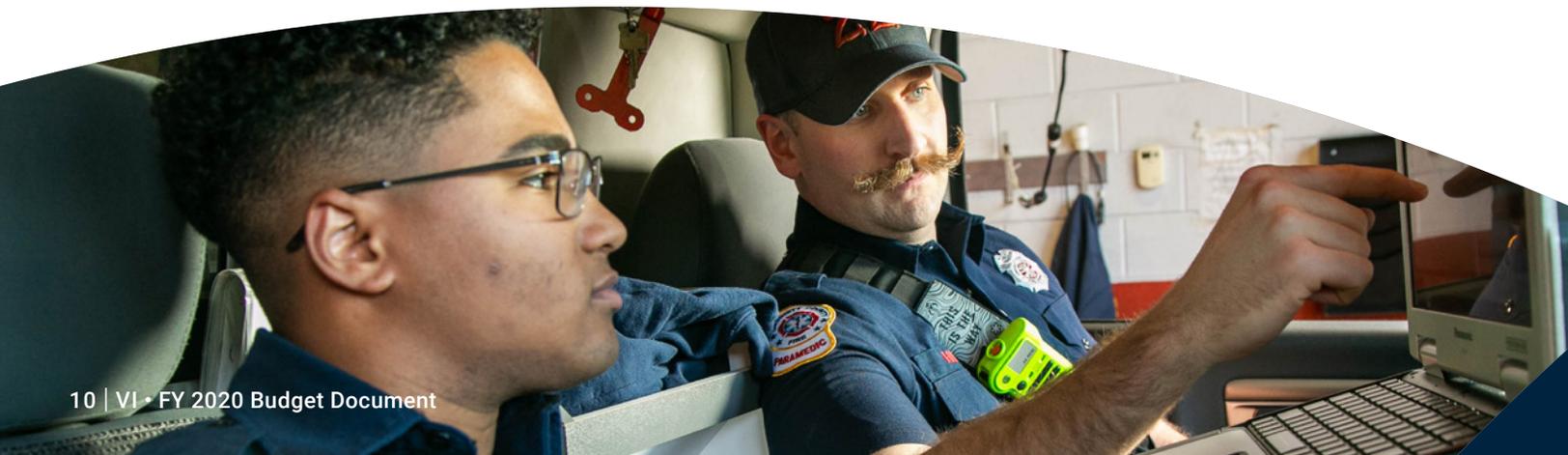
Information Technology

The Department of Information Technology Services' capital improvement plans for 2020 – 2025 include:

- Upgrade of SharePoint to the latest version to provide enhanced features, ongoing vendor support, improved security, and support for mobile-friendly features.
- Continuation of deployment of a modernized public safety ecosystem that includes Computer Aided Design, Law Enforcement Records Management System, Fire Records Management Systems, Automatic Vehicle Locator, and other valuable public safety systems.
- Implementation of a Data Loss Prevention Solution which will enable the County to discover, monitor, and protect confidential information wherever it can be found: email, web, other network-based communications, servers, databases, other document repositories, laptops, desktops, removable storage, mobile devices, and cloud applications.
- Continue upgrades and improvements to enhance public safety operations. These projects include modernization of public safety information systems; in-car cameras for Police; interview room cameras for Police; an E-911 digital phone system upgrade; and the continued deployment of approximately 630 mobile data terminals for Police, Sheriff, and Animal Welfare; and public safety radios for Fire and Emergency Services and the Sheriff's Office.
- Continue to enhance the information security program through multi-factor authentication and other critical cybersecurity solutions. These solutions work together to reduce the risk of unauthorized access to the County's IT environment.
- Continue installation, upgrades, and replacements of video surveillance equipment at multiple sites throughout Gwinnett County. The video system at various locations allows agencies to retain videos for evidence, lawsuits, medical claims, billing disputes, vandalism deterrence, etc.
- Continue enhancements and improvements to Gwinnett County's public website to provide better accessibility and functionality that is more useful for Gwinnett County employees and residents.
- Continue focus on network and security enhancements for reliability, business continuity, and better protection against malware, ransomware, and malicious websites.
- Continue expansion of the network and communications infrastructure, including wireless access, virtual private networks, cellular network connectivity, firewalls, and various security platforms.
- Continue procurement of updated network equipment, server hardware, software, and diagnostic tools necessary to better incorporate new technologies and support Gwinnett County's continued growth and expansion.
- Purchase software, monitoring tools, peripheral devices, and other hardware for various departments throughout Gwinnett County. This project will provide for the updating of hardware and software and allow them to operate more effectively and efficiently.
- Pursue opportunities to leverage cloud computing to reduce technology costs while enhancing capabilities and County employees' productivity.
- Continue to roll out additional Virtual Desktop Infrastructure end-points to reduce the footprint of the Microsoft Windows Operating System, improve security, and ensure compliance.

GENERAL GOVERNMENT CAPITAL IMPROVEMENT PLAN

Project Category	2020	2021	2022	2023	2024	2025	Total 2020 – 2025
Cities Share of 2017 SPLOST	33,689,431	34,194,773	34,707,694	8,547,413	—	—	111,139,311
Computers and Computer Systems	17,846,774	7,191,493	1,922,928	3,167,271	3,486,820	499,701	34,114,987
Contingencies and Miscellaneous Projects	5,701,890	84,385	70,000	70,000	70,000	70,000	6,066,275
Fleet Equipment	1,772,000	1,231,826	1,087,455	1,151,652	1,366,700	3,760,830	10,370,463
General Government Facilities	26,903,571	29,252,473	13,844,853	5,558,350	2,718,600	4,104,105	82,381,952
General Government Facilities – Civic Center Expansion	360,000	—	—	—	—	—	360,000
Judicial Facilities	330,000	250,000	—	250,000	—	—	830,000
Libraries	9,652,690	3,296,390	817,400	—	—	—	13,766,480
DOT Central Site Improvements	100,000	—	—	555,000	—	—	655,000
Park Renovations and Improvements	426,000	365,000	360,000	45,000	—	—	1,196,000
Police Facilities	509,000	499,708	4,074,977	—	120,000	5,625,949	10,829,634
Airport Assessments Study	—	50,000	—	—	—	—	50,000
Senior Service Facilities	—	1,900,000	—	—	—	—	1,900,000
Animal Welfare Renovations – Overflow Site	65,000	—	—	—	—	—	65,000
Playground Equipment	—	—	92,000	—	—	—	92,000
E-911 Center HVAC Upgrade	50,000	210,000	—	—	—	—	260,000
Corrections Facility	210,000	—	450,000	260,000	—	—	920,000
Support Services Administration	135,000	1,550,700	—	—	—	—	1,685,700
Total General Government	97,751,356	80,076,748	57,427,307	19,604,686	7,762,120	14,060,585	276,682,802



PUBLIC SAFETY

CAPITAL IMPROVEMENT PLAN

The Public Safety Capital Improvement Plan consists of projects that preserve and protect the lives and property of Gwinnett County residents.

2019 Capital Achievements – Police Services

Achievements in 2019 pertaining to the Gwinnett County Police Department include the following:

- Major Repairs and Renovations: During 2019, Police Services began and completed the re-striping and sealing of one precinct parking lot that could not be completed in 2018.
- Purchase of a new Aviation Helicopter and Avionics: During 2019, Police Services took possession of the new helicopter. In 2020, this project should be completed once the avionics have been installed.

2019 Capital Achievements – Fire and Emergency Services

Achievements in 2019 pertaining to the Department of Fire and Emergency Services include the following:

- Received two new medic units to place Medic 27 and Medic 30 in service
- Placed Truck 10 in service for additional ladder coverage in the Mall of Georgia response area
- Received one new aerial truck to replace an older unit
- Received one new pumper to replace an older unit
- Received one new specialty apparatus to replace an air and light unit
- Received three new Fire Investigator vehicles to replace older units
- Received one new utility truck for new approved Trades Technician positions in Fire Facilities
- Received two remounted med units to replace older units and delivered two additional units for remount
- Received three new power stretchers with XPS technology for aid with bariatric patients
- Completed the replacement of an emergency generator at Fire Stations 16 and 19



- Repaired concrete pad and extended concrete for a more durable surface in front of the pod building at Fire Station 20
- Repaired concrete pad in front of Fire Station 14
- Purchased 11 new self-contained breathing apparatus for Medic 27, Medic 30, and Truck 10
- Received 285 plate carriers through an Urban Area Search Initiative Grant for personal protection on high risk incident types such as SWAT callouts, domestic violence calls, etc.
- Upgraded to Workforce Telestaff

2020 – 2025 Capital Improvement Plan

The 2020 capital budget and 2021 – 2025 Capital Improvement Plan for Public Safety totals approximately \$148.7 million. Some of the highlights of planned improvements are listed below.

Police Services

Police Services' capital improvement plans for 2020 – 2025 include the following existing capital projects: adding generators at the training center and continuing the police parking expansion project, including installing six security cameras and connecting to the County fiber optic network. Projects added for 2020 include a logging recorder for the Alternate E-911 Center at Bay Creek. Projects added for 2022 include a tactical rescue elevated lift for SWAT and revisions of the running tract at the training center.

Fire and Emergency Services

The 2020 – 2025 Capital Improvement Plan for the Department of Fire and Emergency Services includes the continued replacement of older fire apparatus and medic units (ambulances) along with various support vehicles within the department. Three Alternative Response Vehicles and two medic units were requested as part of the 2020 Business Plan. These units are anticipated to be placed in service in 2021. We are currently in the process of relocating Fire Station 13 near Buford Highway and Westbrook Road. Future plans call for the relocation/renovation of Fire Station 14 in Buford and the continued addition of gear rooms at Fire Stations 3, 4, 16, 17, and 19. Additionally, Fire Station 2 in the Lilburn area is being evaluated for renovation or replacement and relocation. In conjunction with the Department of Support Services, a comprehensive facility condition assessment is being performed to aid in the scheduling of station replacements and/or major renovations for future capital improvements. In 2020, Fire and Emergency Services will see the replacement and upgrade of all fire station alerting systems to notify response personnel of incidents. This will seamlessly integrate with the Public Safety One Solution for a new Computer Aided Dispatch system, fire reporting system, and other public safety features planned for implementation in 2021. Fire and Emergency Services will work with Support Services on fire alarm system replacement, HVAC replacements, and roof replacement programs as part of the facility condition assessment report and established replacement schedules.



PUBLIC SAFETY CAPITAL IMPROVEMENT PLAN

Project Category	2020	2021	2022	2023	2024	2025	Total 2020 – 2025
Ambulances	2,723,730	2,805,440	3,764,445	1,656,958	—	—	10,950,573
Detention Center Renovations	—	—	569,981	—	—	229,500	799,481
Fire Apparatus and Equipment	6,216,557	4,553,384	6,743,330	365,000	390,000	390,000	18,658,271
Fire Facilities	430,000	300,000	325,000	350,000	375,000	375,000	2,155,000
Fire Station Relocation	—	—	—	2,164,658	4,700,000	—	6,864,658
Police Facilities	470,500	—	391,519	—	—	—	862,019
Public Safety Administration	712,000	—	—	—	—	—	712,000
Public Safety Vehicles and Fleet Equipment	5,506,000	16,600,900	10,868,769	17,322,939	10,295,229	46,248,943	106,842,780
Sheriff Facilities	248,135	—	—	595,000	—	—	843,135
Total Public Safety	16,306,922	24,259,724	22,663,044	22,454,555	15,760,229	47,243,443	148,687,917

TRANSPORTATION

CAPITAL IMPROVEMENT PLAN

The Transportation Capital Improvement Plan consists of projects to improve the County's transportation infrastructure. Projects fall into three categories: Road Improvements (of which there are several sub-categories), Airport Improvements, and Transit.

The County's Road Improvement Program consists of the following:

- Major Roadway Improvements include new road construction, new alignments, and increasing the capacity of existing roads.
- Intersections/Traffic Operation Improvements include the addition of turn lanes and improvements of alignments of cross streets, sight distances, and signalizations, as well as Advanced Traffic Management System improvements.
- Bridges/Roadway Drainage Improvements consist of new construction or reconstruction of existing bridges and culverts up to sufficiency standards.
- Road Safety and Alignment projects correct safety deficiencies such as sight distances, horizontal and vertical alignments, and at-grade railroad crossings.
- School Safety projects improve traffic safety near schools with the installation of turn lanes at school entrances, installation of sidewalks, and signalization improvements.
- Sidewalks and Multi-Use Trails include projects to link existing sidewalk segments or link residential areas to nearby activity centers.
- The Unpaved Road category funds the paving of gravel and dirt roads throughout the county.
- The Rehabilitation and Resurfacing category renovates, rehabilitates, and resurfaces existing County roads to prolong the life of the road.

The County Airport Improvement category consists of various improvements to Gwinnett County's Briscoe Field, the third busiest airport in the state. Projects in the Transit category consist of the acquisition/replacement of buses and equipment and the construction of various transit facilities.

2019 Capital Achievements

The Department of Transportation's capital achievements in 2019 include the following:

- Began construction on traffic management system expansion on Five Forks Trickum Road and Ronald Reagan Parkway
- Began engineering and construction of traffic management system expansion in city of Peachtree Corners
- Completed construction on traffic management system expansion on SR 316 and Old Peachtree Road
- Completed the Connected Vehicle Technology Master Plan in preparation for deployment of CV technology along the county road network
- Completed engineering design for pedestrian crossing upgrade projects for multiple school and bus stop locations
- Completed 144 miles of resurfacing
- Began construction of SR 316 at Harbins Road interchange project
- Began construction of SR 324/Gravel Springs Road at I-85 interchange project
- Began engineering of US 29/SR 8/Lawrenceville Highway at Ronald Reagan Parkway intersection improvement
- Began construction of Dacula Road at US 29/SR 8/Winder Highway project
- Began construction of Sugarloaf Parkway at Satellite Boulevard widening and intersection improvement
- Completed construction of Hamilton Mill Road widening from Ivy Mill Drive to Sardis Church Road
- Began engineering of Peachtree Industrial Boulevard southbound widening from Suwanee Dam Road to north of McGinnis Ferry Road

- Completed construction of Holcomb Bridge Road at Thrasher Street project
- Began engineering of Webb Gin House Road at SR 20/Grayson Highway intersection improvement
- Completed construction of Dogwood Road at Holly Brook Road roundabout school safety project
- Completed construction of Whitehead Road bridge project
- Began construction of 17 projects including bridges, major roadways, school safety, and sidewalks
- Completed construction of 30 projects including bridges, major roadways, school safety, and sidewalks
- Began engineering of 37 projects including bridges, major roadways, sidewalks, school safety, and road safety
- Completed 27 in-house quick fix projects
- Completed 165 property acquisitions
- Completed the acquisition of Gwinnett Place Transit Center property
- Began design of Harbins Park & Ride lot
- Completed the design and engineering phase of the Indian Trail Park & Ride lot rehabilitation project
- Made state of good repair improvements including procurement of fare revenue equipment
- Purchased two local transit buses for expansion of service to Georgia Gwinnett College on Route 45
- Purchased improved bus shelters

2020 – 2025 Capital Improvement Plan

The 2020 capital budget and 2021 – 2025 Capital Improvement Plan for Transportation totals approximately \$351.8 million. Some of the major projects are as follows:

- Continue management of SPLOST programs
- Continue traffic signal equipment and guardrail replacement programs
- Complete the engineering design for traffic management system expansion projects on Cruse Road, Killian Hill Road, SR 13/Buford Highway, SR 120/Duluth Highway, SR 20/Loganville Highway, and Sugarloaf Parkway
- Deploy communication technology to all traffic signals not currently connected to the traffic management system to allow remote monitoring from the Traffic Control Center
- Continue construction on the Dacula Road at US 29/SR 8/Winder Highway intersection and bridge replacement project
- Complete engineering and right-of-way acquisition and let to construction the Sugarloaf Parkway Extension from SR 316/University Parkway to I-85
- Let to construction the Indian Trail Park & Ride rehabilitation project
- Begin Bus Rapid Transit corridor study
- Begin commuter bus mid-life overhauls
- Resurface I-985 Park & Ride lot and add amenities
- Design and construct new Gwinnett County Transit Center
- Acquire land, design, and construct two new park-and-ride facilities on SR 316
- Purchase enhanced security equipment
- Purchase new and replacement buses and micro-transit vehicles with associated equipment
- Conduct a feasibility study to identify the future location for a Snellville area park-and-ride facility
- Complete construction of Airport Central Basing Area

TRANSPORTATION CAPITAL IMPROVEMENT PLAN

Project Category	2020	2021	2022	2023	2024	2025	Total 2020 – 2025
Airport Capital Improvements and Equipment	226,000	109,650	–	–	–	376,150	711,800
Bridge and Roadway Drainage Improvements	7,356,125	13,906,750	12,934,250	2,528,500	–	–	36,725,625
Cities Allocation-Roads	7,065,367	5,141,348	5,344,178	1,792,325	–	–	19,343,218
Intersection/Traffic Operations Improvements	12,010,882	7,775,625	7,916,875	10,849,812	325,000	325,000	39,203,194
Major Road Improvements	23,060,785	34,836,239	24,972,024	9,362,500	4,000,000	–	96,231,548
Neighborhood Speed Control	97,250	97,250	97,250	340,375	–	–	632,125
Pedestrian Safety/Sidewalks	7,258,499	5,282,867	3,538,164	2,743,961	–	–	18,823,491
Resurfacing/Rehabilitation	17,000,000	19,000,000	19,023,462	2,917,500	–	–	57,940,962
Road Program Management	3,250,000	2,000,000	4,000,000	3,190,462	–	–	12,440,462
Road Safety and Alignments	5,251,236	4,851,264	2,626,052	6,311,981	175,000	175,000	19,390,533
School Safety Program	1,215,625	4,310,837	1,495,000	6,932,913	–	–	13,954,375
Transportation Administration	4,425,000	–	–	–	–	–	4,425,000
Transit Facilities	1,012,500	262,500	–	–	–	–	1,275,000
Transit Program Miscellaneous/ Contingencies	450,000	100,000	–	–	–	–	550,000
Transit Vehicles and Equipment	–	607,834	500,000	53,060	1,053,782	4,913,969	7,128,645
Transportation Planning	5,419,000	489,455	1,157,637	1,604,057	2,256,871	11,486,352	22,413,372
Unpaved Roads	194,500	194,500	194,500	–	–	–	583,500
Total Transportation	95,292,769	98,966,119	83,799,392	48,627,446	7,810,653	17,276,471	351,772,850

WATER RESOURCES

CAPITAL IMPROVEMENT PLAN

The mission of the Gwinnett County Department of Water Resources is to provide superior water services at an excellent value.

DWR's Capital Improvement Plan consists of projects that provide clean, potable water for Gwinnett residents and businesses; collect and reclaim wastewater to protect the environment and promote the health, safety, and welfare of the public; and help manage stormwater. These projects include construction of new facilities, improvements to existing water facilities, and projects that improve the efficiency of operations. The need for improvements or new facilities may be driven by increased demand, changes in regulatory requirements, required service level improvements, asset failure due to age, or a combination of these and other factors. The focus of DWR's current Capital Improvement Plan is the rehabilitation and replacement of aging infrastructure.

DWR operates and maintains two water production facilities with 248 million gallons per day of production capacity and three water reclamation facilities with 98 MGD of treatment capacity. DWR also operates and maintains 218 raw sewage pump stations, 10 water booster pump stations, 10 water storage tanks, 277 miles of pressurized sewer pipe, 2,827 miles of gravity sewer pipe, 1,475 miles of stormwater drainage pipe, and 3,812 miles of water main, serving approximately 176,830 sewer customers and 250,434 retail water customers. This infrastructure has a replacement value of \$9 billion. Projects in the Capital Improvement Plan are funded by water and sewer revenue, stormwater fees, or SPLOST funds.

2019 Capital Achievements

Water and Sewer Capital Improvement Plan achievements are divided into six subprograms:

- Water Reclamation Facilities
- Collection System
- Distribution System
- Water Production Facilities
- Systems and Technology
- Miscellaneous

The **Water Reclamation Facilities program** includes projects for expansions of and improvements to the County's three water reclamation facilities as well as projects to support watershed protection required by the water reclamation facilities' National Pollutant Discharge Elimination System permits. The following major project was completed in 2019:

- **F. Wayne Hill Membrane Train Replacements:** These membranes enable the F. Wayne Hill Water Reclamation Center to achieve excellent treated water quality and meet low effluent permit limits. This project will replace all 16 membrane cassettes located throughout the plant. The current membrane cassettes have been in service since 2006 and have reached the end of their useful life. DWR is replacing the current membranes with the same treatment technology as previously used so that a smooth, continuous operation is sustained. Installation will occur at a rate of one train of membrane cassettes every four to six weeks until 16 membrane cassettes are replaced. Replacement of these cassettes allows for a renewed expected life of 10 to 15 years.

The **Collection System program** includes projects for expansion, replacement, and assessment of gravity sewer pipe, force mains, and wastewater pump stations. It also includes projects that improve cost effectiveness by installing gravity sewers to decommission pump stations. The following major project was completed in 2019:

- **Hopkins Creek Dacula Interceptor:** The project installed approximately 6,710 linear feet of 24-inch diameter ductile iron gravity sewer line and 2,110 linear feet of 8-inch diameter ductile iron gravity sewer line. This project will allow for the decommission and demolition of two existing pump stations, Alcovy Springs and Alcovy Reserve. This project will be able to serve additional residents in this service area and reduce overall septic tank usage. The removal of both pump stations will reduce the amount of operations and maintenance funding spent to maintain these facilities going forward.

The **Distribution System program** consists of projects associated with water meters, pressure management, and water distribution pipe extensions and replacement. The following major project was completed in 2019:

- **48 inch Pre-stressed Concrete Cylinder Pipe replacement (I-85 Interchange at SR 324):** The Gwinnett County water distribution system maintains 178 miles of water transmission mains ranging in size from 20- to 78-inches in diameter. Originally 53 miles of the transmission mains were PCCP installed in the 1970s. Due to high failure rates of PCCP water transmission mains, 39.22 miles have been replaced over the past twenty-five years, leaving 13.51 miles of PCCP remaining. DWR is continuing to systematically replace the PCCP with ductile iron pipe addressing sections with the highest risk and consequence of failure first. This project replaced approximately 0.44 miles of PCCP near the I-85 Interchange at Old Camp Branch Road prior to the GDOT off ramp construction project. At the completion of this project, 14.07 miles of PCCP will be remaining to be replaced.

The **Water Production Facilities program** includes projects for expansion and improvements to the two water production facilities and the booster stations and tanks. The following major project was completed in 2019:

- **Repair of Grayson Pre-stressed Concrete Water Storage Tanks:** DWR's proactive tank inspection program identified repairs needed for the two 10-million-gallon pre-stressed concrete water storage tanks located on Grayson-New Hope Road in Grayson. This project included repairs to spalling concrete on the exterior of the tanks and application of protective coatings on the pipes and supports for both tanks. These repairs were critical to maintain the structural integrity of these tanks, piping, and appurtenances to ensure continued service in the County's potable water distribution system. The repairs have been completed and the tanks are now back in service.

The **Systems and Technology program** includes all projects related to technology improvements made to related DWR systems. Some major categories within this program include physical security improvements, SCADA upgrades, GIS upgrades, IT hardware, Enterprise Content Management upgrades, fiber optics expansion, and SAP enhancements. The following major project was completed in 2019:

- **Shoal Creek Physical Security Upgrades:** This project consisted of security upgrades for the Shoal Creek Water Production Facility. Upgrades included new advanced door access controls with card readers and power backup. These upgrades also included camera systems for the plant in order to increase security and oversight of the facility. A central security terminal in which new cameras can be monitored and access control entries are logged and can be reviewed and checked backed up the new systems.

The **Miscellaneous program** has a wide variety of projects that include new and replacement vehicles, administration building improvements, relocations of utilities necessary during road projects, and other projects that support the mission of the department. The Miscellaneous program also includes funds for reserves and contingencies and System Development projects that include water and sewer planning studies and projects that promote economic development. The following major project was completed in 2019:

- **Infinite Energy Center Sewer Improvements:** The Infinite Energy Center is moving forward with an implementation of its master plan for expansion of the facility. This major undertaking is designed to elevate the center as a destination location in metro Atlanta. The master plan includes structured parking, outdoor gathering spaces, landscaping enhancements, and expansion and improvements to the center's facilities. Also, two joint ventures are planned for the campus which includes a headquarters hotel developed by Concord Hospitality and a new mixed-used entertainment district. In order to service this expanded facility, DWR has to increase the size of the sewer available and run it to all the new property locations. This project will allow for the continuation of the expansion project.

The **Stormwater Capital Improvement Plan** contains projects related to stormwater pipe replacement, pipe lining, flood studies, drainage improvements, and dam rehabilitation. In 2019, the following stormwater pipe replacements, drainage improvements, and rehabilitation projects were completed:

- 21,060 linear feet of pipe rehabilitation lining projects
- 9,031 linear feet of pipe replacement projects
- 63 stormwater pipe rehabilitation projects
- 57 stormwater pipe replacement projects
- 120 total stormwater pipe replacements and rehabilitation projects



2020 – 2025 Capital Improvement Plan

The 2020 capital budget and 2021 – 2025 Capital Improvement Plan for Water Resources totals approximately \$1.02 billion. Some of the major projects are as follows:

- The Water Tower: Global Innovation Hub @ Gwinnett and Training Center will be a premier location for research and problem-solving for water issues around the world. It will house three main functions: the Research Section, the Training Section, and the Public Education and Outreach Section. The Research Section will explore fundamental and applied technology through relationships with academia, other water utilities, and public-private partnerships. There will also be a focus on growing and supporting a water technology community that will look at sustainable water resource management. The Training Section will allow DWR employees and other water industry professionals to benefit from access to the most up-to-date information, processes, and equipment. The Public Education and Outreach Section will provide opportunities for residents to experience hands-on learning that will lead to an understanding of the effect our water use and habits have on the environment and water resource management. This facility will promote public outreach and education, staff training, and research in the water field once completed. Gwinnett plans to partner with public and private entities to be a leader in innovation and continue to be a utility of the future, and this building is the cornerstone of that future collaboration.
- Crooked Creek WRF – Construction Package 4 Improvement Project: The Crooked Creek Water Reclamation Facility has been in operation for more than 20 years. The equipment and facilities are in need of rehabilitation or replacement to continue to meet permit standards and to increase safety and efficiency. DWR has been replacing and rehabilitating sections of the facility over the last five years. The previous construction packages addressed the influent pump station, headworks, operations and maintenance buildings, oxidation ditch #3 aeration, effluent filter media replacement and just recently, the rehabilitation of secondary clarifiers #5 and #6. The Crooked Creek WRF Improvement Project CP4 involves upgrading or replacing the remaining key processes within the existing Crooked Creek WRF including chemical addition facilities, activated sludge, additional secondary clarifiers, disinfection, post aeration, solids handling, and electrical systems. This construction contract is anticipated to last four years.
- Lanier Raw Water Pump Station Water Intake and Pump Station maintenance: This project includes the replacement of the three existing 72-inch raw water intake pipes with two 72-inch end cap pipes with barrel screens, valve and actuator replacement, raw water sampling system, and installation of a flow meter on the discharge line.
- Major Supervisory Control and Data Acquisition upgrades: DWR intends to convert the existing Foxboro distributed control system to an open architecture system using programmable logic controllers and a Wonderware System Platform at the F. Wayne Hill Water Resources Center. To accomplish this, detailed design documents and technical specifications suitable for bidding purposes need to be produced to allow DWR to engage a general contractor to complete the conversion.

WATER RESOURCES CAPITAL IMPROVEMENT PLAN

Project Category	2020	2021	2022	2023	2024	2025	Total 2020 – 2025
Collection System Rehabilitation and Replacements	18,341,636	21,981,406	23,664,312	25,690,220	23,750,950	26,345,000	139,773,524
Information Technology Systems and Applications	12,364,000	12,199,000	15,339,000	9,069,000	10,999,000	5,899,000	65,869,000
Miscellaneous Projects and Contingencies	40,021,786	27,132,663	16,000,000	27,300,000	30,250,000	30,900,000	171,604,449
Stormwater Management	29,173,978	26,223,778	26,650,000	27,773,121	26,950,000	27,050,000	163,820,877
Utility Relocations	1,750,527	2,039,508	2,000,000	2,000,000	2,000,000	2,000,000	11,790,035
Water and Sewer Plans and Studies	257,066	850,000	500,000	1,150,000	1,150,000	1,650,000	5,557,066
Water Production Facilities	23,822,442	12,756,524	28,998,500	17,430,000	18,380,000	18,000,000	119,387,466
Water Reclamation Facilities	41,460,481	38,301,407	35,812,425	34,800,000	38,500,000	38,000,000	226,874,313
Water Transmission/ Distribution	7,341,038	15,990,585	22,115,705	26,160,181	23,844,753	24,259,753	119,712,015
Total Water Resources	174,532,954	157,474,871	171,079,942	171,372,522	175,824,703	174,103,753	1,024,388,745