Annual Report
Facilities & Campus Services | Fiscal Year 2021
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Covid-19 forced a virtual commencement in 2020, but WFU seniors got to celebrate in a very different way this year. With a diploma ceremony hosted in the **LJVM Coliseum** and the commencement celebration on **Truist Field**, we threw a graduation like no other for both the Class of 2020 and the Class of 2021.
Fireside on Manchester

A collaboration across the Facilities & Campus Services Department, the Fireside on Manchester project was a welcoming Covid safe gathering place for students.

photo courtesy of Ken Bennett
Construction
Special Projects

Tea Huts
Made minor repairs and installed new shingles on 7 tea huts at Reynolda Gardens.

Fireside at Manchester
Installed the base and drainage for the tent on Manchester Plaza, providing a covered, COVID-safe gathering space.

Deacon Place
Built new data rooms for each building, repaired stair ceilings, and installed new brick grills.

Worrell Classrooms
Re-laminated 1107 & 1108 law school classrooms, avoiding the cost of buying new furniture.
The President’s Suite in Reynolda Hall was refreshed with all new hardwood and carpet flooring, new chandeliers with LED lighting, and new wallpaper and furnishings throughout the space to welcome President Wente.

The wood paneling and doors were refurbished, and the signature element of the space is a new conference room table expertly crafted by our in-house construction team from reclaimed wood from trees on the President’s House property and wrought iron rails from one of the original campus buildings. A carefully curated selection of representative art put the finishing touches on the walls.
The President's House is one of the University's treasured assets. The house is located on Kearns Avenue just 2 miles southeast of the Reynolda Campus. Built in 1929 for Ralph and Dewitt Hanes, the house was donated to the University in 1988 for use as the President's residence. Conceived and designed by famed New England architect Julian Peabody, the house remains a wonderful example of the country estate style popular at the time. Today the house continues the tradition of warm and gracious entertaining and hospitality extended by the Hanes family.

Construction was completed in August 2021. While the house has received numerous upgrades and improvements over the years, the facility was in need of some significant improvements regarding critical systems and infrastructure, as well as a refresh of the interior finishes. Now that construction is complete, in addition to the many systems and site improvements, the house also benefits from a new wine cellar, new carport with electric car charging stations, and outdoor kitchen with an Italian pizza oven.
Work was recently completed to restore the **fourteen** large oval windows in Wait Chapel. These windows were in disrepair due to their age and constant exposure to the elements. Other than painting and occasional glass replacement, the windows were essentially still as they were installed when the chapel was constructed in the **1950's**. While the wood windows were in relatively good condition for their age, the windows had numerous broken panes in need of replacement. Every pane is unique and was originally **handmade**, so the replacement required a very specialized approach. The largest windows were restored in place, while the four smaller windows in the balcony were removed and restored off site. All of the windows now visually match their original condition and should serve the university for many years into the future.

As a part of the project, all of the windows within the chapel received automated interior “black out” shades. For many years, black plastic has been installed on the windows to allow for presentations within the chapel. That installation required many hours of maintenance time and the use of large lifts on the exterior of the building. With the new interior shades, the presenter can now easily lower any or all of the shades with the push of a button. This investment allows the chapel to be more readily utilized for large audience presentations, concerts, and classes.
Greene Hall was constructed in 2000, and is named for William B. Greene, a former University trustee and 1959 graduate of the College. Located on the Magnolia Quads, most students take at least one class in Greene Hall, as it houses the romance languages, psychology, German, and Russian departments. In recent years, issues surfaced regarding structural conditions, envelope system deficiencies, and water infiltration issues, limited to the east and west elevations and the skylight over the center atrium.

During the summer of 2020, work was completed to install new waterproofing and to re-clad the east and west facades. The original exterior panel material was replaced with new metal panels over upgraded waterproofing. The west entrance was upgraded for better accessibility and the project also included associated interior upgrades to the lobby. Finally, the large skylight over the atrium was re-glazed to address prior water intrusion issues and UV damage to the interiors.
The brand new *Wakerspace* at Wake Downtown is equipped with tools such as a state of the art Water Jet, CNC Machine, Laser Cutter, Band Saw, and Drill Press.

The Engineering Downtown project included the renovation of over **14,000** square feet of space at Wake Downtown.

This project served the 1st Wake Forest University Engineering program graduating **Class of 2021**.
The Reynolda Pedestrian Crosswalk Project provides a safe way for visitors to walk across Reynolda Road between the paths at Reynolda Village and Graylyn.

Using the Manual on Uniform Traffic Control Devices released by the US Department of Transportation, the Reynolda Crosswalk project implements the manual’s acceptable methods of enhancing pedestrian safety at uncontrolled marked crosswalks.

The Rectangular Rapid Flashing Beacon increases driver yield rates by up to 90%. The crosswalk beacons, activated in October, are completely solar powered. The Wig Wag plus Simultaneous flash pattern is a highly visible pattern ideal for uncontrolled crossings of high speed and multi lane roads, such as Reynolda Rd. These enhancements help keep our visitors safe during crossing.
Hearn Plaza Stairs were originally constructed in the 1950’s using a Flemish bond for masonry work. The Flemish bond is a decorative bond that lends visual quality to a wall surface using alternating *stretchers* (sides of brick) and *headers* (ends of brick) to form a pleasingly patterned regularity, requiring skill to execute.

The restoration of the East and West stairs on Hearn Plaza beside Reynolda Hall involved *masonry* repair and replacement, granite cap cleaning and replacement, granite tread replacement, *bluestone* paver installation, *wrought iron* railing, and drainage components.

Approximately 45 tons of NC granite was installed. Mount Airy, nicknamed "The Granite City," is home to the largest open face granite quarry in the world. There are larger pit quarries throughout the world but no larger open-face quarries.

Approximately 900 square feet of Pennsylvania bluestone and 15,000 bricks were installed in the Hearn Plaza Stair Project.

Pine Hall Brick manufactures a deacon blend, made specifically for WFU. Pine Hall is a century-old family-owned manufacturer headquartered in Winston-Salem, NC.
In front of the Sutton Sports Performance Center and Shah Basketball Player Development Center, the McCreary Practice Field project completed the remaining half of the grass football practice field to provide a larger natural grass playing surface for the Football team. In addition, the area was finished by completing the ornamental fence and paving the road and adding bollards for security at the road’s entrance.

The Practice Field project included the installation of 30,000 square feet of new sod.

The new mobile camera system on a 42 square foot mast has the capability to film, record, and log footage from the integrated console. The camera system is powered by an integrated battery system providing hours of use without connection to external power.

The scoreboard was upgraded with a new LED segment timer.
Replacing the 92 metal halide light fixtures with LED fixtures in the Indoor Tennis Center led to both a dramatic difference in light quality and energy savings. These lights will save an estimated $58,716 per year due to lighting efficiency improvement and reduced cooling load in the facility. Approved for a rebate by Duke Energy, this project will lead to a payback in less than 2 years.

The new LED lights, manufactured in Henderson, North Carolina, are instant on versus the original lights that required a 15 minute warm up time to reach 90% of their full light output. They also reduce glare and hotspots and result in a more even light distribution.
'21 Projects

Fireside on Manchester
Benson Flat Roof Replacement
Worrell Classrooms, Fancoil Replacements, and Emergency Starwell Lighting Replacements
Babcock Exterior Painting
Bridger Field House Fire Alarm System Upgrade
President's Office Renovations
Greene Hall Renovations and LED Upgrade
Hearn Plaza Stairs
Wait Chapel Windows and A/V system
McCreary Practice Field
Carrol Weathers Drive Repaving from Wake Forest Road to The Barn
Farrell Hall LED Upgrade
Polo LED Upgrade
ZSR LED Upgrade
Winston Hall LED Upgrade and Exterior Painting

Off Campus Projects

Deacon Place
Engineering Downtown
Tea Huts at Reynolda Gardens
President's House Renovations
Reynolda Crosswalk
Indoor Tennis Center LED Court Lighting
Rosedale House showers
UOC Air Compressor
From our new waste diversion programs, we've been able to recover an additional 1,275 lbs of material from campus. Textiles = 300 lbs, Paper Towels = 475 lbs, Dining Compost = 500 lbs.

Sophie Wimberley, our Waste Reduction Specialist in Facilities & Campus Services, has introduced a new textile waste redirection project called Green Zone, taken over the Deacs Donate program during student move-out, and organized sustainability awareness events during Earth Month.

The office of Waste Reduction and Recycling has been committed to an intricate balancing act during the past year consisting of managing waste and keeping waste reduction and diversion goals at the forefront of their practice. Across the globe single-use plastic has increased in efforts to keep people safe during the pandemic. However, the office of Waste Reduction and Recycling has continued to increase waste diversion programs and waste reduction initiatives while promoting the safety and wellbeing of students, faculty, and staff. Throughout the pandemic the Surplus team and the office of Waste Reduction and Recycling has prevailed in keeping Sustainability and Waste diversion as a primary focus.

With a total of 674 Waste Reduction specific Work Orders, we've been able to increase our waste diversion rate by 8% over the last fiscal year.

Waste Diversion

FY '21 Total Waste Diversion = over 1,500 tons

Surplus

Total Tons of Surplus Material Diverted = over 10 tons
Facilities & Campus Services owns and maintains 216 licensed vehicles, including trucks, cars, and trailers as well as 151 non licensed vehicles like landscaping equipment.

In Fiscal Year '21, Fleet bought 11 vehicles, sold 18, and re-purposed 8.

Our four fleet staff have a total of over 100 years of experience.

Preventative vs. Reactive Work

<table>
<thead>
<tr>
<th>FY '21 Workorders</th>
<th>Created</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Created</td>
<td>1879</td>
<td>1825</td>
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PM 52%

Reactive 48%

143 vehicles washed
173 oil changes
220 tires changed
157 batteries replaced
229 gallons of oil recycled
297,716 gallons of bulk gas purchased.
Wake Forest University’s Custodial Department is determined and dedicated to further ensure the cleanliness and safety of Reynolda Campus for all students, faculty, and staff. Throughout the pandemic, rooms used for quarantine and isolation were cleaned and disinfected with advanced, electrostatic equipment that ensured efficient turnarounds and maximized student safety. As demands increased, custodial staff ensured the needs of students were consistently met and additional disinfection processes were implemented according to CDC guidelines.

These additional processes guaranteed the cleanliness of Residence Life & Housing, Academic and Administrative buildings, Athletic facilities, and Shuttle Bus transportation for all students, faculty, and staff. The custodial team maintained over 200 hand sanitizer dispensers, 150 paper towel holders, and 250 disinfectant bottles for classroom use over the pandemic time frame. Ultimately, the support and collaborative communication between WFU’s departments was instrumental in achieving our overall success.
Landscaping

Bucket Truck

Facilities staff can now serve campus from new heights with the 2021 Freightliner Chassis bucket truck equipped with a **Terex XTPRO 60/70 Aerial Device**. The benefits of having this new tool to work with include its extended reach up to **70 feet high**, four outriggers for stability, and smooth operation. With most of the mature trees on campus and buildings standing well above **50 feet** in height, this bucket truck creates a new and improved level of safety and efficiency for both technicians and arborists.

The empty lot on the corner of **Wingate Road** and **Faculty Drive** was placed in the hands of the Landscaping team. **Darryl Grieser** completed a design for a garden space filled with North Carolina native plants, mulched strolling trails, and several sitting benches. The finished area is now called **Pocket Park**.

Did you know** the magnolias on Manchester Plaza arrived at only 5 feet tall in 1956 from a group of 20 donated saplings by Walter Raphael Wiley Sr. and his wife, Monnie Louise McDaniel Wiley? With the University’s pending move from the town of Wake Forest to Winston-Salem, the family collected magnolia seeds from the original campus, planted them in a filled-in swimming pool in their hometown in South Carolina, later delivering them in a large station wagon to the new campus in Winston-Salem.

'21 Numbers

- **27** Landscaping Staff
- **400** flats of annuals planted in the spring
- **35,000** tulip bulbs planted
- **600** cubic yards of mulch used
- **92** acres maintained on Reynolda campus
- **318** acres maintained at Reynolda House, Village, and Gardens
- **39** hazardous trees removed
- **20** fallen trees cleared
- **305** trees pruned for clearance and aesthetics
- **15** trees planted
Academic & Admin Team

Top 10 Workorder Categories

- **Lights Out**: 20%
- **No Heat/AC**: 11%
- **Pest Control**: 9%
- **Elevator Repair**: 5%
- **COVID-19**: 4%
- **No Power**: 4%
- **Clogged Toilet**: 3%
- **Electrical Problem**: 3%
- **Hang Files/Pictures**: 2%
- **General Repairs**: 39%

FY '21 Workorders

*Completed Work Orders include standing work that crossed over fiscal year timeframe.*

- **Created**
  - 8620
- **Completed**
  - 8994

Preventative vs. Reactive Work

- **Reactive**: 32%
- **Preventative**: 68%
Preventative vs. Reactive Work

Preventative: 51%
Reactive: 49%

Top 10 Workorder Categories

- General Repairs: 36%
- Pest Control: 15%
- Clogged Shower: 12%
- No Heat or AC - In Room: 11%
- Lights Out: 9%
- Clogged Toilet: 5%
- No Power to Receptacle: 4%
- Furniture Repair: 2%
- Door Repair: 2%
- General Repairs: 36%

FY '21 Workorders Created vs. Completed

Created: 8126
Completed: 8716

* Completed Work Orders include standing work that crossed over fiscal year timeframe.
The Athletics Turf Team manages 42.5 total acres of turf and fields. Out of the 12 different fields, 6 are made of natural grass, 5 are synthetic, and 1 is a mix of natural grass and synthetic turf.
Our team of 4 locksmiths manages:

- 200 ADA accessible door openers
- 2000 card readers
- 1000 mailbox keys
- 8500 Residence Life & Housing specific keys

The Lock & Key Management Policy has been updated to keep campus safe and secure through changes in campus access over recent years. These changes to the policy have been reflected with the increase in secure points of entry and more security checks than ever before.

In Fiscal Year 2021, the Lockshop team completed more than 800 re-cores & re-keys to secure campus.

'21 Numbers

- 2847 fire extinguishers
- 110 fire alarm tests
- 62 fire hydrants
- 100 fire alarm panels across campus
- 62 fire inspections
- 357 fire drills
- 75 sprinklered buildings

photo courtesy of Ken Bennett
Life Safety inventory continues to represent a larger value and quantity for a 2nd straight year, due to the stocking of PPE/COVID-19 items supplied for campus customers’ needs.

Of the top 5 inventory categories:
- $94,717 in Life Safety supplies
- $36,391 in HVAC equipment
- $19,463 in Entrances & Egresses

Total Inventory Value: $248,458

FY '21 Numbers

- 4,069 part requests
- 1,404 parts inventoried
- 1,026 vendor deliveries
Outreach

During the most restrictive COVID-19 period on campus, our social media communications were temporarily halted exclusively for emergency communications.

Our YouTube channel was able to grow with our very first virtual TechX presentation video and a donor-targeted floral tour led by Paul Sheff in Landscaping.

As campus began to repopulate, and COVID safe events were planned, our department made sure that we were communicating our services to campus.

Some events continued virtually, including some community conversations about From the Ground Up, our collaborative arts performance on Hearn Plaza in October of 2019.

Posts and engagement on social media slowed during campus COVID restrictions, but now increases with the return of in person classes and more on campus activities & events.

Facilities has a total of 1,086 followers, an average of 454 reach and impressions, and 25 average engagement per post across all 3 major social media platforms, Facebook, Twitter, and Instagram.

Watch our YouTube videos by scanning this code.

Facilities & Campus Services

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photo courtesy of Ken Bennett
FY '21 Numbers

Work Orders by Cause

Less than 1% of our reactive work orders from FY '21 were emergencies, 13% were high priority, 79% were medium, less than 1% were low priority, and 8% were scheduled.

COVID-19 comprised 5% of total work order request causes in FY '21.

Work Orders by Department

Top 10 Work Orders by Issue

Out of the top WorkOrder Issues by volume,

Preventative Maintenance accounts for 50%
Maintenance makes up 23%
Custodial is 6%
Plumbing is 5%
Electrical is 4%
Fleet is 4%
Lock or Card Reader Issues are 3%
Heating and Cooling are 3%
Leaks are 1%
Projects are 1%
COVID-19 initiated many restrictions, including online classes and work from home mandates. Our team made the most of an unoccupied campus with strategic scheduling and were able to decrease energy usage.

Due to in-person events scaling back during this time, Athletics and off campus properties also saw a decrease in energy usage leading to energy cost reductions in Fiscal Year 2020 compared to Fiscal Year 2019.

On Reynolds Campus, energy costs were reduced by $443,630 during COVID-19.

Due to in-person events scaling back during this time, Athletics and off campus properties also saw a decrease in energy usage leading to energy cost reductions in Fiscal Year 2020 compared to Fiscal Year 2019.

On Athletics Off-Campus Properties, energy costs were reduced by $186,747 during COVID-19.
Energy Savings continue as our Gross Square Footage increases. Since Fiscal Year 2007, we have managed to reduce our carbon emissions and energy use intensity by 47% despite an increase to our gross square footage across campus.

Our department produced a video presentation on our building systems for the TechX event, held virtually this year.
Letter from the Vice President

Dear Campus Community,

Fiscal Year 2021 was certainly a challenging year. The dedication of all the Facilities and Campus Services staff has been amazing. I want to sincerely thank everyone in Facilities & Campus Services for all the hard work. Looking back, I can say with confidence that the Facilities employees are strong and poised to handle any and all emerging challenges.

This year, Facilities and Campus Services recognized retirees that total over 500 years of service, all while welcoming the next generation. Change is all around us, and the determination to excel is the norm. We are grateful to our campus partners and look forward to supporting the University’s educational mission and making the student experience the best it can be.

Sincerely,
John Shenette

Retirements

Phil Atkins
21 years

James Carlin
35 years

Ernie Johnson
8 years

Willie Lennon
8 years

Hugh Brown
36 years

Greg Scott
36 years

Melvin Lee
26 years

Benny O’Neal
27 years

Lorraine Bradford
24 years

Tanya Johnson
25 years

Terry Rice
17 years

John McCrowell
30 years

Ron Mitchell
10 years

Lorraine Bradford
24 years

Facilities & Campus Services

Annual Report 2021
Facilities & Campus Services had 24 early retirees leave the Department and University over Fiscal Year 2021.

We were able to thank them for their service at a Staff Celebration before the start of the Fall 2021 semester.

Our retirees worked for Wake Forest University for a total of over 500 years.
Wake Forest University

Facilities and Campus Services

photo courtesy of Lauren Olinge