



SUSTAINABLE COLUMBUS[★]

ANDREW J. GINTHER, MAYOR



2021 ANNUAL REPORT

2021 Sustainable Columbus Annual Report

Message from City of Columbus Mayor Andrew J. Ginther



Dear Friends and Neighbors:

2021 was a historic year in the City of Columbus for sustainability and environmental justice.

Through our Sustainable Columbus initiative, the city released its first-ever Columbus Climate Action Plan (CAP), committing our community to be carbon neutral by 2050. This plan is not only for the City of Columbus and our municipal operations, but for the community as a whole, including our residents and private-sector and nonprofit partners. The plan will act as our roadmap for imparting environmental justice through purposeful and intentional climate action, and ensuring Columbus does its part to combat global climate change.

Through these efforts, we have changed how the city operates, breaking down walls between departments and further strengthening our work with external partners. We know we can only reach these ambitious goals with the steadfast and enthusiastic support of organizations outside the city.

Another key milestone was the launch of the Clean Energy Columbus aggregation program, providing 100% clean energy to hundreds of thousands of Columbus residents. In the first year of this program, residents used almost 1.5 billion kilowatt hours of electricity (kWh) generated from

renewable energy sources. That's equivalent to 226,036 fewer cars on the road during a one year period and 17,345,984 more trees growing for 10 years.

The city has embraced sustainability as a guiding principle, always keeping an eye on how our actions impact our most vulnerable residents and how city government can help promote more prosperous neighborhoods. Our work is going well, and we are achieving real results, which you will see in the pages of this report.

I'm proud of the work we've accomplished in keeping Columbus as a sustainability leader in our state, region and nation. Our work is not done. But the best is yet to come.

Sincerely,

The Honorable Andrew J. Ginther

Mayor, City of Columbus



**SUSTAINABLE
COLUMBUS**

ANDREW J. GINTHER, MAYOR

THE CITY OF
COLUMBUS

ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
PUBLIC UTILITIES

Year In Review

2021 was a historic year for sustainability and environmental justice in Columbus, most notably due to the release of the first-ever City of Columbus Climate Action Plan (CAP).

The CAP sets the Columbus community on a path to reach carbon neutrality by 2050, ensuring Columbus does its part to combat global change while also ensuring we are prepared for some of its inevitable effects. The plan has five key sections that reflect sectors of emissions and our values as a community. Within those sections, there are 13 strategies and 32 actions, each with their own targets and goals to help us stay on track and accountable.

The city also made unprecedented commitments to expand sustainability staffing, with an additional six positions budgeted through the 2022 operating budget. This additional capacity will support implementation of the Columbus Climate Action Plan and further equitable impact for residents.

This year for our annual report, we're providing updates and progress based on those key sections of the plan. We're proud of the progress that's been made and look forward to building on this work with community partners in the decades to come.



Mayor Andrew J. Ginther stands with partners from the Ohio Environmental Council, The Columbus Partnership and IMPACT Community Action at the Linden Community Center for the launch and press conference for the Columbus Climate Action Plan

Climate Solutions: The Columbus Way

Empowering a Community of Climate Leaders, Developing a Clean Energy Economy, and Enhancing Partnerships for Success

GreenSpot Program

Created in 2008, the GreenSpot program inspires, educates, and recognizes households, businesses, and community groups that adopt green practices. Growth in 2021 saw membership rise to 23,185, including 21,766 household members, 1,272 business members, and 147 community groups. Additionally, four businesses graduated from the GreenSpot Sustainable Business Course. Each year the GreenSpotLight awards recognize a large, medium and small organization for outstanding sustainability practices. 2021 winners were DLZ, Accurate IT, and CeraNet who had notable accomplishments such as:

- **40% reduction in electric use (DLZ)**
- **“No Idling” policy and practice (DLZ and Accurate IT)**
- **“Zero Landfill” facility (Accurate IT)**
- **Work from home and remote policies (CeraNet)**
- **Recycled 650 servers and six truckloads of accessories (CeraNet)**



GreenSpot teamed up with Green Columbus to give away 350 trees in Opportunity Neighborhoods, which are primarily communities of color and/or lower-income neighborhoods. 19 GreenSpot Conversations were held covering a range of sustainability topics, and GreenSpot held several educational webinars, created numerous videos covering sustainability topics for children and adults, and ran educational social media campaigns. More than 1,482 households participated in the GreenSpot Backyard Conservation program to learn about stormwater, rain barrels and native plants. To date, GreenSpot members have saved more than \$12 million through reduced energy usage, reduced CO2 emissions by 70 million pounds, reduced water consumption by 226 million gallons, and recycled 37 million pounds of material that otherwise would have ended up in a landfill. To further align with the Columbus Climate Action Plan, the GreenSpot Advisory Board began meeting and convening to put together a plan for achieving Action 1.1 of the CAP – Incorporate Climate Action Programs into GreenSpot.

Community Advocates

Sustainable Columbus secured national partner funding to support equitable community engagement for healthier, more sustainable buildings, and development of new electric vehicle transportation choices in our Opportunity Neighborhoods. This funding was awarded to partner IMPACT Community Action to hire three Community Advocates to engage with residents about Sustainable Columbus policy, in particular an Electric Vehicle (EV) Readiness policy that was in its beginning stages. The hiring of these advocates is designed to ensure equitable engagement from the outset of policy development.



About the 2021 Advocates –



Ebony Williams – Having resided in nearly every part of town at some point in her life and now based in Linden, Ebony Williams is a proud Columbus native. Ebony believes climate justice is an equal opportunity for everyone to live a long, healthy life – and not just for people with the biggest pockets.



Jameka Humphries – Jameka is a lifelong Columbus resident who has always taken a sense of pride in her community. Born and raised in the Linden area and now residing in the Southside, Jameka joined IMPACT as a Community Advocate in order to serve Columbus' most vulnerable residents in securing a more sustainable future.



JD Groves – JD Groves, MBA, is a small business owner and electrician in the Hilltop who is passionate about educating the community on clean energy alternatives. JD joined IMPACT as a Community Advocate because he desires to make a positive impact on upward mobility in Columbus' Opportunity Neighborhoods, where the threats of climate change are disproportionately felt.

Empowered! Clean Energy Jobs Training Program Funded

Building on our commitment to environmental justice and the successful Energy Advocates and Energy Savers programs, the 2022 operating budget (released in 2021) invested \$1.5 million for the Empowered! clean energy workforce program. The goal of the Empowered! program is to provide pathways to good paying careers, that lead to upward mobility, in the construction and clean energy sector for young Columbus residents with a focus on people of color, women and residents in Opportunity Neighborhoods. Administered by IMPACT Community Action, the funding supports three cohorts of up to 75 participants. This program was developed in partnership with the Clean Energy Columbus program, AEP Energy, and the support of the American Cities Climate Challenge.



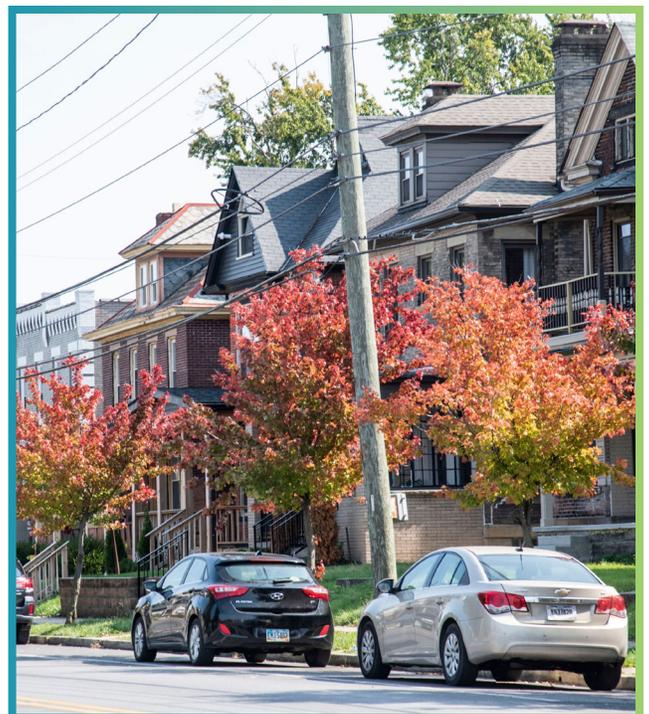
Sustainable Neighborhoods

Supporting a Healthy & Resilient Community, Implementing Strategies for Healthy Ecosystems, and Preparing for Warmer and Wetter Seasons

LED Streetlights

As part of the Columbus Climate Action Plan, a goal was established to convert all streetlights to light-emitting diode (LED) by 2030. Standards for the City of Columbus now require all new streetlights to be LED, and as existing lights fail they are replaced with LED. The Smart Lighting project will convert all existing high-pressure sodium (HPS) lights to LED as the project moves forward. Approximately 3,100 street lights are now LED.

The Smart Lighting pilot phase project to convert 2,550 lights in the Linden area was approximately 20% complete. The design plan for the Hilltop's 3,794 street light conversion project was 100% complete and is undergoing citywide review.



Urban Forestry Master Plan

The UFMP is the first citywide strategic plan to invest long-term in Columbus' trees. Over the next decades, the plan will guide the entire Columbus community to prioritize, preserve and grow our tree canopy. The Mayor's Office awarded \$1.5 million to implement the UFMP in the 2020 capital budget, and City Council appropriated the funds in September 2021. Another \$1.5 million was proposed in the 2021 capital budget. These funds are planned to be used for Forestry staff, equipment and contracts. The Columbus Recreation and Parks Department has also received \$420,500 of federal Community Development Block Grants to update the street tree inventory and plant city trees. In 2021, Recreation and Parks Forestry staff planted 3,148 trees.

The Recreation and Parks Department completed more than 50% of the public tree inventory for the City of Columbus in 2021, providing vital information on existing trees as well as building a bank of available planting spaces. An updated tree canopy assessment is in process. The assessment will show what percentage of the city is covered by trees and will analyze tree canopy

cover across all of Franklin County, as well as how Columbus' canopy has changed over time.

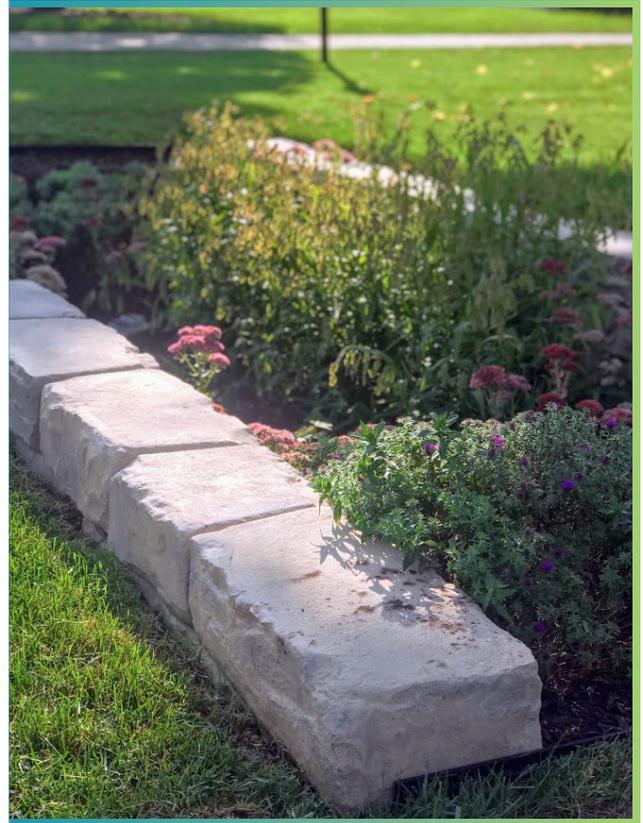
The Recreation and Parks Department increased forestry staffing for proactive tree care, filling two full-time positions within the Forestry Division and reimagined the role of the City Forester position. Columbus partnered with the Church for All People, the Ohio State University, Green Columbus, Friends of the Lower Olentangy Watershed (FLOW), and the Ohio Department of Natural Resources to plant trees on the South Side. The South Side neighborhood has an average of 18% tree canopy, below the city's average, and scores highly on the UFMP social equity index.



Blueprint Columbus

Blueprint Columbus is the alternative to portions of the Wet Weather Management Plan, submitted to the Ohio Environmental Protection Agency in 2005, to address sewer overflows and consent orders with the state in 2022 and 2004. The final Blueprint Columbus integrated plan was approved by the agency in 2015. The plan utilizes greener alternatives and residential infrastructure improvements to solve wet weather problems, instead of building more costly sewer tunnels or “gray solutions.” The four main strategies, or pillars, of the plan include: residential home sewer lateral lining, roof water redirection, sump pumps, and green infrastructure.

Five Blueprint Columbus capital improvement projects began construction or were awarded in the North Linden 1 project area in 2021. These projects were recommended in the City of Columbus Integrated Plan, and will construct bioretention basins within the right-of-way and on vacant parcels owned by Columbus. These basins will capture pollutant-laden stormwater runoff and provide treatment prior to discharge to the receiving stream. Storm sewer and inlet improvements constructed in conjunction with these basins will improve drainage and reduce street flooding.



**BLUE
PRINT
COLUMBUS**
Cleaner streams.
Stronger neighborhoods.



Buildings

Increasing Renewable Energy, Increasing Building Efficiency, and Adopting Net Zero & Resilient Building Standards

Clean Energy Columbus

Clean Energy Columbus, the city's 100% clean energy electric aggregation program, officially began in June of 2021. The program launch was the exciting culmination of over a year and half of work with residents, community groups and stakeholders to implement the program – which included residents approving a ballot measure in fall of 2020 and an Aggregation Advisory Group that met for 8 months into the spring of 2021 to help shape the final program.

Clean Energy Columbus is a city program in partnership with consultant and manager Trebel Energy, and program energy supplier AEP Energy. For the first year of the program, residents participating in Clean Energy Columbus used almost 1.5 billion kilowatt hours (kWh) generated from renewable energy sources. The environmental benefits of which equate to:

- **Over 226,000 fewer cars on the road during a year period**
- **Over 1.1 billion fewer pounds of coal burned**
- **Over 17 million more trees growing for 10 years**

The program maintained a participation rate of over 70% for the duration of the first year of the program, meaning anywhere from 170,000 to almost 200,000 accounts enrolled.

The program also supports further sustainability and climate work through the community grant built into the program. The program generated nearly \$1.2 million in its first year, and to further leverage the impact of this incoming funding Columbus committed \$3 million of its operating budget toward energy efficiency measures for low-income residents and workforce development efforts.



Columbus Solar Park

Clean Energy Columbus not only provides participants with 100% clean energy, but is on a path to all Ohio-based wind and solar, ensuring the most environmental benefit for our local community. One project in particular is the Columbus Solar Park, located right here in Franklin County. In September 2021, Mayor Andrew J. Ginther along with community partners SWACO, BQ Energy, AEP Energy, IMPACT Community Action and Sierra Club's Ready for 100, stood together at a press conference to announce the inclusion of the Columbus Solar Park as part of the Clean Energy Columbus program.

The Columbus Solar Park is a 49.5 megawatt (MW) solar project being developed on a 173-acre property that once served as Franklin County's sanitary landfill between Jackson Pike and I-71. The former landfill will be transformed into the largest solar facility of its kind in the U.S. The clean energy produced will stay in our community and be used to power around 5,000 Columbus homes and small businesses.



Columbus Solar Co-Op

In support of strategies to increase clean, renewable energy, 2021 saw Sustainable Columbus complete its first Solar Co-Op campaign in partnership with non-profit Solar United Neighbors. The co-op successfully recruited 105 residents to join, surpassing the 100 member goal and additionally educated over 200 residents on the benefits of solar and clean energy. Through the initiative, 121 kilowatts of solar was installed that will provide \$510,000 in savings for those members over the life of the systems. These residents will offset over 4.3 million pounds of carbon through their solar installations, which supports Columbus' Climate Action Plan goals and aids in meeting the target of 50 megawatts (MW) of onsite residential solar by 2030.

The 2021 co-op was successful in moving the needle on residential clean energy adoption and building relationships to continue that work. Other partners critical to the success included the Ohio Environmental Council, IMPACT Community Action, Sierra Club Ready for 100, the Rocky Mountain Institute, and Power a Clean Future Ohio.

Sustainable Columbus has continued to build on these partnerships by contracting with Solar United Neighbors to do two additional Solar Co-Ops planned for 2022 and 2023.

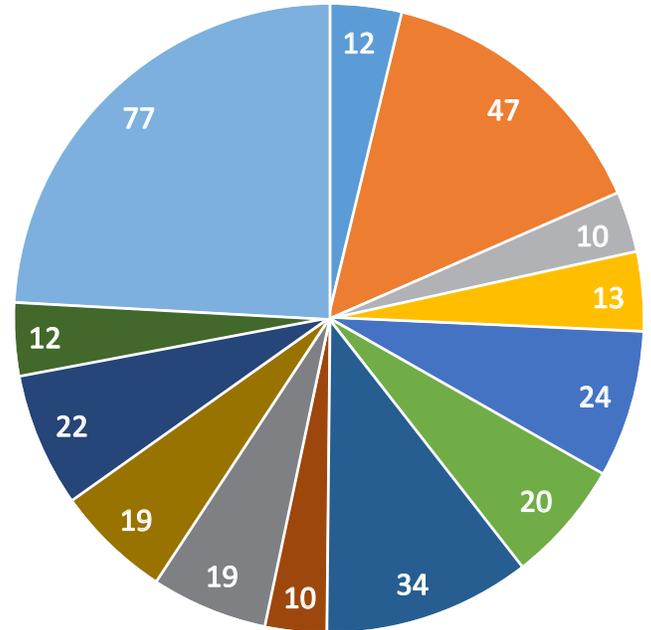


Benchmarking & Transparency

2021 saw the first year of implementation for the Benchmarking Ordinance, which requires all buildings in Columbus 50,000 square feet and larger to track monthly energy and water data, and then submit yearly reports to the city. Bringing all required buildings into the ordinance was done in phases, with 2021 requiring buildings 100,000 square feet or larger to submit 2020 energy data only. The first year had many milestones, including the development of an automated benchmarking program for water data, collaboration with AEP Ohio to establish an electric meter lookup system for multi-family owners along with anonymized aggregate electric data distribution for building owners, and automated benchmarking for Columbia Gas commercial building owners.

The Benchmarking Help Desk works with building owners to bring their buildings into compliance. In 2021, the Help Desk fielded over 215 phone calls and 1,782 emails. 360 buildings were in compliance with the ordinance for its inaugural year, capturing 66,744,232 square feet of building space, and 37,529,089,784.8 MMBtu (Metric Million British Thermal Units) of energy. This equates to 2,411,864.1 MTCO₂e (Metric Tons of Carbon Dioxide Equivalent) of greenhouse gasses. Metrics like these are vital to Columbus understanding how and where we use energy, a necessary step to meet our climate change goals.

2021 Columbus Benchmarking Compliance By Building Type



- **Distribution Center**
- **Office**
- **Manufacturing/ Industrial Plant**
- **Fitness Center/Gym**
- **K-12 School**
- **Retail Store**
- **College/University**
- **Non-refrigerated Warehouse**
- **Laboratory**
- **Residence Hall**
- **Healthcare Facility/Medical Office**
- **Other-Recreation**

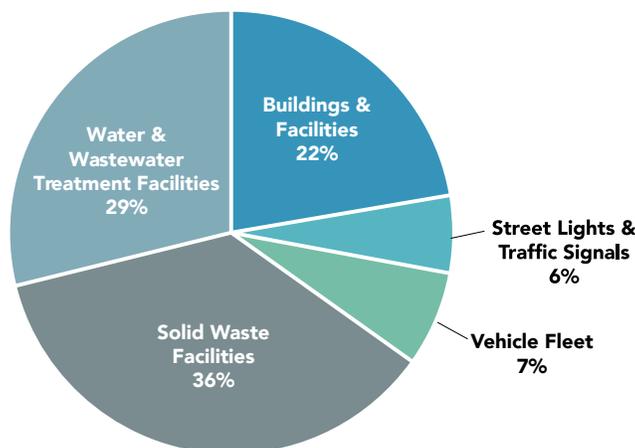


Municipal Comprehensive Energy Management Plan

The Comprehensive Energy Management Plan (CEMP) for municipal buildings was developed and finalized by the City of Columbus and Southface Institute in December of 2020. The plan establishes a comprehensive approach to reducing municipal building energy use 25% by 2030 over the 2018 baseline, and in alignment with the Climate Action Plan goals around reducing greenhouse gas emissions from municipal building operations.

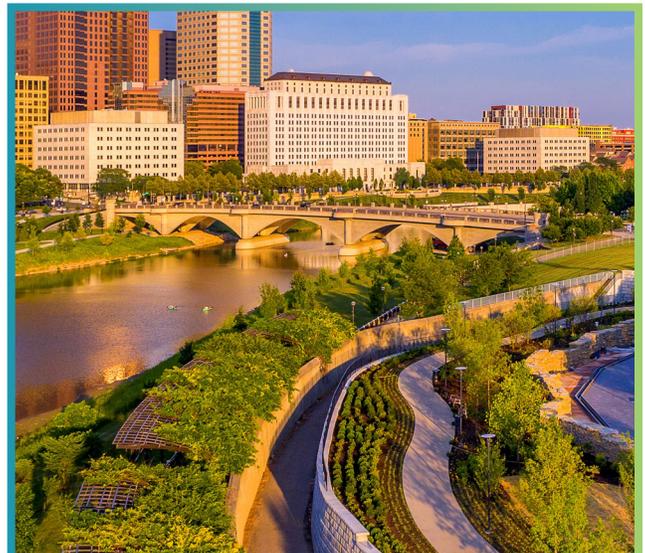
The figure below shows a pie chart of total greenhouse gas emissions from municipal operations in 2019, the latest data available at the time the CEMP was created. Municipal buildings comprise two categories: Buildings & Facilities (22%), and Water & Wastewater Treatment Facilities (29%). Together, these two categories account for 51% of the total emissions from municipal operations, demonstrating the importance of reducing emissions from this sizeable category.

2021 allowed for greater collaboration and goal setting amongst three key departments to building management and operations: Finance and Management, Public Utilities, and the Recreation and Parks Department. All departments created CEMP teams, attended regular quarterly check-in meetings, budgeted for projects, updated JadeTrack billing management, and began to focus on priority buildings 25,000 sq ft and above with high energy utilization. A training session was hosted for all parties interested in improving their understanding of the JadeTrack utility bill management software which was well-received and attended by 16 city staff members from all departments.



Other highlights include:

- \$650,000 worth of energy efficiency measures implemented at six city facilities
 - o East Central Health, Jerry Hammond, City Hall, Police Academy, Fire Training Academy, and Central Safety
- Hired a firm to perform energy audits and identify energy conservation measures for Hap Cremean Water Treatment Plant and Jackson Pike Wastewater Treatment Plant
 - o This is an exciting development as water and wastewater treatment plants are among the highest energy users amongst the city's municipal building stock. They are in operation 24/7 providing critical services to ensure safe, clean drinking water for our community. Identifying energy efficiency opportunities for these operations will contribute significantly toward meeting our municipal efficiency goals.
- Hiring a Full Time Employee (FTE) to support the Energy Manager and implementation of the CEMP
- HVAC Improvements at Berliner, Big Run MacDonald, and Willis Athletic Complex
- Over \$6 million budgeted for further Recreation and Parks Department efficiency upgrades in 2022



Transportation

Enabling Carbon Free Vehicles and Supporting Equitable Mode Shift

Electric Vehicle Readiness Ordinance

The City of Columbus advanced our EV readiness in 2021 through a research and planning process to adopt an EV Ready Parking Ordinance. EV Ready Parking is a best management practice that ensures newly constructed parking spaces can easily and affordably be converted to EV charging stations in the future. It requires that a certain percentage of newly constructed parking spaces include electrical infrastructure at the time of construction. The vast majority of parking facilities in Columbus are not currently constructed to accommodate the installation of electric vehicle charging stations. Adoption of an EV Ready Parking Ordinance is a priority action in the City's Climate Action Plan. The passage of the ordinance will provide widespread, equitable access to EV charging throughout the city and prepare for rapid EV adoption. The impact of the ordinance will also improve local air quality, and ensure we achieve the city's climate and equity goals in an accessible and inclusive manner.

Research and planning completed in 2021 included review of EV Ready Parking Policies enacted by other cities, review of published technical analyses and cost estimates for the policy, and outreach and education on EV Ready Parking with developers and affordable housing experts. Funding was secured for CommEN Strategies to conduct equitable engagement with residents living in Opportunity Neighborhoods through three focus groups, and more broadly, with residents across the city using a community impacts survey. The three focus groups were used to better understand what matters most to Columbus residents when it comes to personal transportation, as well as their perspective on EV. A total of about 100 residents completed the online Equitable EV Ready Parking Community Impacts Survey. Input from the engagement with residents will be used to inform a draft EV Readiness Ordinance for Columbus.

Read EV Ready updates and answers to frequently asked questions available here:

www.columbus.gov/sustainable/evreadyparking/

Smart Columbus

In May 2021, Smart Columbus closed out its five-year U.S. Department of Transportation Smart City Challenge (SCC) grant. In the first half of 2021, Smart Columbus focused on data collection, program evaluation and strategy for the continuation of several projects, including the Smart Columbus Operating System, Connected Vehicle Environment, Multimodal Trip Planning App and Event Parking Management. A comprehensive Smart City Challenge Final Report as well as an Executive Summary was published, sharing with the community the efforts' accomplishments, challenges, learnings and opportunities.

Smart Columbus also honed in on its mission and purpose beyond the SCC grant. Alongside key stakeholders, Smart Columbus defined a strategic framework and established itself as a community non-profit with a Board of Directors. This laid the groundwork for the core priorities Smart Columbus aims to accomplish in its next chapter: accelerating the reduction of greenhouse gas emissions and accelerating the region's digital transformation through thought leadership, partnerships, and impact delivery. A team was built to support execution of the Strategic Framework, including scoping, recruiting, and onboarding six new team members (Director of Sustainability, Director of Partnerships, Operations Lead, Design Research Lead, Digital Inclusion Program Lead, and an Administrative Assistant).



LinkUs

LinkUs is a growth and mobility initiative that will create an integrated mobility system to make it easier to walk, bike or take public transit in our region's busiest areas, while preserving desirable commute times for everyone.

The region is expected to grow to three million people by 2050, providing an opportunity to create transit modes Columbus currently doesn't have, and to improve access and expand opportunities for all who live in our region.

This investment will drive sustainable growth patterns close to transit, protect open space and farmland, and limit traffic impacts. It will include high capacity, advanced rapid transit – adding bikeways, green space, roadways, pedestrian improvements including sidewalks, and development along key regional corridors.

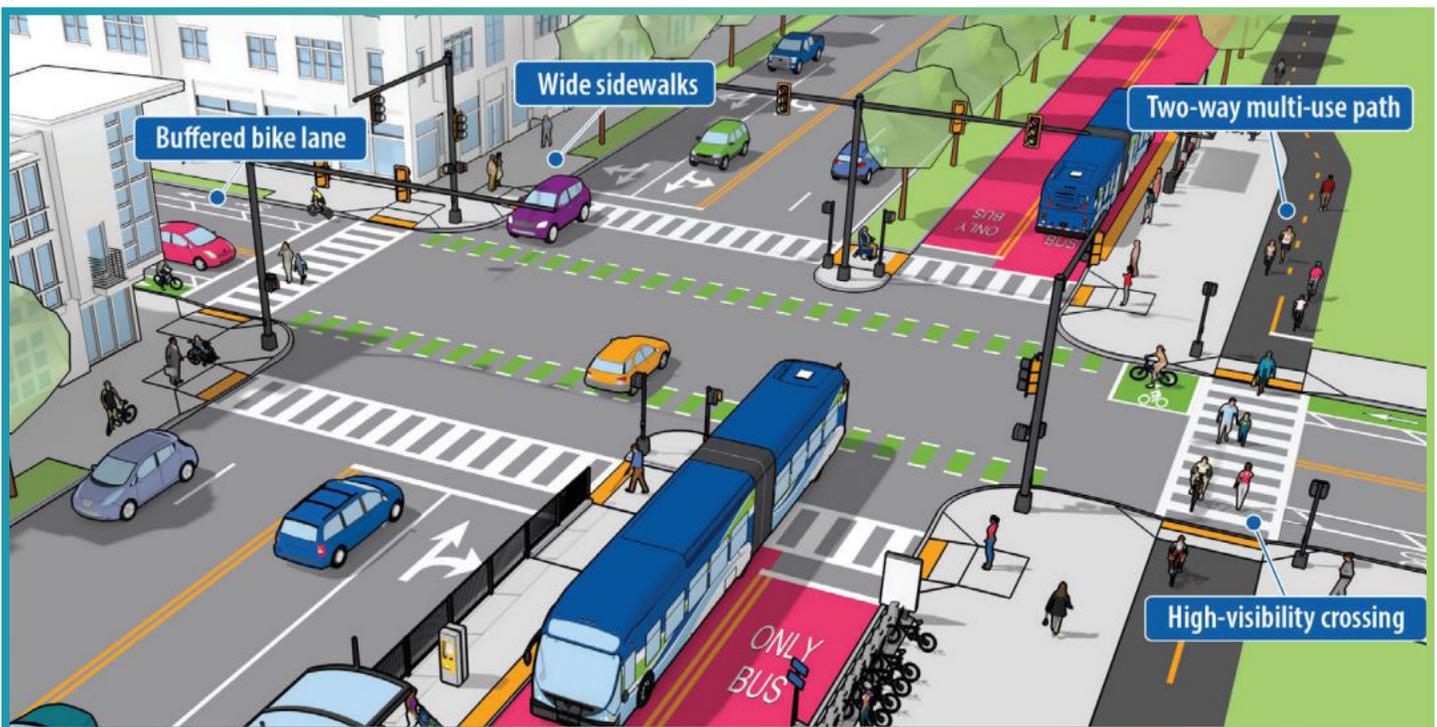
High Capacity Rapid Transit (HCRT) corridors are the foundation of LinkUS and design progressed in 2021 on three corridors for bus rapid transit (BRT) – Northwest, W. Broad Street and E. Main Street.



LinkUS will increase access for all members of the community, including seniors, veterans, people with disabilities, students and working families who depend on it to get to the grocery store, doctor appointments, school and work. In June 2021, the LinkUS partners released the State of Mobility Report that helps establish the “why” for LinkUS.

The State of Mobility Report:

- Provides a snapshot of our transportation system and emerging mobility trends
- Documents ongoing mobility planning efforts in the Columbus region
- Showcases the critical role of mobility in achieving broader regional goals of equity, public health, sustainability, and economic competitiveness
- Identifies our changing transportation needs and the importance of strategic investments in mobility
- In August 2021, the LinkUS Leadership Coalition kicked off to help establish key recommendations related to the who, what, why and how of LinkUS. The LinkUS Community Action Plan is anticipated in the first half of 2022.



Waste

Reducing Waste Generated and Increasing Landfill Diversion Rates

Each week, the Division of Refuse Collection under the Department of Public Service empties refuse containers at more than 350,000 Columbus households. Biweekly recycling and yard waste collection is also provided.

In addition, crews collect scheduled bulk pickup items, service public litter containers in the right of way and support Mayor Ginther's Clean Neighborhoods initiative to clear city alleys of trash debris and illegal dumping. Refuse Collection is focused on creating greater operational efficiencies as Columbus' population and number of households continue to grow.

Refuse Collection partnered with the YMCA of Central Ohio in 2021 on a summer and fall program that employed teens and young adults to help tackle litter in Columbus neighborhoods. The YMCA Earth Service Corps accomplished cleanup of at least 50,000 pounds of litter. Nearly 400 young people were employed by the program to pick up litter a few hours each weekday. Then they returned to their base YMCA or city community center for lunch and Earth Service Corps programming on topics such as service learning, environmental education, leadership development, cross-cultural awareness, financial literacy and college and career exploration.

Refuse Collection helped develop the Earth Service Corps program, funded by the American Rescue Plan, and disposed of bags of litter collected.

Keep Columbus Beautiful, a litter abatement program managed by Refuse Collection, partners with neighborhood and community groups, businesses and schools on litter cleanup, beautification projects and recycling promotion. Nearly 11,500 volunteers devoted 28,476 hours in 2021 to litter collection. Their haul: 254,873 pounds of debris — more than 127 tons of litter.

Refuse Collection and the Solid Waste Authority of Central Ohio, better known as SWACO, launched a Recycle Right pilot in the Hilltop to increase participation in the city's residential

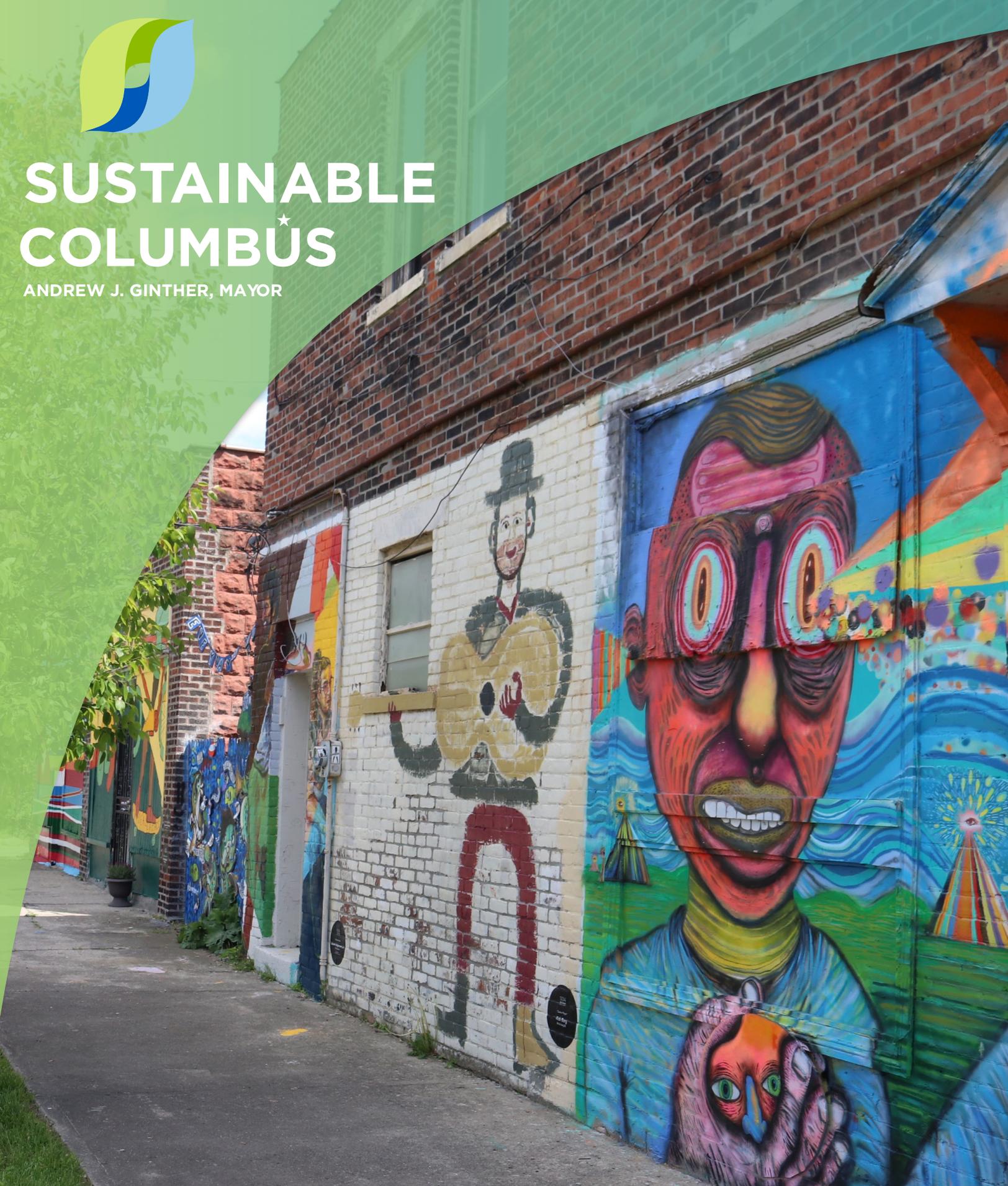
recycling collection service. The initiative is focused on educating residents about recycling benefits to the Hilltop and to the environment. Neighborhood ambassadors provided outreach on proper use of the city-issued household blue recycling containers.





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