THE CITY OF COLUMBUS
ANDREW J. GINTHER, MAYOR
DEPARTMENT OF BUILDING AND ZONING SERVICES

City of Columbus
Building and Zoning Services and Sustainable Columbus

SUSTAINABLE COLUMBUS
ANDREW J. GINTHER, MAYOR

EV Ready Parking Ordinance

Public Comments Received and City Responses

The following document outlines **public comments received through the 30-day public comment period (April 25, 2022 - May 25, 2022)** that posed a question and/or required clarification from the City of Columbus. Summarized feedback is noted in the left column and City of Columbus response is noted in the right column. A summary of the changes made to the draft EV Ready Parking Ordinance based on stakeholder input submitted during the 30-day public comment period can be found on our website.

What We Heard and How We Responded	
Stakeholder Feedback	**City of Columbus Response**
Additional lead time is needed to incorporate EV ready standards into design of new projects.	Our current proposal sets an implementation date of January 1, 2024 to ensure all developments have adequate time to adjust to the new standards.
How can we ensure the EV requirements allow flexibility for rapidly changing technologies?	The proposed technical specifications for charging infrastructure are based on universally adopted industry standards set by SAE International. Technical specifications will be promulgated through Rules and Regulations at the Director's discretion rather than established via Code.
How are supply chain delays being addressed?	By establishing an implementation date of January 1, 2024, we expect to circumvent current supply chain delays, but we will continue to monitor the situation.
How will EV regulations be implemented if parking requirements receive a zoning variance?	If a variance is granted that reduces the amount of parking, the EV parking minimums will apply to the amount of parking set by the parking variance. For example, if a variance is granted that reduces the number of overall parking spaces from 100 to 50,

	the EV Parking Minimum Requirements set in Section 3 of the proposed EV Ready Parking Ordinance will apply to the 50 spaces.
Will EV requirements be scaled up or down based on the development's proximity to transit corridors?	Not at this time.
Will there be exceptions for Extremely Low Income housing or those serving homeless populations?	Not at this time. The EVSE Installed requirements for affordable housing are contingent upon a City-funded program to cover the costs. The developer would only be responsible for the costs associated with the EV Capable and EV Ready requirements (Section 3) to allow for cost-effective scaling of EV charging stations in the future.
What costs are anticipated for these requirements and what funding will be available to offset those?	The following estimates are based on national studies and local data to install charging infrastructure during the time of construction. There will be variation in cost based on the type of parking (garage or surface), distance from the electrical panel, labor, and other factors. Per space: EV Capable - $500 EV Ready - $1,200 EVSE Installed - $5,000 (networked charger*) The EVSE Installed requirements for affordable housing are contingent upon a City-funded program to cover the costs. The developer would only be responsible for the costs associated with the EV Capable and EV Ready requirements (Section 3) to allow for cost-effective scaling of EV charging stations in the future. In cases where charging infrastructure is not installed during construction, parking may need to be retrofitted in the future to accommodate increased EV demand. The cost to retrofit, which typically includes trenching and/or boring, can be up to 75% more expensive than during construction. The proposed EV

	Ready Parking Ordinance is an intentional step to future-proof our community with the cost-effective approach of including charging infrastructure during construction. *The building owner/manager will decide the type of charger that's installed and if/how the usage costs are distributed to users of the charging stations. "Networked" chargers typically have a higher up-front cost but can collect payment for usage and service. "Non-networked" chargers are typically lower in cost but do not have the technological ability to collect payment for usage.
What are the anticipated maintenance costs and who is responsible for that maintenance?	Maintenance costs are typically low and dependent on site specifics. Department of Energy studies estimate up to $400 per year. EV charging station manufacturers typically include a warranty with their equipment and include maintenance for a set time.
What universal standard(s) exists to ensure widespread usability and adaptability of the technology?	The proposed technical specifications for charging infrastructure are based on universally adopted industry standards set by SAE International. The auto manufacturing industry (except Telsa, which offers an adapter) has standardized the charging port for electric vehicles to use the SAE J1772 connector for widespread use. This is the charge port that EV charging station manufacturers supply.
What is the effective useful life of the proposed technologies?	The useful life of an EV charging station will largely depend on how frequently it's used. On average, the expected lifespan is 10 years.
How are usage costs distributed to the tenant(s) and how do these impact utility allowance rules?	The proposed EV Ready Parking Ordinance addresses EV charging infrastructure installed during the time of construction. As such, these costs are typically rolled into overall construction development and costs. When EV charging stations are installed and activated, they can be on a meter separate from tenant usage meters. The building owner/manager will decide

	the type of charger that's installed and if/how the usage costs are distributed to users of the charging stations. "Networked" chargers typically have a higher up-front cost but can collect payment for usage and service. "Non-networked" chargers are typically lower in cost but do not have the technological ability to collect payment for usage.
May EV requirements be substituted for other environmental provisions (ex. green certifications)?	Not at this time.
May EV requirements be 'traded' among developers to balance expected consumer demands?	Not at this time.
We have concerns about the cost of installing EV charging infrastructure for single family homes.	The proposed EV Ready Parking Ordinance requires an EV Ready outlet for newly built single family, duplex, and triplex housing. This would be a 40 amp breaker and 220V service, the equivalent to electrical service needed for dryers, electrical cooking, and home heating and cooling. Local developers have quoted an additional cost of $50-$100 per home to include this outlet during construction.
How are labor costs and inflation taken into account?	We understand the impacts of inflation and labor on the construction and housing industry and have proposed an implementation start date of January 1, 2024 for the EV Ready Parking requirements, providing 18 months of lead time until the requirements are implemented. This decision was made to provide developers with sufficient time to incorporate the new EV ready standards into their projects and operating procedures, and allow the market and economy to adjust.
How is affordability and cost of living taken into account?	Housing and transportation costs are typically a household's most significant expenses and converting to EVs helps reduce this. Total cost of ownership for an electric vehicle is lower than a gas-powered vehicle with reduced "fuel" prices and minimal maintenance. Appropriate charging infrastructure is needed to accommodate this shift, especially as more electric vehicle

	models come into the market and we see an increase in availability of lower-cost used EVs.
Who pays for the electricity usage?	The building owner/manager will decide the type of charger that's installed and if/how the usage costs are distributed to users of the charging stations. "Networked" chargers typically have a higher up-front cost but can collect payment for usage and service. "Non-networked" chargers are typically lower in cost but do not have the technological ability to collect payment for usage.
The ordinance needs to set standards, provide rebates, incentives and rules governing operation, maintenance and safety.	The proposed EV Ready Parking Ordinance includes industry standard technical specifics for electrical infrastructure that will be promulgated through Director Rules and Regulations to allow for maximum flexibility as technology evolves. The Design, Accessibility, and Signage requirements in Section 2 of the proposed EV Ready Parking Ordinance establish industry standard best practices for maintenance and safety. From 2016 to 2021, $10.7 million in incentives and rebates were available through AEP Ohio, Smart Columbus, and the State of Ohio to accelerate expanding EV charging infrastructure across Columbus.
To require an EV charging station in someone's personal property seems absurd. If a private business chooses to install them, then that is one thing, but it should absolutely not be required for personal property.	The proposed EV Ready Parking Ordinance requires an EV Ready outlet for newly constructed single family, duplex, and triplex housing. Installation of a charging station is not required for these housing types.
Promoting walking and biking is the most cost beneficial and better for the environment.	The inclusion and expansion of walking and biking networks is a critical transportation option. These networks are part of the LinkUS initiative and a priority for the Columbus Department of Public Service.
If we build to EV Ready standards for commercial and	Based on stakeholder feedback and the concerns we've heard

multifamily, the wiring requirement will sit underground as unused and aging infrastructure. How can this be addressed?	about aging infrastructure (primarily wiring) associated with the EV Ready requirements, we're consolidating the requirements of EV Ready into EV Capable. This will maintain that electrical capacity is available and conduit is run to parking spaces for future conversion to EV charging stations, but will not require wiring to be installed and possibly sit underground unused. For ongoing maintenance of physical charging stations, EV charging station manufacturers typically include a warranty with their equipment and include maintenance for a set time.
Is a requirement for a lower level of charging infrastructure satisfied by incorporating a higher level?	Yes. EV Capable requirements may be satisfied by meeting EV Ready technical specifications and EV Ready requirements may be satisfied by meeting EVSE Installed technical specifications.
How will we ensure that entrepreneurs / small businesses do not miss out on opportunities to open businesses if they cannot afford to install EV capabilities?	Developers will be responsible for meeting the proposed EV Ready Parking requirements where there is a minimum of 10 parking spaces newly built or added to existing parking. Multiple funding sources, including Federal Infrastructure funding and utility incentives, may be able to help offset the cost of installing EV charging infrastructure. Additionally, private EV charging vendors have various operating models that cover the costs and maintenance of charging stations. Building owners and site hosts have the flexibility to determine the EV charging station ownership model that works best for them. The following estimates are based on national studies and local data to install charging infrastructure during the time of construction. There will be variation in cost based on the type of parking (garage or surface), distance from the electrical panel, labor, and other factors. Per space: EV Capable - $500 EV Ready - $1,200 EVSE Installed - $5,000 (networked charger*)

	*The building owner/manager will decide the type of charger that's installed and if/how the usage costs are distributed to users of the charging stations. "Networked" chargers typically have a higher up-front cost but can collect payment for usage and service. "Non-networked" chargers are typically lower in cost but do not have the technological ability to collect payment for usage.
Will all residential properties that are pulling permits for remodels be required to be EV Ready? Or just new build construction?	The proposed EV Ready Parking Ordinance applies to parking created for newly built for single family, duplex, and triplex housing.
If independent people trying to rehab a house can't meet the EV requirements need variances just for the EV requirements?	The proposed EV Ready Parking Ordinance applies to newly created parking and does not apply to renovating existing single family homes.
What mechanisms will be included in the code for enforcement of non-EV vehicles parking in designated EV parking spaces? Or for EV cars - can they park there even if they are not charging? What will the fines for violations be? Will they be towed for improper parking?	Section 3312.56 Administrative Requirements of the proposed EV Ready Parking Ordinance outlines Design, Accessibility, and Signage outlines requirements based on industry standard best practices for enforcement. Enforcement of towing violations will be at the discretion of the building owner / site host.
The City seems to have gone from 0-100 very quickly. What about the happy medium? What are the builders of multi-family and commercial saying about the requirements? If their tenants don't want/need EV parking, then costs are being added with no return.	From 2016 to 2021, $10.7 million in EV charging incentives and rebates were available through AEP Ohio, Smart Columbus, and the State of Ohio to accelerate expanding EV charging infrastructure across Columbus. That momentum has enabled many developers to include EV charging infrastructure as standard operating procedure for newly constructed parking. Projections indicate that 15% of the vehicles in Columbus will be electric by 2030. By installing EV charging infrastructure during construction, cost savings of up to 75% can be recognized when compared with retrofitting parking in the future.

Will the City support not just the physical infrastructure through this legislation, but also help with building out a network of technicians who are capable of being hired to install EV stations?	Yes. There are two existing workforce development programs for EV charger installation: Columbus has a robust network of Electric Vehicle Infrastructure Training Program (EVITP) certified electricians, and Columbus State Community College has an Alternative Energy Automotive Technician Certificate program. We will continue to support building out this workforce.
I'm concerned about affordable housing having to put in required EV stations without there being an actual need for them.	Residents who live in affordable housing and our lower-income neighborhoods have disproportionately less access to new technology, including electric vehicles and EV charging stations, that can reduce their household expenses over time. Residents are significantly more likely to switch to an electric car, especially as the cost of used EVs comes down, if they know they'll have reliable access to charging. While installing EV charging stations in lower-income areas is a key equity goal, the City recognizes the unique nature of building affordable housing. We are committed to creating a funding mechanism to cover the costs of installing EV charging stations at affordable housing.
What about electric vehicle battery disposal?	Batteries in electric vehicles have an average lifespan of 10-20 years, and longer as technology evolves. After their useful life, batteries are recycled and reused through the circular economy.
Can we work to put some regulations into place as far as pricing?	Building owners and site hosts have the flexibility to determine the EV charging station ownership model and fee structure that works best for them.
Will there be resources to help fund the install of these EV stations for small businesses and residential properties?	Developers will be responsible for meeting the proposed EV Ready Parking requirements where there is a minimum of 10 parking spaces newly built or added to existing parking. Multiple funding sources, including Federal Infrastructure funding and utility incentives, may be able to help offset the cost of installing EV charging infrastructure. Additionally, private EV charging vendors have various operating models that cover the costs and maintenance of charging stations. Building owners and site hosts have the flexibility to determine the EV charging station

	ownership model that works best for them. The proposed EV Ready Parking Ordinance requires an EV Ready outlet for newly constructed single family, duplex, and triplex housing. Installation of a charging station is not required for these housing types.
I think just an extra reminder to be mindful of the disabled and making sure they can access these charging stations.	The proposed EV Ready Parking Ordinance includes accessibility requirements such that at least one EVSE Installed space must be located adjacent to an Americans with Disabilities Action (ADA) Accessibility designated space to provide access to the charging station.
I absolutely do not want cars parked on my street (especially overnight) to charge their vehicles. We have limited parking on our neighborhood (one way) street, and having charging stations will only make the matter worse.	The proposed EV Ready Parking Ordinance applies only to *off-street parking* – newly built parking lots, garages, and driveways – and wouldn't impact street/neighborhood parking.
Can this legislation be used to loosen some of the red tape associated with being required to pull permits to increase amp service for older homes to allow for meeting the EV requirements?	The proposed EV Ready Parking Ordinance applies to newly created parking and does not apply to renovating existing single family homes.
In addition to open-ended questions where stakeholders provided the feedback noted above, below is a summary of responses from multiple choice questions asked in the Ordinance Feedback Form:	
Questions from Public Comment Feedback Form:	**Responses:**
Have you joined one or more of the Equitable EV Ready Parking meetings?	18 responses ● Yes: 7 ● No: 8 ● Unsure/not answered: 3
Which best describes your role?	18 responses ● Affordable housing developer: 1

	• Community member/resident: 6 • Community-based organization: 2 • Industry professional: 4 • Local business owner: 1 • Other: 4 (city employee x1, non-profit x3)
Which kind of properties does your organization work with?	10 responses • Commercial: 2 • Commercial, multifamily, and other: 1 • Commercial, multifamily, and single family: 3 • Multifamily and single family: 1 • Other: 1 • Single family: 2
Rate your experience with installing EV charging equipment at properties you have developed.	10 responses • Frequently installed: 1 • Never installed: 6 • Never installed but have considered installing: 3
What do you think of the proposed EV readiness thresholds for 1-3 unit dwellings?	17 responses • Not ambitious enough: 1 • The right level of ambition: 11 • Too ambitious: 5
What do you think of the proposed EV readiness thresholds for multifamily housing, office, and workplace locations?	17 responses • Not ambitious enough: 1 • The right level of ambition: 12 • Too ambitious: 4
What do you think of the proposed EV readiness thresholds for all other commercial locations?	17 responses • Not ambitious enough: 3 • The right level of ambition: 9

	• Too ambitious: 5
What do you think of the proposed EV readiness thresholds for affordable housing developments?	17 responses • Not ambitious enough: 3 • The right level of ambition: 9 • Too ambitious: 5
We heard from stakeholders that sufficient lead time is necessary to incorporate EV ready standards into new construction project design. Given that information, we propose an implementation start date of January 1, 2024. What do you think of the January 1, 2024 implementation start date?	17 responses • Not soon enough: 2 • The right time: 11 • Too soon: 4
Do you think that 2028 is the right year to reconvene stakeholders tasked with proposing new EV readiness thresholds to begin in 2030?	17 responses • No - too late: 9 • No - too soon: 2 • Yes: 6
How likely are you to support the EV Ready Parking Ordinance?	17 responses • Strong oppose: 2 • Oppose: 2 • Neutral: 2 • Support: 6 • Strongly support: 5