



Updated File No. PDA-003-26-ZTX

To: City of St. Louis Planning Commission
From: Don Roe, Executive Director
Subject: Updated Framework for Data Center Regulation
Date: May 1, 2026

This report outlines an updated approach—based on community feedback and additional research—for regulating data centers in the City of St. Louis, including zoning definitions, application requirements, a use table, and standard conditions and requirements. This report focuses on zoning standards, which are the specific purview of the Planning Commission; however, it also describes policy tools that can complement zoning to guide the development of data centers in the city, maximize benefits to the St. Louis community, and minimize negative impacts.

The report has three main sections:

1. **Background** (page 2), which describes the status of data center standards in St. Louis;
2. **Key Research Themes & Findings** (page 3), which shares an updated summary of what staff has learned; and
3. **Guiding Principles & Policy Tools** (page 12), which describes the role of various policies tools in guiding the development of data centers; and
4. **Zoning Framework & Regulations** (page 16), which outlines an updated approach to zoning regulations, and highlights major changes made since the February 11th meeting. The regulations are also presented in a more consolidated form in Exhibit 'A' (page 30).

Staff will present these recommendations to the Planning Commission for their consideration on May 18th, with the intent to advance the Planning Commission's recommendations to the Board of Aldermen. The meeting will also include a public hearing. The meeting will be held in a hybrid format, with members of the public welcome to attend and participate both in-person and online:

Time: 5:30pm
Location: Kennedy Room 208, St. Louis City Hall, 1200 Market Street, St. Louis MO 63103
Zoom details: tinyurl.com/42v6upeq
(253) 215-8782
Meeting ID: 816 9925 8307
Password: 149154

Staff will also present this framework during a zoom-based informational webinar on May 11th, 6:00pm to 7:30pm. This webinar is intended to further explain the updated framework to the public to facilitate further understanding and refinement. The public can join at: <https://stlouis-mo-gov.zoom.us/j/82986212175>.

Written comments may be submitted to the Planning Commission in advance of the May 18th hearing via an online form at <https://forms.gle/bt7RK4zrj3igzTxHA> or at planning-commission@stlouis-mo.gov.

Section 1

Background

The United States and globe are in the midst of a digital infrastructure build-out that is unprecedented in its scale and complexity. Data centers, which are part of the backbone of internet infrastructure, are a major part of this build-out. Like many other parts of the country, the St. Louis region is seeing very large-scale data center proposals, and is challenged to appropriately respond. St. Louis has had several (at least 12) data centers for some time, largely located in repurposed office buildings Downtown. However, new, high-profile proposals around the region are many times the size of existing data centers, in both their physical footprint and in the scale of energy use. For example, the largest existing data centers in St. Louis, known to the City, have access to 20 megawatts of electricity. Proposals in rural parts of the state and region would operate with 500 megawatts of power or more, and cover hundreds of acres; proposals of that size are not possible or appropriate in the city.



In April of last year, the Planning Commission discussed the emergence of this new land use and the need to establish tailored zoning standards, and set it as a priority for the coming year. At the time, data centers were regulated either as “warehousing” or “office,” which are not effective proxies for data centers.

As staff began to understand and share more about the complexity and intensity of the use, the Planning & Urban Design Agency and the Planning Commission recognized the urgency and complexity of the task and recommended a temporary moratorium on new data centers in order to allow the City focused time to develop zoning regulations. In recognition of the recommendation, the Mayor and Board of Aldermen established an interim framework for managing data center applications. The data center proposed next to the Armory was reviewed and approved under this interim framework.

Executive Order 92¹ and Resolution 111² defined data centers, established that they be handled as conditional uses, included a detailed question set, and directed staff to research data centers and develop a recommended approach within five months. Staff research included a review of literature on the subject, tours of existing facilities, interviews with subject matter experts, and a review of other cities’ approaches to regulation.

At the Planning Commission’s February meeting, staff presented key findings, outlined a preliminary set of zoning regulations, held a public hearing, and took Commissioners’ questions. Since that time, staff have accepted additional written feedback, reviewed all public feedback, conducted further research, and revised the draft zoning regulations.

The City is also in the process of fully overhauling its antiquated zoning code to align with modern zoning practices and help implement newly-adopted plans such as the Strategic Land Use Plan. This Zoning Upgrade (ZOUP) is well underway, with most components of a draft code scheduled to be available for review by the fall, and enactment expected in mid to late 2027. Data center standards will need to be integrated into this new structure, even if policies are passed prior to the new code’s enactment.

¹ Executive Order 92 can be found online at [tinyurl.com/5sk3epeb](https://www.tinyurl.com/5sk3epeb).

² Resolution 111 can be found online at [tinyurl.com/5dr6dxys](https://www.tinyurl.com/5dr6dxys).

The table on the next page describes the evolution of data center zoning standards prior to Executive Order 92 and Resolution 111, under this interim framework, and in relation to the development of new standards.

Summary: History of Data Center Standards in St. Louis

| Before Executive Order 92 / Resolution 111 | Under Executive Order 92 / Resolution 111 (Current) | In Progress |
|---|--|--|
| <p>The use was not defined</p> <p>Treated either as an “office” or “warehousing” use (i.e., of data)</p> <p>Conditional use in commercial and mixed-use districts (i.e., “F” thru “H”)</p> <p>Permitted by right Downtown and in industrial districts (i.e., “I” thru “L”)</p> <p>No specific standards for evaluating them as conditional uses</p> | <p>The use is defined</p> <p>Conditional use in commercial, mixed-use, Downtown, and industrial districts (i.e., “F” thru “L”)</p> <p>Detailed question set to increase available information to guide conditional use decisions</p> | <p>Developing detailed regulations to define different types of data centers, guide where data centers will (and won’t) be allowed, and establish standards.</p> <p>—</p> <p>Later to be integrated into the new zoning code developed via the Zoning Upgrade (ZOUP) process</p> |

Section 2

Key Research Themes & Findings

As directed by the Executive Order 92 and Resolution 111, staff have sought to learn more about data centers, their development, their operations, their benefits, their challenges, and other communities’ approaches to regulating the use. The subject has proven to be exceedingly complex, and new information emerges every day. This report endeavors to share high-level findings from staff research; those findings have been updated and expanded since the initial report’s publication in February.

Overarching Themes

The following four themes emerged through staff conversations and research:

- **A growing part of our landscape:** Data centers are part of our evolving economy and technological landscape, and have potential to support innovation and economic growth. Data centers and associated infrastructure can also generate significant new revenue for municipalities, through a combination of real estate taxes, personal property taxes, utility taxes, and other fees.
- **Environmental impacts, utility challenges, and other concerns:** Many community members have significant concerns about data centers’ environmental impact, impact on place, and impact on electricity or water bills. There is broad-based concern about AI and its impact on employment, wealth inequality, and education. There is also deep unease about the potential for AI to irreparably harm or existentially alter our future. Many aspects of these challenges lie outside of the direct influence or control of local governments, but all merit consideration and understanding.

- **Complex and changing fast:** Data centers and the surrounding industry are exceedingly complex and rapidly evolving. Cities are doing their best to establish appropriate regulation for urban places, but it seems no city is fully confident in its approach. Many cities are actively engaged in research efforts and efforts to develop or refine their own regulations. Even since February, communities and even states have passed or considered efforts to establish moratoriums until regulations are in place, establish new regulations, and better guide utility policy. An iterative approach to the City’s policy will likely be necessary.
- **Unknowns & uncertainties:** There are many unknowns in the data center and AI industries and their future. Many communities strive to achieve up-front financial or other community benefits, in part to mitigate against future risk. In addition, many communities are concerned with the industry’s lack of transparency, particularly around the needs associated with operations. At the same time, participation in this evolving economy could bring economic benefits to the region, which could be lost through an overly restrictive approach.

Land Use: Key Findings

Data centers, as a land use, have unique characteristics that shape their development and operation. The following is a summary of key takeaways:

- **Data centers come in many shapes and sizes:** Data centers can vary significantly in both their physical size and their energy demands. Most reporting on data centers has focused on “hyperscale” data centers which are characterized by a large footprint (with campuses that cover hundreds of acres), are used by a single entity (e.g., Google, Meta, AWS, etc.), and have enormous power and energy needs. But data centers can be much smaller, and can repurpose existing warehouse or office buildings.³ There is speculation that even smaller-footprint data centers could emerge that can be deployed more nimbly to meet compute demand.

Images below illustrate some of the variation in data centers (including one existing data center in St. Louis,⁴ one being developed, and a data center in Northern Virginia).



While not the norm, data centers can be built in a mixed-use format, integrating office and/or active ground floors. Cities generally share a concern for data center’s impact on urban vibrancy, and seek to encourage mixed-use development of data centers. The images below show examples of mixed-use data center developments in Seattle, St. Louis’s Post Building Downtown, and Houston.

³ Servers and other equipment associated with operating a data center can be very heavy; adaptive reuse of buildings is constrained, somewhat, by the loads a building’s structure can support.

⁴ There are currently at least twelve data centers operating in the City of St. Louis.



- **Data centers have a mixed impact on Downtowns.** In high vacancy Downtowns, like in St. Louis, data centers are a double-edged sword. On the one hand, repurposing vacant office space as a data center puts a building back into tax-producing use. And the right type of data center can even serve as an amenity for other companies with compute needs, helping to attract or retain tech-oriented companies in the city. On the other hand, data centers do not require many permanent employees, and therefore contribute little to the vitality of a place or to the market demand for ground floor retail or restaurants. Data centers are also very high-value uses, from a real estate perspective, and stand to outcompete residential or office projects in a property sale. Over time, this dynamic could start to undermine office-to-residential conversion efforts Downtown.

- **Access to electric power drives site selection.** Data centers demand a lot of energy for both cooling and compute needs, and seek sites that can deliver this power. While transmission and distribution can extend power to rural locations for new hyperscale data centers, the direct costs of new infrastructure required for a data center is now developers' financial responsibility.⁵

In St. Louis, data centers will be drawn to sites along high-voltage transmission lines (shown to the right⁶ and detailed in Exhibit B), which run primarily along railroad rights of way.



- **Floodplains are a risk factor in site selection:** Data centers avoid locating in floodplains, because a flood event is a significant risk to servers, other equipment, and the continuous operation that data centers require to meet the needs of customers. In St. Louis, there is a modest overlap between the location of high-voltage transmission lines and floodplains. The presence of the levee reduces flood risk for protected properties, but it is possible that even those sites will not be attractive to every data center developer, and/or may require extensive investment to mitigate risk.

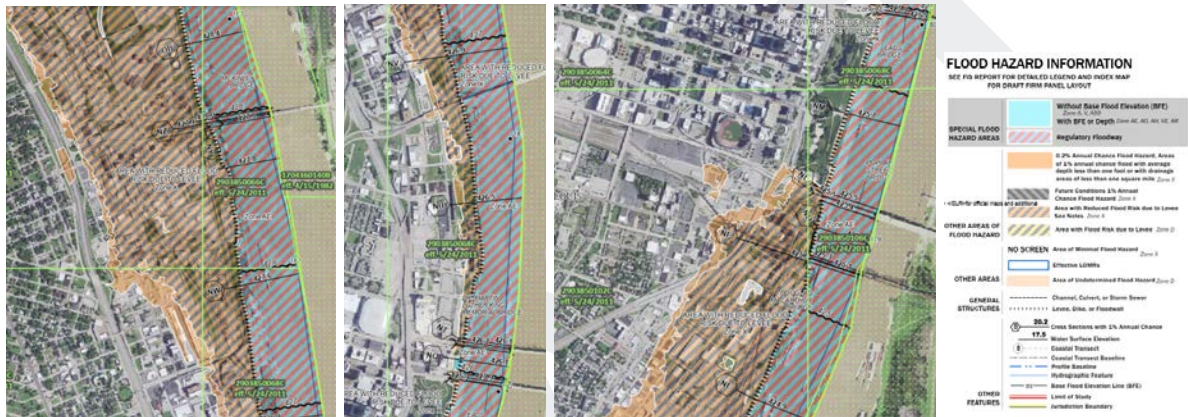
⁵ Under rules approved by the Missouri Public Service Commission (PSC).

⁶ National Renewable Energy Laboratory (“National Laboratory of the Rockies”) Accelerating Speed to Power

Some online trade publications⁷ suggest that since traditional maps infamously underestimate the geography of flood risk⁸, some data centers end up inappropriately sited in this respect.

Anecdotally, many St. Louis community members have posited that riverfront, and especially north riverfront locations, are well suited for data centers, due to their industrial character, vacancy, and relative separation from neighborhoods. Data centers may also present a stabilization opportunity for old, vacant warehouse buildings that are at risk of further deterioration. However, there are potential constraints. A flooding of a data center may also present significant risks to the public in terms of soil or water contamination; locations in a floodplain, without significant flood mitigation efforts, should be avoided.

The maps below illustrate some of the complexity in select segments of the riverfront.



- **Zoning is a limited tool, but cities use it to address a variety of data center concerns.** Zoning is cities’ primary tool for regulating land use. Zoning is most effective at addressing issues related to location, size, and the character of development, but cities are using it to the best of their ability to establish standards that promote responsible data center development. For example, cities use zoning to establish noise standards and reporting requirements to address the unique concerns related to data centers (i.e., a low, continuous drone that can occur when data centers aren’t designed effectively), and add standards that encourage renewable energy use.

Data centers nearly always require additional infrastructure for their cooling and backup power⁹ needs—these are often the systems which generate the most noise and/or emissions. This infrastructure should also be appropriately regulated.

⁷ November 2025. “When Data Centers Flood, Communities Pay the Price.” DataCenterKnowledge. <https://www.datacenterknowledge.com/security-and-risk-management/when-data-centers-flood-communities-pay-the-price>

⁸ <https://www.nrdc.org/bio/joel-scata/femas-outdated-and-backward-looking-flood-maps>

⁹ The generators used to supply backup power are also monitored and regulated by Missouri’s Department of Natural Resources.

Water, Energy, and Environment: Key Findings

Data centers are widely known for their environmental impact. The following points summarize key research takeaways:

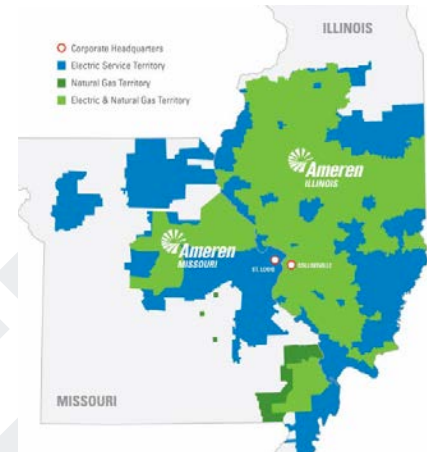
- **Data centers are driving energy demand up.** Data centers use a lot of power. Meeting these power needs is a challenge for utilities across the country, and creates more pressure to bring online new, readily available energy (such as gas), or to delay closure of old fossil fuel facilities, exacerbating emissions that contribute to climate change. Solar and other renewables, especially when combined with battery storage, are excellent options for meeting new demand, and mitigate climate impacts of energy generation.

Building new energy generation facilities is very costly, and requires long-term planning and investment. It also creates a difficult balancing act: building too much new energy generation capacity could leave ratepayers on the hook paying for stranded assets. And building too little could exacerbate grid reliability issues and drive prices up due to constrained supply. Added to this balancing act are the rapidly changing technology and uncertainty in the AI industry that could create rapid falloffs in demand.

Large load tariffs—specialized utility rate structures and contracts designed for customers with exceptionally high energy demands—are the main tool that utilities use to mitigate the potential volatility and risks that providing power to such a large user could entail. Ameren’s large load tariffs¹⁰ apply to any electric customer demand 75 megawatts or more. Key elements of the tariffs¹¹ include:

- A minimum contract term of 12 years and a 5-year load ramp.
- An expansion of renewable and clean energy options.
- A minimum payment of 80 percent of the maximum potential energy use, and automatic extensions.
- Requirements for early notification of exit, and service termination fees.
- Caps on the utility’s Return on Equity (ROE), past which revenues from large load customers are exclusively dedicated to low-income customers.

The large load tariffs—particularly the minimum payments and requirement that developers pay for transmission infrastructure—help mitigate the costs borne by other ratepayers. It is difficult to ascertain what the total combined impact of investment in new energy generation and large load tariff policies will be. It should be noted that any new costs are shared by ratepayers across Ameren’s entire territory.



¹⁰ November 24, 2025. PSC Approves Ameren Missouri Large Load Power Rate Plan with Customer Protections. Missouri Public Service Commission.

https://psc.mo.gov/Electric/PSC_Approves_Ameren_Missouri_Large_Load_Power_Rate_Plan_with_Customer_Protections--pr-26-40

¹¹ November 24, 2025. “Missouri Regulators Approve Consumer Protection Plan for Ameren Customers.” Sierra Club. <https://www.sierraclub.org/press-releases/2025/11/missouri-regulators-approve-consumer-protection-plan-ameren-customers>

Without adequate planning and demand management, data centers can also impact grid reliability for other customers in a utility's service territory.¹² This can be a serious issue during major weather events (heat and cold), when demands peak.

- **Water use can be reduced.** Traditional data centers relied extensively on water to meet their cooling needs. The industry has largely shifted to closed loop cooling systems, and other advanced technologies like liquid immersion cooling and direct-to-chip cooling, which dramatically reduce water consumption.¹³ However, these technologies also increase energy demand. Other advanced technologies can increase efficiency of energy use and stabilize energy demand during peak hours.



- **Water needs to be adequately treated.** Data centers do not typically create the same waste water contamination risks as heavy industrial manufacturing. While concentrated dissolved minerals or other treatment chemicals are of concern, waste water would be subject to the Metropolitan Sewer District's industrial discharge requirements. Newer closed-loop or systems that use less water, wastewater volume would be less.
- **The City's water infrastructure can manage increased demand.** While data centers are considered a large user of water, with an efficient design or closed-loop cooling, their water usage may be comparable to other larger users like a large hotel, campus, or golf course, depending on its size. The City's water system has capacity to service large users, like data centers, because the system was built for a much larger population. Additional customers can help the system operate more efficiently. However, capacity doesn't mean unlimited or inefficient water use is acceptable. Large users should be expected to use water responsibly, have an appropriate rate and cover system impact fees.

The largest water concerns with data centers are usually in rural or water-stressed areas where large hyperscale data centers rely on groundwater or exceed local supply capacity. This creates competition between a data center and agricultural, residential, and business needs in rural areas, whereas the City's water system was built to handle nearly three times the population we currently serve, making it capable of handling a large water user.

- **Heat emissions must be managed.** Data centers generate a lot of heat from servers and cooling systems. This is a real concern for the City as we already experience extreme summer temperatures and urban heat island impacts. Facilities can and should be designed to disperse heat properly to prevent uncomfortable or unsafe conditions in the surrounding areas.
- **Air quality impacts need to be minimized.** Mainly because of backup generators, there are air quality concerns. Diesel generators emit pollutants and on very hot days, where air quality is already of concern, these emissions can have a greater impact on nearby residents, workers, and those with asthma or other respiratory conditions. However, emergency generators are regulated under federal

¹² June 2025. 2025 State of Reliability. North American Electric Reliability Corporation.

https://www.nerc.com/globalassets/programs/rapa/pa/nerc_sor_2025_overview.pdf#page=12

¹³ June 25, 2025. Data Centers and Water Consumption. Miguel Yanez-Barnuevo, Environmental and Energy Study Institute. <https://www.eesi.org/articles/view/data-centers-and-water-consumption>

air-quality standards limiting how and when they can operate. It is important to ensure equipment is compliant with the strictest available emissions control standard.

- **Some of the largest potential end users have ESG goals.** Very large tech companies like Google, Amazon, and Microsoft have Environment, Social, and Governance (ESG) goals.¹⁴ The use of renewable energy sources, efficient data center design, and community benefits agreements can help advance those goals. Some companies leasing space in a colocation data center have similar goals. However, when the end user of a data center is not yet known or confirmed (as can often be the case), any ESG goals remain unknown.

Economic Development: Key Findings

Data centers represent a new type of infrastructure that can benefit local economies. But the benefits are complex to forecast, and there is significant uncertainty about how the AI economy will evolve. There are also costs to workers if AI results in broad job displacement. The following points summarize key takeaways.

- **Employment is significant during construction.** Data center construction requires participation by many trades and high-skilled workers, and creates many many construction jobs (which have indirect benefits). Data centers also require frequent upgrades to systems and equipment, which involves participation by construction and other industries in an ongoing manner.
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- **Few permanent jobs.** Permanent job creation is much smaller, though permanent jobs are high-skill and high-paid. However, as noted above, the frequent upgrades and maintenance required for these facilities sustains a great deal of construction and trades employment opportunities.
 - **Data centers can strengthen other industries and contribute to scientific and other technical innovations.** If AI and other compute-intensive functions are increasingly integrated into health care, advanced manufacturing, and other industries, these industries will require proximate compute power. Having data centers in a region—including a network that connects to job centers—can help provide that compute power with minimal latency, and can support the region’s ability to capture and cultivate these emerging industries.¹⁵
 - **Increasing integration of AI into the economy is expected to displace jobs.** Many companies and researchers estimate that a broad range of professional jobs involving knowledge work are most exposed to AI. The Brookings Institute has attempted to estimate these workers’ ability to adapt to these trends.¹⁶ Other growing industries, such as health care, are estimated to have lower exposure to AI displacement.

¹⁴ 2024. Local Guidelines for Data Center Development. Urban Land Institute.

¹⁵ Latency refers to the delay before a transfer of data begins following an instruction for its transfer. Shorter distances between data centers and end users can reduce latency. Low latency is not critical for all end users, but is for some.

¹⁶ <https://www.brookings.edu/articles/measuring-us-workers-capacity-to-adapt-to-ai-driven-job-displacement/>

Many of these trends are difficult to predict; it is also not clear how much local land use decisions have the capacity to influence the effects of these global trends on a given region.

- **Cities use a variety of mechanisms to secure up-front benefits.** In part as a means to mitigate against the negative impacts, cities seek to secure community benefits and other commitments as part of data center approvals. These are currently the most commonly used when the end user is identified and/or if local incentives are being offered.
- **Fiscal benefits can be significant.** Because data centers entail extensive capital investment through both construction and equipment purchase/upgrades, real estate and personal property tax revenues are very high relative to other land uses. There is uncertainty inherent in any revenue projection, and an additional level of uncertainty in assumptions tied to AI. The rate of equipment replacement can also vary, making it difficult to predictably estimate personal property tax revenues.

In February, the Planning Commission asked for more information about the fiscal impact of data centers. The St. Louis Development Corporation has provided some general information on estimated fiscal impacts¹⁷ of data centers in St. Louis’s specific tax structure.

| Facility size | Estimated total capital investment | Estimated annual property taxes |
|---------------|------------------------------------|---------------------------------|
| 20 megawatts | \$214 million | \$5.3 million |
| 75 megawatts | \$803 million | \$19.9 million |
| 150 megawatts | \$1.605 billion | \$39.9 million |

SLDC notes that these estimates would vary significantly by the actual fit-out cost per megawatt, the relative value of the building versus equipment, and the depreciation and replacement rate of equipment.

In the City of St. Louis’s property tax rate structure, the school district is the single largest direct beneficiary, accounting for 4.9085 of the 9.7522 total commercial rate.¹⁸ The City levy is also significant, and the City rate sheet shows the commercial total includes additional commercial-only components beyond the base rate. The library, junior college, MSD, Zoo-Museum District, Children’s Services, Developmental Disability Resources, Senior Services, and State also participate through the overlapping levy structure.

SLDC also notes that fiscal benefits have largely been actualized in other communities. For example, data center revenue accounted for about 31 percent of total local revenue in Loudoun county Virginia in FY23. But fiscal impacts vary by a community’s tax structure. For example, Virginia’s Joint Legislative Audit & Review Commission (JLARC) notes that a hypothetical project with \$150 million in taxable computer equipment could generate anywhere from \$0.4 million to \$10.8 million over five years because of different tax rates and depreciation schedules.

¹⁷ Estimates use: 1) JLL’s current industry estimate of about \$10.7 million per megawatt average in global construction costs between 2020 and 2025; 2) an assumed split of 25 percent taxable real property / 75 percent taxable equipment.

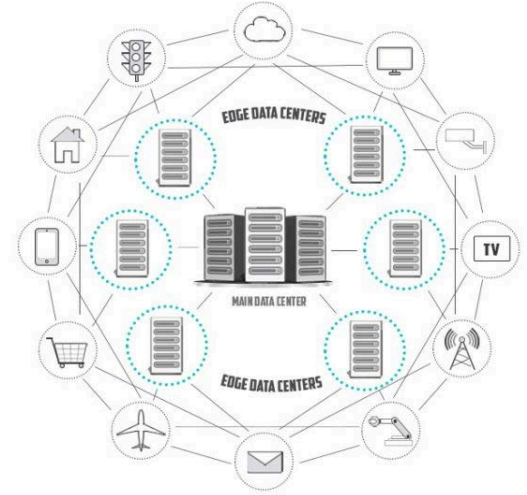
¹⁸ 2025 Commercial Rate Sheet

<https://www.stlouis-mo.gov/government/departments/assessor/documents/upload/Tax-Rates-2025.pdf>

Anticipated Context for Data Center Development in the City of St. Louis

St. Louis has its own infrastructural and physical context that will impact the shape of data center development in St. Louis.

For example, the City is fairly well-served by energy transmission infrastructure and fiber connections, making it a somewhat more attractive location for data center development. But relative to suburban, rural, or exurban communities, there are not many sites that are large enough to, or have sufficient infrastructure to, accommodate large data centers. We are unlikely to see any proposals of the scale seen in communities like St. Charles and Festus (e.g., with hundreds of acres and 500 megawatts or more). Our ample supply of water has been viewed as a competitive advantage by the industry.



We may expect to see smaller “edge” data centers that extend the networks of hyperscalers to expand and improve the reliability of data networks. These can be, relatively speaking, more easily integrated into an urban environment. “Inference data centers,” for example, could support low-latency applications of AI in healthcare, finance, or geospatial industries, and may not require the same physical footprint or power of hyperscale facilities being built today.

That said, very large data centers built anywhere in Ameren’s territory—and less directly in the MISO transmission region—will have an impact on the city’s energy availability, reliability, costs, and mix.

The vast range in size of data centers is difficult to grasp, especially in St. Louis where, unlike in most regions, there are not any large-scale data centers yet in operation. Many such hyperscale campuses are already active in other communities.

It is staff’s understanding that currently, Ameren’s largest customer has a maximum power demand of 33 megawatts. Ameren is now challenged with supplying energy to prospective customers with much, much larger power demands. The table on the next page shows a summary of economic development prospects included in Ameren’s May 2025 testimony to the Missouri Public Service Commission¹⁹, and highlights several that have power requirements over 1 gigawatt (i.e., 1,000 megawatts). The same testimony reports that through 2019, the average electricity demands of new projects was 3 megawatts;

Figure 2: Missouri Department of Economic Development & Missouri Partnership Selected Projects on August 13, 2024

| Jobs | Capex | Site Acreage Requirement | Building Square Footage Requirement | Electric Requirements |
|-------|-----------------|--------------------------|-------------------------------------|--|
| 1,500 | \$5,200,000,000 | 820 | | 480 MW 100% Renewable |
| 650 | \$3,300,000,000 | 2,200 | | 1.28 GW |
| 675 | \$2,000,000,000 | 260 | | 1 GW 100% Renewable |
| 3,240 | \$1,500,000,000 | 200 | | 80 MW |
| 388 | \$550,000,000 | 300 | 1,500,000 | 12 MW |
| 802 | \$199,000,000 | | 760,000 | 15 MW |
| | | 150 | | 200 MW |
| 150 | \$800,000,000 | 175 | | 500 MW |
| 205 | \$599,000,000 | 30 | 450,000 | 50 MW |
| 100 | \$320,000,000 | 650 | | 45 MW |
| 200 | \$140,000,000 | 50 | 526,262 | 9.5 MW portion attributed to renewables |
| 308 | \$121,000,000 | 50 | 275,000 | 12 MW |
| 5,000 | TBD | 1,000 | | 1.2 GW by 2042 |
| 1,000 | \$1,000,000,000 | 150 | | 400 MW by 2028 |
| 326 | \$455,000,000 | 80 | | 100 MW |

¹⁹ <https://efis.psc.mo.gov/Document/Display/832446>

by the end of 2024, that had shot up to 190 megawatts.

While not all of these projects will ultimately be built, this information demonstrates how dramatically the landscape is changing, and the differences in scale of new data centers. It also indicates that some new customers are requesting renewable energy.

The scale in requests also illustrates the dual reality that a very large project in the city—for example demanding up to 120 megawatts—is both very very large relative to existing data centers and electricity users in the region, and also quite small relative to the gigawatt+ prospective projects (which are almost certainly prospective hyperscale data center campuses), and even smaller in power demand than projects proposed in suburban locations (e.g., the 200-megawatt proposal in Ferguson).

Section 3

Guiding Principles & Policy Tools

Efforts to regulate this use—both through zoning and through other tools available to the city—can be described through 5 guiding principles. These include:

1. **Protect residential neighborhoods:** Large data centers should not be located in or near residential areas to ensure that noise and environmental health impacts are avoided.
2. **Set high standards and monitor impacts:** Establish high standards for facility design and operation that minimize or mitigate negative environmental and/or health impacts. Ongoing reporting and oversight will be required to ensure data centers achieve these standards.
3. **Maximize available information:** Requiring as much information as possible will put St. Louis in the best position possible to evaluate a given project, set additional conditions, and maximize benefits. Limiting by-right approvals ensures that the City will be able to act on that information, establishing additional protections and asking additional questions.
4. **Preserve other opportunities:** Data centers' development should advance, or at least not undermine, other goals for development such as a vibrant Downtown and transit-oriented development.
5. **Leverage data centers for other benefits:** Though they present many challenges, data centers also present opportunities to stabilize our water infrastructure, leverage and expand our district energy systems, and generate tax revenue for St. Louis Public Schools and for other community needs.

Guidance from Adopted Plans

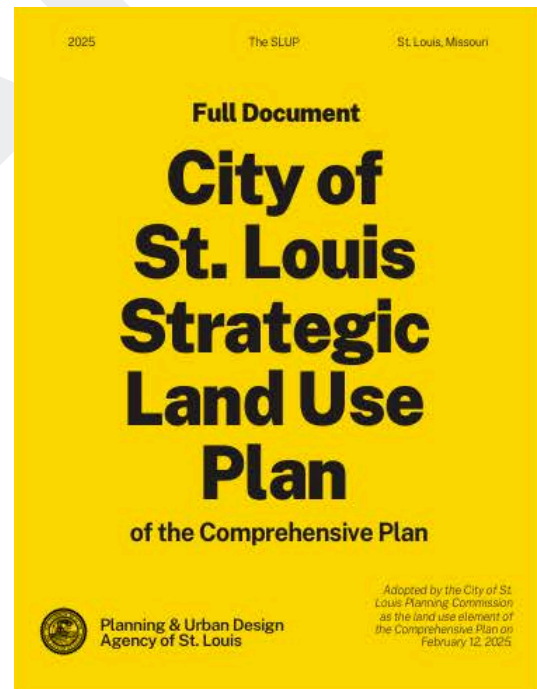
The 2025 Strategic Land Use Plan

In February of 2025, the Planning Commission adopted a new Strategic Land Use Plan²⁰, the land use element of the City’s Comprehensive Plan. This plan, the “SLUP”, replaced the 2005 Strategic Land Use Plan, which was the first of its kind for St. Louis. The 2025 SLUP is a high-level plan to chart a path forward for the use of land in support of three main goals: ensure St. Louis is equitable, growing, and thriving. To achieve these goals, the SLUP leans into what makes the City great—its people and its neighborhoods. In short, it is an urban city. The SLUP stresses the importance of remaining an urban center for the region in a way that encourages an appropriate mix of uses to support neighborhoods and economic centers, a more pedestrian-friendly built form, and a city resilient and equitable in the face of a changing climate.

To that end, the SLUP places the whole City into seven categories of land uses: Neighborhoods, Corridors, Nodes, Central Areas, Industrial Areas, Open Space, and Campuses. Most of these designations contain sub-categories that further describe the intended intensity or scale of development expected in these areas.

Data centers are typically considered an industrial use, so the SLUP would encourage an appropriate size and scale of data center uses within the industrial areas, both the Flex Industrial designation and the Core Industrial designation (p. 108). However, the SLUP acknowledges the need for a better integration of modern uses into areas of the city where people live and work. Data center uses of an appropriate human-friendly scale could be incorporated into corridors and nodes, such that they support adjacent sectors and businesses (p. 76). The Central Areas - essentially, the central corridor from the Arch to Forest Park - and Campuses may also be appropriate for these uses. So long as residents and neighbors are protected from the negative impacts of data center uses, the SLUP encourages innovation in the integration between these businesses and the rest of the city. Neighborhoods and Open Spaces are not appropriate for data center uses of any kind.

St. Louis already has robust and growing industries that rely on technology and research. Financial tech, medical research, biotech, agtech, and geospatial technologies could all benefit from an expansion of compute power and data center uses throughout the city. The SLUP wants to find ways to expand and encourage growth in these sectors in a way that is mutually beneficial for residents and business owners alike (p. 196).



That said, the SLUP is also concerned with the long-term livability of the city, especially areas that have seen past (or ongoing) environmental racism and disinvestment. Specific mention is made of the danger that a changing climate, including increased flooding and high heat, can pose to vulnerable communities. The SLUP encourages land use patterns that at worst do not exacerbate these problems, but hopefully help alleviate them (p. 41). Thus, across all industries and sectors, the SLUP encourages more robust landscaping, green buffers, and tree canopies in vulnerable areas or around uses that could worsen urban heat islands (p. 216).

²⁰ The full Strategic land Use Plan document can be found at: <https://www.stlouis-mo.gov/government/departments/planning/planning/adopted-plans/strategic-land-use/index.cfm>

The SLUP also encourages a catalyzed transition away from fossil fuels as an energy source. Large property owners and businesses are encouraged to shift to renewable energy generation, and to invest in modern, resilient energy infrastructure. An expansion of reliance on renewable energy sources by private entities and the City would help achieve the SLUP goal of protecting residents and businesses from rising energy costs (p 212).

The 2025 Sustainability and Climate Plan

In 2025, the Planning Commission also adopted a new Sustainability and Climate Plan (SCP)²¹. This plan builds on and ultimately replaces the 2013 Sustainability Plan, which was the first of its kind for St. Louis. The 2025 SCP is implementation focused, geared towards setting tangible goals for making St. Louis a greener, healthier, and more resilient city for decades to come with a target of reducing community emissions by 35 percent by 2030.

Relevant key goals of the SCP are:

1. Reflect the opportunities and needs of disinvested areas, repair past harms, and prioritize action in areas of the greatest need.
2. Reduce residents’ and businesses’ reliance on fossil fuels, incentivize transition away from coal-powered energy.
3. Abate the effects of increased flooding and urban heat, create a more resilient, proactive, and adaptive, and prepared community (p. 10).

Through these and other goals, the SCP directs relevant city departments to find ways of reducing energy burden on residents, further green our neighborhoods, and identify appropriate resources to support these initiatives.

Priority Action C.5 directs the City to craft and implement an Urban Heat Island Action Plan. This plan should include strategies to de-pave underutilized hardscapes, substantially expand greenspace and the native tree canopy in heat-island zones, and the enforcement of a cool roof policy.

Priority Action E.5 directs the City to develop and implement policies around energy- and water-intensive users, like data centers. These policies should protect current and future residents and businesses from the negative effects of such massive on-site power consumption. Strategies should include methods for capturing waste heat and for reducing the burden on the electrical grid (p. 84).



²¹ Read more about the Sustainability & Climate Plan here: <https://www.stlouis-mo.gov/sustainability/plan/index.cfm>

The Role of Zoning

Zoning can support some, but not all of these goals. For example, zoning can:

- Define different types of data centers (e.g., by size),
- Regulate where they can be located,
- Establish minimum standards, and
- Establish a process for review and monitoring.

However, zoning cannot regulate electric rates, determine what kind of new power Ameren builds, control business applications of data centers, or direct incentive policy. Specific legal limitations of zoning will be referenced in the explanation of specific regulations, in Section 4 of this report.

While zoning is the focus of this report, other tools are needed to guide the responsible development of data centers. Some of these are in the City's control, while others are not. These are briefly summarized below:

- **Water Utility Policy:** St. Louis is very fortunate to own its own water utility; it is a very valuable asset that is in need of extensive re-investment. The City can establish a rate and impact fee structure that ensures data centers pay their fare share toward the City's water infrastructure.
- **Electric Utility Policy:** There is a need to protect ratepayers from the uncertainty tied to developing power for large electricity users, and to ensure that new infrastructure is paid for by data centers, the future beneficiaries of that infrastructure. As in most states, these policies in Missouri are set by a combination of the state Legislature, which establishes the broad framework for utility regulation, and the state Public Service Commission (PSC). The PSC is the entity that reviews rate increase requests, establishes large load tariffs, approves new energy generation projects, and authorizes the use of Construction Work in Progress requests for new projects. While the City can participate in relevant rate cases and other cases at the PSC, the decisions are entirely outside of the direct control of our local government. There is a broad rationale for regulating utilities at the state level, because utility territories typically cross jurisdictional boundaries. But the separation is frustrating, given the impossibility of ensuring a local land use policy decision (whether to approve or disapprove of a data center) avoids impacts to local ratepayers.

That said, a City *can* support local energy efficiency measures and distributed energy resources to reduce utility bills, reduce energy burdens for low-income households, and support the local grid.

- **Environmental Impact Monitoring:** The City can establish a system for monitoring the environmental impacts of existing and new data centers. This may include monitoring of noise, heat emissions, e-waste, energy use, and water use. Monitoring would support accountability and enforcement of zoning standards, and also help shape future policy decisions. This is a complex task, but the City has some infrastructure for this monitoring in its Office of Building Performance.
- **Community Benefits Agreements:** There is growing recognition²² across the country that local leaders should ask more of the data center industry, and use tools like Community Benefit Agreements (CBAs) to address public concerns and ensure other local benefits beyond what

²² January 2026. "Why community benefit agreements are necessary for data centers." Brookings Institution. <https://www.brookings.edu/articles/why-community-benefit-agreements-are-necessary-for-data-centers/> & March 2026. "Data centers are coming. Here's how communities can negotiate for local benefit." Jordana Barton-Garcia, Connect Humanity. <https://connecthumanity.fund/data-centers-are-coming-heres-how-communities-can-negotiate-for-local-benefit/>

regulation like zoning can achieve on its own. CBAs can require direct payments, establish community funds, establish revenue commitments, require infrastructure improvements, require construction and operating jobs, and more. Most CBAs around the country involve the public sector providing some level of incentive. However, the recent CBA negotiated by the City does not commit any local incentives to the project, and in fact prohibits them; to the City’s knowledge, this is the first such agreement of its kind.

Section 4 Zoning Framework & Regulations

Zoning Precedent & Best Practices Research

To learn how data centers are being regulated at the local level across the country, staff spent substantial time examining regulations other cities have put in place regarding data center siting, design, and operations, and meeting with staff from other cities to discuss their thoughts and experiences. This process involved selecting cities and municipalities that have profiles somewhat similar to St. Louis. Several places were also chosen due to their notable data center activity even if their profiles are otherwise different. Ultimately, staff selected 12 municipalities to study, located throughout the Midwest and Southeast. Staff then studied relevant zoning standards, reached out to city staff members to learn more, and in eight instances met virtually with staff members from selected locations to ask questions and gain insights. Since February, staff have monitored other cities’ work to develop new regulations. The table below is updated to our best understanding of the status of regulations in other cities.

Summary of Precedent Research²³

| City / County | # of Data Centers in Area | Code Mentions Data Centers | Code Defines Data Centers | Code Contains By-Right Districts | Code Contains Cond. Use Districts | Site Design Reqs | Utility Reqs | Environmental Reqs | Emissions Reqs | Currently Updating Reqs |
|------------------------|---------------------------|----------------------------|---------------------------|----------------------------------|-----------------------------------|------------------|--------------|--------------------|----------------|-------------------------|
| Kansas City | 31 | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ |
| Chicago | 171 | ✓ | ✓ | ✓ | | | | | | ✓ |
| Atlanta | 147 | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | |
| Louisville | 24 | ✓ | | ✓ | | | | | | ✓ |
| Pittsburgh | 37 | | | ✓ | | | | | | ✓ |
| Charlotte | 44 | ✓ | ✓ | ✓ | | | | | | ✓ |
| Des Moines | 77 | ✓ | ✓ | ✓ | | ✓ | | | | |
| Nashville | 27 | | | ✓ | ✓ | | | | | |
| Columbus | 134 | ✓ | | ✓ | | | | | | |
| Indianapolis | 35 | ✓ | | ✓ | ✓ | | | | | ✓ |
| Loudoun County, VA | 199 | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Fauquier County, VA | 2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| St. Louis (current EO) | 12 | | | | ✓ | | | | | ✓ |

²³ Many places have been updating their data center regulations, so the information presented in this table may not reflect recent changes made to other cities’ data center regulations.

The following points summarize key observations from staff’s precedent research:

- **Cities’ approaches are evolving:** Everyone is grappling with rapid changes in the demand for data centers. Many cities that have data center regulations have somewhat piecemeal regulations that were established reactively to proposed developments. Nearly half of the peer cities staff contacted are in the process of expanding or updating their data center regulations. Most of them already have data centers as a defined use in their zoning code or development ordinance, but St. Louis has the potential to demonstrate a more deliberate and comprehensive approach.
- **Common concerns:** Staff members from many peer cities shared concerns about the emissions (pollutants, noise, vibrations, and light) from data centers, their intensive utility usage, and maintaining vibrant walkable urban spaces.
- **By-right allowance:** Most cities allow data centers by right in at least one zoning district, with two notable exceptions being Atlanta and Loudoun County, Virginia, which is part of the densest data center development region in the world. Notably, Fauquier County, Virginia, which abuts Loudoun County, permits data centers by right in two zoning districts. However, only two parcels in the entire county carry those zoning designations so they have also effectively made data centers a conditional use by requiring rezoning for any parcel to be able to host a data center.
- **Emerging standards:** There is precedent to require developers of data centers to: disclose expected utility usage, limit noise and vibration emissions to predetermined levels, use recycled water for cooling, activate the ground floor or include a data center in a mixed-use development where appropriate, avoid sites near transit and greenways, and use renewable energy. Peer cities have taken a wide variety of approaches to regulating data center design, but two notable themes are: 1) limiting their ground floor space in denser districts when they are permitted; and 2) requiring visual and/or acoustic buffering to attenuate their aesthetic and auditory impacts on the surrounding community.
- **Bans or caps:** Smaller suburban and/or exurban communities in the region—such as St. Charles, Olivette, and Festus—have also updated data center regulations. St. Charles established a permanent ban on large data centers, and Olivette established a cap on physical size. This is not an approach staff has observed in any of St. Louis’s peer cities or other urban center cities, other than those that have established temporary moratoriums in order to study the issue and develop regulations.

Best Practice Recommendations

In addition to learning about different place-specific approaches, staff endeavored to synthesize as much third-party research and guidance on data centers as possible, particularly from professional groups such as the American Planning Association (APA). The following points are key recommendations:

- **Data centers should be defined and treated as a specific land use.** They are distinct in many ways, including the potential for consistent noise emissions, relatively low car and foot traffic, and the necessity of having backup generators as a measure of redundancy for service continuity. Many communities have begun to define and incorporate use-specific requirements for data centers in their zoning codes, and the APA recommends proceeding using that model.
- **Governments should be aware of potential nuisance issues.** Communities closest to data centers are at risk of being impacted by construction noise and dust, noise and vibration emissions, and pollution from backup generators. Cities should shield residents from potential negative impacts through measures such as noise mitigation and careful consideration of siting and design elements.

- **Require as much information as possible to accurately assess proposed developments.** Many data center proposals may use non-disclosure agreements or otherwise be opaque to the public or even a city government. This makes it difficult to accurately assess the expected impacts of a proposed project. The more information the developer is required to present up-front, the more informed the public and city officials can be throughout the decision-making process, allowing for appropriate consideration of the entire proposal. This is an issue many communities are facing, and the APA recommends requiring project specifics in writing.
- **Limit by-right allowance of data centers.** Several reports have advocated to limit the by-right allowance of data centers, requiring conditional use permits or “special use permits” (a roughly equivalent concept used in other cities), other than for data centers under a certain size threshold (e.g., 40,000 square feet)²⁴.
- **Consider standards that reduce incompatibility with other land uses.** These strategies could include noise limitations, required distances from other land uses, the use of vegetative buffers, and enclosure of mechanical equipment. Data centers should also be cited to avoid impeding transit-oriented development.
- **Explore ways to mitigate risks and uncertainty.** The astronomical growth of data centers to support the burgeoning use of artificial intelligence (AI), in addition to many other technological functions, has raised concerns that there may be an AI bubble which could result in some data centers not operating long-term. To manage this concern, communities are finding ways to mitigate the risks. For example, Fauquier County, Virginia, encourages data center operators to commit to removing all generators, equipment, and hazardous materials from a site within one year of its ceasing operations. Another example for a different kind of land use is Ferndale, Washington, which requires large retail store developments to submit a potential reuse plan or to pay a bond for 150 percent of the estimated demolition cost. Many of these approaches, however, rely on tools outside of zoning.

Zoning Regulations

Staff believe there is no model zoning ordinance that adequately responds to the particular physical context of St. Louis city, St. Louis community concerns, nor opportunities present here. Rather than mirroring the approach of another city, staff recommend St. Louis takes a novel approach to regulating this use that incorporates best practices from other communities while establishing more comprehensive protections and standards. The framework presented in February sought to achieve that through a combination of:

- Establishing data center types based on thresholds for megawattage;
- Requiring very detailed information as part of up-front application submissions; and
- Detailing use-specific standards and conditions.

The preliminary regulations can be found on the Planning Commission website:

https://www.stlouis-mo.gov/government/departments/planning/planning/planning-commission/upload/Preliminary-Data-Centers-Zoning-Recommendations_February-5-2026.pdf or tinyurl.com/yjbm7vn9.

Based on feedback received to date, staff have adjusted the proposed approach. Key changes include:

²⁴ Southern Environmental Law Center. “Getting it Right: Local Approaches to Data Center Development.” January 2026. https://www.selc.org/wp-content/uploads/2026/01/SELC-Data-Center-Development-Report-All-0126_F.pdf

- Lowering the megawattage threshold between the “Standard” and “Major” data center types to better control appropriate development outside of industrial districts;
- Revising renewable energy requirements in accordance with technical advice acknowledging the constraints of limited renewable supply in the region;
- Reorganization of the regulations for clarity and legibility;
- Heightened standards for generators to minimize environmental health impacts;
- Revising the approach to data centers Downtown and mixed-use districts to preserve office, retail, and housing opportunities, and to remove barriers to adaptive reuse projects; and
- Requiring agreements that avoid negative impacts to the City’s water system.

The detailed regulations are presented and explained below. Substantive changes from the preliminary recommendations are **highlighted**. General explanations of standards are outlined in **blue, sans serif text**.

1. **New Chapter** (Chapter 26.77: Data Centers)

A new, standalone chapter will allow for all of the standards, terms, and definitions to be made available in one easy-to-reference location. Incorporating data center zoning standards into the Code’s cascading structure would make it exceedingly difficult for applicants and community members to understand the process or what is expected.

This approach will also make the regulations more adaptive to the work of the Zoning Upgrade.

2. **Purpose** (Section 26.77.010)

The purpose and intent of this Chapter 26.77, Data Centers, is to define and address the location, establishment, application requirements, and standard conditions for data centers in order to ensure the health, safety, and general welfare of the residents of the City of St. Louis. This chapter seeks to allow for responsible, predictable development of data centers and associated infrastructure, to encourage best practices, limit negative impacts, **and establish a foundation for monitoring and accountability.**

A clearly-stated purpose is a best practice for the drafting and presentation of zoning policy. The highlighted update references the reporting requirements outlined in Section 26.77.050.i.

3. **Definitions** (Section 26.77.020)

a. **Backup Generators**

Backup Generators means engines that are designed to be used for utility power outages to provide continuous electricity, preventing data loss, and service disruption.

b. **Baseline Noise Level**

Baseline noise level means a measure of noise, taken at the property line pre-application, that establishes dBA and dBC noise levels averaged over a 60-minute measurement period. Measurements shall include daytime levels (e.g., taken between 7:00 a.m. and 1:00 p.m.) and nighttime levels (i.e., taken between 10:00 p.m. and 7:00 a.m.).

c. **Cool Roof**

Cool Roof means a roofing system designed to reflect more sunlight and emit absorbed heat with a minimum Solar Reflectance Index of 90.

d. **Community Benefits Agreement**

Community Benefits Agreement means a binding agreement for the purpose of protecting the health, safety, and welfare of the residents of the City by mitigating the impacts associated with Major Data Center land use, energy consumption, infrastructure demands, and environmental effects; providing long-term commitments for site maintenance, closure, decommissioning, and remediation; and addressing site-specific impacts related to utilities, noise, air quality, water resources, and transportation not otherwise addressed in the is Chapter.

e. Data Center

Data Center means a facility used primarily for the storage, management, processing, and transmission of digital data and that houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data storage, processing, and related operations. Data center uses include data storage facilities, server farms, artificial intelligence training or processing, image processing, cloud computing, email servicing, and similar uses. A Data Center may be a primary or secondary use.

f. Data Center, Major

Major Data Center means a data center with a Maximum Power Demand of 30 megawatts or more.

g. Data Center, Micro

Micro Data Center means a data center with square footage less than 10,000 gross square feet and Maximum Power Demand less than 5 megawatts.

h. Data Center, Standard

Standard Data Center means a data center with square footage of more than 10,000 gross square feet or Maximum Power Demand of more than 5 megawatts but less than 30 megawatts.

i. District Energy System

District Energy System means the Downtown Steam Distribution System and/or the planned Chilled Water Loop.

j. Expansion

Expansion means the addition of floor area used for Data Center purposes or an increase in Maximum Power Demand that escalates the applicable classification of Data Center (e.g., Micro, Standard, or Major).

k. Green Roof

Green Roof means a vegetated roofing system which is functionally integrated onto a roof area.

l. Local Renewable Energy Credits (RECs)

Local RECs means RECs generated by renewable energy facilities located within the utility service territory, the State of Missouri, or the MISO region.

m. Maximum Power Demand

Maximum Power Demand means the maximum energy draw that the facility may use for critical IT and building systems and equipment, as set by an agreement with an electric service provider.

n. Renewable Energy

Renewable Energy means energy derived from wind, solar, geothermal, or other sources of renewable energy.

o. Server Room

Server room means an accessory facility with less than 1 megawatt in Maximum Power Demand that supports routine functions of the primary use. Server rooms are not subject to the requirements of this Chapter 26.77.

p. Transit Center

Transit Center means a location where Metro operates a major hub for MetroBus and/or MetroLink stops as identified by their System Maps. Individual bus stops are not Transit Centers.

Definitions have been updated to eliminate confusing and circular language, and to define any new concepts referenced in the regulations.

4. Use Table (Section 26.77.030)

The following Use Table lists how Data Centers are regulated in the various existing zoning districts. Within the table, the user can identify the type of Data Center and how the facility is regulated under each zone, thus identifying whether the use is Permitted (P), whether it requires a Conditional Use Permit (C), or whether it is prohibited (NA).

| Use | A - E | F | G | H | I | J | K | L |
|----------------------|-------|----|----|----|----|----|---|----|
| Micro Data Center | NA | NA | NA | C | C | C | C | C |
| Standard Data Center | NA | NA | NA | NA | C | C | C | C |
| Major Data Center | NA | NA | NA | NA | NA | NA | C | NA |

The use table simply clarifies which types of data centers will be allowed in which districts. Additional distance requirements outlined in Section 26.77.050.a would further buffer data centers from neighborhoods, transit stations, and residential areas. The use table indicates that:

- Data centers of all kinds would not be permitted in any residential district or neighborhood commercial district.
- Micro data centers would be permitted conditionally Downtown, in the city’s most intensive mixed-use district, and in industrial districts. In the preliminary framework, Micro data centers would have been permitted by right in industrial districts; this was changed to prevent an unchecked “daisy chaining” of many small data centers into an intensive data center district.
- Standard data centers would be permitted conditionally Downtown and in industrial districts.
- Major data centers would only be permitted conditionally in the most intensive industrial district: “K” - Unrestricted.

5. Application Requirements (Section 26.77.040)

An applicant seeking a conditional use permit for any new data center or expansion must include the following information as part of their application submission:

1. The classification of the proposed data center (i.e., Micro, Standard, or Major).

2. Elevations and interior floor plans indicating areas dedicated to data center functions and areas planned for other uses (e.g., office, retail, research, etc.), if relevant.
3. Site plan clearly identifying the building and its square footage, the location of backup generators and cooling equipment, fuel storage and fuel type, parking, landscaping, overhead power (e.g., transmission, distribution lines), on-site battery storage and battery type, on-site substations, any on-site power generation (e.g., solar, wind, etc.), and any additional critical infrastructure or equipment.
4. Megawattage of maximum power demand.
5. The facility's proposed cooling system, sources of energy, and whether the facility plans to provide its own energy, or to meet its power demands through renewable sources.

An applicant seeking a conditional use permit for any Standard Data Center or Major Data Center must also include the following information:

1. Anticipated end users of the data center, and purpose of the proposed facility, such as: data storage; cloud computing; general artificial intelligence; cryptocurrency mining; surveillance; large language model training; or other business applications.
2. Map indicating the location of any new substations or substation upgrades required for the data center, and the location of new power lines serving the proposed data center. (Any on-site power generation, outside of renewable and backup power sources, shall be reviewed via a separate submission process.)
3. The number, size, fuel source, and anticipated testing schedule for backup generators.
4. An assessment of any flood risk to the proposed site, and planned mitigation efforts.
5. The expected timeline for commencing construction and operation of the facility.
6. Baseline noise levels, expected noise levels to be generated by the proposed facility's cooling systems, turbines, load banks, and backup generators, a proposed testing schedule designed to minimize air quality and noise impacts, and the proposed facility's planned sound attenuation and noise reduction measures to limit the emission of noise and prevent disturbances to nearby residents.
7. Fire detection and suppression systems that will be installed at the proposed facility.
8. Whether the user plans to participate in any renewable energy or virtual power plant program, have any onsite renewable energy generation and/or storage, or purchase any Renewable Energy Credits (RECs).
9. Anticipated annual water use and anticipated or committed Power Usage Effectiveness (PUE) and Water Usage Effectiveness (WUE) for both peak and average annual demand.
10. Plans to participate in the state's sales tax exemption program.
11. If new construction, whether and how the proposed facility building's facade, height, massing, and orientation will be designed to be compatible with adjacent properties and the surrounding area.

An applicant seeking a conditional use permit for any Major Data Center must also include the following information:

1. A detailed description of sources and uses.
2. Any community benefits offered by the proposed facility or its operators.
3. An environmental impact report prepared by a third-party professional environmental engineer describing:
 - a. Anticipated emissions and air quality impacts, and any plans to mitigate impacts;
 - b. Anticipated heat emissions and heat plumes generated by the proposed facility, and any plans to mitigate impacts; and
 - c. Anticipated stormwater impacts and mitigation.

4. An economic impact report prepared by a third-party credentialed professional entity describing:
 - a. The amount of tax revenue local taxing jurisdictions are anticipated to receive as a result of the proposed development;
 - b. The number of construction jobs and permanent jobs associated with the data center; and
5. Whether the applicant has executed an Interconnection Study Agreement, Construction Agreement, and/or Electric Service Agreement with an electric service provider.
6. Plans to remove infrastructure and equipment from the site should the data center cease operation.
7. A letter of attestation from the electricity provider describing any impacts to ratepayers or grid reliability of required new power generation or other infrastructure upgrades to serve the project.
8. Documentation of having advertised and held at least one meeting with community members during which project information is shared, feedback is invited, and questions are answered.
 - a. Advertisement: Such a meeting is to be advertised no fewer than 15 days prior to the meeting's date, with notification provided by email to all Registered Neighborhood Organizations having a geographical boundary within a one mile radius of the proposed data center; by email to all Neighborhood Improvement Specialists; by email to relevant City departments and agencies (i.e., Planning & Urban Design Agency, Health Department, Zoning Section of the Building Division, St. Louis Development Corporation); by mail to all residents and property owners within a 1,000 foot radius of the subject property; and by email to all state and local elected officials representing residents of the surrounding 1 mile of the proposed location.
 - b. Meeting: Such a meeting is to be held at least 45 days prior to submission of an application to the City. The meeting shall include a presentation of project details required for application, and a question and answer period. All major areas of concern, questions, and feedback should be documented and provided to the City as part of the application.
 - c. Feedback Period: During the 45 days following the Meeting, the applicant shall invite and document community feedback. Applications shall not be submitted within the 45 day Feedback Period.

In the event that an applicant is unable to provide any of the above information, the applicant shall, in writing as part of their application, indicate that they are unable to provide the information and also describe the reason this information cannot be provided.

In light of public feedback, legal guidance, and additional technical research, a great deal of detail has been added to the application requirements. Broadly speaking, the intent of the changes is to further clarify expectations, better understand potential impacts, account for potential project elements now better understood by City staff, and collect more third-party information regarding the impact of larger-scale projects.

6. **Site Requirements, Design Requirements, and Standard Conditions** (Section 26.77.050)

Data Centers shall comply with the following site requirements, design requirements and standard conditions:

a. **Location Requirements**

- i. **Micro Data Centers:** No Micro Data Center shall be situated on a parcel with any of its lot lines within 150 feet of another parcel, or fraction thereof, containing a light

- ii. rail station or transit center, zoned A, B, C, D, E, F, G, or containing a school or public park.
- ii. Standard Data Centers: No Micro or Standard Data Center shall be situated on a parcel with any of its lot lines within 300 feet of another parcel, or fraction thereof, containing a light rail station or transit center, zoned A, B, C, D, E, F, G, or containing a school or public park.
- iii. Major Data Centers: No Major Data Center shall be situated on a parcel with any of its lot lines within 600 feet of another parcel, or fraction thereof, containing a light rail station or transit center, zoned A, B, C, D, E, F, G or containing a school or public park.

The location requirements are designed to limit data centers to sites where their impact can be meaningfully mitigated, and where they have potential to complement other land use and development goals. The buffer methodology has been updated to provide more clarity to third-parties assessing sites (i.e., by removing Assessors property classifications). But to achieve the same intent, the “F” and “G” districts were added, as these are where many residential uses exist, and are also the locations of many neighborhood commercial districts.

Spacing measures have been updated from the initial flat approach of 300 feet to offer spacing that is more tailored to the size and potential impact of a data center.

b. Area Standards

- i. The facility shall comply with the Height and Setback limitations of the underlying zoning district.
- ii. The facility shall provide 1 off-street parking space for every 5 permanent employees.
- iii. The facility shall not exceed 500,000 square feet in total gross floor area.
- iv. In the H, I, and L Districts:
 - 1. New Data Center uses within 300 feet of an existing Data Center may be allowed if they comprise less than 30 percent of the gross square footage of a structure.
 - 2. Data Center uses shall not exceed more than 50 percent of the gross ground floor area of any building with street frontage. For the purposes of this section, a building with street frontage is any building located within 50 feet of a street right-of-way line.

These standards are similar to those presented in the preliminary regulations, with one exception: b.iv.1 would control the prevalence and density of data centers Downtown to mitigate the potential erosion of uses that help populate Downtown with vibrancy. Staff considered many approaches to achieve this intent, and have put forward the measure that, on balance, was most clear and attuned to current data center typologies.

c. Noise and Vibration Controls

- i. The facility shall have no unabated nuisance violations.
- ii. The facility shall be subject to provisions of Ordinance 68130 or its successor.
- iii. Noise levels shall not exceed 5 dBA or dBC above the Baseline Noise Levels, as reported prior in the application, during standard operation.

These standards tie into existing City policies for mitigating noise impacts, and add use-specific standards that capture both higher-frequency (dBA) and lower-frequency (dBC) noise. Low-frequency hums from cooling equipment are some of the noises that can be most problematic with a badly-designed data center. Comparison to a Baseline Level is intended to account for existing ambient noise levels that reach a given property, allowing only a modest increase as a result of the data center.

d. Building Systems & Equipment Screening

- i. The building shall be designed and operated with a Cool Roof, Green Roof, or rooftop photovoltaic solar panels to reduce urban heat impacts.
- ii. Visually screen all exterior equipment and equipment areas in order to limit visibility from the right of way, adjoining parcels, and nearby thoroughfares or highways.
- iii. Noise-emitting equipment, such as back up generators, shall be physically enclosed within acoustically treated structures and placed away from primary frontages.
- iv. Enclose and/or screen all exterior and rooftop cooling equipment, and any other infrastructure to provide a visual and acoustic barrier from the property line and surrounding area. Enclosures and/or screens shall be opaque to obstruct from view and reduce frequency and vibrations.
- v. On-site fuel storage shall be visually and physically screened, and set back at least 20 feet from the property line.

These standards remain largely unchanged from the initial recommendation, but are consolidated into their own section. The only addition accounts for controlling on-site storage of fuel tanks, ensuring these don't contribute to visual clutter or create a public safety issue for passersby or neighboring property owners.

e. Site Design

- i. Provide landscaping on a minimum of 10 percent of the lot area, inclusive of a mix of evergreen and deciduous trees. Trees must be maintained in a healthy condition and replaced if dead. Data Centers are exempt from these landscaping requirements when rehabilitating, reconstructing, or repurposing an existing building(s) within the H, I, or L District.
- ii. Provide a tree lawn not less than 3 feet in width along all public streets, where setbacks and available right of way make this practicable. Street trees shall be installed in the tree lawn, between the public sidewalk and public street, when the tree lawn has sufficient width, or street trees with gates shall be installed in public sidewalks where the sidewalk has sufficient width and with a maximum of 25 feet between trees. In the K district, Data Centers may install a landscape berm as an alternative to a tree lawn.

Standards in this section ensure basic landscaping and public realm improvements surrounding data center uses. The changes made were to reduce barriers to adaptive reuse projects where standards may be impossible to achieve.

In many cities' more modern zoning codes, such standards would be already established for all uses. The City is in the process of upgrading its entire Zoning Code to establish a similar consistent approach, but is applying some basic standards for this use in the interim to provide some basic mitigation for urban heat impacts.

f. Water Responsibility

- i. The facility shall not operate with a cooling system that solely relies on Evaporative Cooling. Evaporative Cooling means a highly water-intensive process that uses water evaporation to cool air for the facility's temperature regulation.
- ii. The facility shall achieve and maintain compliance with all wastewater discharge standards set by the Metropolitan St. Louis Sewer District.
- iii. Applicants for Standard and Major Data Centers shall enter into written agreement(s) with the St. Louis City Water Division to:

1. Fund any and all fees required for data centers or new large load users that could be identified out of a cost of service study prior to receiving a building permit.
2. Fund any and all system impact fees required for data centers or new large load users that could be identified out of a cost of service study including the cost of a hydraulic model study and rectifying any detrimental impact on existing customers determined by the study prior to receiving a building permit. Prior to a cost of service study's completion, an agreement may also establish a short-term rate.

Nearly all of this section has been updated from the preliminary framework; all but the first item are entirely new concepts.

- Instead of requiring a Closed Loop system, this new approach more simply bans Evaporative Cooling as the sole cooling method. (Evaporative Cooling Systems are highly, highly water intensive, and can also create a highly concentrated discharge that contributes to pollution challenges.) Hybrid methods can minimize water consumption while also reducing electric cooling loads on very warm days. Technology is also very rapidly developing, and limiting projects to Closed Loop systems may reduce the opportunity for beneficial innovations.
- All projects would have to meet the discharge standards of MSD whether that was listed as a condition or not; listing it as a condition in the zoning regulations strengthens enforcement powers to ensure industrial wastewater discharges are not exceeding what MSD can safely treat.
- F.iii establishes clear expectations that data center applicants shall, as a condition of the permit, enter into relevant agreements with the Water Division to ensure they pay the full cost of infrastructure upgrades and pay an appropriate rate.

g. Backup Generators

- i. Except for generator testing or commissioning activities, generator use is limited to backup/emergency use only.
- ii. Generators shall be fully enclosed within the primary structure or an exterior structure.
- iii. Generators shall utilize the cleanest certified emissions tier. Certificates of Conformity demonstrating Tier 4 / NSPS Subpart III requirements (if diesel), or level of certification (if not diesel), of all equipment shall be provided prior to any such equipment's testing or use.
- iv. Backup generators shall be tested only between 10am and 5pm, Monday through Friday.
- v. Backup generators shall not be tested on bad air quality days when the Air Quality Index (AQI) is above 100.

This section establish standards for generators to ensure that 1) they are never used as a primary power source, and are strictly reserved for backup power service in the case of grid failure; 2) they are designed to the highest standard in order to minimize emissions; and 3) their testing does not occur outside of business hours or when air quality is already a concern.

h. Environment, Energy & Infrastructure Standards

- i. As practicable, facilities shall achieve and maintain LEED certification or certification through a similar green building program for the direction of the data center's operation.
- ii. Facilities shall achieve and maintain a peak Power Usage Effectiveness (PUE) of 1.35 or better.
- iii. Facilities shall dispose of all electronic waste in an environmentally appropriate manner through the duration of the data center's operation, and maintain an active

- contract with an R2-certified (Responsible Recycling) or e-Steward certified contractor.
- iv. Facilities shall not commence operation until a letter verifying adequate power capacity and infrastructure to serve the facility is provided by an electric service utility.
 - v. Facilities shall connect to District Energy Systems if located within 50 lineal feet of an existing line existing at the time of submission for zoning approval.
 - vi. Facilities shall not commence operation until a District Energy Willing to Serve letter from a district energy provider is provided. Such a letter shall confirm the system is prepared to extend service to the site, or serve as a written waiver explaining why extension is not feasible.
 - vii. Facilities shall, when feasible, use battery storage for non-IT load.
 - viii. All outdoor lighting shall meet the standards of the Dark Sky Initiative or other Bird City recommendations to reduce light pollution.
 - ix. Facilities shall ensure any heat plumes created by the facility are adequately dispersed at the property line to avoid adverse impacts on the health or well-being of individuals outside of the property.
 - x. **Standard and Major Data Centers:**
 1. Facilities shall achieve and maintain a minimum of 50 percent of annual electricity consumption from renewable energy by the end of its 5th year of operation through the electric utility's renewable energy programs, PSC-approved large-load renewable energy programs, and/or onsite renewable energy generation and storage, including participation in virtual power plant programs. Beginning in the 6th year, any unmet portion may be satisfied through bundled Renewable Energy Credits from the MISO region.
 2. Facilities shall achieve and maintain 100 percent of annual electricity consumption from renewable energy by the end of its 10th year in operation through the electric utility's renewable energy programs, PSC-approved large-load renewable energy programs, and/or onsite renewable energy generation and storage, including participation in virtual power plant programs. No more than 25 percent of RECs can be used to meet this requirement.

This section has been reorganized and expanded to: 1) require recycling of e-waste; 2) clarify District Energy Requirements but allow for requirements to be waived where connection is not feasible; 3) incorporate lighting standards that reduce light pollution; 4) address heat emissions; and 5) update renewable energy requirements.

The City received feedback both from the development community and renewable energy experts / advocates in the region that the preliminary recommendations were simply not feasible with the current and projected supply of renewables in Ameren's service territory. The requirements have been adjusted, but the REC requirements have been specified to ensure that credits are generated within the MISO region (the electric transmission region that St. Louis rests in).

i. Reporting Requirements for Standard and Major Data Centers

- i. Facilities shall comply with all applicable environmental, energy, water, and other reporting requirements established by the City.
- ii. **Standard and Major Data Centers:**
 1. **Noise:** Annually provide a report to the Health Director/Commissioner (or his/her designee), with copy to the Zoning Administrator, a third-party report, created by an entity acceptable to the Health Director/Commissioner, of noise

emissions to verify compliance with relevant standards and identify other issues and mitigation strategies. The first annual report shall occur within 30 days of the data center commencing operation. Subsequent annual reports shall reflect readings taken between the months of June and August, and submitted by September 30. Readings should be taken at the parcel line of all joining parcels or parcels directly across a street or alley from the parcel containing the data center, and shall compare noise levels to daytime and nighttime Baseline Noise Levels. The report shall include a measure of both dBA and dBC sound levels.

2. Heat Impacts: Annually report waste heat rejected to the outdoor environment, the quantity of waste heat recovered or reused, and the dispersion of heat plumes during summer design conditions or the hottest days of observation in order to assess urban heat impacts and mitigation strategies.
3. Renewable Energy: Provide an annual report verifying compliance with relevant requirements to the Executive Director of the Planning and Urban Design Agency or his/her designee, with copy to the Zoning Administrator, no later than July 30 of each year.

This section establishes and consolidates reporting requirements in order to monitor compliance with relevant standards. This may subsequently be updated to align with requirements separately established for monitoring of data centers' environmental impacts.

j. Community Benefits Agreements

- i. Prior to the issuance of building permit, the applicant for a Major Data Center shall enter into a Community Benefits Agreement with the City or an entity designated by the City. Such agreement shall be recorded in the office of the Recorder of Deeds and shall run with the land and be binding upon any and all successors, assigns, and any transferee. A copy of the executed Community Benefits Agreement shall be provided to the Building Commissioner, with copy to the Zoning Administrator, before a building permit is granted.
- ii. The contents of the Community Benefits Agreement shall be determined based on the site-specific context of the Major Data Center, and shall contain the applicant's assurances to mitigate impacts of the Data Center, improve the surrounding area, and benefit the community. Nothing in this Chapter is intended to limit the discretion of the Board of Aldermen in establishing guidelines for acceptable terms and conditions of Community Benefits Agreements.

This is a new section. The above approach uses zoning policy to require that an agreement be established, but does not detail what a Community Benefits Agreement (CBA) should entail. However, because many items addressed in a CBA may not be directly related to land use issues (e.g., job numbers, revenue projections, etc.), zoning will not always be the most appropriate legal tool to enforce elements of a CBA. However, it is important that other project benefits are contractually affirmed or expanded, and other project impacts contractually addressed.

7. Applicability (Section 26.77.060)

Unless expressly stated otherwise, Data Centers shall demonstrate compliance with these standards at such time that modifications to the property, building, or maximum power demand are made as set forth below.

- a. New Facility. Full compliance is required for new Data Centers.
- b. Expansions. Full compliance is required for any improvements or modifications that constitute an Expansion as defined in this Chapter. Full compliance with this Chapter is required for the full facility.
- c. Previously Approved Facilities. Subject to the provisions of subsection (b), any Data Center lawfully in use or approved by conditional use permit as of the Effective Date of this Chapter shall be considered an existing Nonconforming Use as defined in Section 26.08.331 and may be continued pursuant to the regulations in effect at the time, except that discontinuation of the lawful Data Center shall be subject to the provisions outlined in 26.16.060. Conditional use approvals shall be subject to the standard provisions outlined in 26.80.010.D.5.

This new section simply addresses how existing Data Centers, previous approvals, and future expansions will be reviewed. The approach is to treat legal nonconformities, previous approvals, and future expansions as consistently as possible for this as for other uses in the city.

8. Application Review Process (Section 26.77.070)

The Zoning Administrator shall provide application materials for any Standard or Major Data Center to the Executive Director of the Planning & Urban Design Agency, the Commissioner of Health, the Fire Marshall, the Water Division, the St. Louis Metropolitan Sewer District, relevant district energy service providers, and the Office of Building Performance. Upon receipt of materials, these entities shall then have no less than 30 days to review and provide findings and recommendations to the Zoning Administrator before a recommendation is submitted to the Board of Public Service. Review by relevant parties may occur in parallel.

This process is intended to give City departments with expertise on a range of issues the opportunity to weigh in on proposals so that feedback is available to inform conditional use recommendations, including recommended conditions.

9. Deadline for Review & Revision (Section 26.77.080)

The Planning Commission of the City of St. Louis shall take up review of this Chapter no later than 2 years from the Effective Date of this Chapter 26.77 in order to determine necessary changes that respond to evolutions in technology or increased understanding of impacts and opportunities.

This new section establishes a timeline for review and update.

Exhibit A

Updated Zoning Regulations in Consolidated Form

Significant changes from the preliminary recommendations are highlighted.

a. New Chapter (Chapter 26.77: Data Centers)

b. Purpose (Section 26.77.010)

The purpose and intent of this Chapter 26.77, Data Centers, is to define and address the location, establishment, application requirements, and standard conditions for data centers in order to ensure the health, safety, and general welfare of the residents of the City of St. Louis. This chapter seeks to allow for responsible, predictable development of data centers and associated infrastructure, to encourage best practices, limit negative impacts, and establish a foundation for monitoring and accountability.

c. Definitions (Section 26.77.020)

1. Backup Generators

Backup Generators means engines that are designed to be used for utility power outages to provide continuous electricity, preventing data loss, and service disruption.

2. Baseline Noise Level

Baseline noise level means a measure of noise, taken at the property line pre-application, that establishes dBA and dBC noise levels averaged over a 60-minute measurement period. Measurements shall include daytime levels (e.g., taken between 7:00 a.m. and 1:00 p.m.) and nighttime levels (i.e., taken between 10:00 p.m. and 7:00 a.m.).

3. Cool Roof

Cool Roof means a roofing system designed to reflect more sunlight and emit absorbed heat with a minimum Solar Reflectance Index of 90.

4. Community Benefits Agreement

Community Benefits Agreement means a binding agreement for the purpose of protecting the health, safety, and welfare of the residents of the City by mitigating the impacts associated with Major Data Center land use, energy consumption, infrastructure demands, and environmental effects; providing long-term commitments for site maintenance, closure, decommissioning, and remediation; and addressing site-specific impacts related to utilities, noise, air quality, water resources, and transportation not otherwise addressed in the is Chapter.

5. Data Center

Data Center means a facility used primarily for the storage, management, processing, and transmission of digital data and that houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data storage, processing, and related operations. Data center uses include data storage facilities, server farms, artificial intelligence training or processing, image processing, cloud computing, email servicing, and similar uses. A Data Center may be a primary or secondary use.

6. Data Center, Major

Major Data Center means a data center with a Maximum Power Demand of 30 megawatts or more.

7. Data Center, Micro

Micro Data Center means a data center with square footage less than 10,000 gross square feet and Maximum Power Demand less than 5 megawatts.

8. Data Center, Standard

Standard Data Center means a data center with square footage of more than 10,000 gross square feet or Maximum Power Demand of more than 5 megawatts but less than 30 megawatts.

9. District Energy System

District Energy System means the Downtown Steam Distribution System and/or the planned Chilled Water Loop.

10. Expansion

Expansion means the addition of floor area used for Data Center purposes or an increase in Maximum Power Demand that escalates the applicable classification of Data Center (e.g., Micro, Standard, or Major).

11. Green Roof

Green Roof means a vegetated roofing system which is functionally integrated onto a roof area.

12. Local Renewable Energy Credits (RECs)

Local RECs means RECs generated by renewable energy facilities located within the utility service territory, the State of Missouri, or the MISO region.

13. Maximum Power Demand

Maximum Power Demand means the maximum energy draw that the facility may use for critical IT and building systems and equipment, as set by an agreement with an electric service provider.

14. Renewable Energy

Renewable Energy means energy derived from wind, solar, geothermal, or other sources of renewable energy.

15. Server Room

Server room means an accessory facility with less than 1 megawatt in Maximum Power Demand that supports routine functions of the primary use. Server rooms are not subject to the requirements of this Chapter 26.77.

16. Transit Center

Transit Center means a location where Metro operates a major hub for MetroBus and/or MetroLink stops as identified by their System Maps. Individual bus stops are not Transit Centers.

4. Use Table (Section 26.77.030)

The following Use Table lists how Data Centers are regulated in the various existing zoning districts. Within the table, the user can identify the type of Data Center and how the facility is regulated under each zone, thus identifying whether the use is Permitted (P), whether it requires a Conditional Use Permit (C), or whether it is prohibited (NA).

| Use | A - E | F | G | H | I | J | K | L |
|----------------------|-------|----|----|----|----|----|---|----|
| Micro Data Center | NA | NA | NA | C | C | C | C | C |
| Standard Data Center | NA | NA | NA | NA | C | C | C | C |
| Major Data Center | NA | NA | NA | NA | NA | NA | C | NA |

5. Application Requirements (Section 26.77.040)

An applicant seeking a conditional use permit for any new data center or expansion must include the following information as part of their application submission:

6. The classification of the proposed data center (i.e., Micro, Standard, or Major).
7. Elevations and interior floor plans indicating areas dedicated to data center functions and areas planned for other uses (e.g., office, retail, research, etc.), if relevant.
8. Site plan clearly identifying the building and its square footage, the location of backup generators and cooling equipment, fuel storage and fuel type, parking, landscaping, overhead power (e.g., transmission, distribution lines), on-site battery storage and battery type, on-site substations, any on-site power generation (e.g., solar, wind, etc.), and any additional critical infrastructure or equipment.
9. Megawattage of maximum power demand.
10. The facility’s proposed cooling system, sources of energy, and whether the facility plans to provide its own energy, or to meet its power demands through renewable sources.

An applicant seeking a conditional use permit for any Standard Data Center or Major Data Center must also include the following information:

12. Anticipated end users of the data center, and purpose of the proposed facility, such as: data storage; cloud computing; general artificial intelligence; cryptocurrency mining; surveillance; large language model training; or other business applications.
13. Map indicating the location of any new substations or substation upgrades required for the data center, and the location of new power lines serving the proposed data center. (Any on-site power generation, outside of renewable and backup power sources, shall be reviewed via a separate submission process.)
14. The number, size, fuel source, and anticipated testing schedule for backup generators.
15. An assessment of any flood risk to the proposed site, and planned mitigation efforts.
16. The expected timeline for commencing construction and operation of the facility.
17. Baseline noise levels, expected noise levels to be generated by the proposed facility’s cooling systems, turbines, load banks, and backup generators, a proposed testing schedule designed to minimize air quality and noise impacts, and the proposed facility’s planned sound attenuation

- and noise reduction measures to limit the emission of noise and prevent disturbances to nearby residents.
18. Fire detection and suppression systems that will be installed at the proposed facility.
 19. Whether the user plans to participate in any renewable energy or virtual power plant program, have any onsite renewable energy generation and/or storage, or purchase any Renewable Energy Credits (RECs).
 20. Anticipated annual water use and anticipated or committed Power Usage Effectiveness (PUE) and Water Usage Effectiveness (WUE) for both peak and average annual demand.
 21. Plans to participate in the state's sales tax exemption program.
 22. If new construction, whether and how the proposed facility building's facade, height, massing, and orientation will be designed to be compatible with adjacent properties and the surrounding area.

An applicant seeking a conditional use permit for any Major Data Center must also include the following information:

9. A detailed description of sources and uses.
10. Any community benefits offered by the proposed facility or its operators.
11. An environmental impact report prepared by a third-party professional environmental engineer describing:
 - a. Anticipated emissions and air quality impacts, and any plans to mitigate impacts;
 - b. Anticipated heat emissions and heat plumes generated by the proposed facility, and any plans to mitigate impacts; and
 - c. Anticipated stormwater impacts and mitigation.
12. An economic impact report prepared by a third-party credentialed professional entity describing:
 - a. The amount of tax revenue local taxing jurisdictions are anticipated to receive as a result of the proposed development;
 - b. The number of construction jobs and permanent jobs associated with the data center; and
13. Whether the applicant has executed an Interconnection Study Agreement, Construction Agreement, and/or Electric Service Agreement with an electric service provider.
14. Plans to remove infrastructure and equipment from the site should the data center cease operation.
15. A letter of attestation from the electricity provider describing any impacts to ratepayers or grid reliability of required new power generation or other infrastructure upgrades to serve the project.
16. Documentation of having advertised and held at least one meeting with community members during which project information is shared, feedback is invited, and questions are answered.
 - a. Advertisement: Such a meeting is to be advertised no fewer than 15 days prior to the meeting's date, with notification provided by email to all Registered Neighborhood Organizations having a geographical boundary within a one mile radius of the proposed data center; by email to all Neighborhood Improvement Specialists; by email to relevant City departments and agencies (i.e., Planning & Urban Design Agency, Health Department, Zoning Section of the Building Division, St. Louis Development Corporation); by mail to all residents and property owners within a 600 foot radius of the subject property; and by email to all state and local elected officials representing residents of the surrounding 1 mile of the proposed location.
 - b. Meeting: Such a meeting is to be held at least 45 days prior to submission of an application to the City. The meeting shall include a presentation of project details required for application, and a question and answer period. All major areas of

concern, questions, and feedback should be documented and provided to the City as part of the application.

- c. Feedback Period: During the 45 days following the Meeting, the applicant shall invite and document community feedback. Applications shall not be submitted within the 45 day Feedback Period.

In the event that an applicant is unable to provide any of the above information, the applicant shall, in writing as part of their application, indicate that they are unable to provide the information and also describe the reason this information cannot be provided.

6. Site Requirements, Design Requirements, and Standard Conditions (Section 26.77.050)

Data Centers shall comply with the following site requirements, design requirements and standard conditions:

a. Location Requirements

- i. Micro Data Centers: No Micro Data Center shall be situated on a parcel with any of its lot lines within 150 feet of another parcel, or fraction thereof, containing a light rail station or transit center, zoned A, B, C, D, E, F, G, or containing a school or public park.
- ii. Standard Data Centers: No Micro or Standard Data Center shall be situated on a parcel with any of its lot lines within 300 feet of another parcel, or fraction thereof, containing a light rail station or transit center, zoned A, B, C, D, E, F, G, or containing a school or public park.
- iii. Major Data Centers: No Major Data Center shall be situated on a parcel with any of its lot lines within 600 feet of another parcel, or fraction thereof, containing a light rail station or transit center, zoned A, B, C, D, E, F, G or containing a school or public park.

b. Area Standards

- i. The facility shall comply with the Height and Setback limitations of the underlying zoning district.
- ii. The facility shall provide 1 off-street parking space for every 5 permanent employees.
- iii. The facility shall not exceed 500,000 square feet in total gross floor area.
- iv. In the H, I, and L Districts:
 - 1. New Data Center uses within 300 feet of an existing Data Center may be allowed if they comprise less than 30 percent of the gross square footage of a structure.
 - 2. Data Center uses shall not exceed more than 50 percent of the gross ground floor area of any building with street frontage. For the purposes of this section, a building with street frontage is any building located within 50 feet of a street right-of-way line.

c. Noise and Vibration Controls

- i. The facility shall have no unabated nuisance violations.
- ii. The facility shall be subject to provisions of Ordinance 68130 or its successor.
- iii. Noise levels shall not exceed 5 dBA or dBC above the Baseline Noise Levels, as reported prior in the application, during standard operation.

d. Building Systems & Equipment Screening

- i. The building shall be designed and operated with a Cool Roof, Green Roof, or rooftop photovoltaic solar panels to reduce urban heat impacts.
- ii. Visually screen all exterior equipment and equipment areas in order to limit visibility from the right of way, adjoining parcels, and nearby thoroughfares or highways.
- iii. Noise-emitting equipment, such as back up generators, shall be physically enclosed within acoustically treated structures and placed away from primary frontages.
- iv. Enclose and/or screen all exterior and rooftop cooling equipment, and any other infrastructure to provide a visual and acoustic barrier from the property line and surrounding area. Enclosures and/or screens shall be opaque to obstruct from view and reduce frequency and vibrations.
- v. On-site fuel storage shall be visually and physically screened, and set back at least 20 feet from the property line.

e. Site Design

- i. Provide landscaping on a minimum of 10 percent of the lot area, inclusive of a mix of evergreen and deciduous trees. Trees must be maintained in a healthy condition and replaced if dead. Data Centers are exempt from these landscaping requirements when rehabilitating, reconstructing, or repurposing an existing building(s) within the H, I, or L District.
- ii. Provide a tree lawn not less than 3 feet in width along all public streets, where setbacks and available right of way make this practicable. Street trees shall be installed in the tree lawn, between the public sidewalk and public street, when the tree lawn has sufficient width, or street trees with gates shall be installed in public sidewalks where the sidewalk has sufficient width and with a maximum of 25 feet between trees. In the K district, Data Centers may install a landscape berm as an alternative to a tree lawn.

f. Water Responsibility

- i. The facility shall not operate with a cooling system that solely relies on Evaporative Cooling. Evaporative Cooling means a highly water-intensive process that uses water evaporation to cool air for the facility's temperature regulation.
- ii. The facility shall achieve and maintain compliance with all wastewater discharge standards set by the Metropolitan St. Louis Sewer District.
- iii. Applicants for Standard and Major Data Centers shall enter into written agreement(s) with the St. Louis City Water Division to:
 1. Fund any and all fees required for data centers or new large load users that could be identified out of a cost of service study prior to receiving a building permit.
 2. Fund any and all system impact fees required for data centers or new large load users that could be identified out of a cost of service study including the cost of a hydraulic model study and rectifying any detrimental impact on existing customers determined by the study prior to receiving a building permit. Prior to a cost of service study's completion, an agreement may also establish a short-term rate.

g. Backup Generators

- i. Except for generator testing or commissioning activities, generator use is limited to backup/emergency use only.
- ii. Generators shall be fully enclosed within the primary structure or an exterior structure.

- iii. Generators shall utilize the cleanest certified emissions tier. Certificates of Conformity demonstrating Tier 4 / NSPS Subpart III requirements (if diesel), or level of certification (if not diesel), of all equipment shall be provided prior to any such equipment's testing or use.
- iv. Backup generators shall be tested only between 10am and 5pm, Monday through Friday.
- v. Backup generators shall not be tested on bad air quality days when the Air Quality Index (AQI) is above 100.

h. Environment, Energy & Infrastructure Standards

- i. As practicable, facilities shall achieve and maintain LEED certification or certification through a similar green building program for the duration of the data center's operation.
- ii. Facilities shall achieve and maintain a peak Power Usage Effectiveness (PUE) of 1.35 or better.
- iii. Facilities shall dispose of all electronic waste in an environmentally appropriate manner through the duration of the data center's operation, and maintain an active contract with an R2-certified (Responsible Recycling) or e-Steward certified contractor.
- iv. Facilities shall not commence operation until a letter verifying adequate power capacity and infrastructure to serve the facility is provided by an electric service utility.
- v. Facilities shall connect to District Energy Systems if located within 50 lineal feet of an existing line existing at the time of submission for zoning approval.
- vi. Facilities shall not commence operation until a District Energy Willing to Serve letter from a district energy provider is provided. Such a letter shall confirm the system is prepared to extend service to the site, or serve as a written waiver explaining why extension is not feasible.
- vii. Facilities shall, when feasible, use battery storage for non-IT load.
- viii. All outdoor lighting shall meet the standards of the Dark Sky Initiative or other Bird City recommendations to reduce light pollution.
- ix. Facilities shall ensure any heat plumes created by the facility are adequately dispersed at the property line to avoid adverse impacts on the health or well-being of individuals outside of the property.
- x. Standard and Major Data Centers:
 - 1. Facilities shall achieve and maintain a minimum of 50 percent of annual electricity consumption from renewable energy by the end of its 5th year of operation through the electric utility's renewable energy programs, PSC-approved large-load renewable energy programs, and/or onsite renewable energy generation and storage, including participation in virtual power plant programs. Beginning in the 6th year, any unmet portion may be satisfied through bundled Renewable Energy Credits from the MISO region.
 - 2. Facilities shall achieve and maintain 100 percent of annual electricity consumption from renewable energy by the end of its 10th year in operation through the electric utility's renewable energy programs, PSC-approved large-load renewable energy programs, and/or onsite renewable energy generation and storage, including participation in virtual power plant programs. No more than 25 percent of RECs can be used to meet this requirement.

i. Reporting Requirements for Standard and Major Data Centers

- i. Facilities shall comply with all applicable environmental, energy, water, and other reporting requirements established by the City.
- ii. **Standard and Major Data Centers:**
 1. **Noise:** Annually provide a report to the Health Director/Commissioner (or his/her designee), with copy to the Zoning Administrator, a third-party report, created by an entity acceptable to the Health Director/Commissioner, of noise emissions to verify compliance with relevant standards and identify other issues and mitigation strategies. The first annual report shall occur within 30 days of the data center commencing operation. Subsequent annual reports shall reflect readings taken between the months of June and August, and submitted by September 30. Readings should be taken at the parcel line of all joining parcels or parcels directly across a street or alley from the parcel containing the data center, and shall compare noise levels to daytime and nighttime Baseline Noise Levels. The report shall include a measure of both dBA and dBC sound levels.
 2. **Heat Impacts:** Annually report waste heat rejected to the outdoor environment, the quantity of waste heat recovered or reused, and the dispersion of heat plumes during summer design conditions or the hottest days of observation in order to assess urban heat impacts and mitigation strategies.
 3. **Renewable Energy:** Provide an annual report verifying compliance with relevant requirements to the Executive Director of the Planning and Urban Design Agency or his/her designee, with copy to the Zoning Administrator, no later than July 30 of each year.

j. Community Benefits Agreements

- i. Prior to the issuance of building permit, the applicant for a Major Data Center shall enter into a Community Benefits Agreement with the City or an entity designated by the City. Such agreement shall be recorded in the office of the Recorder of Deeds and shall run with the land and be binding upon any and all successors, assigns, and any transferee. A copy of the executed Community Benefits Agreement shall be provided to the Building Commissioner, with copy to the Zoning Administrator, before a building permit is granted.
- ii. The contents of the Community Benefits Agreement shall be determined based on the site-specific context of the Major Data Center, and shall contain the applicant's assurances to mitigate impacts of the Data Center, improve the surrounding area, and benefit the community. Nothing in this Chapter is intended to limit the discretion of the Board of Aldermen in establishing guidelines for acceptable terms and conditions of Community Benefits Agreements.

7. Applicability (Section 26.77.060)

Unless expressly stated otherwise, Data Centers shall demonstrate compliance with these standards at such time that modifications to the property, building, or maximum power demand are made as set forth below.

- a. **New Facility.** Full compliance is required for new Data Centers.

- b. Expansions. Full compliance is required for any improvements or modifications that constitute an Expansion as defined in this Chapter. Full compliance with this Chapter is required for the full facility.
- c. Previously Approved Facilities. Subject to the provisions of subsection (b), any Data Center lawfully in use or approved by conditional use permit as of the Effective Date of this Chapter shall be considered an existing Nonconforming Use as defined in Section 26.08.331 and may be continued pursuant to the regulations in effect at the time, except that discontinuation of the lawful Data Center shall be subject to the provisions outlined in 26.16.060. Conditional use approvals shall be subject to the standard provisions outlined in 26.80.010.D.5.

8. Application Review Process (Section 26.77.070)

The Zoning Administrator shall provide application materials for any Standard or Major Data Center to the Executive Director of the Planning & Urban Design Agency, the Commissioner of Health, the Fire Marshall, the Water Division, the St. Louis Metropolitan Sewer District, relevant district energy service providers, and the Office of Building Performance. Upon receipt of materials, these entities shall then have no less than 30 days to review and provide findings and recommendations to the Zoning Administrator before a recommendation is submitted to the Board of Public Service. Review by relevant parties may occur in parallel.

9. Deadline for Review & Revision (Section 26.77.080)

The Planning Commission of the City of St. Louis shall take up review of this Chapter no later than 2 years from the Effective Date of this Chapter 26.77 in order to determine necessary changes that respond to evolutions in technology or increased understanding of impacts and opportunities.

Exhibit B

Map of Some Site Location Factors for Data Centers

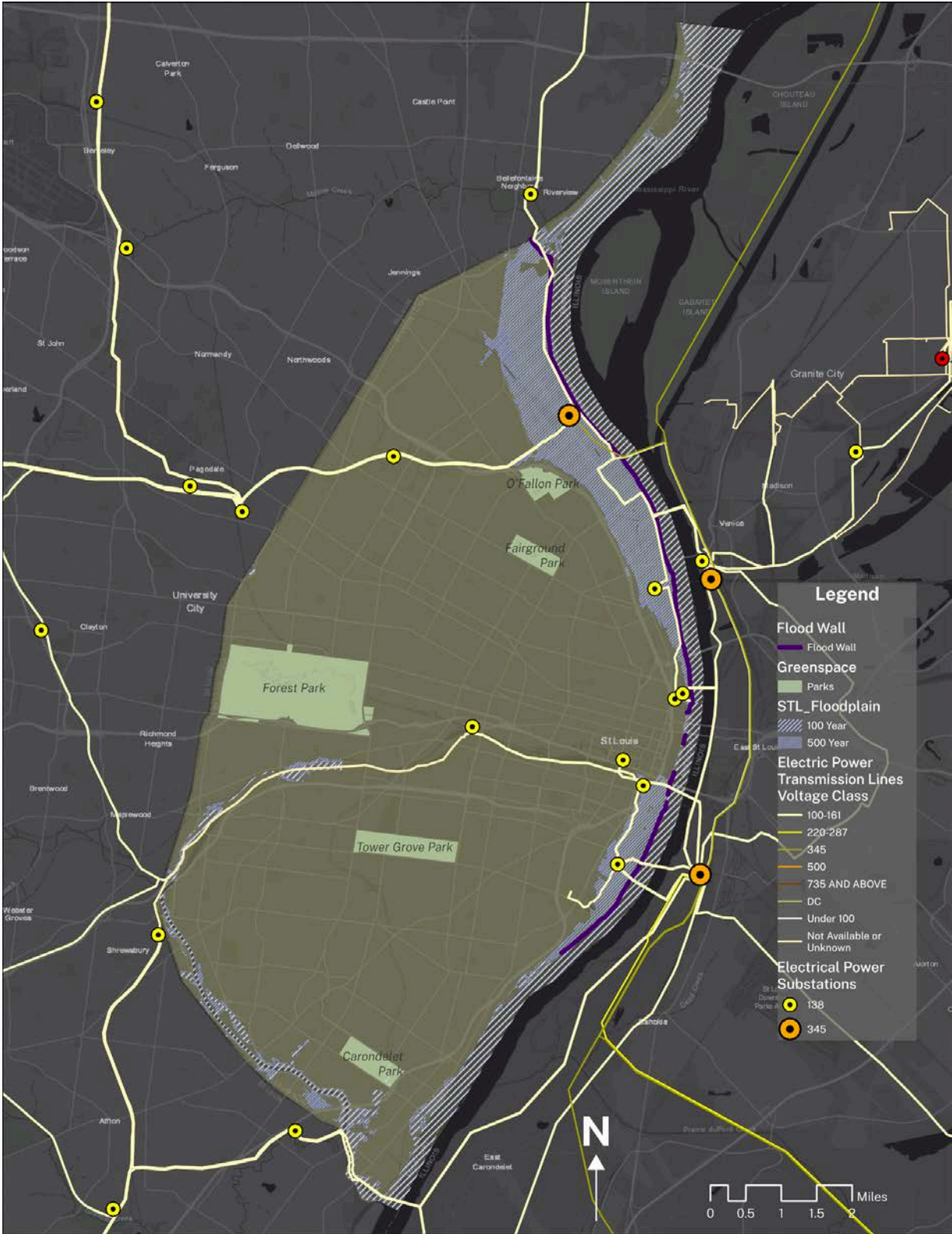
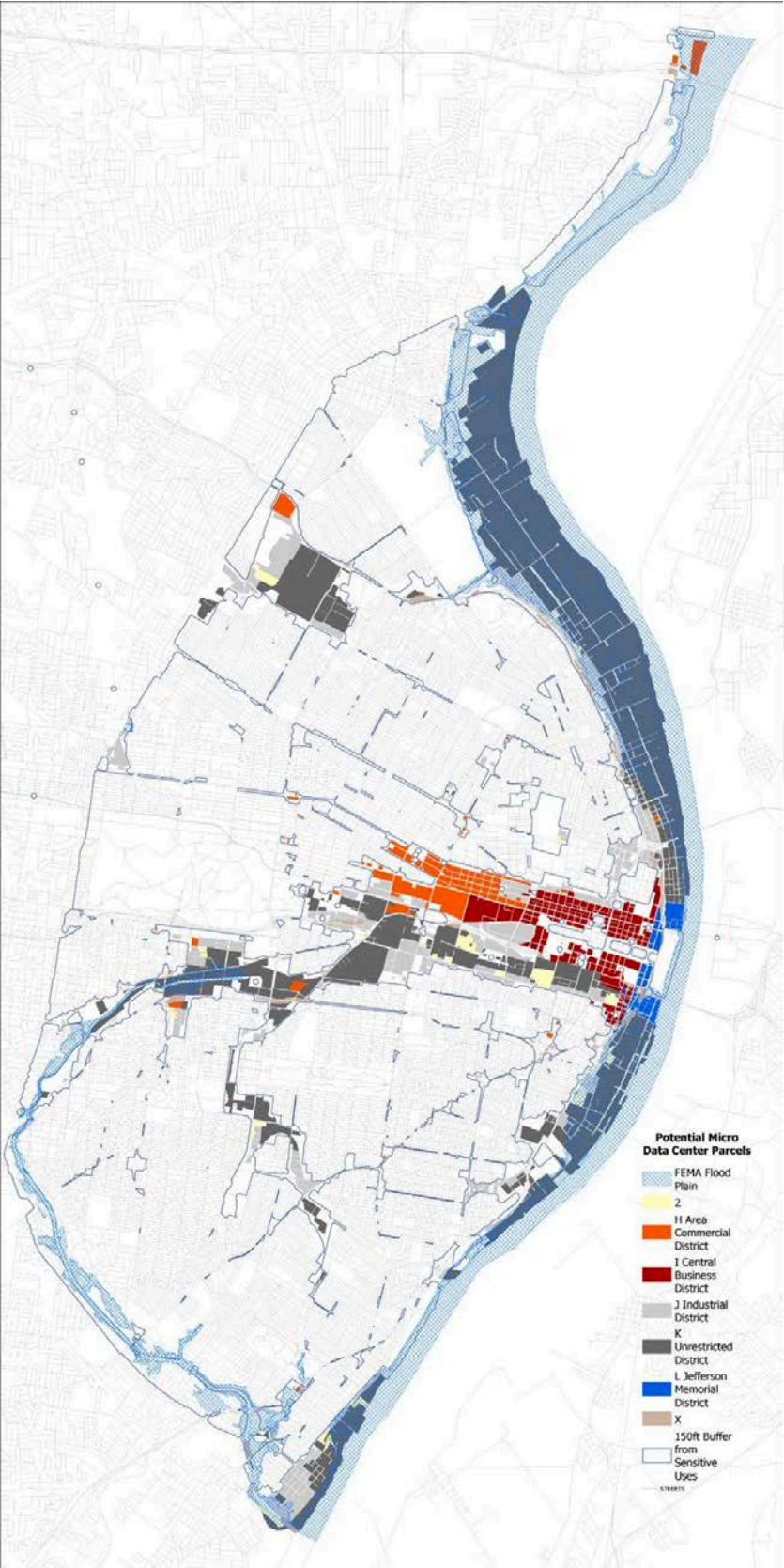


Exhibit C: Illustration of Distance Requirements



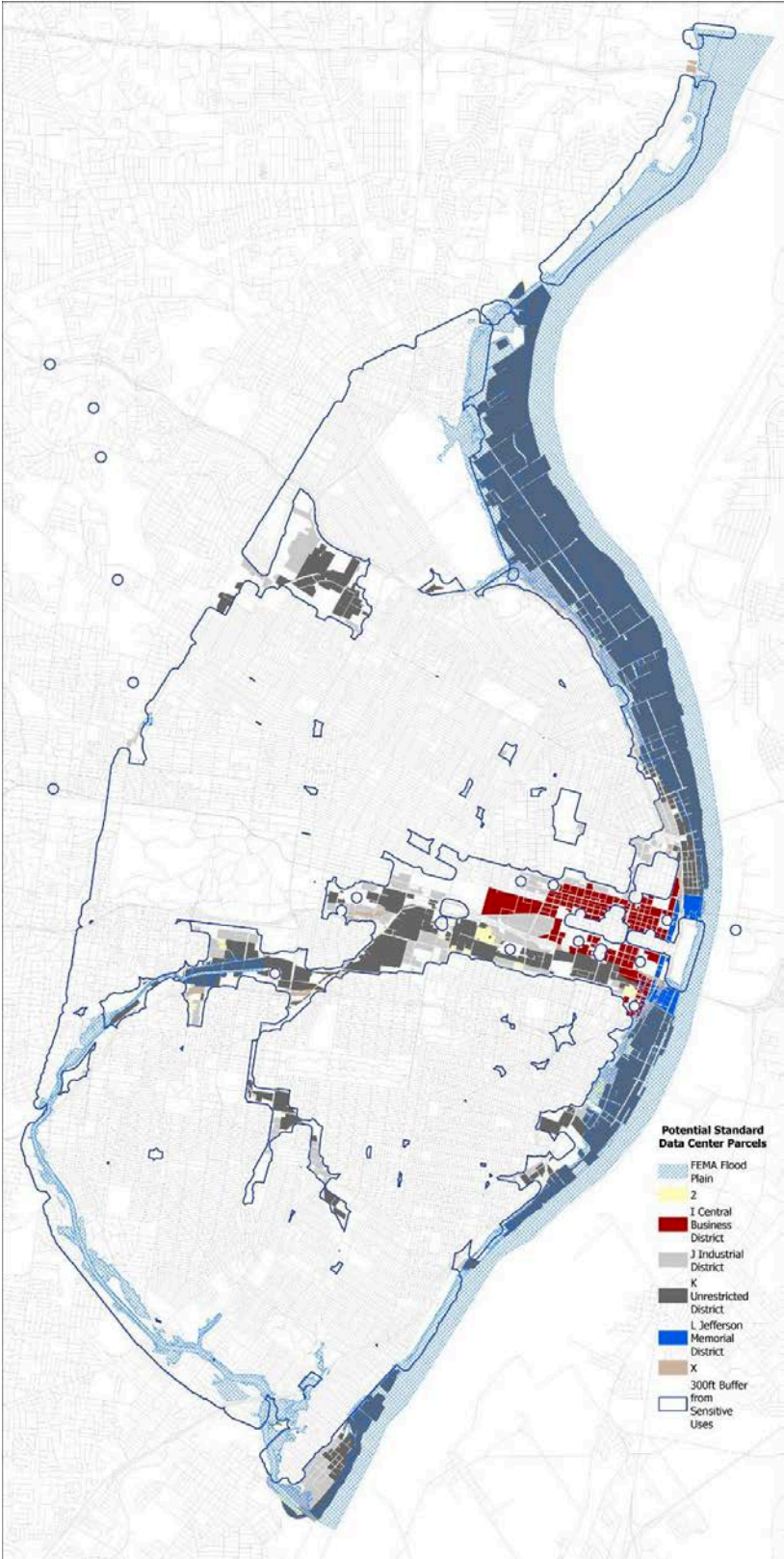
Micro Data Centers

The map to the left helps illustrate where Micro Data Centers (those less than 10,000 square feet or 5 megawatts in size, would be conditionally allowed.

Areas shown as negative space are parcels where a Micro Data Center is not allowed, due to their zoning designation and/or the 150-foot buffer from residential areas, neighborhood commercial districts, schools, and parks.

Areas shown with color indicate parcels, by zoning district, where Micro Data Centers would be conditionally allowed.

The light blue hatch illustrates FEMA-designated flood plains, in which data centers likely would not be located.



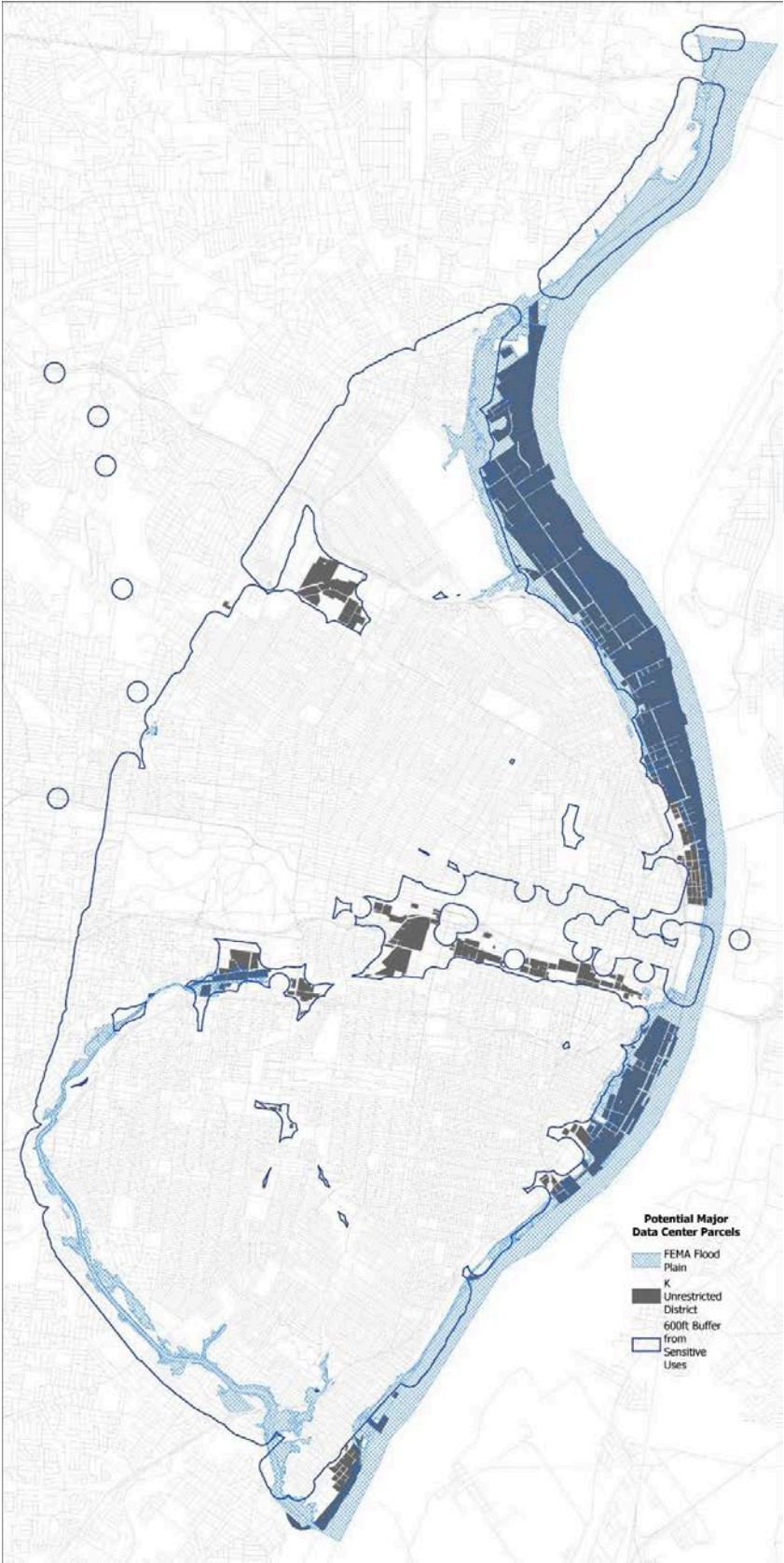
Standard Data Centers

The map to the left helps illustrate where Standard Data Centers (those more than 10,000 square feet or 5 megawatts in size, but less than 30 megawatts) would be conditionally allowed.

Areas shown as negative space are parcels where a Standard Data Center is not allowed, due to their zoning designation and/or the 300-foot buffer from residential areas, neighborhood commercial districts, schools, and parks.

Areas shown with color indicate parcels, by zoning district, where Standard Data Centers would be conditionally allowed.

The light blue hatch illustrates FEMA-designated flood plains, in which data centers likely would not be located.



Major Data Centers

The map to the left helps illustrate where Major Data Centers (those more than 30 megawatts in size) would be conditionally allowed.

Areas shown as negative space are parcels where a Major Data Center is not allowed, due to their zoning designation and/or the 600-foot buffer from residential areas, neighborhood commercial districts, schools, and parks.

Areas shown with color indicate parcels, by zoning district, where Major Data Centers would be conditionally allowed.

The light blue hatch illustrates FEMA-designated flood plains, in which data centers likely would not be located.