



**AGENDA  
CITY OF CREVE COEUR  
PLANNING AND ZONING COMMISSION  
300 NORTH NEW BALLAS RD  
NOVEMBER 17, 2025  
6:00 PM**

**CALL TO ORDER**

**ROLL CALL**

Ms. Julie LaBonte (Chair)  
Mr. Thomas Buelter  
Ms. Rhonda O'Brien  
Mr. Larry Potashnick  
Ms. Marjorie Richter  
Mr. Stephan Tomlinson  
Mr. AJ Wang

Mr. Carl Lumley, City Attorney  
Mr. Jason Jaggi, AICP, Director of Community Development  
Ms. Bethany L. Moore, AICP, City Planner  
Ms. Claralyn Bollinger, Recording Secretary, Administrative Services Supervisor

**ACCEPTANCE OF THE AGENDA**

**APPROVAL OF MINUTES**

- 1. October 20, 2025 Planning and Zoning Commission Draft Meeting Minutes**

**PUBLIC COMMENT**

An opportunity for members of the public to address the Planning and Zoning Commission regarding issues or concerns not already on the agenda for this meeting. Those wishing to speak will be asked to limit comments to three minutes and to complete a speaker card.

**UNFINISHED BUSINESS**

**NEW BUSINESS**

- 1. Application #25-033: Site Development Plan For A Fence Along Runnymede Drive Right-of-Way and Ladue Road Right-of-Way for the Property Addressed as 108 Runnymede Drive**

Patrick Duncan, homeowner, has submitted an application to replace a 6-foot (72") tall, wooden fence within the front yards and adjacent to street right-of-way for Ladue Road and Runnymede Drive. The subject property has three front yard setbacks along three separate rights-of-way.



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**2. Public Hearing. #25-032. Text Amendment to the Zoning Code to Amend Section 410.210, Table A, Pertaining to NAICS 518210 Data Processing, Hosting, and Related Services.**

Jason Jaggi, Director of Community Development, City of Creve Coeur, has submitted a zoning ordinance text amendment application to change the classification of Data Processing, Hosting, and Related Services (NAICS Use Code 518210) from Permitted Uses to Conditional Uses in the following zoning districts: PO-Planned Office, RO-Research Office, PC-Planned Community, CB-Core Business, and LI-Light Industrial. The submitted application amends Table A, Permitted and Conditional Uses as referenced within Section 405.210 Regulation of Uses. This land use category comprises establishments primarily engaged in providing infrastructure for hosting or data processing services, including facilities that are commonly referred to as Data Centers.

**WORK AGENDA**

**PENDING APPLICATIONS**

1.
  - **Graeser Station Planned Mixed-Use Development Rezoning--December 1st Meeting**
  - **Dewey's Pizza CUP, 736 N New Ballas Road--December 1st Meeting**
  - **Einstein's Bagels CUP, 12505 Olive Boulevard--December 1st Meeting**

**DEPARTMENT REPORTS**

Bayer East Campus Comprehensive Plan Update

**ADJOURNMENT**

**Pursuant to Section 610.022 RSMo., the Planning and Zoning Commission could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or**



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**communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. And/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.**

Posted by: \_\_\_\_\_  
Date/Time posted: \_\_\_\_\_

***If you need special accommodations to attend a meeting, services may be arranged by contacting the Office of the City Administrator in advance.***



**DRAFT MINUTES  
CITY OF CREVE COEUR  
PLANNING AND ZONING  
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6:00 PM**

**CALL TO ORDER**

A regular meeting of the Planning and Zoning Commission of the City of Creve Coeur was called to order by Vice Chair Rhonda O'Brien at the City Council Chamber, 300 North New Ballas Rd, City of Creve Coeur Government Center, Creve Coeur, MO 63141 on Monday, October 20, 2025, at 6:00 PM.

**ROLL CALL**

**Ms. Julie LaBonte (Chair) – absent  
Mr. Thomas Buelter  
Ms. Rhonda O'Brien  
Mr. Larry Potashnick  
Ms. Marjorie Richter  
Mr. Stephan Tomlinson  
Mr. AJ Wang**

**Mr. Carl Lumley, City Attorney  
Mr. Jason Jaggi, AICP, Director of Community Development  
Ms. Bethany L. Moore, AICP, City Planner  
Ms. Claralyn Bollinger, Recording Secretary, Administrative Services  
Supervisor**

**ACCEPTANCE OF THE AGENDA**

<p><b>RESULT: APPROVED (UNANIMOUS)</b> <b>MOVER:</b> Mr. Wang <b>SECONDER:</b> Mr. Tomlinson <b>AYES:</b> Mr. Buelter, Ms. O'Brien, Mr. Potashnick, Ms. Richter, Mr. Tomlinson, Mr. Wang <b>NAYS:</b> None</p>
--

The vote on the motion being 6 ayes and 0 nays, motion carried.

**APPROVAL OF MINUTES**

**1. October 6, 2025 Planning and Zoning Commission Draft Meeting Minutes**



**DRAFT MINUTES  
CITY OF CREVE COEUR  
PLANNING AND ZONING  
300 NORTH NEW BALLAS RD  
OCTOBER 20, 2025  
6:00 PM**

**RESULT: APPROVED (UNANIMOUS)**

**MOVER:** Mr. Wang

**SECONDER:** Mr. Tomlinson

**AYES:** Mr. Buelter, Ms. O'Brien, Mr. Potashnick, Ms. Richter, Mr. Tomlinson, Mr. Wang

**NAYS:** None

The vote on the motion being 6 ayes and 0 nays, motion carried.

**PUBLIC COMMENT**

**UNFINISHED BUSINESS**

**NEW BUSINESS**

**1. Application #25-029 and #25-030: Application for A Site Concept Plan and Site Development Plan with Associated Boundary Adjustment for Ballas Dental Located at 11647 Studt Avenue**

Elliot Reed of Cochran Engineering gave a presentation about the proposed Ballas Dental location. It will be 8,700 square feet and single story along Studt Avenue and Ham Avenue. Main access will be from Studt Avenue. Ham Avenue is a private easement, and they are willing to give a public easement to the City on Ham Avenue.

Architect Amel Fazlic gave a presentation about the building design. Brick and composite siding will be the building materials. There will be 22 dental offices and 15 - 20 people will be able to work at one time. Water runoff will be piped underground.

Ms. Moore gave the City's presentation. 5 vacant lots will be combined into 2 lots in the CB Core Business District. There are 65 total parking spaces with requirements of 36 parking spaces and 2 EV Ready parking spaces. 58% total site coverage, 63% maximum. Street trees are required 1 per 30 feet of street frontage. Additional landscaping will be needed around the retaining wall. The primary materials are a lighter, neutral shade of brick and dark gray cement panel. The total height of the mounted lighting is 23 feet. All proposed lighting will be downcast and shielded.

The first easement is granted to the City along the entire length of Ham Avenue from Olive Boulevard to Studt Avenue. The second easement is 24 feet wide covering the full street frontage of the property at 750 Ham Avenue. The third easement is 12 feet wide and covers the full Ham Avenue



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street frontage for the property.

Landscaping requires underground sprinklers. ADA access will be reviewed at the building permit stage. Trash enclosure will be of the same material as the building.

Ruth Marner, a Creve Coeur resident, asked how many mature trees will be removed. Mr. Reed said the site is very tight and most of the trees will be removed. Ms. Marner spoke against the project and in favor of nature and green space. Many people walk by this area daily. Studt Road is really a residential road. Many people still work from home. She raised concerns about traffic and noise from construction.

Craig Morrison of Old Ballas Village Condominiums spoke about traffic concerns on Studt Road. He echoed Ms. Marner's concerns.

William Hanes with Ballas Dental spoke and said that they are currently located at Ballas and Clayton Roads.

Boundary Adjustment motion

**RESULT: APPROVED SUBJECT TO CONDITIONS (UNANIMOUS)**  
**MOVER:** Mr. Wang  
**SECONDER:** Mr. Tomlinson  
**AYES:** Mr. Buelter, Ms. O'Brien, Mr. Potashnick, Ms. Richter, Mr. Tomlinson, Mr. Wang  
**NAYS:** None

The vote on the motion being 6 ayes and 0 nays, motion carried.

Site Concept and Site Development Plan motion

**RESULT: APPROVED (UNANIMOUS) RECOMMEND APPROVAL SUBJECT TO CONDITIONS**  
**MOVER:** Mr. Wang  
**SECONDER:** Mr. Tomlinson  
**AYES:** Mr. Buelter, Ms. O'Brien, Mr. Potashnick, Ms. Richter, Mr. Tomlinson, Mr. Wang



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The vote on the motion being 6 ayes and 0 nays, motion carried.

**WORK AGENDA**

**1. Bayer East Comprehensive Plan Update**

Mr. Jaggi presented revised recommendations for review and gave the Commission members Mr. Potashnick's comments. The redlined version of the revised draft recommendations was discussed. A wide variety of land uses could happen on the Bayer East campus. There are different types of housing opportunities on this campus with a buffer between housing and other uses.

Ms. O'Brien: Make sure that the wooded area doesn't take away from trees elsewhere on the property.

Mr. Potashnick: This draft is greatly improved over the initial draft.

Mr. Jaggi: This is meant to be a guide. It is a balancing act among the varied interests. What the priorities are for development on this site will be in this plan. The zoning process will likely be a Planned Development like Olia Village. This explains our goals for the future in this area of 39 North.

Ms. O'Brien: We want it to stay beautiful. We want it to have a lot of greenery. We want it to be part of the Greenway.

Mr. Jaggi: Our plan does speak to this.

Mr. Buelter: Are we interjecting early in the process with Bayer?

Mr. Jaggi: Bayer is working with a purchaser and they have been in contact with the City.

Mr. Jaggi presented three possible development concepts from PGAV Planners.

Mr. Jaggi: These recommendations are being presented at the Oct. 29 Open House for the public's comments. The public will be able to give comments at each station.

Mr. Potashnick: Brought up some concerns about the trees and recommendations and vagueness of language.

Mr. Jaggi: Code requirement is that 50% of trees can be removed without having to replace trees. We are going beyond this to emphasize the importance of the trees and wooded areas..

There will be an opportunity to make further adjustments.



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The recommendations will be put on the website and presented at the Oct. 29 Open House.

**2. Discussion of the review process for the proposed Olive-Graeser development rezoning application (Graeser Station)**

Mr. Jaggi: The Olive Graeser proposal was submitted on Oct. 17. He presented a review process for this project. The review could be split across two meetings. The developer has hired a parking study consultant. The public hearing at the earliest will be on Nov. 17.

**PENDING APPLICATIONS**

No pending applications for Nov. 3 meeting so it is proposed to cancel that meeting.

**DEPARTMENT REPORTS**

Ms. Moore recommended that Nov. 3 meeting and January 5 meeting be cancelled.

**RESULT: APPROVED (UNANIMOUS)**  
**MOVER:** Mr. Tomlinson  
**SECONDER:** Mr. Wang  
**AYES:** Mr. Buelter, Ms. O'Brien, Mr. Potashnick, Ms. Richter, Mr. Tomlinson, Mr. Wang  
**NAYS:** None

The vote on the motion being 6 ayes and 0 nays, motion carried.

**ADJOURNMENT**

Meeting adjourned at 7:42 PM.

Submitted by:

\_\_\_\_\_  
Recording Secretary

\_\_\_\_\_  
Chair



## APPLICATION TO PLANNING AND ZONING COMMISSION

### #25-033: SITE DEVELOPMENT PLAN FOR A FENCE ALONG RUNNYMEDE DRIVE RIGHT-OF-WAY AND LADUE ROAD RIGHT-OF-WAY FOR THE PROPERTY ADDRESSED AS 108 RUNNYMEDE DRIVE

FOR THE MEETING OF: Monday, November 17, 2025

**SUBJECT PROPERTY LOCATION:** 108 Runnymede Drive, zoned A-Single Family Residential

**REQUEST:** Patrick Duncan, homeowner, has submitted an application to replace a 6-foot (72”) tall, wooden fence within the front yards and adjacent to street right-of-way for Ladue Road and Runnymede Drive. The subject property is zoned A Single Family Residential. The subject property has three front yard setbacks along three separate rights-of-way.

**ADDITIONAL INFORMATION:** The City of Creve Coeur’s Zoning Ordinance Section 405.640 (C) *Fences Within The Front Yard Section And Along Street Right-Of-Way*, states that a fence may project within the area equivalent to the front yard of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least 15 feet from the property line, no more than 4 feet in height, and is an open slatted decorative metal fencing. Any other fence design or location, outside of the preceding criteria, in the area equivalent to the front yard along any street right-of-way shall be subject to site development plan approval by the Planning and Zoning Commission.

**OWNER/APPLICANT:** Patrick and Rachel Duncan:  
108 Runnymede Drive  
Creve Coeur, Mo 63141

#### Key Issues:

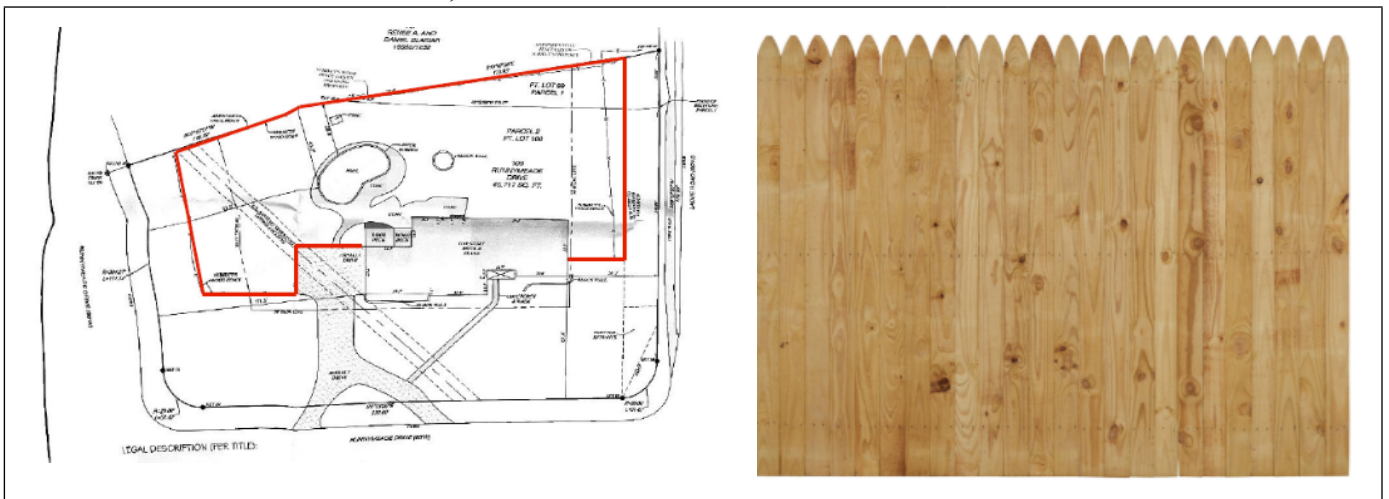
- Does the request integrate with the existing surrounding uses?

#### Creve Coeur 2030 References

- Estate Neighborhood 2 (ER2)
- Design Guidelines

#### Zoning Code References

- Section 405.250: A-Single Family Residential
- Section 405.640: Fences and Walls
- Section 405.1080: Site Concept, Site Development, and Minor Site Plan Approval



**REPORT PREPARED BY:** Bethany L. Moore, AICP, City Planner

**DATE:** 11/12/2025

**ATTACHMENTS:** Applicant’s Materials

**LAND USE AND ZONING OF SURROUNDING PROPERTIES**

The adjacent zoning and land uses are as follows:

DIRECTION	USE	ZONED	SEPARATED BY
North	Single family residence	A-Single Family Residential	Magna Carta Drive
South	Single family residence	A-RDD-Single Family Residential	Ladue Road
East	Single family residence	A-Single Family Residential	N/A
West	Single family residence	A-Single Family Residential	Runnymede Drive

**FENCE PLACEMENT AND DESIGN**

The Applicant is seeking to install a 6 foot (72”) tall wooden fence in a similar location to the existing 6-foot-tall wooden fence within the areas equivalent to the front-yard section and adjacent to street right-of-way along both Runnymede Drive and Ladue Road for the corner property addressed as 108 Runnymede Drive. The applicant is requesting to replace the fence to enclose the yard for the safety of their children and dogs. The fence will be placed in the same location as the existing fence with the exception of being placed roughly 10 feet closer to Ladue Road in order to be in line with the location of the existing neighboring fence along Ladue Road. The fence will sit 15 feet from the property line adjacent to Ladue Road. The fence material will be the same wooden material as the existing fence but the new fence will be a 6-foot tall, solid privacy fence design instead of the 6-foot tall, shadow box style fence that is existing. The proposed new fence has received approval from the Runnymede Subdivision trustees, which is attached for reference. The only fence within the front yard section and along street right of way that can be approved at a Staff level is a 4 foot (48”) open slatted, decorative metal fence that is 15 feet from the property line. All other fences in this area must be approved by the Planning and Zoning Commission.

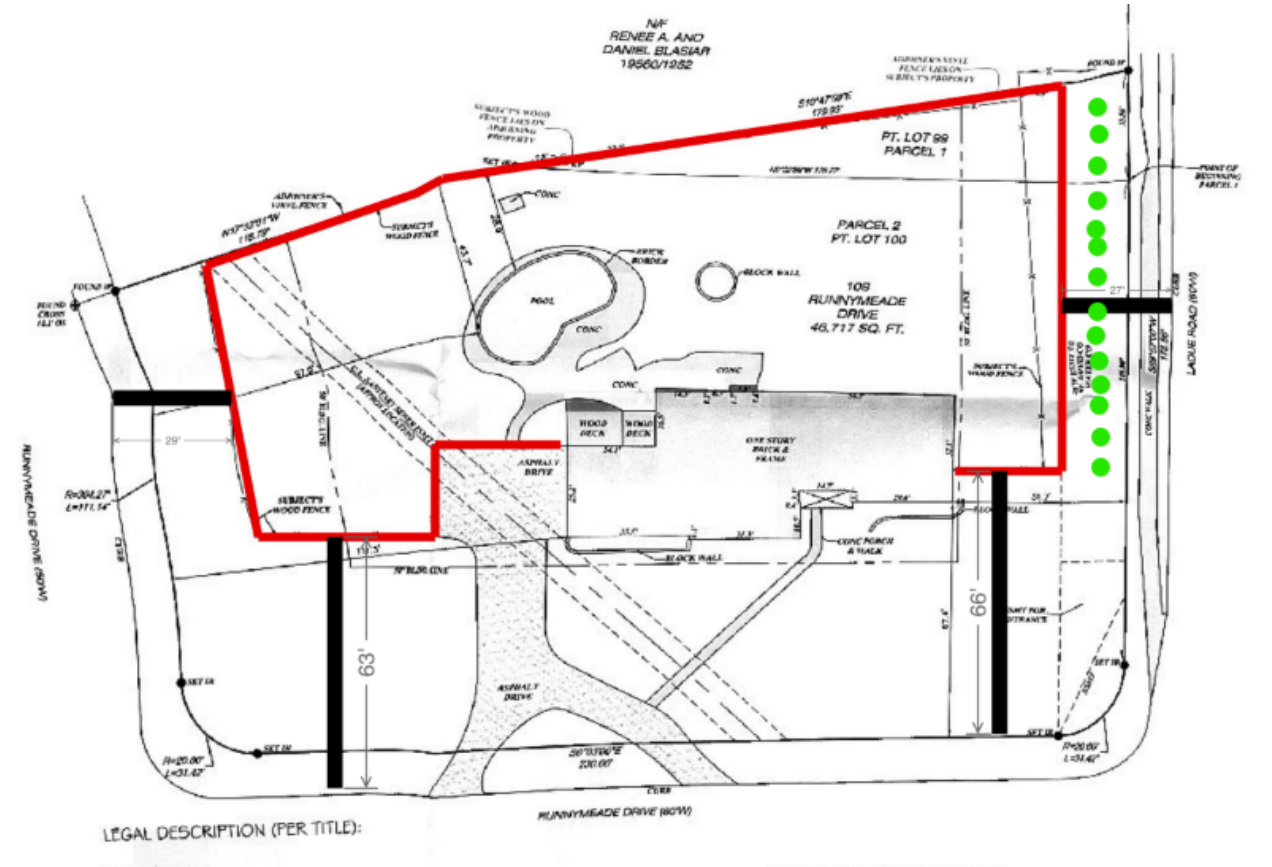


Figure 1: Applicant's Site Plan with replacement fence location in red and proposed Arborvitae.



Figure 2: Fence detail.

**ANALYSIS**

The Zoning Code provides standards for evaluating requests for fences within the front setback under Section 405.640 Fences and Walls:

- C. Fences Or Walls Within The Front Yard Section And Along Street Right-Of-Way.  
A fence may project within the area equivalent to the front yard of the applicable zoning district, when clearly to the side or rear of the home, provided that such fence is setback at least fifteen (15) feet from the property line, no more than four (4) feet in height, and is an open slatted decorative metal fencing, similar in style for swimming pool enclosures as provided in Subsection (D). Any other fence design or location, outside of the preceding criteria, in the area equivalent to the front yard along any street right-of-way shall be subject to site development plan approval by the Planning and Zoning Commission in accordance with Section 405.1080.*

The location of the applicant’s fence on the property is more than 20 feet from the property line adjacent to street right of way along Runnymede Drive and will be 15 feet from the property line adjacent to street right of way along Ladue Road but the material and height require Planning and Zoning Commission approval. The fence is clearly to the side of the house but its location on a corner with three street frontages places it within the front yard setbacks. The context of the surrounding area includes a mix of fenced and unfenced yards both within the Runnymede Subdivision and along Ladue Road. It should be noted that there is extensive existing landscaping along Ladue Road that blocks the fence from view from Ladue Road that will be removed by Ameren in order to complete work along Ladue Road. The applicant is proposing to install upright Arborvitae in front of the fence to screen it from Ladue Road and connect to the existing row of Arborvitae along Ladue Road on the adjacent property. There is less dense, decorative, landscaping along the Runnymede Drive side that provides some cover for the fence and helps it to blend in to the surrounding neighborhood. The proposed fence design reduces the existing openness to some degree but it will not have a notable visual change compared to the existing fence design. A

condition of approval is requested that the existing landscaped area on Runnymede be retained to reduce the visual impact and that the existing vegetation on Ladue Road be replaced with upright Arborvitae to match the existing trees along Ladue Road on the adjacent property as proposed. Given that the proposed fence would be replacing an existing fence in the same location with the same materials and height as the existing fence, Staff does not feel that additional landscaping is necessary along the Runnymede frontage but if the Commission determines that the fence should be screened from Runnymede Drive, this area would be appropriate for additional landscaping installation.

**CONCLUSION AND ACTION**

If the members of the Planning Commission find the applicant’s reasons for the fence location, height, and design sufficient, they can approve it as proposed, with the following conditions. If the Commission wishes to revise the location, material or height of the fence or require additional landscaping, discussion with the Applicant and a revised motion would be necessary.

1. Existing landscaped area on Runnymede Drive be retained to reduce the visual impact of the fence and existing vegetation on Ladue Road to be removed be replaced with upright Arborvitae to match the existing trees along Ladue Road on the adjacent property, as proposed by the applicant.

**MOTION**

The motion for the fence within the area equivalent to the front yard at 108 Runnymede Drive as shown in the enclosed site plan will be in the form of approval, approval with conditions, or deferral. City Council action is not required. The following is an example motion for this application:

“I move to approve the site plan for a 72 inch-tall, wooden fence to be located within the area equivalent to the front yard section along Runnymede Drive and Ladue Road, for the corner property addressed as 108 Runnymede Drive with the conditions as discussed within the Staff Report for Application #25-033 for the November 17, 2025, Planning and Zoning Commission meeting.” (Modification or revisions may be included by preceding motion).

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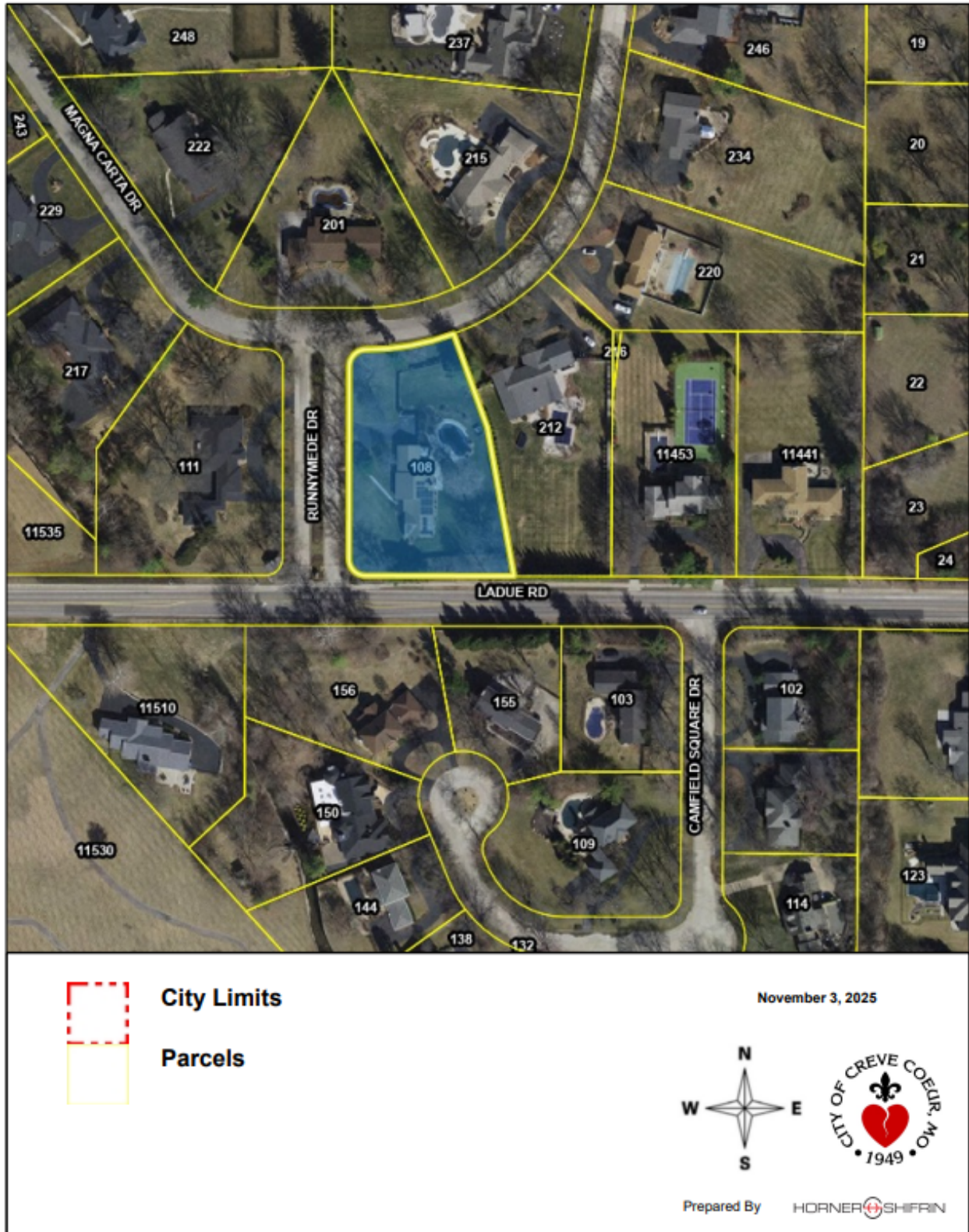
**APPENDIX 1: COMPREHENSIVE PLAN**


Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 3: AERIAL MAP**



<b>APPENDIX 4: SITE PHOTOGRAPHS</b>		Photo Dates: 11/12/2025
	<p>Description: Existing conditions as viewed from Google Street view from Ladue Road.</p>	
	<p>Description: Existing fence as seen from Runnymede Drive.</p>	
	<p>Description: Existing landscaping in front of fence along Runnymede Drive.</p>	



Description: Existing landscaping in front of fence along Runnymede Drive.



Description: Existing fence as seen from Runnymede Drive.



city of **CREVE COEUR**  
PLANNING DIVISION

300 North New Ballas Road, Creve Coeur, Missouri 63141  
Tel. (314) 872-2501 • Fax (314) 872-2505

**PLANNING AND ZONING COMMISSION AGENDA APPLICATION**  
**SITE DEVELOPMENT PLAN**

Select Project Type: Site Development Plan  Site Concept Plan  Minor Site Plan

Title of Project: \_\_\_\_\_

Location of Project: \_\_\_\_\_ Locator # \_\_\_\_\_

Subject for Agenda: \_\_\_\_\_

**Applicant:**

Architect  Engineer  Contractor  Agent  Owner

Applicant:	Applicant's Representative (if applicable):
Name <u>Patrick Duncan</u>	Name _____
Company (If Applicable) _____	Company (If Applicable) _____
Address <u>108 Runnywede Drive</u>	Address _____
Address <u>St. Louis, Mo 63141</u>	Address _____
Telephone # <u>309-212-6696</u>	Telephone # _____
Fax # _____	Fax # _____
Email: <u>patrick.duncan.90@gmail.com</u>	Email: _____
<u></u> Applicant's Signature	_____ Applicant's Representative's Signature

Owner's Acknowledgement (if different from applicant):		
Name <u>PATRICK DUNCAN</u>		
Company (If Applicable) _____		
Address <u>108 Runnywede Drive, St. Louis, MO, 63141</u>		
Phone <u>309-212-6696</u>	Fax <u>N/A</u>	Email <u>PATRICK DUNCAN 90@gmail.com</u>
<u></u> Applicant's Signature		

Description of Request (attach additional sheets as needed)

General Description: \_\_\_\_\_

Install new 6 foot wood privacy fence due to previous fence damage, rot, and failure.

Rationale

Please describe in detail, on an attached sheet, the reasons why you believe the request should be approved and what steps are being taken to lessen any impacts on surrounding residences and businesses. An explanation of the building and landscape designs (if changes are proposed) should also be included.

Our existing fence is broken in multiple places. We have had our dogs escape onto the road. We have 3 small children as well so we need a new fence for their safety.

Submittal Checklist

- |   |   |
|---|---|
| <input type="checkbox"/> Rationale  | <input type="checkbox"/> Building elevations for new construction |
| <input type="checkbox"/> Site plan 4 hard copies  | <input type="checkbox"/> Photographs of existing structures       |
| <input type="checkbox"/> Access and parking plan-4 hard copies; (may be shown on site plan) | <input type="checkbox"/> Materials samples for Commission review  |
| <input type="checkbox"/> Landscape plan 4 hard copies                                       | <input type="checkbox"/> Legal Description in Word format         |
| <input type="checkbox"/> Floor plan 4 hard copies   | <input type="checkbox"/> Fees: \$250 (non-refundable)             |
| <input type="checkbox"/> Electronic copies of all materials                                 | <input type="checkbox"/> \$2000 (refundable deposit)              |
|   | <input type="checkbox"/> Other items as requested by staff        |

Preferred Public Hearing Date: Monday, 11/17, 2025.

\*\*Confirm schedule and available meeting dates with Planning Division staff\*\*

Office Use Only	
_____ All Sections Complete	Received By: _____
_____ All Documents, incl. e-Copies	_____
_____ Fees Paid	Date: _____



Bethany Moore <bmoore@crevecoeurmo.gov>

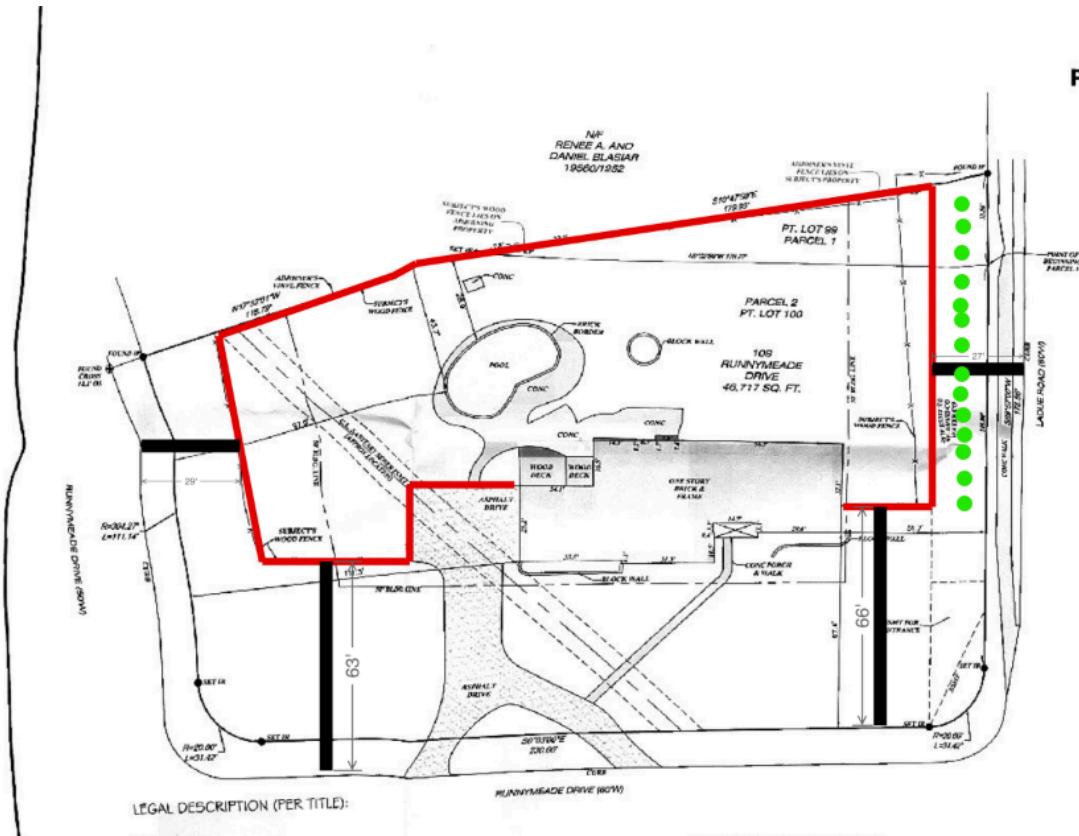
**Fwd: 2025-11-07 7-24 a.m.**

Patrick Duncan <patrickduncan90@gmail.com>  
To: Bethany Moore <bmoore@crevecoeurmo.gov>

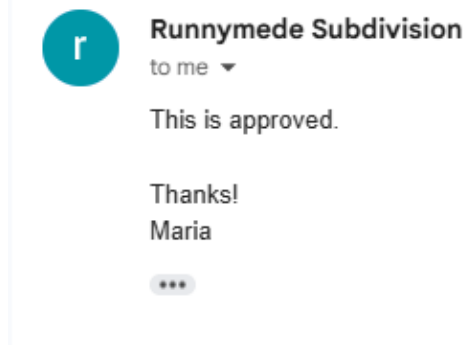
Thu, Nov 13, 2025 at 8:48 PM

Follow up our conversation today.

1) Below is a diagram with the measurements. The 27 feet is off a ladue and corresponds to 15 feet from our property line (in line with our neighbor's property). The green dots are where we will plant the arbor vitae in the spring (again in line with our neighbors).



2) Here is a screen grab of the HOA approval response email--



3) Attached is a final copy of the overhead easement we signed with Ameren

I will send you the powerpoint this weekend. Let me know if you need any clarifications on the above.







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**REMS INFORMATION**

Agreement ID: UEC-202401-53155

Project ID: 67500

**EASEMENT**

(Electric Line Overhang)

LOCATOR NO. 18N410379  
108 RUNNYMEDE DR, ST. LOUIS, MO 63141

KNOW ALL MEN BY THESE PRESENTS, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, that **PATRICK DUNCAN AND RACHEL DUNCAN, A MARRIED COUPLE**, their successors and assigns, whether one or more and whether an individual, individuals, a corporation, or other legal entity (hereinafter "Grantor"), for and in consideration of the sum of One and No/100th Dollars (\$1.00) and other valuable consideration in hand paid, the receipt of which is hereby acknowledged, does hereby grant unto **UNION ELECTRIC COMPANY d/b/a AMEREN MISSOURI**, a Missouri corporation, its successors and assigns (hereinafter "Grantee"), a perpetual easement (hereinafter "Easement") with the right, privilege, and authority of Grantee, its agents, contractors, and subcontractors to survey, stake, construct, reconstruct, replace, use, operate, maintain, patrol, inspect, protect, repair, relocate, modify, add to the number of and remove an electric line and communications line or lines, consisting of wires, cables, fixtures, and appurtenances thereto (hereinafter individually and collectively "Facilities"), together with all rights and privileges for the exercise and enjoyment of the Easement rights. If any party other than the Grantee requires use of the Easement Area, then a separate written agreement must be agreed upon between the Grantor and the third party for use of the Easement Area, pursuant to the provisions hereof, upon, over, and across the following described land in Section 10, Township 45 North, Range 05 East, of the 5th Principal Meridian, in St. Louis County, State of Missouri, to-wit:

**PROPERTY DESCRIPTION:**

Parcel 1:

Part of Lot 99 of Runnymede Plat 5, a subdivision according to the plat thereof recorded in Plat Book 134 pages 2 and 3 of the St. Louis County records, and described as follows: Beginning at the Southwest corner of said Lot 99, and point being on the Northern line of Ladue Road, 60 feet wide; thence along the Western line of said Lot 99 North 0 degrees 02 minutes 59 seconds West, 176.77 feet to a point, thence leaving said Western line and

running South 10 degrees 47 minutes 50 seconds East, 179.93 feet to a point on the Northern line of Ladue Road, as aforementioned; thence along said road line South 89 degrees 57 minutes 01 seconds West, 33.56 feet to the point of beginning.

Parcel 2:

Lot 100 of Runnymede Plat No. 2, according to the plat thereof recorded in Plat Book 117 page(s) 84 of the St. Louis County Records; EXCEPTING therefrom that part conveyed by General Warranty Deed recorded In Book 7036 page 988.

Subject to easements and restrictions of record.

EASEMENT DESCRIPTION:

See Exhibit "A", attached hereto and made a part hereof (hereinafter "Easement Area").

Grantor also conveys the right of ingress and egress to and over the Easement Area, for all purposes herein stated, together with the right to trim, control the growth, cut and remove or cause to be removed at any time and from time to time, by any means, any and all brush, bushes, saplings, trees, roots, undergrowth, rock, overhanging branches or other obstructions upon and over the surface of said Easement Area deemed by Grantee to interfere with the exercise and enjoyment of Grantee's rights hereunder, endanger the safety of the Facilities, or in order for Grantee to maintain compliance with the minimum clearance requirements of the National Electric Safety Code. Notwithstanding the foregoing, Grantee may access Grantor's premises adjoining the Easement Area in order to remove any vegetation or other material that it removes pursuant to this Easement grant.

Grantee shall be responsible for actual damages (except the trimming, controlling of growth, cutting, and removal of trees and other vegetation) occurring as a result of the Grantee's exercise of the Easement rights hereinabove conveyed and shall reimburse the owner thereof for such loss or damages. Grantee shall indemnify, hold harmless and release, Grantor, its directors, officers, employees, agents, invitees, successors and assigns from any and all claims for liability and damages related to Grantee's use, repair, replacement, removal, maintenance, and holding of the Facilities and the Easement.

Grantor, for itself, its successors and assigns, does hereby warrant and covenant unto Grantee, (1) that Grantor is the owner of the Easement Area and has the full right and authority to grant this Easement, (2) that Grantee may quietly enjoy the Easement for the purposes herein stated, and (3) that Grantor will not create or permit any building or other obstruction or condition of any kind or character upon Grantor's premises that will interfere with the Grantee's exercise and enjoyment of the Easement rights hereinabove conveyed.

This Easement shall be governed by the laws of the State of Missouri.

IN WITNESS WHEREOF, the Grantor has hereunto caused this Easement to be executed on the date hereinabove written.

\_\_\_\_\_  
Patrick Duncan

\_\_\_\_\_  
Rachel Duncan

**ALL PURPOSE NOTARY ACKNOWLEDGMENT**

STATE OF \_\_\_\_\_ }  
 COUNTY OF \_\_\_\_\_ } SS

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned, a Notary Public in and for said State, personally appeared (print or type names):

\_\_\_\_\_

to me known to be the person described in and who executed the foregoing instrument and acknowledged that he/she/they executed the same as his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

<b>Capacity Claimed By Signator(s)</b>			
<input type="checkbox"/> Individual(s)	<input type="checkbox"/> Corporate	<input type="checkbox"/> Limited Liability Company	<input type="checkbox"/> Partner(s)
<input type="checkbox"/> Trustee(s)	Title(s) of Officer(s):	Member(s)/Manager(s):	<input type="checkbox"/> Limited Partnership
<input type="checkbox"/> Executor(s)	_____	_____	<input type="checkbox"/> General Partnership
<input type="checkbox"/> Administrator(s)	_____	_____	<input type="checkbox"/> Other (Specify Below):
<input type="checkbox"/> Attorney-In-Fact	_____	_____	_____
<input type="checkbox"/> Conservator(s)	_____	_____	_____
<input type="checkbox"/> Guardian(s)	_____	_____	_____

\_\_\_\_\_  
 My Commission Expires

\_\_\_\_\_  
 Notary Public

Prepared By: O.R. Colan, 3050 W Clay, Suite 200, St. Charles, MO 63301

Return To: O.R. Colan, Attn: Ben Ridling, 3050 W Clay, Suite 200, St. Charles, MO 63301

CON  
 WO#: J0NV9  
 Facility Name: Warson 71  
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 04/03/2025



201

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GREVE COEUR

RUNNYMEDE DR

210

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LADDE RD

10 SQUARE DR

**BOUNDARY AND IMPROVEMENT SURVEY  
 PARCEL 1: PART OF LOT 99 OF RUNNYMEDE PLAT 5  
 A SUBDIVISION RECORDED IN  
 PLAT BOOK 134 PAGES 2-3  
 PARCEL 2: LOT 11 OF RUNNYMEDE PLAT NO. 2,  
 A SUBDIVISION RECORDED IN  
 PLAT BOOK 117 PAGE 84; EXCEPTING THEREFROM THAT  
 PART CONVEYED BY GENERAL WARRANTY DEED RECORDED  
 IN BOOK 7036 PAGE 988  
 ST LOUIS COUNTY, MISSOURI**

**SCHEDULE B SECTION II:  
 ITEM 8: EASEMENTS DO NOT AFFECT PROPERTY**

**BASIS OF BEARINGS:  
 P.B. 134, PGS. 2-3**

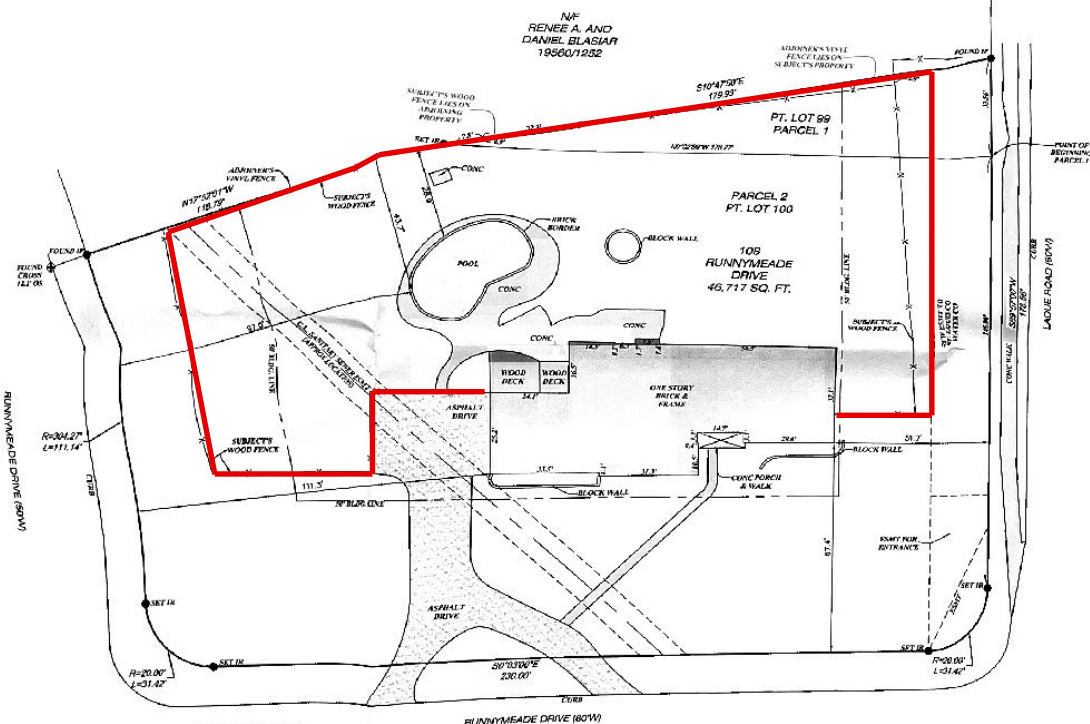
THIS IS TO CERTIFY THAT AT THE REQUEST OF 2004 LEIBOVITCH-CHUN FAMILY TRUST / SECURITY TITLE / FIDELITY NATIONAL TITLE INSURANCE COMPANY AND PER TITLE COMMITMENT NUMBER 226919FC, WE HAVE DURING THE MONTH OF May, 2018 EXECUTED A BOUNDARY AND IMPROVEMENT SURVEY ON PART OF LOT 99 OF RUNNYMEDE PLAT 5 PLAT BOOK 117 PAGE 84, EXCEPTING THEREFROM THAT PART CONVEYED BY GENERAL WARRANTY DEED RECORDED IN BOOK 7036 PAGE 988 AND PART OF LOT 99 OF RUNNYMEDE PLAT 5 A SUBDIVISION RECORDED IN PLAT BOOK 134 PAGES 2-3, A SUBDIVISION IN ST. LOUIS COUNTY, MO. THE RESULTS REFLECT THE CONDITIONS FOUND AT THE TIME OF THE SURVEY, ARE CORRECTLY SHOWN ABOVE AND CONFORM TO THE CURRENT STANDARDS FOR URBAN CLASS PROPERTY BOUNDARY SURVEYS AS ISSUED BY THE MISSOURI DEPARTMENT OF AGRICULTURE AND THE MISSOURI BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, PROFESSIONAL LAND SURVEYORS AND PROFESSIONAL LANDSCAPE ARCHITECTS. THIS SURVEY WAS CONDUCTED UNDER THE IMMEDIATE PERSONAL SUPERVISION OF THE UNDERSIGNED REGISTERED LAND SURVEYOR. THE EASEMENTS, RESTRICTIONS, AND BUILDING LINES SHOWN ARE BASED ON RECORD PLAT INFORMATION OR ON INFORMATION SUPPLIED BY THE CLIENT. NO INVESTIGATION HAS BEEN MADE BY THD DESIGN GROUP AS TO THE PRESENT STATUS OF ANY EASEMENTS, RESTRICTIONS, OR BUILDING LINES, SHOWN OR NOT SHOWN, AFFECTING THE TRACT SURVEYED.

I, BRIAN J FISCHER, A DULY REGISTERED LAND SURVEYOR, LICENSED IN THE STATE OF MISSOURI HEREBY STATE FOR AND ON BEHALF OF THD DESIGN GROUP TO 2004 LEIBOVITCH-CHUN FAMILY TRUST / SECURITY TITLE / FIDELITY NATIONAL TITLE INSURANCE COMPANY, THAT A SURVEY OF THE ABOVE DESCRIBED PREMISES WAS CONDUCTED BY ME OR UNDER MY RESPONSIBLE CHARGE ON May 25, 2018; THAT SAID SURVEY AND THE ATTACHED PRINT HEREON WERE EXECUTED IN ACCORDANCE WITH THE CURRENT MISSOURI STANDARDS FOR BOUNDARY SURVEYS AND THAT THE SURVEY ACCURATELY REFLECTS ALL IMPROVEMENTS, INCLUDING FENCES, RECORDED EASEMENTS AND UNRECORDED VISIBLE EASEMENTS.

**NOTES:**

1. ADJOINERS VINYL FENCE LIES ON SUBJECT'S PROPERTY.
2. SUBJECT'S WOOD FENCE LIES ON ADJOINERS PROPERTY.
3. FENCE OWNERSHIP (IF SHOWN) BASED ON CONSTRUCTION AND FIELD OBSERVATIONS.
4. BUILDING LINES AND EASEMENTS SHOWN PER ABOVE MENTIONED RECORD PLAT.

**LEGEND**  
 --- SURVEYOR  
 --- SETBACK LINE



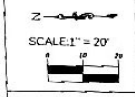
**LEGAL DESCRIPTION (PER TITLE):**

**PARCEL 1:**  
 PART OF LOT 99 OF RUNNYMEDE PLAT 5, A SUBDIVISION ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 134 PAGES 2 AND 3 OF THE ST. LOUIS COUNTY RECORDS, AND DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 99, AND POINT BEING ON THE NORTHERN LINE OF LADUE ROAD, 60 FEET WIDE; THENCE ALONG THE WESTERN LINE OF SAID LOT 99 NORTH 0 DEGREES 02 MINUTES 59 SECONDS WEST, 176.77 FEET TO A POINT, THENCE LEAVING SAID WESTERN LINE AND RUNNING SOUTH 10 DEGREES 47 MINUTES 50 SECONDS EAST, 179.93 FEET TO A POINT ON THE NORTHERN LINE OF LADUE ROAD, AS AFOREMENTIONED; THENCE ALONG SAID ROAD LIEN SOUTH 89 DEGREES 57 MINUTES 01 SECONDS WEST, 33.56 FEET TO THE POINT OF BEGINNING.

**PARCEL 2:**  
 LOT 100 OF RUNNYMEDE PLAT NO. 2, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 117 PAGE(S) 84 OF THE ST. LOUIS COUNTY RECORDS, EXCEPTING THEREFROM THAT PART CONVEYED BY GENERAL WARRANTY DEED RECORDED IN BOOK 7036 PAGE 988.

**THD DESIGN GROUP, INC.**  
 your solution for engineering and surveying  
 14 CHESTERFIELD INDUSTRIAL BLVD STE A, CHESTERFIELD, MO 63005  
 TEL: 636.877.1000  
 FAX: 636.877.1001  
 WWW.THDDESIGNGROUP.COM  
 COMPLETE CERTIFICATE OF AUTHORITY # 201004012

**BOUNDARY AND IMPROVEMENT SURVEY**  
 PARCEL 1: PART OF LOT 99 OF RUNNYMEDE PLAT 5  
 A SUBDIVISION RECORDED IN  
 PLAT BOOK 134 PAGES 2-3  
 PARCEL 2: LOT 11 OF RUNNYMEDE PLAT NO. 2,  
 A SUBDIVISION RECORDED IN  
 PLAT BOOK 117 PAGE 84 EXCEPTING THEREFROM THAT PART CONVEYED BY  
 GENERAL WARRANTY DEED RECORDED IN BOOK 7036 PAGE 988  
 ST. LOUIS COUNTY, MISSOURI





# city of CREVE COEUR

300 North New Ballas Road • Creve Coeur, Missouri 63141

(314) 432-6000 • Fax (314) 872-2539 • Relay MO 1-800-735-2966

## APPLICATION TO PLANNING AND ZONING COMMISSION

### #25-032: TEXT AMENDMENT TO THE ZONING CODE TO AMEND SECTION 410.210, TABLE A, PERTAINING TO NAICS 518210, DATA PROCESSING, HOSTING, AND RELATED SERVICES

**FOR THE MEETING OF:** Monday, November 17, 2025, 6:00 P.M.

**REQUEST:** Jason Jaggi, Director of Community Development, City of Creve Coeur, has submitted a zoning ordinance text amendment application to change the classification of Data Processing, Hosting, and Related Services (NAICS Use Code 518210) from Permitted Uses to Conditional Uses in the following zoning districts: PO-Planned Office, RO-Research Office, PC-Planned Community, CB-Core Business, and LI-Light Industrial. Conditional uses require review by the Planning and Zoning Commission with a public hearing and recommendation to the City Council for final approval. The submitted application amends Table A, Permitted and Conditional Uses as referenced within Section 405.210 Regulation of Uses. This land use category comprises establishments primarily engaged in providing infrastructure for hosting or data processing services, including facilities that are commonly referred to as Data Centers.

**ADDITIONAL INFORMATION:** Text Amendments to the Zoning Ordinance require a public hearing and review by the Planning and Zoning Commission with final approval by the City Council.

**APPLICANT:** Jason Jaggi  
Director of Community Development  
300 North New Ballas Road  
Creve Coeur, MO 63141

**REPORT PREPARED BY:** Jason W. Jaggi, AICP, Director of Community Development

**DATE:** November 13, 2025

**ATTACHMENTS:** Draft Ordinance; Reference documents

#### Key Issues:

- Are the changes consistent with the purposes of the City Code?
- How does the use integrate with the surrounding uses?

#### Code References

- Section 410.210: Regulation of Uses
- Table A, Permitted and Conditional Uses

## **BACKGROUND AND REQUEST**

Data centers have quickly become a focal point in the metropolitan area within the past several months. Recent proposals for data centers in the region have been met with considerable controversy and debate concerning land use, economic, and environmental impacts. Nonetheless, the demand for data centers is expected to grow with the emergence of artificial intelligence (AI) and the need for data storage.

Data centers are secure facilities that provide the necessary infrastructure to store and power computing equipment. They can take on many functions such as providing data storage, powering AI, or mining cryptocurrency. These facilities can range from sprawling hyperscale data centers located within industrial areas or on greenfield sites in suburban locations (similar to the proposed 400+ acre data center in St. Charles) or they can be smaller facilities occupying floors within an office building. The larger, standalone data centers have greater potential to impact the surrounding areas as they tend to require large external equipment to power and cool the facilities. Smaller data centers that occupy a floor or two of an office building may not create as much of a concern.

Based on staff's early research, the main impacts with data centers involve the consumption of water needed to cool the equipment and the electricity required to power these facilities. In addition, due to the mechanical equipment needed to meet the energy requirements, the potential exists for these uses to generate noises, creating a nuisance to surrounding areas.

From an industry perspective, data centers are considered part of the essential infrastructure supporting the nation's computing power. Data centers support online commerce, financial services, health care and most any function that involves the internet. Data that is saved in the cloud is stored in a data center. In September, Greater St. Louis Inc. issued a statement in support of growing the data center infrastructure. Several other organizations signed-on in support of the responsible growth of data centers, including the 39 North AgTech District. This statement is attached for reference.

## **ZONING CLASSIFICATION**

The City of Creve Coeur currently utilizes the 2012 version of the NAICS code to regulate land uses. Data centers are classified under NAICS 518210 Data Processing, Hosting, and Related Services. This use classification is broad and includes all data processing and hosting type activities. The NAICS describes these uses as follows:

This industry comprises establishments primarily engaged in providing infrastructure for hosting or data processing services. These establishments may provide specialized hosting activities, such as web hosting, streaming services or application hosting; provide application service provisioning; or may provide general time-share mainframe facilities to clients. Data processing establishments provide complete processing and specialized reports from data supplied by clients or provide automated data processing and data entry services.

The current zoning code lists Use Code 518210 as a Permitted Use in the following zoning districts:

- PO-Planned Office
- RO-Research Office
- PC-Planned Community
- CB-Core Business
- LI-Light Industrial

The above zoning districts represent many of the City's commercial and light industrial zoning districts. The notable exception is the GC-General Commercial District. Permitted uses are allowed as a matter of right with no public hearing or Planning and Zoning Commission, City Council review. On the contrast, Conditional Uses consider the appropriateness of a proposed use taking into account the surrounding uses,

activities and conditions of the site and of surrounding areas. Conditional uses require public notice and a public hearing with Planning and Zoning Commission and City Council approval.

Based on the acceleration of these uses within the region and nationally, staff is proposing to change the classification of NAICS 518210, which includes data centers, from Permitted to Conditional uses.

### **COMPREHENSIVE PLAN REVIEW**

The comprehensive plan, *Creve Coeur 2030*, was adopted in 2017. The plan establishes seven (7) primary goals (p. 15):

1. Placemaking and Community Identity
2. Residential Development and Preservation
3. Economic Growth and Community Services
4. Community Amenities and Facilities
5. Parks, Open Space and Environment
6. Transportation, Connectivity and Mobility
7. Community Sustainability, Health and Resilience

Under Goal #3 Economic Growth & Community Services, Strategy 3.6 states the following:

Work with the business community to develop recommendations for broadband, electrical, and other infrastructure as it impacts economic development.

This strategy is applicable to the proposed text amendment. Data centers provide the necessary infrastructure to support the digital services that we rely on in today's society. This industry is evolving as the technology changes. The proposed revisions are in line with Strategy 3.6 as they take a responsible approach to regulating these uses while maintaining the ability for them to locate within the City of Creve Coeur. The change in classification from a permitted use to a conditional use does not prohibit data centers. Rather, it provides the opportunity to better understand the operations of a specific use while giving the City the ability to mitigate any potential impacts. In the opinion of staff, this represents a balanced approach to regulation of these uses consistent with the Comprehensive Plan.

### **SUMMARY OF PROPOSED AMENDMENTS**

The proposed changes are to Section 405.210 Regulation of Uses and Table A, which lists the permitted and conditional uses within each of the City's zoning districts. NAICS use code 518210 Data Processing, Hosting, and Related Services is proposed to be changed from P-Permitted Use to C-Conditional Use in the following zoning districts:

- Planned Office (PO)
- Research Office (RO)
- Planned Community (PC)
- Core Business (CB)
- Light Industrial (LI)

The portion of Table A for Use Code 518210 would be amended as follows:

P= Permitted Use, C = Conditional Use Permit Required															
Use Code	2012 NAICS Title	A	B	C	D	AR	HE	PH	PO	RO	MX	PC	GC	CB	LI
518210	Data Processing, Hosting, and Related Services								<u>P</u>	<u>C</u>		<u>P</u>		<u>C</u>	<u>P</u>

**CONCLUSION AND ACTION**

In consideration of the rapid development of data centers, concerns associated with recent proposals in the region, and their potential impact, amendments to the zoning code are proposed to change the classification within the existing zoning districts where they are permitted as of right to conditional uses which would allow a public review and the ability of the City to consider the impacts for any specific proposal for these types of uses. Staff believes this is a responsible regulatory approach for these types of land uses.

**MOTION**

If the Planning and Zoning Commission believes the amendments are appropriate, the following would be a suitable motion for this application:

“I move to recommend approval to City Council for text amendments to the Zoning Code pertaining to NAICS 518210, Data Processing, Hosting, and Related Services as regulated within Section 405.210 and Tab A as described in the attached draft ordinance as part of Application 25-032 discussed at the Planning and Zoning Commission meeting of November 17, 2025.”

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**APPENDIX 1: COMPREHENSIVE PLAN**

Included and attached by reference. See body of report for specific excerpts.

**APPENDIX 2: ZONING CODE**

Included and attached by reference. See body of report for specific excerpts.

BILL NO. \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE CHANGING THE CLASSIFICATION OF NAICS USE CODE 518210 DATA PROCESSING, HOSTING, AND RELATED SERVICES FROM PERMITTED TO CONDITIONAL USES IN CERTAIN ZONING DISTRICTS AS REGULATED IN SECTION 405.210 AND TABLE A OF THE ZONING ORDINANCE, OF THE CODE OF ORDINANCES OF THE CITY OF CREVE COEUR**

**WHEREAS**, an application was made by Jason Jaggi, Director of Community Development, City of Creve Coeur, to amend the zoning regulations pertaining to NAICS Use Code 518210 Data Processing, Hosting, and Related Services by changing the classification of such uses from Permitted to Conditional Uses as regulated in Section 405.210 and Table A; and

**WHEREAS**, the Planning and Zoning Commission of the City of Creve Coeur, Missouri, has recognized the need for such changes as set forth herein, to more effectively implement the goals of the Comprehensive Plan and the purposes of the Zoning Ordinance; and

**WHEREAS**, the Planning and Zoning Commission of the City of Creve Coeur, Missouri, held a public hearing thereon at the Creve Coeur Government Center on November 17, 2025, beginning at 6:00 p.m., or immediately following the close of the previous public hearing; and

**WHEREAS**, the Planning and Zoning Commission reviewed and, by a \_\_\_ vote recommended approval of the subject amendments at its meeting on November 17, 2025; and

**WHEREAS**, notice of said public hearing had previously been published at least 15 days prior to the hearing in the St. Louis Countian, a newspaper of general circulation in the City of Creve Coeur and otherwise posted and published in accordance with the Zoning Ordinance; and

**WHEREAS**, all persons who presented themselves at said meeting and desiring to be heard were given an opportunity to be heard and a copy of the proposed ordinance has been made available for public inspection prior to its consideration by the City Council; and the Bill was read by title in open meeting two times before final passage by the City Council; and

**WHEREAS**, the City Council being fully informed finds that amending the City Code of Ordinances would be in harmony with and bear a substantial relation to the public welfare, health, safety, comfort, and convenience of the citizens of the City of Creve Coeur and in the public interest,

**NOW, THEREFORE**, be it ordained by the City Council of the City of Creve Coeur, Missouri, as follows:

**Section 1:** Amendments to Table A, Permitted and Conditional Uses as referenced within Section 405.210 Regulation of Uses, of the City of Creve Coeur's Code of Ordinances shall be amended as to NAICS use code 518210 as follows:

P= Permitted Use, C = Conditional Use Permit Required															
Use Code	2012 NAICS Title	A	B	C	D	AR	HE	PH	PO	RO	MX	PC	GC	CB	LI
518210	Data Processing, Hosting, and Related Services								<u>P</u> <u>C</u>	<u>P</u> <u>C</u>		<u>P</u> <u>C</u>		<u>P</u> <u>C</u>	<u>P</u> <u>C</u>

**Section 2.** This ordinance shall become effective in accordance with Section 3.11 (g) of the City Charter.

ADOPTED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2025.

\_\_\_\_\_  
 MARK MANLIN  
 PRESIDENT OF CITY COUNCIL

APPROVED THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2025.

\_\_\_\_\_  
 DR. ROBERT HOFFMAN  
 MAYOR

ATTEST:

\_\_\_\_\_  
 KELLIE HENKE  
 CITY CLERK



city  
of

# CREVE COEUR

File # \_\_\_\_\_

300 North New Ballas Road • Creve Coeur, Missouri 63141  
(314) 872-2500/872-2501 • Fax (314) 872-2505 • Relay MO 1-800-735-2966  
www.creve-coeur.org

## TEXT AMENDMENT APPLICATION

PLEASE COMPLETE FRONT AND BACK PAGES

<i>Applicant:</i>	<i>Applicant's Representative (if applicable):</i>
_____ <i>Name</i>	_____ <i>Name</i>
_____ <i>Company (If Applicable)</i>	_____ <i>Company (If Applicable)</i>
_____ <i>Address</i>	_____ <i>Address</i>
_____ <i>Address</i>	_____ <i>Address</i>
_____ <i>Telephone #</i>	_____ <i>Telephone #</i>
_____ <i>Fax #</i>	_____ <i>Fax #</i>
_____ <i>Email:</i>	_____ <i>Email:</i>

***Applicant's Status (Indicate one):***

City Official (Mayor, City Councilor, Planning Commissioner, Zoning Administrator)

Private Party (Financial, contractual, or proprietary interest)

Other Governmental Interest (Jurisdiction: \_\_\_\_\_)

***The undersigned hereby requests to be placed on the Agenda for the Planning and Zoning Commission meeting at 6:30 P.M. on Monday, \_\_\_\_\_, 20\_\_\_\_.***

\_\_\_\_\_  
*Applicant's Signature*

\_\_\_\_\_  
*Applicant's Representative's Signature*

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

*Description of Request (attach additional sheets as needed):* \_\_\_\_\_

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*Affected Section(s) of the Zoning or Subdivision Code:* \_\_\_\_\_

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*Proposed Ordinance Language (attach additional sheets as needed):* \_\_\_\_\_

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<b>Office Use Only</b>	
_____ <b>Proposed Ordinance Language</b>	Received By: _____
_____ <b>Fees Paid</b>	_____
_____ <b>Written Justification</b>	Date: _____



GOODEN, POST-DISPATCH  
ists and Pedestrians

# Data center plans spark debate in St. Louis

Projects expected to grow, though not everyone is on board: A look at key issues

**BYRCE GRAY**  
St. Louis Post-Dispatch

From St. Louis to St. Charles, the topic of data centers has generated debate and controversy in recent weeks. And the issues are not likely to fade any time soon, as data center projects are expected to grow in coming years with the continued rise of artificial intelligence and other digital activity.

The centers typically are large, sprawling facilities where computing equipment is stored — the hardware responsible for powering things like data storage and AI. With developers lining up to build such facilities, some public officials are vocal cheerleaders, seeking to attract the projects. But not all officials are on board, and many residents have become increasingly concerned.

Here's a look at the key issues:

## What are the concerns?

The primary objections to data centers revolve around their extreme consumption of electricity and the need for large amounts of water to keep equipment cool. They also typically take up large tracts of land, with some covering hundreds of acres — raising questions about the best use for land, the loss of farms and the loss of habitat for threatened species.

The rise of data centers is intertwined with questions about how to beef up the grid and electric generation to power them — and whether the ratepaying public could be saddled with the costs.

Earlier this year, Ameren, the St. Louis-based electric utility, said dozens of potential data centers in its Missouri service area would require an average of 470 megawatts of power capacity each. Ameren's largest existing customer uses only about 30 megawatts of power capacity.

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Please see DATA, Page A2

## Data

From A1

And data centers aren't the only prospective big electricity users that are on the radar. Similar worries have recently echoed across Jefferson County, where a facility is on the brink of starting to mine Bitcoin, the digital cryptocurrency that collectively consumes more electricity than many countries. Meanwhile, as of May, Ameren also reported inquiries from 40 potential manufacturing projects, expected to each need an average of nearly 320 megawatts of capacity.

### Do data centers create jobs?

Data centers will create construction jobs as new buildings go up or older structures are renovated, but they tend to support relatively few permanent jobs, according to various studies.

"Once data centers are built, they require relatively few employees since the facilities primarily house computers and servers," said a report published in July by the University of Michigan.

The projects can be a bad deal if public subsidies are involved, the study added.

"Despite claims of job creation, data centers typically generate few permanent positions relative to the scale of public subsidy they receive," it said.

Even some data center operators acknowledge the lack of permanent jobs that typically accompany the projects.

"Normally they are anonymous industrial sheds on the outskirts of town — ugly, boring slabs of steel that have zero connection to human beings, and often have close to zero human beings working inside. That sucks," wrote Patmos, a data hosting company, in a blog entry last week.

The company aims to create a more "humanized" data center

in the former home of the Kansas City Star newspaper, with space for coworking, conferences and concerts housed alongside computing equipment.

### How many data centers are planned?

In a regulatory filing earlier this year, Ameren said it had fielded at least 37 requests from prospective data centers seeking to hook into the power grid in its Missouri service territory.

But it's not certain how many of the projects will ultimately be built. Ameren has said that "traditionally, the state wins 10-15% of new business attraction opportunities."

That percentage, though, could still mean a significant jump in power demand. Ameren and Evergy, the Kansas City-based utility, have both submitted proposals for how to handle such "large-load" projects to state regulators and how to make companies pay for the changes.

There are also questions about how many facilities could sprout in Missouri and the Midwest as a whole. Thus far, for instance, data centers have not spread uniformly across the U.S., clustering in states like Virginia, Texas and North Dakota.

### Will there really be a boom?

It's not clear exactly how much of a data center boom we could see. Over the coming decades, some projections forecast just over 1% annual growth for electric demand in places like Missouri. And some officials warn that new technologies could emerge that upend forecasts of mushrooming power requirements.

Some experts also note historical parallels could serve as cautionary tales — like when similar predictions about runaway electricity needs accompanied the rise of the internet but



ETHAN COLBERT, POST-DISPATCH

Residents opposed to a proposed data center protest outside the St. Charles County Convention Center on Aug. 19, 2025. A St. Charles City Council meeting on the topic was moved to the convention center because a large crowd was expected.

were undermined by improvements in technology and energy efficiency.

### What's happened in the St. Louis area?

Plans for a massive, 400-plus-acre data center in St. Charles were recently pursued by a Fortune 100 tech giant. But it was pulled off the table amid a firestorm of controversy and public opposition. City officials refused to identify the company, citing nondisclosure agreements. Further resistance was stoked by the revelation that local leaders, including St. Charles' mayor, were related to the landowners where the project was to be built.

Backers of the proposal claimed it would create 250 full-time jobs, but residents expressed skepticism about the figures.

In the wake of the controversy, St. Charles City Council members voted to ban data centers for one year, saying they would spend that time closely studying such facilities and their impact.

Shortly after, a local real estate investor unveiled plans to convert the shuttered Army complex in Midtown St. Louis into a data center. Some officials and residents immediately questioned whether a data center was the best use for a such a high-profile, centrally located structure. The investor is holding two town hall meetings this

month to share more information with the public.

Like in St. Charles, St. Louis' planning commission recommended a ban on data centers so staffers could study the issues and develop regulations. But Mayor Cara Spencer stopped short of a ban, instead announcing a special permitting process for data center proposals in the city. Developers would also need to address a list of questions about what the facilities would do, how much energy and water they'd consume, and what impact they would have on the surrounding area.

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SEPTEMBER 22, 2025

# St. Louis Must Build the Infrastructure of the Future



**As published in the St. Louis Business Journal.**

St. Louis is a region that needs to grow, and our innovation community is working every day to make that happen. Technology, entrepreneurship, cutting-edge research, and skilled workers are central to attracting new ideas, new people, and new investment to the St. Louis region.

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The innovators, builders, and educators across our region are aligning their work to make St. Louis a

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any other growth sector –  
 relies on data.

As leaders of organizations  
 focused on driving  
 innovation and growth  
 here in St. Louis, we have  
 come together to say that  
 for our region to grow and  
 increase opportunity for  
 all, we must build the  
 infrastructure that  
 supports the increasing  
 amount of data upon  
 which our current and  
 future economy is being  
 constructed.

For years, the  
 organizations we lead have  
 been laying a foundation  
 for this ecosystem. We  
 have developed  
 programming to support  
 homegrown entrepreneurs  
 while opening doors to  
 outside innovators.  
 Industries of the future like  
 biosciences, agtech,  
 geospatial, and advanced  
 manufacturing have been  
 dutifully cultivated here  
 and are primed for growth.  
 We've trained thousands of  
 St. Louisans to fill high-  
 demand technology roles.

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compete with other regions across the country, we also need the infrastructure that powers modern innovation. Data centers, broadband, and other digital assets are the unseen foundation of today's economy. They enable the cloud services, artificial intelligence, and emerging technologies that entrepreneurs are using to launch companies and that corporations need to stay competitive.

Much like the railroads, highways, and other critical infrastructure on which we've come to rely for the past century, the regions that saw where the economy was headed and invested in infrastructure and systems reaped the benefits adding people, jobs, and investment, while the regions that did not were left behind.

The economy has reached a new crossroads, and if innovators and investors look at St. Louis and see a

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But if they look at St. Louis and see a region unwilling to plan for the future, they may look elsewhere.

Our community has worked tirelessly to position St. Louis as a hub where technology can thrive. That progress needs to maintain momentum. Without infrastructure that keeps pace with the industries of tomorrow, we risk falling behind in a race that other regions are running with urgency. Already, other communities across the country are welcoming billions of dollars in investment and positioning themselves as growth centers for the foreseeable future.

The opportunity is in front of us. If we continue to work together as community leaders, educators, investors, entrepreneurs, and policymakers, St. Louis can be the place where technology powers

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the thoughtful approach to technology infrastructure development recently announced by St. Louis Mayor Cara Spencer and supported by leaders in the Board of Aldermen. This approach recognizes the critical role developing this infrastructure will play in our growth as a region as well as the fact that individual projects should be judged on their own merits. Furthermore, in recognizing how essential data centers and other large-scale facilities are to supporting future growth and demand, this approach must also recognize the impact this critical infrastructure could have on energy supply, land availability, and the environment.

To truly serve the region, we must ensure these infrastructure investments are designed and managed in ways that support innovation and growth, protect community

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so the next generation of opportunity takes root in our city, not somewhere else.

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# Local Guidelines for Data Center Development

By the ULI Americas Data Center Product Council



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# 1

# Introduction: data centers 101

This paper seeks to demystify data centers and their purpose while offering a balanced model zoning ordinance for data center development that authorities having jurisdiction (AHJs) can adapt straight from the page. It also aims to provide a roadmap to data center development for local officials, planners, and other municipal decision-makers.

Data centers are still a relatively new land use, and they are often misunderstood or miscategorized. To be ready when data centers are proposed in your jurisdiction or to attract them, first it is important to understand their purpose in our society and how they function, as well as to have strategies to mitigate common challenges.

## Essential infrastructure

In the morning, most of us brush our teeth or take a shower. We may not know where the water comes from or where it goes. We may not know that it is treated at a plant and arrives at our homes, where wastewater departs, is received in a facility, and is released into surface water systems.

These days, we often check our email or social media first thing in the morning, even before we shower or brush our teeth. The internet—like water, sewer, and power systems—has become part of our essential everyday infrastructure.

Water and sewage systems are typically financed and delivered by local cities or counties. Power is funded and delivered by a mix of public and private entities. Data centers, however, which form the backbone of the internet, are financed, developed, and operated primarily by privately held businesses. Unlike what occurs with other critical infrastructure systems, the development of data centers requires navigating a complex landscape of private property laws, environmental impact assessments, and local zoning regulations. Local officials, in other words, play a key role in ensuring access to the internet economy.

## Purpose and function

A **data center** is a building that houses the infrastructure that supports the world's computing functions. This building is filled with servers that process and store the data commonly referred to as “the cloud.”

### Processing and storage

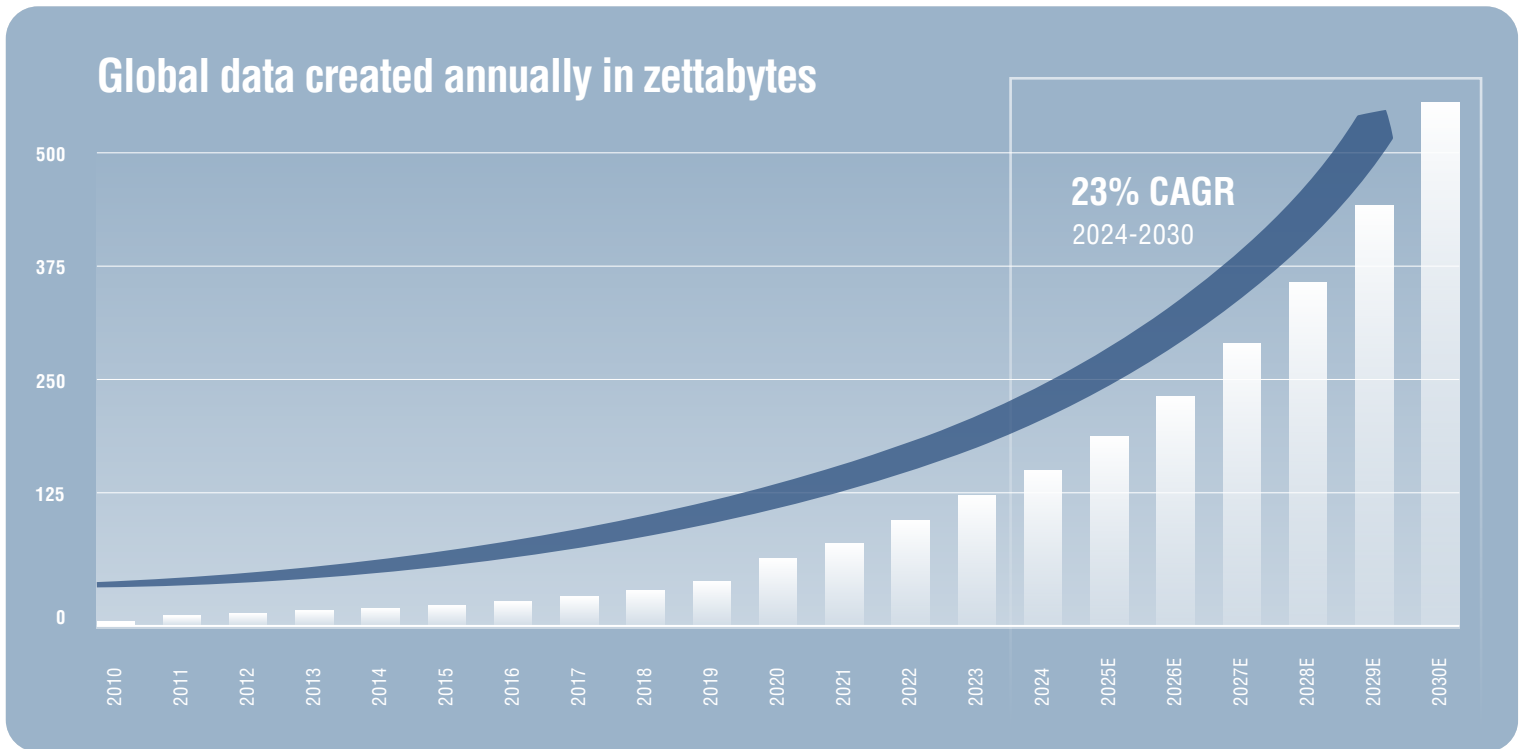
Whenever you swipe your credit card, join a Zoom meeting, or

send an email, your virtual activity connects to a real place in the physical world: a data center.

What gets processed in a data center? A better question: what does not? Data centers house our national security systems, including military communications. They enable online commerce, financial services, health care, and other essential services. Each app on your phone—even offline apps that

sync—and every activity on the internet requires a data center. When you use your smartphone, that tiny device does not process your requests. Instead, your phone asks questions that get answered in data centers—usually in a fraction of a second.<sup>1</sup>

Data centers' primary function is processing and accessing data, but they also store data, safeguarding sensitive information so it's inaccessible to hackers. When you save a file to the cloud, you are not storing it in the sky. A data center stores it, more efficiently and securely than a filing cabinet ever could.



Source: JLL Research, IDC

### The demand for more data center capacity

Our economy and communities were able to continue functioning during the Covid-19 pandemic—when schools, workplaces, and social gatherings shifted to the internet—thanks in large part to the support provided by data centers. This change also moved us further into an economy that exists, largely, online.

The rise of remote work and advancements in artificial intelligence (AI) that require high-density computing increased the demand for processing and data storage, thus requiring

more data center capacity. As a result, this property category has grown significantly.

If society and the economy continue the shift to the internet, we would seem to face a need for more data centers. Where these new data centers will be developed is a matter of great importance that requires several variables to come together. To discuss these variables, we first must discuss what a data center is.

## Types of data centers

**Corporate or enterprise data centers**, which store and process a single organization's data, rose in prominence in the mid-1990s as the dot-com boom drove demand for fast internet connectivity and 24/7 operations. These data centers often store

the data of financial institutions—think American Express or Wells Fargo—that typically own and operate such facilities themselves, rather than leasing them from a provider.

<sup>1</sup> "One: You Use Data Centers," Where the Internet Lives, Google, podcast audio, <https://podcasts.apple.com/us/podcast/one-you-use-data-centers/id1541394865?i=1000501909698>.

At **colocation data centers**, which include **retail data centers**, third-party operators lease data center space—a certain number of server cabinets, for example, or kilowatts (kW) to multiple companies.

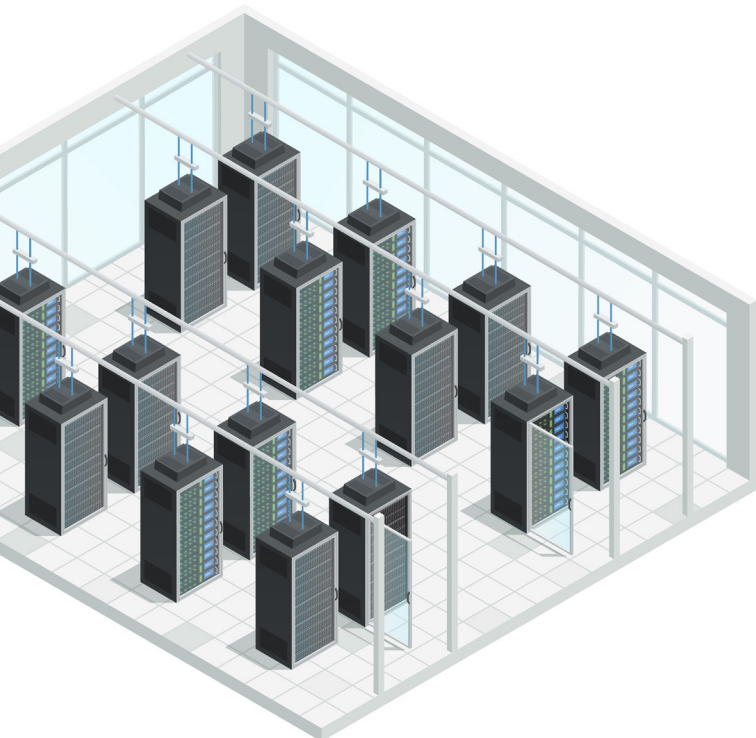
**Wholesale data centers** are a type of colocation data center where a third-party developer rents large portions of the space and energy capacity to one company—often, all of it.

**Telecom data centers**, owned by telecommunications companies such as Verizon, are where traffic from cell towers “switches” to the internet. These facilities tend to be smaller than the other data center types and require less energy.

## Differences from industrial warehouses

Data centers differ from other forms of commercial real estate. They constitute a relatively new category and, until recently, they were concentrated in select geographic areas. As a result, the buildings housing our essential internet infrastructure are widely misunderstood.

Typically, data centers are not explicitly mentioned in zoning codes. Instead, they fall under the umbrella of general industrial zoning uses. But because they store data, they are not typical warehouses. Their classification, as such, causes planning challenges, which we will detail further in a [later section](#).



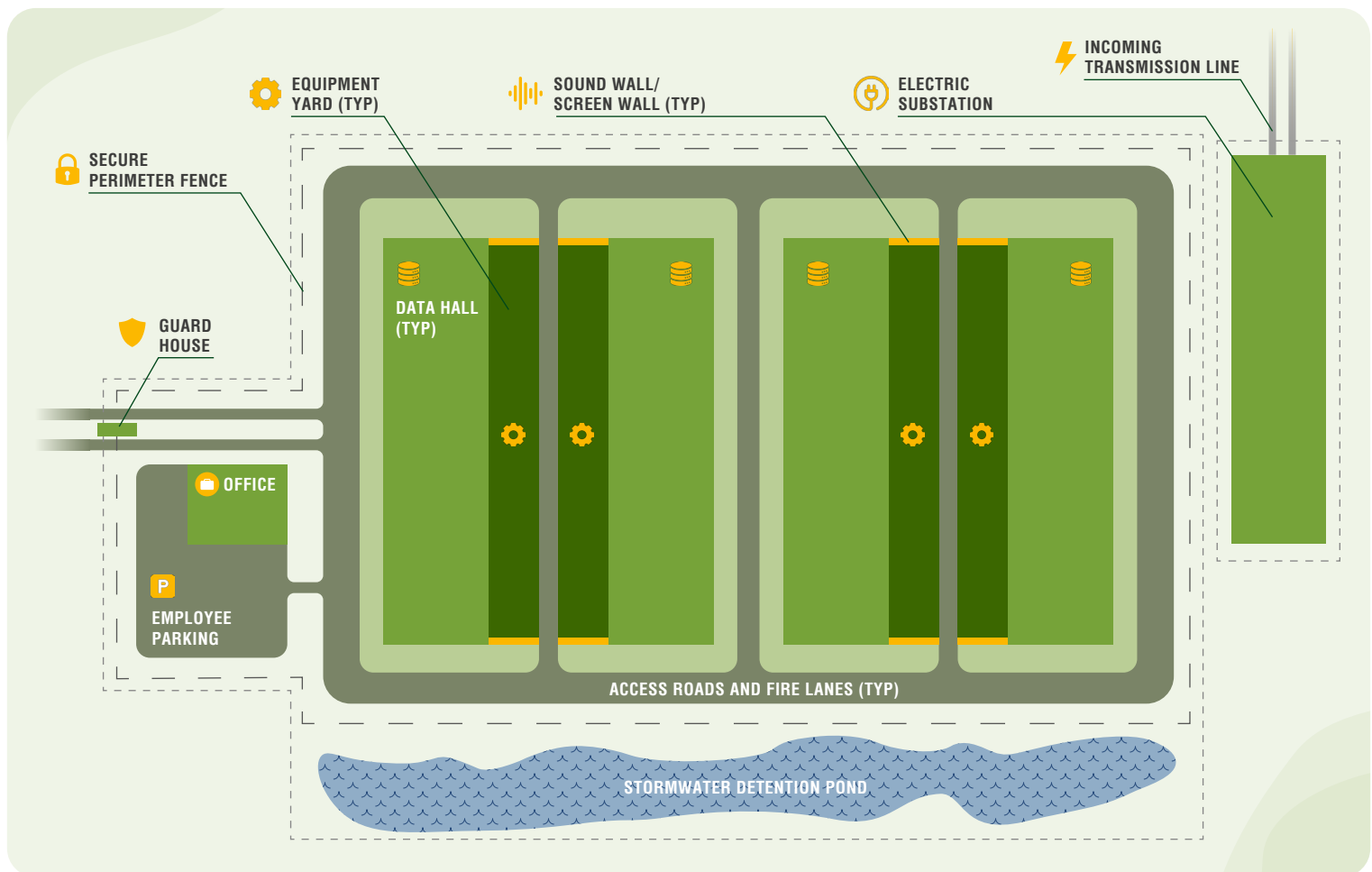
**Hyperscale data centers** are built for a single customer: one of the large tech companies that provide many of the services we use every day—Google (Google Cloud), Amazon (AWS), Microsoft, and Meta. These companies sometimes own their own centers, and sometimes they lease them from a third-party developer. These centers are built based on the data demands of the hyperscaler.

The name *hyperscaler* emphasizes the ability to scale resources up or down quickly and efficiently to meet demand. These companies have a massive number of users and generate vast amounts of data, which together demand substantial processing power and storage capacity, especially as user bases grow unpredictably.

Here's how data centers differ from industrial warehouses or factories:

- Data centers are more compatible with other uses nearby because, unlike factories or warehouses, they are odorless and lack truck traffic.
- They are often taller than traditional single-story warehouses. Data centers can be single-story or multistory. Single-story data centers start at around 30 feet (9.1 meters) and multi-story data centers go up from there.
- They require fewer employees once construction is complete, so long-term impacts on traffic, schools, and public services are minimal.
- They need fewer parking spaces and plumbing fixture counts than are typically mandated by industrial codes.
- Data centers require more robust underground and above-ground infrastructure.
- Unlike warehouses and factories, data centers have external electrical and mechanical equipment.
- Some data centers need multiple layers of redundancy, which we'll discuss [in a moment](#).
- Data centers require more security measures than industrial buildings, including 24/7/365 surveillance and controlled-access points.

## Let's tour a hyperscale data center campus



Most of the data centers developed today are hyperscale data centers—typically within campuses. We tour one below.

### Approaching the campus

As you approach a hyperscale data center campus, you are likely to encounter a fence or gate—often with a gatehouse—beyond which you may be able to see equipment yards and cooling equipment in the distance.

### Security

Data center campuses have extensive security measures and strict protocols for employees and visitors. Infrared surveillance cameras and tall, anti-climb security fences that detect movement surround the property. A guard at the gatehouse checks guests' credentials outside. If you make it past this point—few people do—you will find another security checkpoint at the entrance to the data center building itself, where additional security personnel check badges.

### Equipment yards

Before heading inside, let's first follow the winding campus driveway and stop at the mechanical and electrical equipment yards.

### Electrical yards

In the electrical yards, you'll hear the low hum of static if you stand directly under the transmission lines. A nearby **utility substation transformer** receives this power and converts it down to the lower voltage needed for use inside. The medium-voltage power feeds into **switchgear** in the electrical yard—or another type of power distribution equipment that similarly dispenses electrical power throughout the data center.

Alongside the switchgear, you will see multiple generators that provide emergency power in case of an electrical utility outage. If they look like they aren't running, it's because they are usually turned off. Except during emergency outages, they are turned on only for monthly maintenance tests for a mere 30 minutes<sup>2</sup> and are quiet while running due to sound-attenuated enclosures.

2 GeneratorSource, "Data Center Generator Maintenance," GeneratorSource, January 2024, <https://www.generatorsource.com/blog/January-2024/Data-Center-Generator-Maintenance.aspx>.

### Redundancy

Like hospitals, data centers require a high level of redundancy to ensure they never go down, and the generators are part of this preparedness. Redundancy is often also created through multiple power feeds. The servers have backup capacity, too. For instance, your inbox is stored on several servers so that if one fails, your emails [remain accessible](#).

### Mechanical yards

The mechanical yards operate similarly but typically focus on cooling rather than on power redundancy. On the ground, you'll find chillers that cool the data center. At some data centers, they are on the roof.

Heat is a byproduct of computer processing. The servers within data centers must remain cool to function correctly. There are multiple ways of to achieve this cooling, but for the purposes of this paper, we focus on three main categories: air-cooled chillers, water-cooled chillers, and evaporative cooling.

A highly efficient **air-cooled chiller system** is sealed in a closed loop and uses little to no water—less than the amount used in three single-family homes.

Both water-cooled and evaporative systems use more water and consume less electricity than air-cooled chiller systems. In an open-loop **water-cooled chiller system**, cooling towers evaporate water for cooling purposes. **Evaporative cooling** is primarily achieved by large air-handling units that move air

across a wet medium to evaporate water, which removes heat and cools the air in the data hall.

### Data center structure

Let's now make our way through the security checkpoint and into the data center building itself. Inside, we find the **data hall**, where the servers sit in rows of tall racks along a series of aisles fed by **electrical distribution equipment**. Data halls are the *pièce de résistance* of any data center. Such a structure is typically designed from the data hall outward, with all supporting infrastructure responding directly to its needs.

If you examine the racks from the floor upward, you see bundles of colorful fiber optic cables (inside of which are thin strands of glass) connecting servers to switches and routers. These cables enable high-speed data transfer. Without them, we would be unable to access the web or many of the apps we use daily. The cables are organized in lanes that converge at massive **switches**.

Inside the data center building, you also find electrical rooms that house other critical power supply infrastructure. Battery-powered **uninterruptible power supply (UPS) systems** sit in large cabinets against the wall. In the event of a utility outage, these systems feed power to **power distribution units (PDUs)** inside the data hall. UPS systems are the first-used backup power source and often prevent use of the generators outside.

## The importance of clustering

The internet is a network of interconnected networks, and so are data centers. **Clustering** refers to the practice of linking the servers at multiple data centers with high-speed, low-latency connections so they work together as a unified system. This interconnected group is called a cluster, and each server in the cluster is called a **node**.

Importantly, clustering requires physical proximity: locating multiple data centers close to one another geographically so that optical signals in fiber cables don't lose strength. That's why a huge portion of global internet traffic passes through major hubs such as northern Virginia's "Data Center Alley."

Clustering also requires interconnection—linking these data centers through high-speed, low-latency connections.

### Reduced latency

One primary reason for data center clustering is to reduce **latency**, the time it takes for information to travel from its source to its destination. When data centers are geographically distant from each other, latency increases, which leads to slower application performance for end users, including the dreaded "spinning wheel of death." When data centers are

located near each other, data can travel shorter distances, and this information exchange runs faster. Due to quicker response times, the user experience improves.

### Improved reliability

Clustering enhances redundancy. If one data center server goes offline, others in the cluster can take over, ensuring continuous service availability. Without clusters, one server failure could cause an outage with international implications. In the [appendix](#), we explore this concept further through a case study.

### Load balancing

Clustered data centers allow for more efficient **load balancing**, the process of distributing network traffic across multiple servers at interconnected data centers. This practice prevents any single server or center from becoming overwhelmed.

### Shared infrastructure

Data centers require conduits for power and, in some cases, water. When data centers cluster, they benefit from shared power and cooling infrastructure while also reducing the need for long-distance fiber optic connections.

# 2

## What happens when data centers come to your region: opportunities, challenges, and mitigations

Data centers can provide significant economic benefits and other opportunities. Data center projects also introduce unique planning challenges, however. To be prepared, and to seize opportunities when appropriate, AHJs must understand these challenges and how to mitigate them.

### Opportunities

#### Support essential national infrastructure

Data centers contribute to national infrastructure and economic growth. Also, they enable the digital economy by underpinning businesses of all sizes in virtually every industry.

According to the United States Department of Energy<sup>3</sup>, “At a national level, data centers are critical to supporting America’s economic growth by powering businesses and enabling continued leadership in innovation, including for AI applications.”

### HERE’S HOW DATA CENTERS SUPPORT NATIONAL SECURITY AND ECONOMIC GROWTH:



They protect the privacy of all of the data within U.S. borders against cyber threats by powering security measures such as encryption, firewalls, and access controls.



Data centers also support the development and deployment of emerging tech. Data centers are the backbone of AI infrastructure, which requires rapid data processing, storage, and analysis at scale.



They host critical infrastructure for our emergency services, providing the necessary computing power and data storage to support communication networks, emergency response coordination, and real-time data analysis during crises.



On a macroscale, maintaining advanced data center infrastructure allows the U.S. to compete with such countries as China in the race for AI dominance, thus fostering economic growth and strengthening national security through technological leadership.



Our health care system depends on data centers. They enable a range of services, from telehealth visits to managing digital health records, and they even assist in providing data-analysis-informed diagnoses for patients.



On a microscale, data centers also improve businesses’ operational efficiency by democratizing access to supercomputer processing and secure cloud storage so that small businesses can compete more easily with larger corporations.

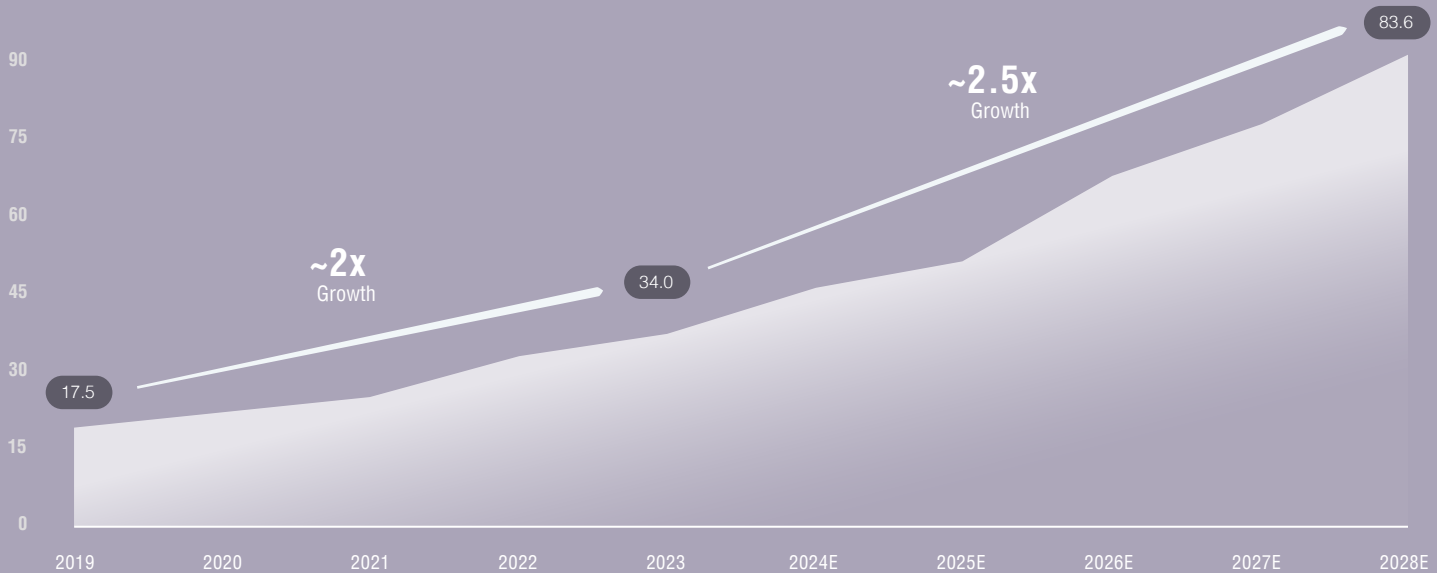


Banks and the rest of our financial ecosystem rely on data centers for their daily operations.

3 U.S. Department of Energy, “Clean Energy Resources to Meet Data Center Electricity Demand,” <https://www.energy.gov/policy/articles/clean-energy-resources-meet-data-center-electricity-demand>.

## Increase much-needed processing and storage capacity

### Growing global data center demand in gigawatts



Source: CBRE, DC Bytes

Our needs for data center capacity have grown—and continue to grow at a fast clip as we create more data.

If we don't build data centers that support this increasing data density, it could hamper the economy, business operations, and our daily lives.

On a microlevel, a lack of data center capacity or redundancy makes files and apps load slowly. On a macrolevel, if we don't build enough data centers to meet our growing storage and processing needs, there will be outages with international consequences, like the October 2021 Meta outage. We include a case study on this incident and its profound impacts in [the appendix](#).

#### Jobs

When data centers are in operation, they require fewer employees to operate than most other commercial properties, leaving minimal impacts on traffic in surrounding areas. A typical data center operates with fewer employees than other commercial or industrial facilities. Unlike industrial facilities, there is no fleet of trucks going in and out, which further minimizes traffic congestion.

More workers are present while the data center campus is under construction, though. Data center construction projects happen in phases, especially on larger campus developments, and these

phases can extend over several years. This phased approach often leads to misunderstandings regarding the permanency of the increased traffic. Clear communication about the nature and duration of construction phases can help manage expectations and reduce misunderstandings.

This phasing approach has a plus side, however. Data centers create local construction jobs for tradespeople who otherwise travel from job to job—with less fossil fuel consumption thanks to reduced commuting. Jobs related to data center construction typically provide these workers, sometimes called journey-people, with more stability and longer timelines, offering a higher quality of life. This outcome, in turn, can prevent or alleviate labor shortages and reduce renovation and building expenses in the area, benefiting homeowners and businesses.

Although the operational workforce of data centers is relatively small, people employed in these roles are well-compensated, often earning six-figure salaries without the need for significant training or a college degree. During both the construction and operational phases, data center jobs boost to the local economy because workers spend at retail stores, nearby restaurants, hotels, and suppliers.

Data centers also indirectly create many jobs across the broader economy. According to PricewaterhouseCoopers International Limited<sup>4</sup> (PwC), each direct job in the U.S. data center industry

4 PwC, "Economic Impact Study of the US Data Center Industry," January 2021; "Data Centers and Ancillary Job Creation," TechIndustryReview, March 2022.

generates, on average, six ancillary jobs throughout the national economy. As a result, the total annual impact of the data center industry on national employment—combining direct, indirect, and induced effects from both construction and operations—grew from 2.9 million jobs in 2017 to 3.5 million jobs in 2021, representing a 20 percent increase.

Furthermore, the PwC study does not include jobs created by the cloud access and processing power that data centers enable. Data centers also facilitate zero-commute remote work across the country, further reducing fossil fuel consumption and contributing to a more sustainable economic model.

## Tax revenue

Data centers provide municipalities with substantial economic and fiscal benefits through various forms of tax revenue (if unabated) that far exceed ones associated with other property types.

Hyperscale data centers are capital-intensive developments that can cost billions to construct—and are filled with high-value equipment and infrastructure. Taxes levied against them can be a windfall for AHJs.

A case in point: the data center tax base in Loudoun County, the central hub of North Virginia's Data Center Alley, increased from \$15.996 billion in 2023 to \$25.627 billion in 2024, constituting 58.5 percent of the municipality's total tax revenue.<sup>5</sup>

Data center owners pay two primary forms of property taxes. The first is real property tax, which applies to the land campuses are built on and the permanent structures that sit upon it, such as buildings. The second is personal property tax, which is levied on movable assets such as the servers and equipment inside data centers.

These revenues become significant boons to surrounding municipalities. In Loudoun, personal property tax revenue from computer equipment purchases for data centers surged by 170 percent in 2023, accounting for two and a half times the tax revenue.

The presence of data centers can also lower the overall tax burden for residents. In Loudoun, the general property tax rate

is set at \$0.87 per \$100 of assessed value; it would be \$1.33 (an additional 52 percent) but for the influx of data center developments, according to the county's executive director of economic development.<sup>6</sup> Revenue from data centers accounts for \$0.47 of the tax rate, thereby alleviating the burden on other taxpayers.

**Data center revenue can be channeled into net-zero programs and those related to health care, education, and other critical public services.**

Data center revenue can be channeled into net zero programs and ones related to health care, education, and other critical public services. Revenue from data centers in Quincy, Washington, for example, has been used to fund local schools, public safety, and infrastructure improvements.<sup>7</sup>

By 2026, Loudoun County projects it will receive roughly \$1.4 billion in tax revenue from the personal property tax it levies on computer equipment alone.<sup>8</sup> This amount constitutes nearly half of Loudoun County's entire fiscal 2021 budget of \$3 billion.

## Community incentive packages

Data center operators also provide significant benefits through incentive packages negotiated with municipalities that can include funding for schools or public infrastructure projects. In multiple cases, hyperscalers have funded renewable energy plants and created workforce development programs in areas where they operate.

As part of AWS' \$10 billion data center campus investment in Mississippi, the company developed STEM-focused workforce training and career awareness programs for K-12 school systems and funded the state's first utility-scale wind farm.<sup>9</sup> You can learn more about the community benefits the hyperscaler provided in [the appendix](#).

5 Emily Leayman, "Loudoun's Data Center Tax Base Jumps, Residential Increases Continue," Patch, February 8, 2024, <https://patch.com/virginia/ashburn/loudouns-data-center-tax-base-jumps-residential-increases-continue>.

6 Hanna Pampaloni, "Rizer: Land Value Increases Bring Benefits and Challenges," Loudoun Now, June 28, 2024, [https://www.loudounnow.com/business/rizer-land-value-increases-bring-benefits-and-challenges/article\\_5b417aa8-3592-11ef-b587-f7ca7fd349c0.html](https://www.loudounnow.com/business/rizer-land-value-increases-bring-benefits-and-challenges/article_5b417aa8-3592-11ef-b587-f7ca7fd349c0.html).

7 Nick Parker, "Quincy Data Centers: The Data Center Conversation" (Presentation, Port of Quincy), <https://wedaonline.org/wp-content/uploads/2020/10/Port-of-Quincy-Presentation.pdf>.

8 "Loudoun Data Center Revenue Growth," Washington Business Journal, October 19, 2020, <https://www.bizjournals.com/washington/news/2020/10/19/loudoun-data-center-revenue-growth.html>.

9 Amazon Staff, "AWS plans to invest \$10 billion in Mississippi, the largest capital investment in the state's history," About Amazon, January 25, 2024, <https://www.aboutamazon.com/news/aws/aws-10-billion-investment-mississippi>.

The region that includes Fredericksburg, Virginia—an emerging exurban hyperscale campus market located southeast of Loudoun County—is a case study in how AHJs can attract landslide economic and fiscal benefits while mitigating potential concerns well in advance.

In March 2024 Virginia's governor, Glenn Youngkin, alongside other state and local elected officials, announced that AWS was making a \$35 billion dollar investment in data centers in

Spotsylvania, Caroline, Stafford, and Louisa counties, creating approximately 2,000 new jobs. Also announced was AWS' contribution of \$400,000 in community funds to those localities.

We explore how AHJs in the region did the work to prepare for and attract that investment in [the appendix](#), which also covers similar measures in [Elk Grove Village](#), Illinois, a unique suburban community northwest of downtown Chicago that modified its zoning code to attract data center development.

## Challenges and mitigations

### Sustainability

The sustainability of data centers is a significant concern for both AHJs, as well as for data center operators and developers, who ensure that their centers are designed and engineered to minimize emissions and other community impacts.

#### Grid impact

Let's address the misconception that data centers draw from the grid power that other customers, such as residential consumers and retail operators, could use. This concern is common among constituents when a data center is proposed in a municipality.

The grid is heavily regulated. Under existing federal regulations (and in Texas, the only state that regulates its own power grid), demand from a new customer cannot affect the reliability or availability of an existing customer.

Rather than taking power from the grid, new large-load customers such as data center operators face the challenge of finding readily available power that the utility can deliver—especially because many seek clean power sources.

According to the U.S. Department of Energy (DOE), as quoted in a recent article,<sup>10</sup> data centers can actually catalyze the grid's clean energy transition: "Near-term data center driven electricity demand growth is an opportunity to accelerate the build-out of clean energy solutions, improve demand flexibility, and modernize the grid while maintaining affordability."

Here's why: in many municipalities, energy providers are obligated to meet the power demands of various users. When a significant portion of demand comes from data center operators, many of which have strong commitments to using renewable energy, that activity accelerates the greening of the grid. These companies, driven by their climate goals, place considerable pressure on utility providers to adopt cleaner energy solutions.

**"Near-term data center driven electricity demand growth is an opportunity to accelerate the build-out of clean energy solutions, improve demand flexibility, and modernize the grid while maintaining affordability."**

*U.S. Department of Energy*

Unlike AHJs, which cannot create the demand to push forward such changes themselves, data center operators wield considerable influence by creating substantial demand for renewable energy.

This dynamic forces utilities to accelerate and help finance their transition to greener energy sources, thereby modernizing the grid to meet contemporary environmental standards. Public officials have a critical role to play in this scenario. By ensuring the existence of clear and easy-to-follow guidelines for data center development within their jurisdictions, AHJs can become integral to the solution, thus fostering a cleaner energy infrastructure.

Conversely, discouraging data center development could inadvertently push these operations into regions with less stringent grid standards and undermine broader sustainability efforts. Thus, the collaboration between data center operators and local governments is pivotal in driving the clean energy transition and ensuring grid modernization.

<sup>10</sup> U.S. Department of Energy, "Clean Energy Resources."

### Grid sustainability

Data center companies—third-party developers, operators, and hyperscalers among them—typically have far stricter carbon reduction commitments than do municipalities themselves.

- The top five hyperscalers have a combined renewable energy portfolio totaling more than 45 gigawatts (GW) worldwide, the equivalent of roughly 118,215 Tesla Model 3 motors<sup>11</sup> running on full power—and that figure doesn't include on-site generation.<sup>12</sup> Roughly 57 percent of global corporate wind and solar capacity tracked by S&P Global Commodity Insights is tied to these five companies alone.
- Amazon first committed to powering all of its operations, including AWS data centers, with 100 percent renewable energy by 2025. As of 2023, Amazon reported achieving this goal early, with 100 percent of its electricity consumption matched with renewable energy sources. The company also set a goal to reach net-zero emissions by 2040.<sup>13</sup>
- Microsoft committed to designing and operating data centers that are carbon negative, water positive, and zero waste before 2030, procuring 100 percent renewable energy on a global scale by 2025, and significantly expanding and decarbonizing local electricity grids.<sup>14</sup>
- Apple has committed to becoming carbon-neutral across its entire supply chain and product life cycle by 2030. This effort includes using nearly 10 GW of existing renewable energy and investing in new renewable generation.<sup>15</sup>
- Google, meanwhile, announced its goal in September 2020 to operate carbon-free, on clean local electricity, 24 hours a day, 7 days a week, 365 days a year by 2030. From 2010 to 2023, the company signed more than 115 agreements totaling in excess of 14 GW of clean energy generation capacity.<sup>16</sup>

- Meta committed to net zero emissions for its supply chain and to becoming water positive by 2030. The company plans to power all of its data centers with renewable energy by 2025.<sup>17</sup>

The methods through which hyperscalers and data center developers are working toward these goals include:

**On-site generation:** Some data centers have solar panels or other renewable energy sources installed directly on their premises. Wind and solar require a lot of land, however, and on-site land is usually scarce. As such, these projects typically provide only a small portion of data centers' total energy needs.

**Power purchase agreements (PPAs):** In a PPA, data center companies (the buyers) sign long-term contracts with renewable energy providers (the sellers) to purchase electricity from specific wind or solar farms. PPAs often support the development of new renewable energy, thus contributing to overall grid decarbonization and improving the grid mix for local residents and businesses.

**Renewable energy certificates (RECs):** Companies purchase RECs to offset their energy consumption, which supports the economics of clean energy development. RECs are not necessarily tied to the specific municipalities where data centers are located, though.

**Investment in renewable projects:** Hyperscalers often invest directly in the development of new renewable energy projects.

### Diesel generators

The role of diesel generators at data centers is often misunderstood. As we [discussed elsewhere](#), these generators are present only as a backup power source.

Also worth noting is that diesel generators are subject to a comprehensive regulatory framework. The Environmental Protection Agency (EPA) sets federal standards implemented and enforced at the state level for generators, and states may

- 
- 11 U.S. Department of Energy, "How Much Power is 1 Gigawatt?" Office of Energy Efficiency & Renewable Energy, <https://www.energy.gov/eere/articles/how-much-power-1-gigawatt>.
- 12 S&P Global Market Intelligence, "Datacenter Companies Continue Renewable Buying Spree, Surpassing 40 GW in US," S&P Global, <https://www.spglobal.com/market-intelligence/en/news-insights/research/datacenter-companies-continue-renewable-buying-spree-surpassing-40-gw-in-us>.
- 13 Amazon, "Climate Solutions," Amazon Sustainability, <https://sustainability.aboutamazon.com/climate-solutions>.
- 14 Microsoft, "Microsoft's Datacenter Community Pledge: To Build and Operate Digital Infrastructure That Addresses Societal Challenges and Creates Benefits for Communities," Microsoft Blog, accessed September 15, 2024, <https://blogs.microsoft.com/blog/2024/06/02/microsofts-datacenter-community-pledge-to-build-and-operate-digital-infrastructure-that-addresses-societal-challenges-and-creates-benefits-for-communities/>.
- 15 Apple Inc., "Apple's Climate Roadmap," Apple Newsroom, <https://www.apple.com/newsroom/2021/07/apples-climate-roadmap/>.
- 16 Google, "Build a Carbon-Free Future for Everyone," Google Sustainability, accessed September 15, 2024, <https://sustainability.google/projects/carbon-free-24x7/>.
- 17 Meta, "The Next Stage of our Climate Commitment: Net-Zero Supply Chain Emissions by 2030," Facebook Newsroom, <https://about.fb.com/news/2021/10/the-next-stage-of-our-climate-commitment-net-zero-supply-chain-emissions-by-2030/>.

have additional requirements.<sup>18</sup> Once permitted, each diesel generator's operation is bound by strict regulations. Operators typically may run generators for only a limited number of hours per year for routine maintenance and inspection purposes.

Although it varies by facility, generators at data centers are typically used far less than these rules dictate. Generators' brief monthly operation to ensure proper functioning is comparable to running a pump system that's been inactive for an extended period—regular checks prevent potential issues that accompany prolonged inactivity, such as seized components or degraded lubricants.

Greener alternatives to diesel are in various stages of development, but none has been proved at scale yet.

### **Water sustainability**

Cooling accounts for almost 40 percent of the total energy consumed by data centers, McKinsey and Company estimates.<sup>19</sup> Several factors determine the type of cooling that is most sustainable yet still suitable for the job.

Air cooling can be more efficient at lower load percentages and smaller equipment capacities. It can also be sustainable at any scale when the data center is located in an area with a high percentage of renewable sources in the energy grid, including ones generated on site.

When cooling processes require water, nonpotable water sources can be used so as not to reduce the local drinking water supply. Nonpotable water is treated—either at a local plant or, in some cases, on site—to remove contaminants, solids, and impurities. Then recycled water is then distributed in plum-colored pipes, which accounts for the nickname the **purple pipe system**. To pursue it, companies often consider access to recycled wastewater an important factor in the early stages of site selection.

Hyperscalers have even helped AHJs finance such projects, though that's not always viable, which makes proximity to existing treatment facilities a key consideration. In 2012, Google funded the construction of the Sweetwater Creek Sidestream Plant in Douglas County, Georgia, which we explore further in [the appendix](#).

### **Electrical utility transmission and distribution**

When developers vet a site for a data center, they consider whether there are adequate transmission lines. At the local level, there can be pushback against the building of new transmission lines, inside and outside a data center context. Local pushback against transmission lines increased by 57 percent from 2022 to 2023, according to Columbia Law School research.<sup>20</sup>

This challenge exists not just for data centers but also for the clean energy transition. One truism says that the transition can't happen without transmission. Here's why: as more sectors such as transportation go electric, overall power demand is likely to increase, requiring greater transmission capacity. Grids in the U.S. are not connected, which is a problem because such clean energy sources as solar and wind are often located far from urban centers, where electricity is most needed. Connecting grids across the country requires a plethora of new transmission lines.

"By the 2030s, we need to build so many new lines that they would reach to the moon if they were strung together," says Bill Gates, cofounder of Microsoft, in a video on his YouTube channel. "And by 2050, we'll need to more than double the size of the grid, while replacing most of the existing wires."

Most transmission lines, built between the 1950s and the 1970s, are now outdated.<sup>21</sup>

How did we get here? For a long time, electricity generation was centralized, and there was no need for a connected grid. Large coal-powered plants and nuclear power plants produced massive amounts of electricity in specific locations. This electricity was then distributed widely to homes, businesses, and industries throughout a large area. Power flowed primarily in one direction: from centralized plants to distributed end users.

As we transition to clean grid sources, however, we need a less centralized, more distributed system. Unlike fossil fuel plants, renewable energy sources are often geographically dispersed, variable in output, and located far from major consumption centers. They require a shift to an interconnected grid with diverse, distributed sources, one that's more resilient to outages and increasingly frequent extreme weather events caused by climate change. This shift requires more cross-regional transmission or inter-regional transmission. It requires . . . transmission lines.

18 U.S. Environmental Protection Agency, "Regulations for Emissions from Heavy Equipment with Compression-Ignition Engines," <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression>.

19 Srinil Bangalore et al., "Investing in the Rising Data Center Economy," McKinsey & Company, January 17, 2023, <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/investing-in-the-rising-data-center-economy>.

20 "Opposition to Renewable Energy Facilities in the United States," Sabin Center for Climate Change Law, Columbia Law School, May 2023, [https://scholarship.law.columbia.edu/sabin\\_climate\\_change/200/](https://scholarship.law.columbia.edu/sabin_climate_change/200/).

21 Bill Gates, "The Surprising Key to a Clean Energy Future," Gates Notes, January 24, 2023, <https://www.gatesnotes.com/Transmission>.

Often, constituents don't understand that transmission lines are an essential part of our sustainable future, even without data center demand. Properly communicating this message to a community isn't easy, but it's essential. Siting data centers near transmission infrastructure is most efficient, as doing so allows for use of the existing infrastructure and the associated rights of way for new infrastructure, if needed.

## Sound

Another common community concern is sound. Most mitigations related to it are already baked into the development process. Data center designers, architects, and engineers tend to design data center campuses to mitigate impacts from sound upon nearby neighbors, including strategic placement of generators away from other uses. Developers typically employ on-site acoustic monitors as part of regulatory entitlements to ensure sound levels remain within acceptable limits.

Let's discuss where sounds occur at data center campuses. Remember the low hum in the equipment yards? It comes from cooling equipment. Screens and sound attenuators make it barely audible.

Generators make mechanical sounds, albeit only when they are turned on for testing or emergencies. Sound impacts can also be easily mitigated by housing generators in sound-attenuated enclosures with proper exhaust systems.

## Aesthetics

Community members often raise concerns about whether data center campuses will look as if they fit into the community. This issue can be mitigated by:

- Creating buffer zones near residential and retail areas
- Employing glass façades in key areas to make data centers more closely resemble office buildings than industrial complexes
- Applying other exterior design techniques that use materials and colors to blend buildings into their surroundings, if required and appropriate to the context

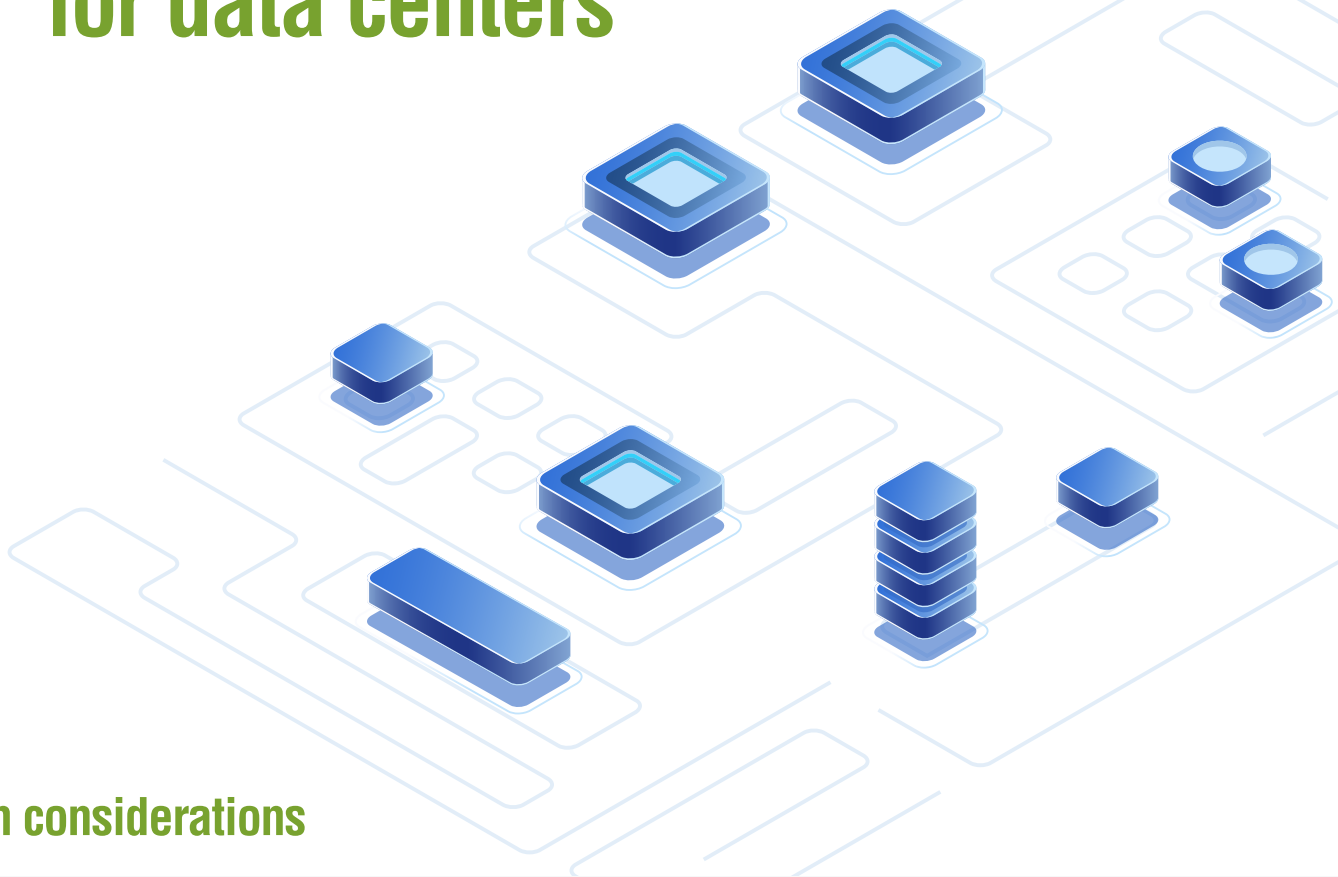
Although these mitigations are effective, it's important not to codify excessively specific or restrictive design standards into zoning codes, as doing so can discourage data center development. Exceedingly stringent height restrictions, for example, could hinder the functional design of these facilities. Balancing aesthetic considerations with operational needs of data centers is key.

More important than any one mitigation is effective community education. Many residents do not understand the purpose and benefits of data centers, which have been outlined herein, such as how they support daily internet activities and contribute to local tax revenues.



# 3

## Long-term planning for data centers



### Location considerations

Because of their unique operational and physical requirements, several crucial factors must be considered when deciding what sites suit data centers:

#### ● Power

Data centers are power-intensive. Reliable and robust access to power is non-negotiable, making proximity to high-capacity substations essential.

#### ● Roads

Whereas operational traffic is minimal, the initial construction phase generates more traffic. Thus, easy access to highways and major roads is vital for logistics and transportation.

#### ● Land

Hyperscale campuses require ample land area to accommodate both the facility and its accompanying infrastructure.

#### ● Discharge infrastructure

If there is runoff from water-based cooling, a site will need adequate infrastructure for wastewater discharge, such as a connection to a municipal sewer system, an on-site water treatment facility, or proper drainage.

#### ● Wet utilities

Some data centers require access to municipal water supply greater than what typical industrial developments need. The climate goals of most hyperscalers and developers are driving demand for recycled, rather than potable, water.

## Frequent missteps

Common pitfalls in planning for data centers include:

### ● Height restrictions:

Failing to allow sufficient building height can impede the efficient design of cooling systems, which rely heavily on vertical space for optimal airflow. The minimum height for a single-story data center could be as much as 30 feet (9.1 m). In denser jurisdictions with higher land basis, multistory data centers are common and typically require at least 66 feet (20.1 m) of height, in addition to considerations for rooftop equipment. Minimum heights are generally measured ground level to the roof line. Ancillary height structures, such as parapets, equipment platforms, screens, and stairwells can add another 15–20 feet (4.6–6.1 m) of height in some cases.

### ● Zoning challenges:

The lack of a uniform land-use category for data centers presents challenges for localities in siting these facilities appropriately. Data centers typically fall between office and industrial/warehouse uses, which often makes the applicant request variances that appear to be special considerations rather than basic requirements. This outset can lead to high-stakes decision-making by exception that undermines the existing zoning codes.

### ● Building code challenges:

Typical building code requirements around occupancy and plumbing fixtures may need to be modified for data center uses.

### ● Parking and plumbing standards:

Regulations developed for office or warehouse uses often impose excessive parking and plumbing fixture counts on data centers, which necessitate variances and complicate the planning process.

### ● Substation zoning:

Substations often fall under different categories than does the data center itself, creating further zoning inconsistencies and the need for additional, sometimes separate, approvals for one campus.

### ● Construction confusion:

Data center campuses are often built over time, as we [discussed above](#), which can cause planning confusion. The sightlines of a campus may change over time, so it's important to consider both the full campus and each individual building in the planning process.

### ● Fire Department considerations:

Fire departments that are not yet experienced with data centers might not know that the on-site batteries and generators are for backup purposes only, so education is essential. Yet even though those backups aren't frequently used, data centers are built with robust fire detection and suppression systems. Modern batteries for UPS applications include multiple safety features, including battery management systems that monitor voltage, temperature, and current. Fuel tanks for backup generators are typically stored in separate, fire-rated enclosures, and secondary containment systems are used to prevent fuel spills and leaks.

## Clear rules benefit all parties

Clear rules in zoning codes and land use plans, as well as in the entitlement and permitting processes, benefit all stakeholders involved in data center development, including the surrounding community.

Clarity simplifies the planning process, reduces the amount of planning that is done by exception, and lets communities gain maximum financial benefits from data center developments.

In the next few sections, we discuss planning options for AHJs seeking to be prepared to regulate thoughtful data center development, to attract it, or both. We also provide a [model zoning ordinance](#) that municipalities can adopt, designed to address common concerns while avoiding excessively restrictive measures that could hinder data center development.

# 4

# Regulating data centers

## Planning-related options

AHJs that want to bring data centers to their region can start by identifying strategic locations. Municipalities should perform comprehensive analyses to determine suitable areas, based on power availability, infrastructure, and environmental impact.

Ideally, more than one area should be designated for potential development—as with the process for industrial parks—to provide flexibility and attract varied investments.

### ● Option 1: Create an overlay district

One option for guiding the development of data centers is to incorporate an overlay district. An overlay district is mapped to certain areas of the jurisdiction's zoning map without necessarily changing the underlying zoning district and what is allowed therein.

A historic overlay district is a common application of this tool. It typically provides for certain additional standards—an expansion of the uses that might be permitted in that district, a limitation of them, or some mix of the two.

A data center overlay district can allow for the development of data centers and prescribe that such development meet certain standards or requirements. An overlay district clearly indicates where and under what circumstances data centers are permitted and provides additional direction to any data center developer seeking to develop in that jurisdiction.

### ● Option 2: Create a planned innovation, research, and technology (PIRT) district

PIRTs—and their regional equivalents, which include innovation zones, technology corridors, and research and technology parks—offer municipalities a flexible approach to land use that goes beyond traditional industrial or commercial zoning.

This designation allows for a mix of uses and can adapt to the specific requirements of data centers without necessitating a rezoning. Data centers in a PIRT district can integrate seamlessly with adjacent research facilities or tech hubs, fostering synergistic growth and innovation. Examples of successful PIRT districts include Palo Alto's Stanford Research Park.<sup>22</sup>

When data centers are sited clearly as being a by-right use, data center developers are more likely to consider the location for investment because they have the required certainty that the land they acquire won't struggle or be delayed in the approvals process. In the appendix, we explore how Elk Grove Village did so successfully.

### ● Option 3: Note preferred data center locations in the comprehensive plan and invite owner- or hyperscaler-initiated rezoning applications

AHJs can identify preferred locations for data center development in their comprehensive plans and invite rezoning applications in those areas.

Municipalities and data center companies can agree on development conditions—sometimes called proffers, development agreements, or conditional zoning—which are voluntary commitments made by developers in return for allowed zoning. They outline specific conditions or promises agreed upon to mitigate the impact of proposed developments or to otherwise benefit the municipality's residents.

Development conditions may include infrastructure improvements, restrictions on use, environmental protections, community benefits, and other strictures. They are flexible enough to apply to various zoning categories, including PIRTs.

### ● Option 4: Implement a specific data center zoning district defined by ordinance

Creating a data center-specific zoning district is a solution that's more detailed and restrictive than the previous three. We recommend it as a best practice in many jurisdictions because it establishes clear guidance on where data centers are permitted by right and eliminates the possibility that high-stakes decisions are made by exception. The ordinance should define data centers and outline general standards for building them, such as building size thresholds, height limits, and floor area ratio (FAR) requirements.

The zoning ordinance should include specific use standards for data centers, such as parking, setbacks, buffering, plumbing fixture counts, equipment screening requirements, and operational sound limits. The next chapter consists of a model ordinance that AHJs can adopt.

22 "About Stanford Research Park," Stanford Research Park, <https://stanfordresearchpark.com/about/>.

# 5

## Model zoning ordinance guidelines

AHJs that want balanced and transparent zoning standards that mitigate unwanted impacts while encouraging the many potential benefits of data center development can take this zoning ordinance off the page and adapt it.

No two jurisdictions are the same. Each needs to layer in its own considerations.

Our intention, however, is to offer a strong foundation upon which AHJs can build zoning districts for data centers defined by ordinance. Note that the language provided below is to be included in the zoning ordinance and there may be other provisions that govern development, such as in the building code as it pertains to plumbing fixtures, that may need to be adjusted.

### For example:

- Rural counties can consider additional guidelines and requirements when a data center is adjacent to certain agricultural uses or other sensitive uses.
- Urban municipalities can consider additional guidelines and requirements when a data center is adjacent to transit hubs or to prioritize pedestrian activity.

## Zoning categories

Broadly, zoning districts in which data centers have specific considerations fall into four categories:

**Residential:** Because data centers are ultimately an industrial use, we believe that data centers are not appropriate in residential districts.

**Industrial:** Given the nature of data centers, they should be permitted in all industrial categories, from light industrial to heavier industrial. In such areas, data centers should be permitted as any other industrial use would be allowed, including following the same height, setback and landscaping requirements.

**Rural/agricultural:** In rural areas, data centers should be permitted to the extent that industrial uses would be permitted in such areas, provided that the same conditions are applied that would be applied to permissible industrial uses on such land. If another industrial use would require a certain setback, landscaping treatment or other mitigation on rural or agricultural land, our recommendation is that the same conditions be applied for a data center on such land.

**Commercial:** Data centers in commercial areas can be appropriate, provided they comply with certain use standards as set forth below. For the purpose of this section, commercial districts are defined as ones that permit a diversity of nonresidential uses, such as office and retail.

## Use standards for commercial areas

Data centers shall be permitted by right in commercial districts if the following criteria are met:

1. To provide screening and reduce noise levels, all equipment for cooling, ventilation, or otherwise operating the facility—including generators or other power supply equipment—must be fully enclosed, except when determined by the [zoning administrator] not to be mechanically feasible. If the zoning administrator determines that full enclosure is not mechanically feasible, all equipment for cooling, ventilation, or power generation must be screened by a wall or similar barrier. In addition, any accessory electrical substation must be screened from adjacent nonindustrial properties or public streets by a wall or similar barrier. This standard does not apply to solar panels.
2. A data center building must include a main entrance feature that is differentiated from the remainder of the building façade by a change in building material, pattern, texture, color, or accent material. The entrance feature must also either project or recess from the adjoining building plane.
3. The primary façades of data centers must include either:
  - a. A change in the primary facade surface for every approximately 150 horizontal feet of at least one of the following: building material, pattern, texture, color, or accent material; or

- b. A minimum of thirty percent (30%) of the primary facade shall be comprised of windows, doors, or similar fenestration design features such as faux windows that are generally distributed horizontally and vertically across the façade.
  - c. These standards do not apply to accessory uses.
  - d. For the purposes of this requirement, a primary facade shall be deemed to be a facade that fronts on a public street.
4. Buildings may be constructed up to one hundred (100) feet (30.5 meters) in height or taller with special exception approval and subject to FAA limitations.
  5. FAR shall not exceed [1.5 times the maximum FAR of the commercial district] without approval of a special exception. With approval of a special exception, the FAR may be increased to [2.5 times the maximum FAR of the commercial district].

## Use standards for industrial areas adjacent to residential

Although data centers are appropriate in all industrial zoning categories, special attention may be afforded when industrial land is adjacent to residential. In such cases, the following language could be included in the locality's zoning ordinance:

1. Where industrial is adjacent to residential or any other sound-sensitive use, any data center building or ancillary equipment should (1) be located at least 200 feet (61 m) from the residential or noise-sensitive use or (2) meet the other standards set out for data centers in the commercial districts set out in [section 1](#).
  - a. A lesser distance that does not conform to the standards in paragraph 1, above, may be allowed with special exception approval.

## Parking requirements for all data centers

As referenced elsewhere in this document, the parking requirements for data centers are far less than would be required for another industrial or commercial use of a similar size. Overbuilding parking for a given data center site or campus can be unnecessarily costly but more importantly creates excess impervious surface and avoidable environmental consequences. Accordingly, we recommend that the parking requirements for data centers be established either by:

1. Applying the parking requirements for office that exist in the ordinance, but only to the portion of the data center building that is actually utilized for office space; or
2. Requesting a staffing plan from the data center developer and allowing such data to inform the minimum number of needed parking spaces.



# 6

# Appendix, contacts, and additional resources

## Appendix: case studies

### Google's Gmail and the need for redundancy

According to Google's podcast *Where the Internet Lives*,<sup>23</sup> Gmail launched in 2004 while offering a staggering 1 gigabyte of storage—more than 250 times the capacity of other email services at the time.

Gmail revolutionized user expectations and increased the need for data center capacity. It made every individual's account data exist on multiple interconnected servers at Google's hyperscale data centers, ensuring that users always have access to their personal information, even in the event of individual server failures, and allowing users to search and organize emails in a new way.

### The Meta outage and the quest for data center capacity

The October 2021 Meta outage affected Facebook, Instagram, WhatsApp, Messenger, Oculus, and other services, making them inaccessible to billions of users for six to seven hours. This disruption, caused by an ill-timed and erroneous maintenance command, led to a cascade of failures that severed Meta's data centers from the internet. The primary cause was a lack of redundancy in the backbone network, which left no failover capacity for critical services.<sup>24</sup>

The economic impact was significant, with individuals and businesses that relied on these services facing major interruptions—amplified by the fact that many users sign in to other apps and services through their Facebook logins. As Mike Isaac and Sheera Frenkel wrote, in the *New York Times*, this mix of factors led “to unexpected domino effects such as people not being able to log into shopping websites or sign into their smart TVs, thermostats, and other Internet-connected devices.”<sup>25</sup> Meta's stock value dropped by billions of dollars during and after the outage.<sup>26</sup>

### Google's financing of a water treatment plant

In 2012, Google funded the Sweetwater Creek Sidestream Plant in Douglas County, Georgia. This move made its nearby data center the first in the state to use recycled water for cooling. Google partnered with the Douglasville-Douglas County Water and Sewer Authority on an initiative to conserve the Chattahoochee River's potable water supply, especially during droughts and summertime.

### AWS' community incentives package in Mississippi

As part of AWS' \$10 billion data center campus investment in Mississippi—the single largest capital investment in that state's history—the company funded Mississippi's first utility-scale wind farm, located in Tunica County, and developed STEM-focused workforce training and career awareness programs for K-12 school systems.

The hyperscaler committed to supporting local educational institutions—community colleges, technical schools, universities, and workforce development organizations—by developing training programs for high-demand career pathways in data center construction and operations, as well as the broadband expansion sector. AWS also provided a free cloud computing curriculum to local institutions and learners.

### Fredericksburg, VA's windfall

Located southeast of Loudoun County, Fredericksburg, Virginia, is an emerging exurban hyperscale campus market. Alongside its regional partners, it represents a case study in attracting data center development—and landmark economic and fiscal benefits—while also mitigating potential concerns well in advance.

In March 2024, Virginia's governor, Glenn Youngkin, alongside other state and local elected officials, announced that AWS was making a \$35 billion investment in data centers in Spotsylvania, Caroline, Stafford, and Louisa counties, thereby creating approximately 2,000 new jobs. It was also announced

23 Fischer Barry, “Two: Inside the Walls,” *Where the Internet Lives*, December 9, 2020, podcast, 40:54, <https://www.google.com/about/datacenters/podcast/>.

24 Kerry Sheridan, “Facebook Outage: Social Media Giant Blames Network Problem for Global Disruption,” *BBC News*, October 4, 2021, <https://www.bbc.com/news/technology-58793174>.

25 Mike Isaac and Sheera Frenkel, “Gone in Minutes, Out for Hours: Outage Shakes Facebook,” *New York Times*, October 4, 2021, <https://www.nytimes.com/2021/10/04/technology/facebook-down.html>.

26 Greg Roumeliotis, “Facebook Services, Including Instagram and WhatsApp, Suffer Worldwide Outage,” *Reuters*, October 5, 2021, <https://www.reuters.com/technology/facebook-instagram-whatsapp-suffer-outage-2021-10-04/>.

that AWS would be contributing \$400,000 in community funds within those four localities, which, together with bordering Fredericksburg, constitute an economic region: the Fredericksburg Area Association of Realtors service area.

What Youngkin called the largest single economic development investment in the history of the state didn't happen by accident. The Fredericksburg Regional Alliance (FRA) at the University of Mary Washington and other regional groups had together been paving the way for data center development since 2016, when they also focused on ensuring the facilities would be built away from residential areas or well-buffered if close to them.

"The reality is [that] this region is one of the [fastest-growing] areas in the Commonwealth. With growth comes the need for infrastructure and services that the area can [afford only] by attracting new revenue sources or raising taxes on local businesses and residents," stated Curry Roberts, president of the FRA, in a local op-ed. "To get ahead of this [need], leaders in our region have worked for over a decade to attract data centers and the tremendous local tax revenue they bring."

According to Roberts, the regional coalition began its quest by evaluating 50 sites to determine whether—based on zoning, transmission lines, and water access—they were compatible with data center use. The coalition eventually narrowed its list down to 15 locations across five localities, with each site exceeding 100 acres. This groundwork set the stage for an ambitious economic development plan aimed at attracting major industry players such as AWS.

Roberts emphasized the importance of getting information in front of the public proactively, rather than waiting for opposition to arise. Stafford County, for example, held several community meetings to educate people about data centers before any specific projects were proposed.

Stafford and Spotsylvania counties set the stage for evaporative cooling by engineering recycled wastewater systems for that purpose in data centers. These systems are now used by data centers, which pay for the service, thus creating additional revenue for the localities.

When AWS approached regional leaders in 2018 about a data center project, the FRA was able to act quickly. It coordinated with localities to harmonize tax rates and depreciation schedules on a parcel that straddled several jurisdictions, ensuring a straightforward fiscal environment for AWS.

Although the project stalled during the pandemic, by 2023 AWS had acquired and entitled approximately 2,500 acres (1,012 ha), paving the way for the development of 18 million to 19 million square feet (1.7 million–1.8 million sq m) of data center space.

Tax benefits from the investment are immense. According to Roberts, for every dollar of service demanded by a data center, the operator is paying \$13 in taxes.

### Elk Grove Village's innovation district

Elk Grove Village, Illinois, a suburban community northwest of downtown Chicago, is located at a major fiber intersection. It intentionally attracted data center development through a combination of zoning code modifications, the promotion of strategic location advantages, and proactive communication with the development community.

Since its formation, the village has had unique zoning. The eastern half of the community, adjacent to O'Hare International Airport, is home to the largest contiguous industrial park in the United States and is zoned as such. The western half of the village is primarily residential and zoned to protect housing.

Matthew Roan, the village manager of Elk Grove Village, said the municipality updated its zoning code to spur redevelopment within its office park by creating a new "innovation and technology" zoning district that specifically permitted data centers as an approved use, thus inviting data center operators to fill unused space.

Additional modifications to the zoning code allow data centers to have greater building heights and front-yard fencing or screening that wouldn't normally be permitted for industrial uses. Other changes reduce parking requirements. All of these changes allow data center builders to get their projects off the ground more quickly, amid the certainty that the structures can be built and won't struggle in the approvals process—an uncertain phase that makes land acquisition too risky for some parties.

This proactive approach has attracted data center developers and hyperscalers, including Meta and Microsoft. Roan, who has served in various roles in village government since 2000, said it brought significant economic benefits to the region, including long-term development and permit fee revenues, financial assistance for local school districts and other taxing bodies, high-quality site aesthetics, and temporary construction jobs. The increased tax and fee revenue from data centers allowed the village to reinvest in infrastructure improvements and redevelopment projects, he said.

This strategic positioning of Elk Grove Village as a data center hub exemplifies how proactive municipal policies can drive growth and innovation—as well as stable economic returns. Once data centers make their large capital investments, Roan said, they tend to stay in the community long term, unlike more transient industrial users.

## Contacts

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# 7

## Glossary

**air-cooled chiller system:** A cooling system sealed in a closed loop that typically consumes very little water—less than the amount used in three single-family homes.

**clustering:** The practice of data centers locating near one another, connecting their servers to work as a unified system, or both.

**colocation data centers:** Multi-tenant data centers where third-party operators (developers) lease data center space—a certain number of server cabinets, for example, or kilowatts (kW) to a host of other companies.

**corporate data centers:** Also called enterprise data centers, these facilities store and process a single organization's data. These data centers often store the data of financial institutions—think American Express or Wells Fargo—that typically own and operate such facilities themselves, rather than leasing them from a provider.

**data center:** A building or campus that houses the infrastructure that supports the world's computing functions.

**data hall:** The rooms in data centers where data is processed and stored.

**evaporative cooling:** A cooling system that uses large fans to move air across a wet medium to evaporate water, which removes the heat from the data center and cools the air.

**hyperscale data centers:** Large data center buildings or campuses that process and store the data of companies that often need to scale up or scale down their infrastructure quickly.

**hyperscaler:** A company that occupies and operates a large data center building or campus. These companies—which include AWS, Microsoft, Google and Meta, often need to “scale up” their infrastructure quickly.

**latency:** The time it takes for information to travel from its source to its destination.

**load balancing:** The process of distributing network traffic across multiple servers at interconnected data centers.

**node:** An individual server in a cluster of servers.

**phasing:** A process for data center campus construction that occurs in stages.

**power distribution units (PDUs):** Devices that distribute energy to servers, network devices, and other equipment within a rack.

**power purchase agreements (PPAs):** An agreement between a data center company (the buyer) and a renewable energy provider (the seller) to purchase electricity from specific wind or solar farms.

**purple pipe system:** A recycled water setup whereby water is treated to remove contaminants, solids, and impurities and then distributed via plum-colored pipes.

**renewable energy certificate (REC):** A tradable commodity wherein each REC equates to the generation of 1 MWh of power from a qualified renewable resource, usually wind or solar power generation facilities.

**switch:** A device used to connect network devices and route data through interconnected networks.

**switchgear:** Power distribution equipment that controls, protects, and distributes electrical power throughout the data center.

**telecom data centers:** Where traffic from cell towers “switches” to go out to the internet. Typically owned by such telecommunications companies as Verizon, these centers tend to be smaller facilities than the other data center types and require less than 10 kW.

**uninterruptible power supply (UPS) systems:** Electrical equipment used in data centers to provide battery backup power in the event of a power outage.

**utility substation transformer:** A large electrical device in the electrical yards of a data center campus that steps down high-transmission voltages from the utility grid to lower, more manageable medium-voltage levels suitable for distribution throughout the data center.

**water-cooled chiller system:** An open-loop pipe system in which water removes heat from the refrigerant.

**wholesale data center:** A type of data center where a third-party developer rents a large portion of the space, the energy capacity, or both to one company—often, all of it.