



City of Longview

1525 Broadway
Longview, WA 98632
www.ci.longview.wa.us

Agenda

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+1 253 215 8782 or +1 346 248 7799
Webinar ID: 867 8803 8944

Planning Commission

Wednesday, October 5, 2022

7:00 PM

City Hall

1. **ROLL CALL**

2. **APPROVAL OF MINUTES**

22-000614 Minutes of the September 7, 2022 regular meeting.

3. **AUDIENCE PARTICIPATION OF CORRESPONDENCE**

4. **DECLARATION OF EX-PARTE COMMUNICATIONS AND APPEARANCE OF FAIRNESS**

5. **NON-PUBLIC HEARING ITEMS**

22-000616 PC 2022-5 Proposed zoning amendments for driveway surface requirements, mini-storage location and development, data centers and map or plat recording on Mylar requirements.

Recommended Action: Motion to direct staff to prepare proposed zoning amendments as agreed upon by the Planning Commission for consideration at a public hearing to be held November 2nd, 2022.

6. **OTHER BUSINESS**

7. **PLANNER'S REPORT**

22-000617 Residential Infill- Staff to report on next steps which may include:

- City utilities division conduct a study on infrastructure capacity in the CVG neighborhood. Results could inform a connection fee for new development in the area to provide for upgrades.
- Staff to work with Stormwater division on assessing stormwater capacity and impacts of new development in the CVG area.
- Engineering staff continues research on acceptable road standards for infill.
- Engineering staff to contribute to a future street connections map that can be adopted as a comprehensive plan amendment to inform review of development a land subdivisions in the City.

8. **ADJOURNMENT**



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Minutes

Agenda - Planning Commission Workshop Meeting in Training Room or Small Conference Room, upstairs at City Hall

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7799 Webinar ID: 867 8803 8944

Planning Commission

Wednesday, September 7,
2022

7:00 PM

City Hall

1. ROLL CALL

Chairman Collins called the meeting to order at 7:00 p.m.

Present: Member Craig Collins, Member Jeff Rauth, Member Ramona Leber, Member Joanna Lee,
Member Kalei LaFave, Member Stacy Dalgarno

Absent: Member Trey Davis

Staff Present: Ken Hash, Public Works Director; Adam Trimble, Planner; Lisa Vertrees, Administrative
Assistant

2. AUDIENCE PARTICIPATION OF CORRESPONDENCE

None at this time.

3. WORKSHOP ITEMS

22-000548 PC 2022-4 INFILL WORKSHOP #3

Mr. Trimble gave a staff presentation.

There are about 187 properties in the CVG area suitable for infill.

Potential utility issues were discussed. Half streets are not ideal. Private driveways/streets would also

mean private utility lines.

The focus of the CVG area infill concept needs to change. We could possibly reduce the frontage requirement., require punching roads through to existing roads, lot sizes and numbers, . Staff will develop an arterial road map, and work on SDC.

22-000551 PC 2022-5 WORKSHOP ON STAFF PROPOSED ZONING CODE AMENDMENTS: DRIVEWAY STANDARDS, DATA CENTERS, MINI-STORAGE, MYLARS.

RECOMMENDED ACTION: PROVIDE FEEDBACK TO STAFF ON THE PROPOSED AMENDMENT TOPICS.

Mr. Trimble reviewed the staff memo.

1. Driveway pavement requirements: Suggested to require only the first 50' of driveways to be paved from where it meets the public street. Planning Commission members were in agreement.
2. Data Centers: Suggested to remove data centers as a permitted use in the industrial zone. Planning Commission members were in agreement.
3. Mini-storage restrictions: Three approaches were discussed, with requiring a setback in the general commercial zone to preserve frontage for active commercial use was the most appealing. However, the Planning Commission would like more detailed exploration of all three ideas presented before making any decisions.
4. Mylars for recording at the County: The County no longer requires mylar copies. Staff is recommending removing the mylar requirement from the code sections. Planning Commission members agree.

4. PLANNER'S REPORT

None at this time.

5. ADJOURNMENT

The next regular Planning Commission meeting is scheduled for October 5, 2022, 7 p.m.

With no further business to discuss, Chairman Collins adjourned the meeting at 8:22 p.m.

Lisa Vertrees, Recorder



City of Longview

Agenda Summary

PC 2022-5 Proposed zoning amendments for driveway surface requirements, mini-storage location and development, data centers and map or plat recording on Mylar requirements.

Recommended Action: Motion to direct staff to prepare proposed zoning amendments as agreed upon by the Planning Commission for consideration at a public hearing to be held November 2nd, 2022.

Attachments:

1. PC 2022-5 Memo re zoning changes for mini-storage
2. Mini storage vacant land map
3. PC 2022-5 Memo re zoning changes for data centers
4. Zoning-Practice-2022-06 Data Centers
5. PC 2022-5 Memo re driveway standards , misc zoning changes

September 29, 2022

TO: Longview Planning Commission

FROM: Adam Trimble, Planning Manager

SUBJECT: Mini-storage zoning research

At the September 7, 2022 regular meeting, the Planning Commission considered a request by staff for the Planning Commission to initiate amendments to the zoning code regarding 4 different topics including consideration of limitations upon further mini-storage development. The following summarizes information about mini-storage uses in Longview, mini-storage regulations of similar sized cities, and approaches to regulating this use.

Information about mini-storage in Longview and the Longview Growth Boundary

- 4,812,672 sq. ft.: approximate land developed for mini-storage.
- 130 sq. ft. of mini-storage land per person in Longview.
- 15 mini-storage businesses listed on Google
- 5 storage businesses along Ocean Beach Hwy.
- # leasable spaces in Longview is unknown but storage uses maximize lot use.
- 36 vacant or undeveloped properties on Ocean Beach Hwy zoned or designated for General Commercial (would allow mini-storage)
- 50 acres or 2,193,233 sq. ft. land available for mini-storage development on Ocean Beach Hwy.

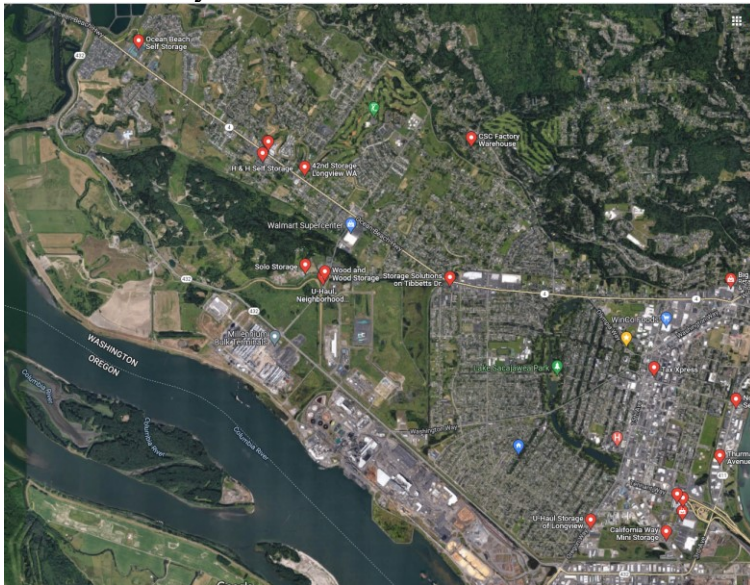


Figure 1: Google map of mini-storage businesses

Mini-Storage Regulations of Similar Sized Cities

In the Longview growth area, there is approximately 4,812,672 sq. ft. of land dedicated to mini-storage, equating to 130 sq feet per person.

City	Population	Mini-storage Business count	Zoning Summary	Permitted outright?	Restrictions?
Lynnwood	40,592	9-10	Allowed in 2/2 Industrial zones, 1 of 3 Commercial. Prohibited in mixed-use zones.	Yes- Industrial and General Commercial	Required to be multi-story building in Commercial zones- emulate office buildings.
Issaquah	39,505	9	4 of 5 commercial/industrial zones. 18.07.527	3 of 4 staff review. 1 design review.	Design Standards. Design review board for 3 acre+ sites.
Parkland	37,946	7	Limited to one mixed-use zone.	Yes	Parkland is governed by Pierce County.
Longview	37,824	15	Allowed in 2 of 6 commercial zones and all light industrial zones, no heavy industrial.	Yes, 1/6 Commercial, 3/4 Industrial	Permitted as a special property use in Office/Commercial zone.
Lake Stevens	36,288	8	Allowed in 4 of 9 non-residential zones. Not allowed in main commercial areas. Code: 14.44.044	No. Staff conditional use.	Only along state routes. Limited to 25% coverage. Design standards.
Wenatchee	35,405	15	❖ Similar to Longview, a main commercial highway goes through town. Mini-storage not allowed on commercial street frontage.	Industrial zone	Not allowed on commercial street frontage in main commercial areas. Required to be in completely enclosed building in most commercial zones.
Mount Vernon	35,404	8	Allowed as an accessory use in 2/6 commercial zones.	2/2 Industrial zones/likely. 2/6 Commercial zones (accessory)	In Commercial zones must be accessory to another use- a gas station, motel, construction yard, office park etc. Seems to result in many locally owned mini-storage.

Approaches To Regulating Mini-Storage

Mini-storage restrictions- consider limiting how mini-storage is developed or reduce the areas where it can be built. Initial Findings:

- Mini-storage remains very popular as a source of passive income for investors.
- Local owner/operators report a consistent 90% lease rate. Only changes temporarily when new units are built.
- Mini-storage is allowed in commercial and industrial areas and it provides very little economic or employment benefit while being land consumptive.
- With online tools and card access for customers mini-storage can be managed remotely.
- Longview has limited developable land and a limited growth area.
- Prime commercial corridors and large tracts of industrial land are finite resources for cities.
- Zoning regulations should reflect the goals of the comprehensive plan which emphasizes employment as a goal for non-residential areas.

The Washington State Employment Security Department identifies a persistently higher unemployment rate and lower labor force participation in Cowlitz County as further reason to protect lands for employment uses:

“Over the past two decades, Cowlitz County’s unemployment rate has run about two percentage points higher than the national average during good times, and three or four points higher during recessions. The average annual rate in the county was 13.5 percent in 2009, before easing down almost a point a year through 2017, when the annual rate was 6 percent. In 2018 the rate inched down to 5.9 percent, the lowest rate on record going back to 1980. Health-related restrictions on economic activity pushed the rate up to 16 percent in April 2020, before the county’s strong recovery led to the lowest rate on record, 4.9 percent, in December 2021. Preliminary rates for 2022 indicate this year will have the lowest annual rate ever.

The county’s labor force participation rate in 2019 was estimated at 52.5 percent and has been below 60 percent over the last decade. The rate was substantially lower than the national mark of 63.4 percent and the state’s 64.7 percent. The rates for women (50.1 percent) and men (55 percent) were 7 to 15 percentage points below the comparable state and national figure Example of mini-storage as accessory use to another primary use.” (<https://esd.wa.gov/labormarketinfo/county-profiles/Cowlitz>)

Three approaches are proposed:

1. Limit the amount of street frontage mini-storage uses can have on Ocean Beach Hwy:
New footnote added: “Mini-storage is permitted to have a maximum of 50’ feet of frontage along Ocean Beach Highway and must be set back 100’ feet from the Ocean Beach property line unless accessory to another permitted use in the zone.”

Definition for Reference: 19.09.015 Accessory use – Accessory building. “Accessory use” or “accessory building” means a subordinate use or subordinate building customarily incidental to and located upon the same lot occupied by the main use or principal building.

2. Allow mini-storage as an accessory use only in Commercial and Industrial zones. Require mini-storage developments to be accessory to a different primary use allowed in the zone. In commercial zones retail, food or lodging buildings may have mini-storage built behind the primary use. In industrial areas warehouses, shops, manufacturing uses, or office buildings may incorporate mini-storage as a part of the overall development. With a binding site plan mini-storage could be one parcel of a larger development with multiple lots that could still be bought and sold independently.
3. Limit or prohibit mini-storage in certain zones.
 - a. Cap mini-storage development to a maximum land square foot area based on population. “Self-storage facilities within the Longview corporate boundary shall not exceed 200 square feet per capita based on the Washington State Office of Financial population estimate for the current year. This calculation is to be construed as the total allowable self-storage space within Longview, not on a single site basis.” *This approach may incentivize development of mini-storage in the near term but establishes that mini-storage land uses are related to the needs of residents of Longview. Final numbers will need further calculation, but the 200 square feet example above would result in 60 more acres of mini-storage.*
 - b. To limit land consumption and encourage compatible industrial development require new mini-storage development to be in large buildings and gain access from the interior of the building. No unit doors may face public right-of-way. *Staff is not recommending this approach as it addresses more of an aesthetic concern.*

Examples of mini-storage in Longview as accessory to another permitted use.

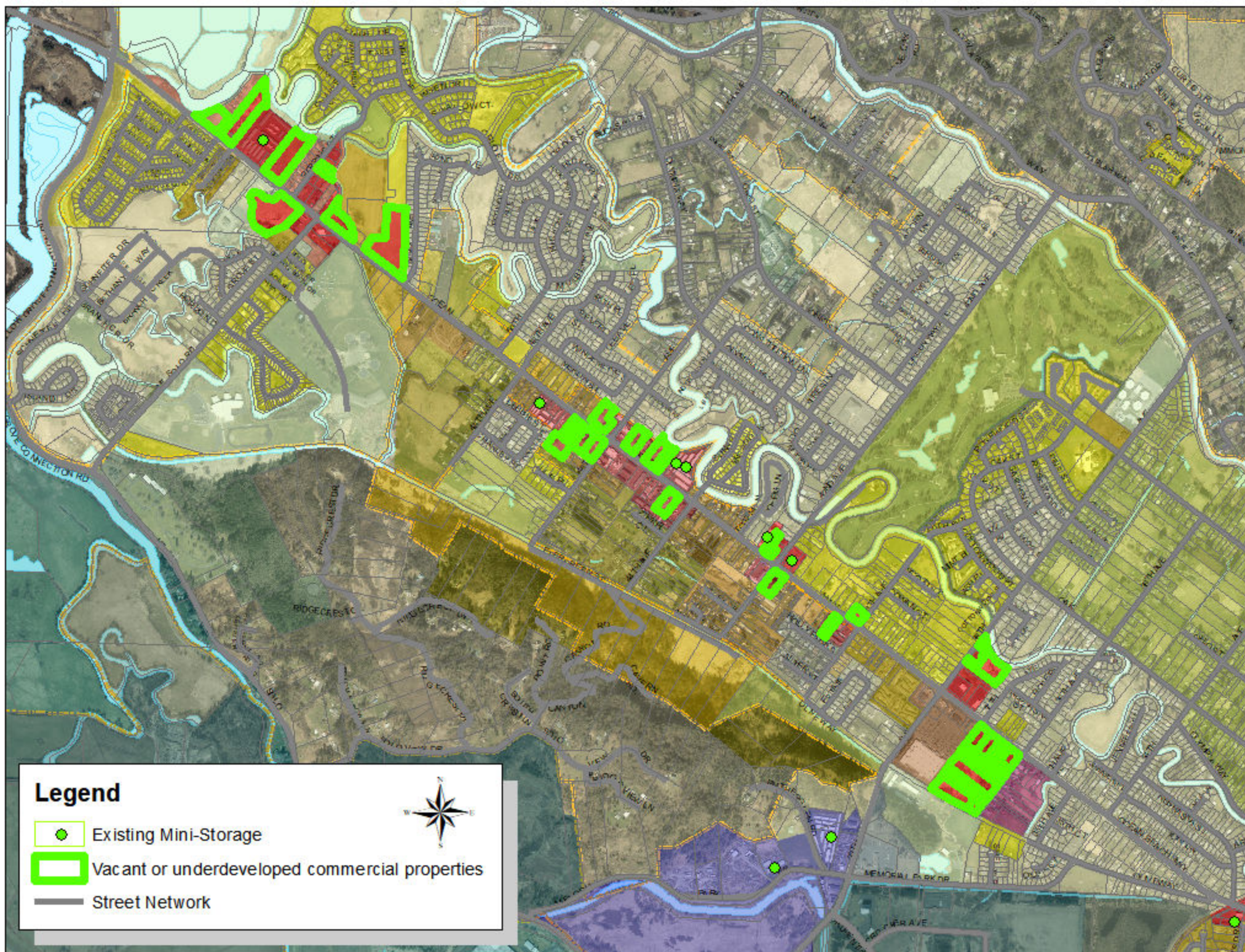


4222 Ocean Beach Hwy: A repair business and automotive services businesses are up-front by the street and self-storage is behind.



1236 3rd Avenue: Auto Detailing business is prominently located up front and mini-storage is behind.

If you have any questions about the materials before the meeting please contact me at 360-442-5092 or adam.trimble@ci.longview.wa.us





Memorandum

September 29, 2022

TO: Longview Planning Commission

FROM: Adam Trimble, Planning Manager

SUBJECT: Crypto currency mining and data centers

At the September 7, 2022 regular meeting, the Planning Commission considered a request by staff for the Planning Commission to initiate amendments to the zoning code regarding 4 different topics including consideration of limitations upon further mini-storage development. The following summarizes information about data centers.

Longview currently permits Data Centers in 4 of 4 Industrial zones. No definition or design standards are provided for this land use. A recent application for this use proposed a data center in 40 separate shipping container structures on a property. Other cities have developed detailed regulations for the use and even restrict the use in residential areas (homes) when exceeding a certain scale not commonly found in a residence. Cryptocurrency mining appears to be the predominant developer of this use and it provides very little economic or employment benefit while also demanding a lot of electricity and space. Employees and the equipment installed are likely to come to the site from outside Longview.

Staff discussed the use with staff from Cowlitz PUD and learned that the utility has no choice about selling electricity to customers and is neutral about data centers- but they do consume a relatively large amount of electricity. The main concern of the PUD is protection and preservation of infrastructure so that transformers do not burn up. Similar to the rush to create marijuana growing operations which require lots of electricity, PUD staff would review any new cryptocurrency mining operation to determine how to safely provide adequate power. To do cryptocurrency mining at any kind of scale, (larger than 10 megawatts), the user will likely be required to construct a small substation and purchase electricity from the PUD at the BPA market rate for transmission, which is lower, but offset by the cost of the substation construction. PUD staff confirmed that our utility district power is a finite resource just like a municipal water supply. It can be all be purchased up or the supply could decrease affecting existing customers and prompting the need to develop more supply. Base load sources of electricity derived from fossil fuel sources are being phased out, which results in less capacity for everyone and decreases the capacity created by years of energy saving and energy reduction efforts.

After the last Planning Commission meeting staff received a contact from a realtor asking about the proposal to remove data centers from the permitted use table. The commentor noted that they are counting on at least one data center to be a tenant in a planned multi-tenant industrial building. Upon further research staff found that Wenatchee WA has developed definitions to distinguish between 'data centers' and 'cryptocurrency mining.' The distinction could allow the Planning Commission to allow data centers while limiting or prohibiting cryptocurrency mining.

“Data center” means a facility where the primary use is to house and operate networked computer systems and associated components that include, but may not be limited to, power supply, data communications connections, environmental controls, and security devices. Facilities or operations that meet the definition of “cryptocurrency mining” will be regulated under that land use designation.

“Cryptocurrency mining” means the operation of specialized computer equipment for the primary purpose of adding, securing, or verifying transactions to a blockchain or mining one or more blockchain-based cryptocurrencies such as Bitcoin. This activity typically involves the solving of algorithms as part of the development and maintenance of a blockchain which is a type of distributed ledger maintained on a peer-to-peer network. Typical physical characteristics of cryptocurrency mining include specialized computer hardware; high density load (HDL) electricity use; a high energy use intensity (EUI) where the operating square footage as determined by the utility is above 250kWh/ft²/year and with a high load factor in addition to the use of equipment to cool the hardware and operating space. For the purposes of the associated regulations, cryptocurrency mining does not include the exchange of cryptocurrency or any other type of virtual currency nor does it encompass the use, creation, or maintenance of all types of peer-to-peer distributed ledgers.

<https://www.codepublishing.com/WA/Wenatchee/#!/Wenatchee10/Wenatchee1008.html#10.08.055>

Wenatchee also developed design standards for the land uses- some of which may be desirable to add to the Longview zoning code (see #2 below) if either use is retained. Additionally, attached with this agenda is a recent publication by the American Planning Association on how to address these uses with zoning regulations.

10.48.310 Cryptocurrency mining and data centers.

All cryptocurrency mining operations where allowed by Chapter 10.10 WCC, District Use Chart, shall meet the following standards unless otherwise regulated within this code:

- (1) Applications for a business license shall be processed as a Type II administrative review with public notice under WCC 13.09.040.
- (2) The use of cargo containers, railroad cars, semi-truck trailers and other similar storage containers for any component of the operation is strictly prohibited.
- (3) Prior to approving the business license, the applicant shall provide written verification from the Chelan County Public Utility District (PUD) stating the following:
 - (a) Adequate capacity is available on the applicable supply lines and substation to ensure that the capacity available to serve the other needs of the planning area is consistent with the normal projected load growth envisioned by the PUD.
 - (b) Utility supply equipment and related electrical infrastructure are sufficiently sized and can safely accommodate the proposed use.
 - (c) The use will not cause electrical interference or fluctuations in line voltage on and off the operating premises.
- (4) Prior to any cryptocurrency mining, a copy of the Washington State Department of Labor and Industries electrical permit and written verification that the electrical work has passed a final inspection shall be provided to the city and the PUD.
- (5) Data centers and cryptocurrency mining operations shall not occupy the grade level commercial street frontage to a depth of 50 feet, except within the industrial zoning district.

(6) New structures proposed for use as data centers or for cryptocurrency mining shall meet the blank wall limitation standards found in WCC 10.24.050(9), for all zones except within the industrial and the industrial overlay zoning districts.

(7) All cryptocurrency mining and data center operations, including all ancillary equipment/operations for purposes such as cooling, shall be designed, constructed, operated, and maintained so as not to cause the dissemination of dust, smoke, glare, heat, vibration or noise in excess of the maximum environmental noise level established by WCC Title 6A or Chapter 173-60 WAC beyond the property line or affecting adjacent buildings. Violation of these established noise levels will result in revocation of a city business license pursuant to Chapter 16.12 WCC and any other applicable penalties.

(8) The project proponent shall provide to the city within 30 days of commencing operations an affidavit that includes the following information:

- (a) Name and qualifications of the person who measured the decibel levels.
- (b) Equipment used.
- (c) Location of the noise measurements depicted on a scaled site plan. The points of measurement shall be at all property lines and generally at the points on those property lines most susceptible to noise from the applicable equipment.
- (d) Decibel levels measured at each property line.
- (e) A description of the operating conditions of the applicable equipment when the measurements were taken.
- (f) Time and duration of measurements.
- (g) A statement attesting to the accuracy of the information provided and a guarantee that the project proponent will not run their equipment at a more intense or noisier state than when they made the measurements.

The city reserves the right to require independent verification of noise measurements and/or to request additional measurements at different points on the property. All measurements must comply with the noise levels established in Chapter 173-60 WAC and WCC Title 6A. (Ord. 2019-30 § 1 (Exh. B))

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ZONING PRACTICE

JUNE 2022



AMERICAN PLANNING ASSOCIATION

➡ ISSUE NUMBER 6

PRACTICE DATA CENTERS



Zoning for Data Centers and Cryptocurrency Mining

By David Morley, AICP

Data centers are the physical facilities where the internet lives. Fundamentally, they consist of networked computer systems used for data storage and processing, along with supporting equipment, such as batteries, back-up power generators, and cooling devices. Modern data centers are the direct descendants of the, so-called, *telecom hotels* that began springing up in downtowns in the late 1990s to accommodate the rapid expansion of the commercial internet and, before that, of automated telephone exchange facilities that made it possible to place land-line telephone calls across a city, the nation, or the world (Evans-Cowley 2002).

An emerging segment of the data center market consists of facilities dedicated in whole or part to “mining” cryptocurrency. A cryptocurrency is a decentralized digital currency that uses encrypted data strings to denote individual units, or coins, and a peer-to-peer database known as a blockchain to maintain a secure ledger of transactions. Several of the most popular cryptocurrencies, most notably Bitcoin, require extremely complex computations to verify each transaction and add a record, or block, for that transaction to the blockchain. Whoever verifies a transaction first receives a new cryptocurrency coin as a reward. While, theoretically, anyone with a computer server can “mine” new coins by helping to verify these transactions, large-scale cryptocurrency mining requires a massive amount of computing power.

This article explores the reasons why cities, towns, and counties may wish to define and regulate data centers and cryptocurrency mining as distinct uses in their zoning codes and provides a summary of contemporary approaches. It begins with a brief overview of the factors that drive demand for data centers or cryptocurrency mines in particular locations before examining the key planning issues that may merit special attention through zoning and posing a series of questions to guide code drafting.



Chad Davis / Flickr (CC BY 2.0)

➡ A hyperscale Google data center in Council Bluffs, Iowa.

The article concludes with short profiles of local zoning approaches that may serve as models for others.

DEMAND DRIVERS

Industry analysts predict sustained growth in data center construction in the coming years (Dunbar and Bonar 2021). This includes demand for larger and larger “hyperscale” data centers as well as more widely distributed “edge” data centers (Sowry et al. 2018). Data center developers (or operators) are attracted to sites with low latency to end users and dependable and affordable electricity.

While data centers have historically been clustered around major internet access points, information technology companies, and government employment centers, the proliferation of cloud computing and the internet of things is pushing demand out to network edges. This means more data centers in smaller metropolitan and nonmetropolitan areas.

Big technology companies are likely to continue looking for sites that can accommodate new, large single-story structures. But

operators that specialize in leasing space in the same facility to multiple companies (i.e., collocated data centers) may be more open to infill sites and existing structures, especially if those sites have access to fiber optic infrastructure.

Data centers use a lot of electricity (see below) to power processing and storage hardware and to keep that hardware cool. The amount of electricity (and often water) needed for cooling is higher in warm, humid climates than in cool, dry areas. Consequently, holding other factors equal, developers favor locations with low electricity rates and cooler climates. Furthermore, because these facilities operate continuously, developers are also looking for sites that are less vulnerable to natural hazards.

Cryptocurrency miners are also looking for locations with cheap electricity and low hazard risk; however, dedicated mining facilities are not concerned about proximity to customers and are less likely to invest in backup power. While there seems to be a widespread consensus that data centers are essential to global communications and the global economy, cryptocurrency miners

have a more limited “social license” to operate. Widespread concerns about the energy use of mines and the limited utility of the coins they produce has led some countries, including China, to ban Bitcoin mining. Consequently, many cryptocurrency miners are relocating to the U.S. (Obando 2022).

PLANNING ISSUES

From the exterior, data centers and cryptocurrency mining facilities may be physically indistinguishable from many commercial or light industrial uses. However, the operational characteristics of these facilities are typically quite distinct from those of surrounding land uses. From a planning perspective, the most noteworthy characteristics relate to their electricity and water use, noise production, enhanced safety and security needs, and low employment densities.

They Use a Lot of Electricity (and Water)

In 2020, data centers used between 200 and 250 terawatt hours (TWh) of electricity, accounting for approximately one percent of global consumption (IEA 2021). While the total consumption has grown steadily along with global power demand, this ratio has held relatively constant over the past 20 years as efficiency improvements have proportionally offset increased demand from data centers. However, this pattern is unlikely to hold as growth in streaming video, online gaming, cloud computing, machine learning, virtual reality, and the internet of things begins to outstrip efficiency improvements.

The figures above exclude cryptocurrency mining. Bitcoin miners alone used an estimated additional 60 to 70 TWh in 2020. According to Cambridge University, if Bitcoin was country, it’s annual electricity consumption would be slightly higher than that of Poland or Malaysia (2022).

Data center and cryptocurrency mining equipment also generates a tremendous amount of waste heat, which must be dissipated by fans or absorbed by a cooling medium to avoid hardware damage and ensure efficient operations. Many data centers and cryptocurrency mines use water as a cooling medium. Water is also necessary for most forms of electricity production. In aggregate, a medium-sized data center typically uses more water each year than two 18-hole golf courses (Mytton 2021).

They Can Be Noisy

Inside a data center or cryptocurrency mine server room, the noise can make it difficult to carry on a conversation at a normal volume. While most data centers and large cryptocurrency mines incorporate construction and soundproofing techniques that ensure this server noise isn’t audible outside of the building, air conditioner compressors mounted on the roof or on ground near these facilities can generate noise that carries across property lines.

In some contexts, vegetation or other structures may rapidly attenuate this sound. In others, the sound may travel over long distances. Obviously, the degree to which these sounds constitute nuisance “noise” depends on surrounding land uses and ambient noise levels. The problem is typically most acute when data centers or mines are near residences.

They Have Enhanced Safety and Security Needs

Data centers typically aim to run continuously, and any outage or downtime can threaten business operations. Furthermore, data centers house expensive, highly specialized hardware, and many handle sensitive data. Consequently, most data centers incorporate enhanced safety and security features, such as gated access points, fencing, or bright lighting, to prevent unauthorized access and to minimize the likelihood of disruption.

Cryptocurrency mines have similar safety and security needs, with two key distinctions. First, miners want to maintain network access, but the stakes are lower

than for data centers because an outage wouldn’t negatively affect any other services or users. Second, cryptocurrency mines generally aren’t receiving any clients and have little incentive to draw attention to themselves with fencing or lighting.

They Have a Low Employment Density

Data centers typically have far fewer workers per square foot than professional offices or light industrial facilities (Tarczynska 2016). And cryptocurrency mines generally have even lower employment densities than data centers. For some communities, data centers (and potentially cryptocurrency mines) are highly desirable from an economic development perspective because they often generate a large property tax surplus that can subsidize more service-intensive land uses, such as single-family homes. Others, however, are reluctant to devote too much commercial or light industrial space to uses that generate few jobs.

ZONING CONSIDERATIONS

Any community interested in regulating data centers and cryptocurrency mining through zoning should consider three key questions:

1. Do these uses need new use definitions?
2. Where should these uses be permitted?
3. Do these uses need special development or performance standards?

Do They Need New Use Definitions?

New land uses don’t necessarily require new use definitions in the local zoning code. It depends, in part, on whether the use fits



eBay/ink / Flickr (CC BY-NC-ND 2.0)

➡ The roof of eBay’s Topaz data center in South Jordan, Utah.

neatly under a broader use category or is substantially like another defined use. And it depends on whether treating the new use the same as this use category or other similar use would be likely to generate negative effects on nearby properties or the community as a whole.

Many communities have defined data centers (or some closely analogous term) as a distinct use in their zoning codes. These definitions typically reference the general function of the facility and the degree to which it is occupied by computer systems and related equipment. For example, Anne Arundel County, Maryland, defines *data storage center* as “a facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data storage and operations” (§18-1-101.(44)).

Comparatively fewer communities have defined cryptocurrency mining as a distinct use. Many of these definitions focus on the specialized purpose of the facility, often with references to other newly defined terms, such as *high density load* or *server farm*, that clarify its distinct characteristics. For example, Moses Lake, Washington, specifies that *cryptocurrency mining* often uses more than 250 kilowatt-hours per square foot each year (§18.03.040).

Where Should They Be Permitted?

Communities that choose to regulate data centers or cryptocurrency mines as distinct uses may permit these uses either by right or with a discretionary use permit (i.e., conditional, special, or special exception use permits) in one or more existing base or overlay zoning districts. Alternatively, they may elect to establish a new special-purpose base or overlay zoning district for either use.

Many communities permit data centers and cryptocurrency mines either by right or with a discretionary use permit in commercial and industrial districts. While data centers and mines can fit in a wide range of existing commercial or industrial buildings, purpose-built facilities are often single-story structures with large floorplates.

Given that they generally have few employees and visitors, these uses may not be appropriate in ground-floor street-frontage spaces in pedestrian-oriented

EXAMPLES OF DEFINED USES

Jurisdiction	Defined Uses
Alpharetta, GA	Data center (§1.4.2)
Anne Arundel County, MD	Data storage center (§18-1-101.(44))
Fairfax County, VA	Data center (§9103)
Frederick County, MD	Critical digital infrastructure facility (§1-19-11.100)
Moses Lake, WA	Cryptocurrency mining; Data center/server farm/cluster (§18.03.040)
Pitt County, NC	Data processing facility (large scale) (§15)
Plattsburgh, NY	Commercial cryptocurrency mining; Server farm; High density load service (LL 6-2018)
Prince George’s County, MD	Qualified data center (§27-2500)
Prince William County, VA	Data center (§32-100)
Somerville, MA	Data center (§9.8.b)
Vernal, UT	Data center (§16.04.173)
Wenatchee, WA	Cryptocurrency mining; Data center (§10.08)

commercial areas. Wenatchee, Washington, addresses this issue by permitting data centers and cryptocurrency mines by right in multiple pedestrian-oriented commercial districts, with a simple stipulation that they cannot occupy “grade level commercial street frontage” (§10.10.020).

A new special-purpose zoning district can help steer data centers or cryptocurrency mines toward corridors or other subareas that have suitable utility infrastructure. When adopted as floating zones, special districts can also provide an extra layer of review for large projects that may cover dozens or hundreds of acres.

Prince William County, Virginia, added a Data Center Opportunity Zone Overlay District to its zoning code in 2016 (§32-509). The county has mapped this overlay to more than 70 percent of its industrially zoned land. The overlay permits data centers and includes design standards for these facilities; however, it does not otherwise modify the existing use permissions for underlying districts.

Do They Need Special Development or Performance Standards?

Communities that decide to regulate data centers or cryptocurrency mines as distinct uses may choose to adopt use-specific standards that modify or supplement other relevant universal or district-specific development or performance standards. This approach can help communities target standards to the distinct features of these uses

to address specific community concerns.

Use-specific standards can help minimize reliance on discretionary approvals and improve the consistency of local decisions. Without these standards, local officials may be more likely to require all data centers and cryptocurrency mines to obtain a discretionary use permit, and they may be more likely to adopt wildly varying conditions of approval for substantially similar proposals.

Communities that have adopted use-specific standards for data centers and cryptocurrency mines often establish building design and buffering or screening requirements to minimize the visibility or improve the appearance of these facilities from public streets or nearby properties. Other common standards address environmental performance, including noise and light pollution, and evidence of electric utility approval.

POTENTIAL MODEL APPROACHES

It would be difficult to find a community with more experience with data centers than Loudon County, Virginia. And the county’s approach to zoning for data centers serves as a potential model for other communities with suitable sites and sufficient infrastructure to accommodate data center development. In contrast, Missoula County, Montana, was one of the first local jurisdictions to craft zoning regulations for cryptocurrency mining operations. And its emphasis on mitigating the potential climate impacts represents a different type of potential model.

Loudon County, Virginia

Northern Virginia's Data Center Alley, primarily clustered around Routes 7 and 267 in Loudon and Fairfax Counties is the largest data center market in the world (Fray and Koutsaris 2022). Its combined power consumption capacity is more than 1.6 gigawatts (GW), nearly twice as much as the next largest market. And within Data Center Alley, Loudon County has the highest concentration of data centers. As of October 2021, data centers occupied more than 25 million square feet, with another 4 million square feet in development (LCDED 2022).

Several important factors have driven demand for data center development in Loudon County. It is home to the Equinix internet exchange, one of the largest internet access points in the world and a successor to Metropolitan Area Exchange, East, the first

U.S. exchange. The county has abundant (and redundant) fiber optic infrastructure, relatively cheap power, and sufficient water. Additionally, it has a high concentration of skilled technology workers and businesses that support the data center industry.

By the year 2000, there was already an emerging data center cluster in Loudon County. However, the county did not define and regulate data centers as a distinct use in its zoning code until 2014 (ZOAM 2013-0003). According to Acting Planning & Zoning Director James David, prior to this, the county defined data centers as commercial offices.

The latest version of the county's zoning ordinance permits data centers by right in Planned Office Park, Research and Development Park, Industrial Park, and General Industrial districts and as a special exception use in Commercial Light Industry

districts. New data centers (without vested rights) must comply with a set of use-specific standards governing façade design, screening of mechanical equipment, exterior lighting, pedestrian and bicycle facilities, and landscaping, buffering, and screening (§5-664).

According to David, these standards are intended to improve the aesthetics of data centers, minimize visibility from nearby residential areas, and ensure continuous sidewalk and trail networks. Overall, they represent a light-touch approach that has, so far, worked well for a county with enormous demand for data centers and relatively modest competition for space from other commercial and industrial uses.

However, in February 2022, county officials directed staff to research regulatory options to prevent new data centers in the

EXAMPLES OF USE-SPECIFIC STANDARDS FOR DATA CENTERS AND CRYPTOCURRENCY MINING

Jurisdiction	Use-Specific Standards
Alpharetta, GA	Requires evidence of compliance with noise standards; specifies exterior lighting fixture design; establishes minimum building height; requires building façade design elements; establishes other fencing, screening, and landscaping requirements to minimize visibility from adjacent roads and properties (§2.7.2.1)
Anne Arundel County, MD	Establishes minimum lot size and setbacks; prohibits residences on the same lot; establishes limit on outdoor storage (§18-10-119)
Fairfax County, VA	Requires all equipment to be enclosed within a building; establishes maximum floor area by zoning district (§4102.6.A)
Frederick County, MD	Establishes criteria for reducing setbacks; specifies building design standards; specifies landscaping, screening, and buffering requirements; clarifies parking, loading, signage, and lighting standards; establishes criteria for private roads; establishes noise and vibration standards (§1-19-8.402)
Moses Lake, WA	Clarifies review process for business license; prohibits container storage; requires evidence of electrical utility approval; requires evidence of electrical permit and inspection; establishes environmental performance standards, addressing noise, heat, and electric and magnetic fields; limits amount of exposed equipment on facades (§18.74)
Pitt County, NC	Limits height; requires separation from sensitive uses; requires noise study and compliance with noise standards; requires underground wiring; requires security fencing and vegetative screening; requires evidence of electrical utility approval; clarifies signage standards; requires notification of abandonment (§8(UUUU))
Plattsburgh, NY	Requires fire suppression and mitigation techniques; limits internal ambient temperature and the direct release of heat on colder days; establishes permissible noise levels (LL 6-2018)
Prince George's County, VA	Requires building façade design elements; specifies exterior lighting fixture design; requires screening for security fencing and limits fence height; requires compliance with landscape manual; clarifies applicable off-street parking standard; clarifies signage standards; requires an acoustical study; specifies additional site, locational, and noticing requirements for facilities in rural residential districts (§27-5102(e)(4)(B))
Somerville, MA	Establishes special review criteria related to aesthetic impacts and employment opportunities (§9.8.b)
Vernal, UT	Requires fencing and structural screening for electrical generators; requires noise mitigation plan for facilities near residential zones or existing hotels or motels (§16.20.250)
Wenatchee, WA	Clarifies review process for business license; prohibits container storage; requires evidence of electrical utility approval; requires evidence of electrical permit and inspection; clarifies blank wall limitation standards; requires an affidavit verifying operating sound levels (§18.48.310)

Route 7 corridor. While data center demand remains high in this area, the county's comprehensive plan designates most of this corridor as Suburban Mixed Use, which envisions a compact, pedestrian-friendly mix of commercial, residential, cultural, and recreational uses. Furthermore, the existing electricity network infrastructure is insufficient to accommodate the existing demand for new data centers (LCDED 2022).

The county is working on its first complete overhaul of its zoning code since 1993. And it intends to incorporate any new regulations for data centers into the new code, which officials hope to adopt by the end of 2022.

Missoula County, Montana

In April 2019, Missoula County, Montana, adopted an interim zoning resolution that established a cryptocurrency mining overlay (Resolution No. 2019-026). The county had one large cryptocurrency mine already, and its low electricity rates and cool climate made it an attractive area for prospective miners. While a few other jurisdictions had already defined cryptocurrency mining in their zoning codes, Missoula County appears to be the first to explicitly position its zoning approach as a response to climate change.

According to county planner Jennie Dixon, AICP, local officials originally took an interest in regulating cryptocurrency mining as a distinct use after multiple complaints of noise from cooling fans at an existing Bitcoin mine operating out of a former sawmill in unincorporated Bonner. Soon, though, the county expanded its focus to include energy consumption and electronic waste.

Montana law only authorizes interim zoning in the case of an emergency involving "public health, safety, morals, or general welfare" (§76-2-206). Dixon says the Intergovernmental Panel on Climate Change's 2018 Special Report on *Global Warming of 1.5° C* helped justify climate change as a local emergency that warranted interim zoning to mitigate greenhouse gas emissions (and other potential environmental impacts) from cryptocurrency mining.

The interim zoning regulations defined cryptocurrency mining as a distinct use and created a Cryptocurrency Mining Overlay Zone, mapped to the entire unincorporated geographic extent of the county (which includes some un-zoned areas). The overlay



Google Earth



The heart of Northern Virginia's Data Center Alley in Ashburn, Virginia.



Google Earth



The former Bonner sawmill in Missoula County, Montana, was once home to the HyperBlock cryptocurrency mine.

restricted cryptocurrency mining operations to industrial districts and required operators to obtain a discretionary use permit if the mine was adjacent to a residential district or within 500 feet of a residential property boundary. These regulations also required all mining operations to verify that all electronic waste be handled by a licensed recycling firm and that all electricity use be offset by new renewable energy production.

Caroline Lauer, the county's Sustainability Program Manager, stresses the importance of this last requirement. If cryptocurrency miners purchased existing supplies of renewable energy, it could actually displace existing utility customers to dirtier sources. While most of the county's

electricity comes from hydropower, coal accounts for much of the remainder.

Missoula County's 2016 *Growth Policy* plan includes an objective to "reduce the county's contribution to climate change" (4.1) and lists policies that promote alternative energy development (4.1.3) and reduce energy use and waste generation as implementation actions (4.1.6). A day before it adopted the interim cryptocurrency mining regulations, the county further strengthened its policy rationale by adopting a joint commitment with the City of Missoula to achieve 100 percent clean electricity use by 2030.

County officials extended the interim zoning for another year in 2020 before adopting the same regulations as a permanent zoning amendment in March 2021 (§1.04

& \$5.05). According to Dixon, the Bonner mine ceased operations during the interim zoning period, but not because of the county's zoning. It declared bankruptcy two days after the "Black Thursday" Bitcoin crash in March 2020, leaving the tribal-owned independent power producer that provided its electricity with a \$3.7 million unpaid bill (Rozen 2020).

CONCLUSIONS

The rapid rise in data center development has coincided with dramatic decreases in the costs of producing solar and wind power. This, in combination with a growing trend toward clean power commitments among technology companies, has blunted some of

the climate impacts of an increased demand for data storage and processing.

The increased digitalization of life virtually guarantees that data centers will continue proliferating in strategic locations across the country (Gomez and DeAngelis 2022). Soon, communities may start seeing a sharp increase in interest in very small edge data centers that could fit in underutilized commercial spaces or even be collocated with other telecommunications infrastructure, such as small cell facilities, in public rights-of-way (Sowry et al. 2018).

The future of cryptocurrency mining facilities is less certain. Bitcoin and other energy-intensive cryptocurrencies are facing social pressure to transition to more

energy-efficient transaction verification methods, and several existing cryptocurrencies already use these methods. However, we are still at the very beginning of the cryptocurrency story. While this form of currency currently exists primarily as a speculative investment vehicle, this could change rapidly if valuations stabilize and large numbers of goods and service providers accept cryptocurrencies for payment.

Not every community will see the value in defining data centers or cryptocurrency mines as distinct uses in their zoning codes. Nevertheless, doing so can give local jurisdictions a leg up when it comes to signaling preferences to developers and operators and minimizing or mitigating potential adverse impacts.

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HOW DOES YOUR ZONING TREAT DATA CENTERS AND CRYPTOCURRENCY MINES?

6



September 1, 2022

TO: Longview Planning Commission

FROM: Adam Trimble, Planning Manager

MEETING DATE: August 3, 2022

SUBJECT: **PC 2022-5 – Workshop on staff proposed zoning code amendments: driveway standards, Data Centers, Mini-storage, Mylars**

Staff is requesting the Planning Commission initiate amendments to the zoning code to address 4 topics:

1. Driveway pavement requirements- require only the first 50' feet of driveways to be paved to reduce costs of development for large lots.
2. Data Centers- remove this use from all industrial zones. Cryptocurrency mining appears to be the predominant developer of this use and it provides very little economic or employment benefit while also demanding a lot of electricity and space.
3. Mini-storage restrictions- consider limiting how mini-storage is developed, or reduce the areas where it can be built. This land use remains very popular as a source of passive income for investors. This use is allowed in commercial and industrial areas and it provides very little economic or employment benefit while being land consumptive. With online tools and card access for customers mini-storage can be managed remotely. Staff is concerned the local supply and price of self-storage is attractive to people outside the community who are willing to drive-in for lower rates.
4. Mylar drafting material for plats- the zoning code requires that survey maps be printed on special transparent plastic film before recording but the County Auditor does not require this any longer, and the City scans and digitally archives survey maps for Boundary Line Adjustments and Short Plats. Removing this requirement for short plats and boundary line adjustments will make the process less expensive for applicants. The city will still require Mylar for long subdivisions which are less frequent.

Code sections:

Note: Underlined text is proposed to be added, ~~strikethrough~~ to be removed.

1. Driveway pavement requirements:

19.78.060 Surface requirements.

Every off-street automobile parking and truck loading and unloading space and necessary means of access to such space, such as driveways, shall be made permanently available for such purpose and shall be improved with asphaltic or Portland cement concrete or other approved alternatives including permeable pavements and pavers, for the first 50 feet of distance starting where it connects to a public road, and be well maintained.

Discussion: Staff has heard complaints from several property owners over the years who were required to pave driveways over 100' feet long to reach garages and outbuildings they constructed at the back or behind their lot. The intent of requiring paved driveways is to prevent track-out of rock and dirt onto public streets. The proposed code amendment will allow owners to chose whether to pave their entire driveway or stop the pavement after 50'. The total distance to be paved could be more nuanced - for example: 'Driveways must be paved the first 50 feet or to a point beyond the rear of the principle building, whichever is greater.' This should result in the portion of the driveway visible from the street being paved.

2. Data Centers:

Table 19.58.020-1. Permitted uses in industrial zones.			
Use			
	LI-A & B	HI	C/I
Research, development, and testing services	P	P	P
Data centers	P	P	P
Veterinary offices and clinics requiring outside animal runs and dog kennels/boarding	P		P
Offices and institutions serving industrial workers	P		P
Energy production		P	

Discussion: Staff has reviewed accounts of other cities, planning literature and a recent application for a data center and concluded it is not in the interest of the community to permit these land-uses in Longview. The use can be land consumptive due to heat generation and spacing and ventilation needs; requires very little employees or on-site monitoring, uses electricity of a scale to require their own substations, and needs security and fencing to protect the equipment. Data Centers do not produce B&O taxes or sales tax revenue and employees can perform maintenance remotely. A data center could pay local utility tax but a recent application for a data center in Longview showed their intent is to acquire electricity directly from the BPA.

3. Mini-storage: Mini-storage and self-service storage is allowed in Light Industrial and Commercial zones:

Table 19.58.020-1. Permitted uses in industrial zones.			
Use			
	LI-A & B	HI	C/I
Manufactured home sales	P		P
Mini-storage and RV storage	P		P
Heavy equipment and truck sales, service, and repair	P	P	P
Motor vehicle dealers, new and used, including auto, motorcycle, truck trailer, boat, recreational vehicles and equipment			P
Vehicle towing and storage services	P		P

Table 19.44.020-1. Permitted uses in commercial zones.

Miscellaneous	D-C	CBD	RC ¹	NC ²	GC	O/C
Day care facilities for the care of more than 12 children	SPU	P		P	P	P
Commercial off-street parking lots and garages	SPU	P			P	P
Self-service storage (mini warehouses)					P	SPU

Mini-storage is allowed in light industrial zones and the general commercial zone which is where the majority of buildable industrial/commercial land exists. The use is allowed as a special property use in the Office/Commercial District.

Discussion: Staff is recommending three approaches:

- In the General Commercial zone, prevent mini-storage from locating near public streets to preserve frontage for active commercial uses. A setback requirement of 120 feet from the road or a maximum frontage allowance of 50 feet could accomplish this. This could preserve visible street front property for commercial uses with frequent customers and activity.
- Limit the overall size of mini-storage allowed on a property and require co-location with active uses from the zone. For example 'mini-storage allowed on 80% of any site when also located with a Retail Sales and Service, Vehicle sales, renting, service, and storage, Lodging, temporary stay, or similar uses.
- Prohibit mini-storage in certain zones. This approach will evaluate how well different areas of the city are served by mini-storage and determine if additional storage should be permitted to be built in the zones where allowed. Existing mini-storage uses could be allowed to continue or expand by 20% for example.

4. Mylars:

19.68.070 Recording.

If the proposed boundary line adjustment is approved:

- (1) The applicant shall cause a survey map to be prepared and recorded with the Cowlitz County auditor's office ~~on reproducible mylar material (stabilized drafting film)~~ measuring at least 18 inches by 22 inches. Full surveys are not required for boundary line adjustments when a single property line is involved. At a minimum, the mylar shall contain the following information:

19.67.040 Final short plat approval.

- (4) Signing the Plat. Once approved, two ~~Mylar~~ copies will be submitted for signature and shall include:

Discussion: Staff is recommending removing the requirement for Mylars from the two code sections above. The Mylar is not required and no longer serves the same durability purpose for archiving it once did.

Please let me know if you have any questions: 360-442-5092 or adamt@mylongview.com