



CITY OF MADISON HEIGHTS
COUNCIL CHAMBERS - CITY HALL, 300 W. 13 MILE RD.
PLANNING COMMISSION MEETING AGENDA
JULY 20, 2026 AT 5:30 PM

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA

1. Additions/Deletions

APPROVAL OF MINUTES

- [2.](#) June 15th, 2026 Meeting Minutes

PUBLIC HEARING

MEETING OPEN TO THE PUBLIC: Items not listed on agenda

UNFINISHED BUSINESS

NEW BUSINESS

- [3.](#) Master Plan Update - Modified Goals and Objectives
- [4.](#) Zoning Text Amendment - Initial Discussion - Residential Impervious Surface Maximums

MEMBER UPDATES

PLANNER UPDATES

- [5.](#) Development Update - July 2026
- [6.](#) Michigan Planner - Data Centers and AI
- [7.](#) Zoning Practice - Zoning for Drones

ADJOURNMENT

NOTICE: Persons with disabilities needing accommodations for effective participation through electronic means in this meeting should contact the City Clerk at (248) 583-0826 or by email: clerks@madison-heights.org at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.

Planning Commission Meeting
Madison Heights, Michigan
June 15, 2026 **(DRAFT)**

A Planning Commission Meeting was held on Monday, June 15, 2026 at 5:30 PM at Council Chambers - City Hall, 300 W. 13 Mile Rd.

CALL TO ORDER

Chair Champagne called the meeting to order at 5:56 pm.

ROLL CALL

PRESENT

Chair Josh Champagne
Mayor Corey Haines
Commissioner Sean Fleming
Commissioner Ryan Fox
Commissioner Eric Graettinger
Commissioner Melissa Marsh
Commissioner Matthew Olson

ABSENT

Commissioner Clifford Oglesby

ALSO PRESENT

City Planner Matt Lonnerstater
Business Services Coordinator Mary Daley
Attorney Tim Burns

PC 26-21. Excuse Absent Members

Motion to excuse Commissioner Oglesby.

Motion made by Commissioner Fox, Seconded by Commissioner Marsh.

Voting Yea: Mayor Haines, Commissioner Fleming, Commissioner Fox, Commissioner Graettinger, Commissioner Marsh, Commissioner Olson, Chair Champagne

APPROVAL OF MINUTES

PC 26-22. May 18, 2026 Meeting Minutes

Motion made by Commissioner Haines, Seconded by Commissioner Fox to approve the Planning Commission minutes of May 18, 2026 as presented.

Voting Yea: Mayor Haines, Commissioner Fleming, Commissioner Fox, Commissioner Graettinger, Commissioner Marsh, Commissioner Olson, Chair Champagne

Motion carried.

PUBLIC HEARING:

Rezoning with Conditions Request PRZN #26-01 – 31075 John R Road (B-1 to B-2)

Chair Champagne open the hearing up to the public for comment at 6:00 pm.

A letter from Kara Ross, youth coordinator for the Madison Heights Community Coalition was read into the record. Two letters from Kimberly Heisler, executive director for the Madison Heights Community Coalition were included in the packet.

Chair Champagne closed the public comment portion of the hearing at 6:04 pm.

Planner Lonnerstater introduced the Rezoning with Conditions Request from Smokin' Bear Tobacco on behalf of the property owner South Lyon Company LLC. Their request is to rezone the parcel located at 31075 John R Road from B-1, Neighborhood Business District to B-2, Community Business District.

The applicant, with the property owner's authorization, has modified the original application and has voluntarily offered a list of conditions that would apply to the rezoning. The full list of conditions are attached as a supplement to the meeting packet.

The draft agreement also contains the following provision: *"Applicant recognizes that, even if this Rezoning with Conditions Application is approved, a dimensional variance would still be required from the Zoning Board of Appeals. Applicant is prepared to submit an appropriate Application for Dimensional Variance."*

Concerns about these proposed conditions from staff and the commission are summarized as follows:

1. The proposed conditions, as stated, appear to be limited to the individual tenant space occupied by the tobacco sales business. As a general rule, zoning regulations apply to an entire parcel, and district boundaries cannot be reduced to an individual retail tenant space. It is unclear what restrictions, if any, would apply to the other tenant spaces or the remainder of the parcel.
2. The proposed conditions repeatedly refer to "the applicant." The applicant in this case is the business, Smokin Bear Tobacco, and not the property owner. Zoning is tied to the land and not an individual; unless specified as part of the Rezoning with Conditions agreement, zoning regulations run with the land and future property owners would be subject to the same conditions of the rezoning. It is unclear whether the applicant intends for these conditions to become void upon a change of tenant, use, or business owner.
3. The proposed conditions prohibit specific uses from operating from the tenant space (e.g. automobile sales, gasoline sales, etc.) but also explicitly state that the applicant's business operations will, *"include tobacco sales and anything incident to said tobacco sales."* This condition appears to lock in a tobacco shop as the only use that could ever operate from the unit. For example, if the tobacco sales business closes and a new restaurant business moves in, would the restaurant be required to offer tobacco sales to be compliant with the conditions of the rezoning?

4. If the property were to ever be redeveloped, it is unclear as to what dimensional standards and list of permitted uses would apply (B1 or B2).
5. The proposed conditions are missing several important substantive clauses, as required per the Zoning Ordinance. Most importantly, the proposed conditions are silent when it comes to the triggers that would revert the property back to the original zoning designation (e.g. upon change of use or redevelopment).

PC 26-23. Rezoning with Conditions Request PRZN #26-01 – 31075 John R Road (B-1 to B-2)

Motion made by Fleming, seconded by Haines to recommend that City Council deny the rezoning of 31075 John R Road (parcel #44-25-02-478-021) from B-1, Neighborhood Business, to B-2, Community Business district – Case PRZN #26-01 – with conditions voluntarily proposed by the applicant, as attached, based upon the following findings:

1. The Planning Commission held a public hearing on June 15th, 2026 on the requested Rezoning with Conditions application and a proposed amendment to the City's Zoning Map.
2. The applicant voluntarily proposed a number of conditions to the requested B-2 rezoning, which are attached in the document entitled "Supplement to Rezoning Application."
3. The proposed Rezoning with Conditions does not satisfy the review criteria for a Rezoning with Conditions request as contained in Section 15.07.3.C(3) of the Madison Heights Zoning Ordinance. In particular, the Planning Commission finds that the conditions voluntarily offered by the applicant fail to satisfactorily address the following Zoning Ordinance standards:
 - a. The proposed rezoning conditions do not further the goals and objectives of the City Master Plan, particularly with regards to objectives related to Community Character and future land use.
 - b. The proposed rezoning conditions do not result in an enhancement of the project area as compared to the existing zoning, as the rezoning's core intent is to allow for a use not presently permitted on the subject parcel.
 - c. It is not in the public interest to grant the rezoning with conditions as the benefits of such proposal – the allowance of a tobacco/smoke shop – does not outweigh foreseeable detriments, including the proximity of said use from public facilities and parks.
 - d. The offered conditions are not likely to be enforceable as they are ambiguous with regards to their application to the remainder of the parcel, especially pertaining to permitted uses and dimensional standards.
 - e. The proposed conditions have the same general effect as a use variance in that the core intent of the conditions is to allow for a tobacco/smoke shop in one individual retail unit within a multi-unit retail building, with no further considerations for the remainder of the building or the remainder of the parcel.

4. The Planning Commission further cites the following issues with the voluntarily proposed conditions as reasons for denial:
 - a. The conditions as proposed only apply to one retail space and are tied to one retail business owner (applicant). It is unclear as to which zoning conditions apply to the remainder of the parcel. Proposed conditions should run with the land unless explicitly stated otherwise within the proposed agreement and should not be applicable to only one individual.
 - b. The proposed conditions appear overly restrictive in that they require tobacco sales to take place from the individual unit and prohibit uses currently permitted by-right within the B-1 district.
 - c. The conditions do not present clear and enforceable standards that can be applied to the remainder of the parcel or applied to future redevelopment or building expansion.

Voting Yea: Mayor Haines, Commissioner Fleming, Commissioner Fox, Commissioner Graettinger, Commissioner Marsh, Commissioner Olson, Chair Champagne

Motion carried.

MEETING OPEN TO THE PUBLIC: Items not listed on agenda

Chair Champagne opened the meeting to the public for items not listed on the agenda at 6:44 pm. Seeing no one wishing to speak, public comment was closed at 6:44 pm.

NEW BUSINESS

No new business at this time.

MEMBER UPDATES

No member updates at this time.

PLANNER UPDATES

Planner Lonnerstater introduced Aidan, an intern serving in the planning department this summer and shared news of the resignation of Commission member Grant Sylvester.

ADJOURNMENT

Seeing no further comments, Chair Champagne adjourned the meeting at 6:46 pm.

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MEMORANDUM

Date: July 15th, 2026
To: City of Madison Heights Planning Commission [July 20th, 2026]
From: Matt Lonnerstater, AICP – City Planner
Subject: Master Plan Update – Updated Goals and Objectives

Introduction

Over the past several months, the Master Plan Sub-Committee and staff have been working to update and strengthen the Goals & Objective chapter for the 5-year Master Plan update. The Goals & Objectives chapter is one of the core elements of the Master Plan as it sets forth foundational vision statements and general policies related to the character, development, improvement, and sustainability of the city. Goals and objectives are guided by a number of factors including public input, staff expertise, current best practices, and demographic and construction trends.

At the July 20th Planning Commission meeting, staff would like to present the sub-committee's recommended modifications to the Goals & Objectives chapter.

Background: Goals and Objectives

Within the existing Master Plan, **goals** are described as high-level, broad policy statements that pertain to a particular topic. Goals are intended to be long-term, and express a desired outcome related to that topic. Each goal is supplemented by more specific **objectives**, which are more measurable activities that can be accomplished in pursuit of the goal. Each goal contains a number of related objectives.

The current Master Plan contains five (5) general goal categories:

1. Community Character
2. Housing
3. Commercial & Industrial Development
4. Public Services & Facilities
5. Transportation

The adopted Master Plan frames goals in the form of a question and response: “What do we want” and “why”, with a supplemental list of potential obstacles or related considerations that may impact the ability to achieve the goal.

As in the current Master Plan, the Goals and Objectives chapter will be utilized to form the Implementation chapter, which will take each objective and assign specific, quantifiable action items, further listing responsible parties, timeframes, and funding sources.

Sub-Committee Modifications

The Master Plan Sub-Committee spent considerable time strengthening the goals to more appropriately reflect current trends and public input; likewise, the sub-committee has suggested a number of changes to the related objectives to make them more concise and attainable. The tables below compare the Master Plan's existing goals with the sub-committee's recommended modifications. Summaries of suggested revisions to the related objectives are provided below each table. Note that the sub-committee recommends the addition of a new goal category: "Infrastructure and Sustainability."

COMMUNITY CHARACTER

EXISTING	PROPOSED
What do we want? <i>An authentic positive identity for the city that is reflected in residential neighborhoods as well as along commercial corridors.</i>	What do we want? <i>An authentic positive identity for the city that is reflected in our neighborhoods, commercial corridors, city center, and public parks and facilities; and an emphasis on local placemaking to make Madison Heights an inviting place to be.</i>

Modifications to Objectives

- New references to streetscaping and the physical design of public streets to promote walkability and bikeability, especially within the city center and mixed-use districts
- Stronger language about city-related communications, marketing, and messaging.
- New references to entryway and gateway features.
- New reference to the public tree canopy.
- Objectives related to public vendor marketplaces/farmers' market and public art.

HOUSING

EXISTING	PROPOSED
What do we want? <i>Attractive, safe, quiet and well-maintained neighborhoods; a diversified range of housing for people of all ages and abilities; and active neighborhoods that promote community connectedness.</i>	What do we want? <i>Attractive, safe, and well-maintained neighborhoods; a diversified range of housing for people of all ages, abilities, and income-levels; a blend of new housing and reinvestment in the existing housing stock; and active, walkable neighborhoods that promote community cohesiveness.</i>

Modifications to Objectives

- New objective relating to aging in place and reinvestments into the existing housing stock.
- New references to providing housing types/styles at a variety of price-points.
- New objectives relating to access and proximity to high-quality childcare and recreational amenities.

COMMERCIAL & INDUSTRIAL DEVELOPMENT

EXISTING	PROPOSED
What do we want? <i>Thriving local businesses and an employed workforce; a convenient selection of goods and services; and a diverse tax base with a resilient economy.</i>	What do we want? <i>Thriving local businesses and an employed workforce; a convenient selection of goods and services within attractive commercial corridors, neighborhood nodes, and vibrant, walkable city center and mixed-use areas; a diverse tax base with a resilient economy; and opportunities for building expansion, repurposing, and redevelopment.</i>

Modifications to Objectives

- Additional emphasis on adaptive re-use and repurposing existing commercial/industrial buildings and encouraging development in underutilized parking areas.
- New focus on neighborhood-oriented, walkable retail and mixed-use areas such as the city center.
- New objective relating to business retention and collaboration with local stakeholders.
- New objective relating to bringing outdated building/sites into code compliance.
- New objective relating to sub-area and corridor plans.

TRANSPORTATION

EXISTING	PROPOSED
What do we want? <i>An efficient and safe multi-modal transportation network that offers mobility options to residents of all ages and abilities.</i>	What do we want? <i>An efficient and safe multi-modal transportation network that offers mobility options to residents of all ages, incomes, and abilities and lays the foundation for neighborhood connectivity, economic development, and a high quality of life.</i>

Modifications to Objectives

- Further emphasis on traffic calming, street safety, and pedestrian/bicycle infrastructure, including safe street crossings and a reference to the new Safe Streets for All Plan,
- New objectives relating to cross-agency and multijurisdictional coordination relating to projects.
- New objective calling for the creation of sub-area and corridor plans with more detailed, place-specific transportation goals.
- Additional references to bus/transit access and connectivity.

PUBLIC SERVICES & FACILITIES

EXISTING	PROPOSED
What do we want? <i>Recreation facilities and programming that meets the needs of and are accessible to all residents; well-maintained infrastructure that meets the needs of current and future residents, businesses and visitors; and excellent public services that meet the health, safety and welfare needs of the community.</i>	What do we want? <i>Recreational and community facilities and programming that meets the needs of, and are accessible to, all residents; excellent public services that meet the health, safety, and welfare needs of the community; and community spaces that can be used for the leisure of all residents.</i>

Modifications to Objectives

- Separated out objectives relating to public infrastructure into new “Infrastructure and Sustainability” goal category.
- Added a cross references to newly-adopted Parks and Recreation Plan.
- New objective relating to timely, friendly and efficient public services and communication.
- New objective relating to development processes and applications, including options for translating documents into other languages for accessibility purposes.
- New objective on a potential greenway connecting neighborhoods and parks.

INFRASTRUCTURE AND SUSTAINABILITY [NEW GOAL]

EXISTING	PROPOSED
N/A	What do we want? <i>Well-maintained and modern infrastructure that meets the needs of current residents, businesses, and visitors and is prepared for growth; and sustainable development practices and policies that prioritize environmental responsibility, reduce the short-term impacts of severe storms, and promote long-term resilience and hazard mitigation.</i>

New Objectives

- Emphasis on low-impact development, green stormwater management, and renewable energy.
- Objectives regarding cross-agency coordination and consistency with the Capital Improvements Plan
- Objectives relating to EV infrastructure, adaptive reuse, and hazard mitigation.

Next Steps

Staff will discuss these suggested modifications with the Planning Commission on July 20th, 2026. We look forward to a productive discussion so that these goals and objectives can be further refined, if desired.

**Madison Heights Master Plan Update
Revised Project Schedule
July 2026**

Task	Time Frame
Staff issues a “Notice of Intent to Amend Master Plan” to send to adjacent communities and local governments, public utilities, and transportation agencies in accordance with the Michigan Planning Enabling Act. Finalize Master Plan survey and make public (online and hard-copy).	Completed (Survey Results Document ready to be published)
Update background data, demographics, existing land use.	In progress (staff)
Present background data and survey results to Planning Commission Set up Master Plan (MP) Committee and meeting dates/times	Completed
Goals and Objectives Chapter	July 20 th Planning Commission Meeting
Land Use Plan Chapter: • Future Land Use • Neighborhood Analyses • Redevelopment Sites	August, September MP Committee meetings
	October Planning Commission Meeting
Downtown Development Authority (DDA) and Thoroughfare Plan chapters	November, December MP Committee meetings
	January 2027 Planning Commission Meeting
Implementation and Zoning Plan chapters and refinement of other chapters	February, March 2027 MP Committee meetings
Presentation of full plan to Planning Commission. Full plan sent to City Council for distribution (this begins mandated 42-day public comment period).	April 2027 Planning Commission Meeting
	April or May 2027 Planning Commission/City Council joint meeting (approve for distribution)
Planning Commission public hearing	May 2027 Planning Commission meeting
Resolution to adopt Master Plan Amendment	June 2027 Planning Commission meeting



Community Character

Proposed Modifications

What Do We Want?

An authentic positive identity for the city that is reflected in our neighborhoods, commercial corridors, city center, and public parks and facilities; and an emphasis on local placemaking to make Madison Heights an inviting place to be.

Why?

- A positive identity for the city provides a sense of community and belonging for residents and businesses.
- A positive image and identity for the city helps support local businesses and attract new residents, entrepreneurs, and visitors.

Potential obstacles/related considerations?

- Physical improvements to the appearance of the city require public and private investment.
- Outside perception of the city takes time to change.
- Internal perception of the city can vary between people, groups, and neighborhoods.

Community Character Planning Objectives:

1. Enhance the city's commercial corridors with streetscaping and physical design changes that support walkability and bikeability, encourage retail and dining activity, and improve community identity.
2. Improve communication between city staff, residents, businesses, and visitors. Continue to work with the Communications team to ensure consistent messaging and marketing across all departments.
3. Create and implement a wayfinding plan that identifies key destinations in the city. Continue to promote unique destinations in the City, such as Red Oaks Park and Waterpark, Red Oaks Nature Center, and unique retail and commercial centers.
4. Improve and maintain entryway features, such as the new gateway signage and associated landscaping, to announce arrival into the City.
5. Pursue funding to undertake public realm improvements, especially in and around the City Center and DDA district and mixed-use districts, including the creation of small pocket parks.

6. Preserve, maintain, and expand the existing tree canopy along public streets and create planting guidelines that recommend biodiverse tree species and plants.
7. Promote the use of quality building design and materials to enhance the appearance and long-term maintenance of new development.
8. Protect established neighborhoods and business districts from the potentially negative impacts of development, including noise, traffic, waste, odor and other nuisances through effective and thoughtful site and building design.
9. Explore the creation of a public food-vendor marketplace (e.g. food truck park or farmers' market) to promote local businesses and highlight the city's character.
10. Develop local artist partnerships with artists and schools to showcase murals and other public-facing art on public facilities.

Housing

Proposed Modifications

What do we want?

Attractive, safe, and well-maintained neighborhoods; a diversified range of housing types and sizes for people of all ages, abilities, and income-levels; a blend of new housing and reinvestment in the existing housing stock; and active, walkable neighborhoods that promote community cohesiveness.

Why?

- Safe and attractive housing in walkable environments allows residents to live close to day-to-day amenities and destinations. These environments appeal both to younger people, families and residents who wish to “age in place.”
- Due to severe housing shortages, there are not enough homes available to serve the broad range of people and households that wish to live in Madison Heights. A wide housing spectrum with different housing types, size, and costs ensures that our housing supply provides for the diverse needs of existing and future residents.
- Older homes are more prone to maintenance issues and tend to be smaller in size. Well-maintained homes lead to safer living environments and more attractive residential areas. Further, reinvestment into the existing housing stock will allow current residents to remain in their homes for a longer period of time, repurpose them into smaller units, or retrofit them their current needs.

Potential obstacles/related considerations?

- Housing maintenance and reinvestment requires funding, which can be hard to come by and varies based upon market conditions.
- Overly-strict zoning regulations can restrict the types and sizes of homes built within the city and make it difficult to expand existing homes. Conversely, large, unregulated infill housing can overpower existing residential character.
- Code enforcement, while effective, cannot address every and all types of maintenance, blight, and signs of disinvestment at once.

Housing Objectives

1. Encourage maintenance of, and reinvestment in, existing housing stock to improve the safety and the attractiveness of existing neighborhoods

2. Encourage opportunities to repurpose or reconfigure existing homes to further diversify Madison Heights' housing stock and encourage aging in place.
3. Ensure that infill and redeveloped residential properties are compatible with the surrounding residential areas and adjacent homes.
4. Encourage a diverse range of housing options at a range of price points that meet the affordability, maintenance, and lifestyle needs of current and future residents.
5. Improve the walkability and bikeability of neighborhoods to improve access to goods and services such as high-quality childcare, and recreational amenities.

Commercial and Industrial Development

Proposed Modifications

What do we want?

Thriving local businesses and an employed workforce; a convenient selection of goods and services within attractive commercial corridors, neighborhood nodes, and vibrant, walkable City Center and mixed-use areas; a diverse tax base with a resilient economy; and opportunities for building expansion, repurposing, and redevelopment.

Why?

- Attractive and well-maintained commercial and industrial areas encourage business retention and expansion and encourage new businesses to set up shop in Madison Heights.
- A healthy mix of business types provide meaningful, well-paying jobs for a variety of Madison Heights residents – from entry-level jobs to more senior positions.
- Goods and services located in walkable and bikeable areas help to establish a sense of place and ensure that they are easily accessible from nearby neighborhoods.
- Larger commercial centers provide an opportunity to promote Madison Heights as a regional draw. Attractive, well-maintained, and repurposed commercial centers and mixed-use areas that are connected to regional transit improve Madison Heights' positive image throughout the Metro Detroit region.
- An increased tax base helps fund and improve city services.
- Reinvestment within the City's industrial areas and corridors provides opportunities for local and regional employment, high-quality tenants, and an overall positive image throughout the region.

Potential obstacles/related considerations?

- Outdated commercial and industrial buildings may not meet the needs of current and future businesses. Repurposing, redeveloping, or bringing older buildings and sites into compliance may require a significant amount of funding.
- Existing auto-oriented building placement design and high-speed, multi-lane streets create a significant hurdle in transitioning commercial corridors into walkable, bikeable, and locally accessible neighborhood nodes.
- Limited transportation options negatively impact the ability of residents and employees to reach businesses.

- Residents and neighbors understandably have concerns about the impact of commercial and industrial development, especially as it relates to noise, traffic, lights, upkeep, and other property management issues.
- A lack of childcare options, especially near places of employment, negatively impacts employees as they may have to travel further to obtain adequate childcare.

Commercial & Industrial Development Objectives:

1. Encourage reinvestment within older commercial areas with high vacancy rates by examining permitted uses, while ensuring that such uses are compatible with adjacent residential areas.
2. Encourage neighborhood-oriented businesses such as personal service, childcare, and cafes close to neighborhoods.
3. Ensure that zoning standards require outdated buildings and sites to be brought into code compliance, when possible, to further the City's economic and industrial development goals, improve aesthetics, and ensure that negative impacts to adjacent neighborhoods are reduced.
4. Provide incentives and flexible zoning mechanisms for commercial and industrial property owners and tenants to upgrade, expand, and repurpose existing commercial and industrial sites, especially sites with large amounts of underutilized parking areas and large amounts of impervious surface.
5. Promote the mix of commercial, office, multi-family residential, and light industrial uses in a way that fosters collaboration and business growth, while creating a desirable environment for the local workforce.
6. Ensure that zoning and design standards promote walkability and bikeability, non-motorized access, and connectivity to adjacent residential areas while maintaining safe vehicle circulation patterns.
7. Continue developing and promoting a vibrant, mixed-use City Center along 11 Mile Road and John R Road south of Gardenia through form-based zoning standards, economic incentives, streetscaping, and regional partners.
8. Encourage entrepreneurship and local business development and retention through partnerships with local stakeholders and serving as "one-stop-shop" for regional contacts and resources.
9. Explore the development of sub-area land use, economic development, and transportation plans for commercial and industrial nodes and corridors, such as the City Center, Stephenson Industrial Corridor, and regional commercial centers along 12 Mile Road, 14 Mile Road, Dequindre Road, and John R. Road.

Transportation

Proposed Modifications

What do we want?

An efficient and safe multi-modal transportation network that offers mobility options to residents of all ages, incomes and abilities and lays the foundation for neighborhood connectivity, economic development, and a high quality of life.

Why?

- Street design that supports all users (e.g. people in personal vehicles, people in buses, people walking, people on bikes, etc.) is inherently safer for everyone.
- A greater variety of transportation options can encourage people to get out of their vehicles and walk or bike, reducing traffic congestion and improving community health.
- Residential areas with safe and attractive streets are more walkable and bikeable and lead to a better quality of life and more vibrant neighborhoods.
- Walkable neighborhoods can help attract neighborhood-oriented development and redevelopment on adjacent commercial corridors, increasing job, housing, and business opportunities.

Potential Obstacles/Related Considerations:

- Current land use patterns prioritize motorized travel over non-motorized forms of transportation.
- The current design and layout of streets prioritize motorized travel and de-emphasizes transit, pedestrian, bicycle, and non-motorized transportation.

Transportation Objectives:

1. Promote the use of accepted traffic-calming and access management techniques that make all travel safe and efficient. Explore the development of a traffic calming guidebook and policy that can be applied throughout the city's neighborhoods and corridors.
2. Provide a safe, efficient non-motorized pathway system that provides links to various land uses throughout the city that gives residents choices about their modes of travel.
3. Promote public education about roadway planning and decision making to help residents and property owners understand the short-and long-term goals of transportation projects.

4. Require transportation infrastructure decisions that support and are coordinated with the land use recommendations of the Master Land Use Plan.
5. Explore the development of sub-area and/or corridor plans that outline more detailed, place-specific transportation goals and objectives and streetscape design considerations.
6. Monitor and plan for future technological trends in terms of autonomous/connected vehicles, ridesharing, and EV charging.
7. Create better connections through – and between – neighborhoods, parks, and community destinations by installing safe pedestrian and bicycle crossing improvements and wayfinding signs.
8. Coordinate with adjacent communities to line up transportation objectives and street projects/timelines.
9. Improve bus access and bus stop amenities along regional transit routes and participate with SMART and RTA in planning for regional transit connectivity.
10. Coordinate transportation projects and policies with the recommendations of the Southeast Oakland County Safety Action (Safe Streets for All) Plan.
11. Coordinate with the Downtown Development Authority and Department of Public Services to improve the streetscape and landscaping within public rights-of-way.
12. Ensure that the Capital Improvements Plan is up to date, and coordinate transportation goals with the timing of capital improvement projects.

Public Services and Facilities

Proposed Modifications

What Do We Want?

Recreational and community facilities and programming that meet the needs of, and are accessible to, all residents; excellent public services that meet the health, safety, and welfare needs of the community; and community spaces that can be used for the leisure of all residents.

Why?

- Providing access to recreation facilities, community spaces, and community programming is essential to build a socially and physically healthy community.
- To provide a high level of services to city residents, including responsive, well-equipped administrative staff, public service teams, and emergency services.

Potential Obstacles/ related considerations?

- Additional resources will be needed to maintain aging parks and recreation and community facilities, while potentially adding and/or expanding facilities, amenities, and programs.

Community Facilities & Services Objectives:

1. Expand the range of recreational opportunities, facilities, and programming in Madison Heights in accordance with residents' needs and abilities.
2. Coordinate land use plans with the goals and objectives of the Madison Heights Parks and Recreation Master Plan.
3. Continue to seek opportunities to share facilities with other public and quasi-public agencies such as the school districts, Oakland County, and non-profit organizations and institutions.
4. Evaluate public facilities, including police, fire, city hall, and community centers on a regular basis to determine whether modifications or additions are needed to serve the existing population and new development.
5. Continue to cooperate with surrounding communities and the County to provide public services and ensure that services are not duplicated.

6. Annually review the City's internal policies to ensure that all city departments provide timely, friendly, and efficient services to the public.
7. Revise development-related applications, guidelines, and handouts, as needed, to ensure that they are user-friendly; work with local ethnic community groups to translate these documents into several languages so that they are accessible to all (e.g. Chinese, Spanish, Arabic, etc.).
8. Research a potential greenway between the City's parks to increase access for pedestrians and non-motorized transportation.
9. Keep Parks and Recreation and Capital Improvement Plans up to date, and review annually.

Infrastructure and Sustainability [NEW SECTION]

Proposed Modifications

What Do We Want?

Well-maintained and modern infrastructure that meets the needs of current residents, businesses, and visitors and is prepared for growth; and sustainable development practices and policies that prioritize environmental responsibility, reduce the short-term impacts of severe storms, and promote long-term resilience and hazard mitigation.

Why?

- We must plan for and budget resources for infrastructure expenditures that are likely to grow over time as neighborhoods age.
- The City must address the reality that storm events are becoming more severe and more frequent as a result of climate change, which in turn cause flooding, power outages, and property damage. Increased energy costs are also becoming a financial burden to many people.

Potential Obstacles/ related considerations?

- Increasing costs of repair and replacement of infrastructure.
- High costs of green infrastructure.

Infrastructure & Sustainability Objectives:

1. Replace aging infrastructure, as necessary, with modern, sustainable technology and materials, and explore undergrounding electric utilities where possible.
2. Update development regulations and engineering specifications to encourage and provide guidance on green infrastructure, renewable energy, and low-impact design practices.
3. Improve stormwater management and water quality by integrating low-impact techniques into public street projects, community building upgrades, and park facilities.
4. Ensure that the Parks and Recreation and Capital Improvement Plans are kept up to date.
5. Coordinate and align infrastructure improvements (water, sanitary, stormwater) with street, streetscaping, and non-motorized improvement projects to maximize City resources, time, and labor.

6. Coordinate public projects with outside agencies, such as MDOT, RCOC, and SMART as well as adjacent municipalities.
7. Conduct a survey on the implementation of EV infrastructure and transitioning city fleet vehicles to EVs.
8. Encourage the adaptive reuse of older, unused buildings and promote circular building design and architecture so that buildings may be repurposed instead of demolished.
9. Explore the development of a stormwater management design guidebook, similar to the [2023 EPA bioretention handbook](#), to have set standards for potential methods of stormwater mediation.
10. Address resiliency and hazard mitigation as a proactive measure through hazard mitigation planning, and pursue grant funding opportunities for public hazard mitigation projects such as flood proofing, alternative power sources, warning systems, etc.

Goals & Objectives

What are goals, objectives, and strategies?

- Goals are general guidelines that explain what the community wants to achieve. Goals are usually long-term and represent global visions such as “protect the city’s natural resources.” Goals define the “what,” “why,” and “where,” but not the “how.” Identifying obstacles to overcome is also useful in defining goals.
- Objectives identify the milestones that mark progress in achieving goals and provide more of the “how” goals will be implemented. For example, with a goal of “protect the city’s natural resources,” an objective to “maintain the city’s tree cover” is something that may be measured and tracked over time.
- Action items are more specific and define the steps to accomplish objectives and attain the identified goals. The most effective action strategies will include who will tackle that task and when it should be accomplished. For the above example objective of maintaining tree cover, one action strategy might be: “Using the city’s GIS data, map the current tree cover in the city.” This may be assigned as a staff item to be completed within one to three years.

Within each category, the goals are presented in clear, concise bullet points that address the following:

- What do we want?
- Why?
- Where? (Note: generally, the goals that follow apply throughout the city, but the question is included here as a guide for the future; some goals may apply in specific areas of the city)
- What are the potential obstacles or related considerations that may impact achieving the goal

The following goals incorporate the priorities identified throughout the planning process, as previously noted.



COMMUNITY CHARACTER



HOUSING



COMMERCIAL & INDUSTRIAL
DEVELOPMENT



PUBLIC SERVICES & FACILITIES



TRANSPORTATION

What do we want?

An authentic positive identity for the city that is reflected in residential neighborhoods as well as along commercial corridors.



COMMUNITY CHARACTER

Why?

- A positive identity for the city provides a sense of community and belonging for residents and businesses.
- A positive image and identity for the city helps support local businesses and attract new businesses.

Where? Throughout the city

Potential obstacles/related considerations?

- Physical improvements to the appearance of the city require public and private investment.
- Outside perception of the city takes time to change.

Community Character Planning Objectives:

1. Enhance the city's commercial corridors to support walkability and improve community identity.
2. Improve communication between residents, the City and businesses.
3. Promote the city's positive identity in the region.
4. Promote the use of quality building design and materials to enhance the appearance and long-term maintenance of new development.
5. Protect established neighborhoods and business districts from the potentially negative impacts of development, including noise, traffic, waste, odor, and other nuisances through effective and thoughtful site and building design.



What do we want?

Attractive, safe, quiet and well-maintained neighborhoods; a diversified range of housing for people of all ages and abilities; and active neighborhoods that promote community connectedness.



Why?

- Safe housing in walkable environments allows older residents to “age in community.”
- Attractive, walkable neighborhoods close to destinations appeals to younger residents and families.
- Ensure sufficient equitable housing for lower income residents.

Where? Throughout the city

Potential obstacles/related considerations?

- All housing should be safe and well-maintained.
- Residents looking for larger, “move-up” housing may not find it in the city.
- Zoning regulations should support housing types desired by current and future residents.

Housing Objectives:

1. Encourage maintenance of and reinvestment in existing neighborhoods.
2. Ensure that infill and redeveloped residential properties are compatible with the surrounding area and adjacent parcels.
3. Provide a diverse range of housing options that meet the affordability, maintenance, and lifestyle needs of current and future residents.
4. Support neighborhoods by improving walkability and access to goods and services.



What do we want?

Thriving local businesses and an employed workforce; a convenient selection of goods and services; and a diverse tax base with a resilient economy.



COMMERCIAL & INDUSTRIAL
DEVELOPMENT

Why?

- Provide meaningful, well-paying jobs for residents.
- Provide entry-level jobs for younger residents.
- Offer access to local goods and services for residents.

Where? Throughout the city

- Local goods and services should be accessible locally.
- Regional employment should be accessible to regional transportation facilities.

Potential obstacles/related considerations?

- Outdated commercial and industrial buildings may not meet the needs of current and future businesses.
- Transportation options may limit the ability for workers to reach businesses.
- Economic activity should be compatible with residential areas in terms of noise, traffic, lights, upkeep, and other nuisances.

Commercial & Industrial Development Objectives:

1. Encourage entrepreneurship and growth for diverse businesses of all sizes to promote a balanced local economy.
2. Provide incentives and flexible zoning mechanisms for commercial and industrial property owners and tenants to upgrade existing commercial and industrial sites.
3. Promote the mix of commercial, office, and industrial uses in a way that fosters collaboration and business growth, while creating a desirable environment for the local workforce.
4. Promote walkability by ensuring sufficient local destinations for goods and services.



What Do We Want?

Recreation facilities and programming that meet the needs of and are accessible to all residents; well-maintained infrastructure that meets the needs of current and future residents, businesses and visitors; and excellent public services that meet the health, safety and welfare needs of the community.



PUBLIC SERVICES & FACILITIES

Why?

- Provide access to recreation facilities and programming that is essential to building a socially and physically healthy community.
- Plan for and budget resources for infrastructure expenditures that are likely to grow over time as neighborhoods age.
- To provide a high level of service to city residents, including responsive, well-equipped emergency services

Where? Throughout the city

Potential obstacles/related considerations?

- Increasing costs of repair and replacement of infrastructure
- Additional resources will be needed to maintain aging parks and recreation facilities, while potentially adding and/or expanding facilities, amenities and programs

Public Services & Facilities Objectives:

1. Expand the range of recreational opportunities and facilities in Madison Heights in accordance with residents' needs and abilities.
2. Continue to seek opportunities to share facilities with other public and quasi-public agencies such as the school districts and non-profit organizations and institutions.
3. Replace aging infrastructure as necessary, with technologically advanced, state-of-the-art infrastructure and materials.
4. Evaluate Police and Fire facilities on a regular basis to determine whether modifications or additions are needed to serve the existing population and new development.
5. Continue to cooperate with surrounding communities and the County to provide public services.
6. Keep recreation and capital improvement plans up to date.



What Do We Want?

An efficient and safe multi-modal transportation network that offers mobility options to residents of all ages and abilities.



TRANSPORTATION

Why?

- To improve traffic safety
- To reduce traffic congestion by offering non-motorized options for local travel
- To appeal to residents and businesses looking for a community with a variety of transportation options
- To provide transportation choices that improve independence for residents of all ages and abilities
- To improve community health by encouraging non-motorized travel

Where? Throughout the city

Potential obstacles/related considerations?

- Current land use pattern dictates motorized travel
- Current road design supports motorized travel

Transportation Objectives:

1. Promote the use of accepted traffic calming and access management techniques that make all travel safe and efficient.
2. Provide a safe, efficient non-motorized pathway system that provides links to various land uses throughout the city that gives residents choices about their modes of travel.
3. Promote public education about roadway planning and decision making to help residents and property owners understand the short- and long-term goals of transportation projects.
4. Require transportation infrastructure decisions that support the land use recommendations of the Master Land Use Plan.
5. Explore innovative traffic designs and flexible engineering standards to improve the safety and efficiency of travel for motorized and non-motorized travel.
6. Explore opportunities for alternative transportation methods for those who don't have access to a car.
7. Monitor and plan for future trends in transportation in terms of autonomous/connected vehicles.





MEMORANDUM

Date: July 16, 2026

To: City of Madison Heights Planning Commission [July 20th, 2026 Meeting]

From: Matt Lonnerstater, AICP – City Planner

Subject: Residential Impervious Surface Maximums – Initial Discussion on Potential Text Amendment(s)

Introduction

At the July 20th, 2026 Planning Commission meeting, staff would like to discuss a potential zoning text amendment to regulate the maximum amount of impervious surface allowed in single-family residential areas. With the exception of dimensional driveway standards, the current Zoning Ordinance does not regulate the location or size of impervious surfaces (e.g. concrete patios, terraces, etc.) in residential areas. If the Planning Commission determines that a zoning ordinance text amendment is warranted, a public hearing can be set for an upcoming meeting.

Background

Large amounts of impervious surface on residential properties can create excessive storm water runoff which, in turn, leads to inundation of the city's stormwater sewers and increased flooding events. The Madison Heights Zoning Ordinance does not contain regulations limiting the total amount of impervious surface (such as driveways, patios, terraces) on a residential parcel. Section 10.04.01 regulates landscaping and stormwater within parking lots, the largest driver of impervious surface for commercial uses; however, this standard does not apply to single-family residential uses. Further, Section 7.03.10 contains regulations for residential driveway locations and sizes but, again, does not apply to paved patios, terraces, or other types of impervious surface.

Additionally, while the Schedule of Regulations sets maximum lot coverage standards for residential parcels, lot coverage only accounts for roofed buildings or structures, not un-roofed paved areas like patios, terraces, driveways, or rear parking pads.



Impervious surfaces covering the vast majority of a parcel can lead to unmitigated stormwater runoff.



A lack of setbacks can cause sheets of water to flow onto neighboring properties.

Regulations from Nearby Municipalities

Impervious coverage standards are fairly commonplace in zoning ordinances throughout the state. Staff analyzed the zoning standards of several other Michigan municipalities to research how they regulate impervious surface coverage in residential areas. Summaries of these zoning standards are provided below:

Clawson:

- **DEFINITION:** “IMPERVIOUS SURFACE” means any surface or structure incapable or highly resistant to penetration by water including, but not limited to, roofs of any type, concrete, asphalt, or bituminous paving, flagstone, brick and compacted gravel or earth.
- R1 low-density single-family zoning: impervious surface maximums of 70% on lots up to 5,500 sq. ft., 65% on lots of 5,501-8,000 sq. ft., and 55% on lots of 8,001 sq. ft. and greater.
- R2 medium density single-family zoning: impervious surface maximums of 70% on lots up to 5,500 sq. ft., 65% in lots of 5,501-8,000 sq. ft., and 60% in lots of 8,001 and greater.

Ferndale:

- Ferndale utilizes a “minimum greenspace” requirement rather than a maximum impervious surface standard.
- **DEFINITION:** “GREENSPACE” means an area of a parcel to be maintained as permeable, natural vegetation such as trees, grass, and plants.
- Minimum 25% Greenspace Coverage for properties with 1-4 dwelling units.
- In addition the greenspace coverage requirements, uncovered patios, decks, and terraces may project into the front yard up to 50% of the minimum setback requirement; at-grade patios do not have to meet side or rear setback requirements.

Marquette:

- **DEFINITION:** “Impervious Surface” means any surface that cannot be effectively and easily penetrated by water, thereby resulting in runoff. Examples include, but are not limited to, “Lot Coverage” (as defined in this Ordinance) and any material (asphalt, concrete, compacted stone and gravel, etc.) used in roads, driveways, decks, terraces, patios, porches, or sidewalks that cannot be effectively and easily penetrated by water. Impervious surfaces shall exclude roads, driveways, and sidewalks that are composed of materials that will allow infiltration and prevent runoff, such as permeable pavers, permeable pavement, or crushed stone or pea stone that does not bind. The definition of an impervious surface shall also exclude decks, terraces, patios, or porches that are composed of pervious materials and/or designed to allow for easy infiltration and underlain with materials that will allow infiltration and prevent runoff. Natural and artificial water bodies, including swimming pools, shall not be classified as impervious surfaces.
- Maximum Impervious Surface Coverage of a Lot in the Low-Density Residential (LDR) and Medium-Density Residential (MDR) districts, and single-family and two-family dwelling units in other zoning districts:
 - 60% of a lot up to 8,712 sq. ft.
 - 50% of a lot between 8,713 sq. ft. and 21,780 sq. ft.
 - 40% of a lot between 21,781 sq. ft. and 43,560 sq. ft.
 - 30% of a lot over 1 acre.

Eastpointe:

- **DEFINITION:** “Impervious Surface” means a man-made material that covers the surface of land and substantially reduces the infiltration of storm water to a rate of 5% or less. Impervious surfaces include, but are not limited to, pavement, buildings and structures.
- Maximum Impervious Lot Coverage:
 - R-1, Low Density Residential (single-family only; up to 4,000 sq. ft. lots): 60% of lot area
 - R-2, Medium Density Residential (multi-family; up to 4,500 sq. ft. lots): 70% of lot area
 - MUI-1, Neighborhood Mixed Use: 70% of lot area.

Kalkaska:

- **DEFINITION:** “Impervious Surface” means any material which prevents, impedes, or slows infiltration or absorption of storm water directly into the ground at the rate of absorption of vegetation-bearing soils, including building, asphalt, concrete, gravel, and other surfaces.
- Maximum Impervious Coverage:
 - Single-Family Traditional (up 10,000 sq. ft. lots): 50%
 - Single-Family Conventional (up 8,000 sq. ft. lots): 50%
 - Flexible Residential (up to 5,000 sq. ft. lots): 55%
- Uncovered and unenclosed ground story decks, patios, or terraces less than thirty (30) inches above grade may project into a required side or rear yard a maximum of 50% of the required yard, and a maximum of ten (10) feet into the required front yard setback.

Waterford Township:

- **DEFINITION:** “Impervious Surfaces” means any material, such as concrete, asphalt, brick, or metal, constructed or erected on landscaped or natural buffer areas which creates a structural barrier than impedes the infiltration of surface water into the ground. All buildings, structures, parking areas, driveways, streets, sidewalks, and any areas in concrete, asphalt, and densely packed stone shall be considered impervious surfaces within this definition.

- Single-Family Districts: 50% impervious surface maximum. Additionally, the total impervious surface within the required front yard shall not exceed a maximum of 35% of the total required front yard area.

Definition Considerations

A definition for “impervious surface” and “impervious surface coverage” should be added to the Definitions chapter. For example:

IMPERVIOUS SURFACE: Any material which prevents, impedes, or slows infiltration or absorption of storm water directly into the ground at the rate of absorption of vegetation-bearing soils. Impervious surfaces include, but are not limited to, pavement (both asphalt and concrete), buildings and structures. Natural and artificial water bodies, including swimming pools, shall not be classified as impervious surfaces.

IMPERVIOUS SURFACE COVERAGE: The part or percentage of a lot occupied by impervious surfaces.

Maximum Impervious Surface Percentage Considerations

When parcels have a high percentage of impervious surface coverage, stormwater cannot infiltrate into the ground on-site; instead, stormwater sheetflows off site, either to adjacent properties or to the nearest catch basin, potentially overpowering storm sewer capacity. By limiting the amount of impervious lot coverage allowed on residential parcels, these impacts can be mitigated. If a maximum is considered, staff advises taking a sliding-scale approach similar to the city of Clawson or Marquette where the maximum percentage is dictated by lot size regardless of the zoning district. This approach recognizes that smaller parcels are naturally limited in their building footprint and development potential.

A table could be added as a footnote to the Schedule of Regulations. For example:

FOOTNOTE X: *Maximum Impervious Surface Coverage of a Lot in the R-1, R-2, R-3, R-MN districts, and single-family, duplex, and multi-plex buildings in other zoning districts in which they are permitted:*

Lot Size	Maximum Impervious Surface Coverage
Up to 4,000 sq. ft.	75%
4,001 to 7,200 sq. ft.	70%
7,201 sq. ft. to 10,000 sq. ft.	65%
10,000+ sq. ft.	55%

Further, while lot size patterns typically correspond to the zoning district, a uniform maximum percentage based on lot size rather than zoning district accounts for lot combinations. For example, a property owner that owns three consecutive parcels in the R-3 district has the ability to combine the lots into a single, large parcel. The sliding scale would ensure that the property owner could not pave 70% of a 10,000 square foot combined parcel, even if it retained an R-3 zoning designation.

Setback Considerations

Currently, Section 7.03.10.C.(3) requires driveways to be set back a minimum of one (1) foot from side and rear lot lines. The intent behind this standard is to allow for stormwater to infiltrate into a grass strip at the property line instead of sheet flowing directly onto adjacent properties. However, this standard does not apply to other types of impervious surfaces such as patios or terraces. Additionally, the Zoning Ordinance allows for a front-yard setback encroachment for covered or uncovered porches and terraces,

but is again silent on other forms of impervious surfaces – most notably, at-grade patios – and silent on any permitted side or rear yard encroachments.

A text amendment relating to setbacks could read as follows:

Uncovered and unenclosed decks, patios, or terraces, or other impervious surfaces less than thirty (30) inches above grade may project into a required front, side, street side, or rear yard up to 50% of the minimum required setback. Uncovered and at-grade patios, terraces, and other at-grade impervious surfaces may project further into a required side, rear, or street side yard, but shall at all times maintain a minimum setback of one (1) foot from property lines. This section does not apply to residential driveways which are regulated separately.

Roofed and unenclosed porches, patios, terraces, or other impervious surface (i.e. one which is not enclosed by walls) and unroofed porches, terraces, decks, patios, and other impervious surfaces 30 inches or greater above grade, may project into a required front yard or street side-yard setback for a distance not to exceed six (6) feet and into a required rear yard setback for a distance not to exceed ten (10) feet, but shall not project into required side yards. However, such features shall at all times maintain a minimum setback of five (5) feet from front, street side-yard and rear property lines.

While this text is fairly lengthy, it is comprehensive and covers a variety of situations and potentially reduces the need for an interpretation from the Zoning Board of Appeals.

Planning Commission Discussion and Next Steps

Staff believes that zoning text amendments are warranted in order to reduce the amount of storm water runoff occurring in residential areas. Staff recommends consideration of both impervious surface maximums and revised setback standards. Provided the Planning Commission elects to move forward with text amendments to limit the amount of impervious surface in residential areas, staff could set a public hearing for an upcoming Planning Commission meeting and begin the public notice process. If desired, staff could present more defined language to the Planning Commission prior to setting a public meeting date. Additionally, input from the Madison Heights Environmental Citizens Committee may be useful to guide discussion prior to formally acting on any proposed text amendments

Madison Heights Development Overview
Special Use and Site Plan Submittals – December 2025 to July 2026

SPECIAL LAND USE (PSP) APPLICATION

PSP CASE	ADDRESS	PROJECT DESCRIPTION	ACTION DATE	STATUS
PSP 26-01	32371 Dequindre Road	Minor Auto Service/Repair	Denied at 3/9/26 City Council	Reapplied under PSP 26-04
PSP 26-02	27392 Park Court	Major Home Occupation – Pet Grooming	Approved – 6/8/26 City Council	Applied for Certificate of Occupancy
PSP 26-03	32525 Stephenson Hwy.	Minor Auto Service [Audio Installation]	Approved – 6/8/26 City Council	Applied for Certificate of Occupancy
PSP 26-04	32371 Dequindre Rd.	Minor Auto Service/Repair and Sales	Approved – 6/8/26 City Council	Awaiting Site Plan submittal.

SITE PLAN (PSPR) APPLICATION APPROVALS [EXCLUDES MINOR SITE PLANS]

PSPR CASE	ADDRESS	PROJECT DESCRIPTION	DATE APPROVED	STATUS
26-01	611 W. 12 Mile Road	Bubba's 33 Restaurant	---	Conditionally approved, but ON HOLD; various related denials, including alley and driveway access, have put the project on hold.
26-05	750 E. 11 Mile Road	3-Unit Townhomes	---	Awaiting Revisions (2 nd round)
26-10	32420 Stephenson Hwy.	New 5-story Hotel	---	Awaiting Revisions (3 rd round)

MICHIGAN PLANNER

Michigan Chapter
American Planning Association

DATA CENTERS *and AI*

INSIDE

2 CONNECT | **4** Zoning for Data Centers | **7** Moratoriums to Master Plans | **9** How Planners Use AI for Good | **10** When the Cloud Drops | **12** An Argument for Sensible AI

CONNECT

When you think of MAP, you probably consider the excellent training and workshops we deliver to planning and zoning officials; the *Michigan Planner* magazine, covering current topics (like this issue, devoted to Data Centers and AI); our extraordinary annual Planning Michigan Conference that attracts more than 500 professional planners, planning and zoning officials, zoning administrators, and more; and opportunities to network and learn at our Transportation Bonanza, Spring Institute, or metro Detroit Planner's Night Out events. You may contemplate a section you belong to, like the Emerging Professional Planners (EPP), the Metro Detroit Planners (MDP), or the MI Black Professional Planners (MBPP).

What may not be as apparent are the various grants MAP secures each year to develop and deliver Toolkits, Best Practice Guides, and publications to help you improve your skills. In the past 2 years alone, MAP has secured grant funding and administered at least 6 different grants, each with the goal of equipping our members and partners with tools and resources to tackle complex problems.

While the Zoning Reform Toolkit and the companion Stories and Studies were completed in 2022 and 2023 respectively, MAP's partnership with MSHDA – funder of both – spans decades and together MAP's expertise in housing solutions, and access to planners and officials, when paired with MSHDA investment has yielded significant local reforms to expand housing supply. In 2025, MAP partnered with the Michigan Disability Network, and MSHDA funded development of an Inclusive Design Toolkit which introduces a wide variety of planning and zoning interventions to create policies that will result in more accessible communities. Finally, MSHDA counts on MAP to provide technical assistance and support to the Regional Housing Partnerships (RHPs) to help implement their plans.

MAP's relationship with the Michigan Department of Transportation (MDOT) and its Safe Routes to School (SRTS) program has been ongoing for almost twenty years. What started as an FAQ to encourage municipalities to implement active school access through participation in SRTS programs evolved into an annual, multidisciplinary event, Transportation Bonanza, that attracts nearly 300 planners, engineers, and health professionals to learn together about best practices for transportation planning.

And EGLE's Coastal Management Program (CMP) has provided direct grants to MAP to develop and implement various tools and resources to coastal communities to help them manage and protect Michigan's shorelines, dunes, and bluffs. Planning, coupled with zoning interventions, is one of many important ways to preserve our greatest natural assets.

MEDC, through its RRC program, has also been a long-term funder and supporter of MAP. Most recently they were a major contributor to the National Zoning Atlas (along with Kent County ARPA and the Taubman College of Architecture and Urban Planning funds), to pilot a zoning atlas in Kent, Muskegon and Ottawa Counties. The initial MEDC investment enabled MAP to launch its own improved Zoning Atlas, now called the Michigan Zoning MAP. The platform is nearly built, and we are ready to launch interactive zoning maps in Wayne, Oakland and Macomb Counties, with many other counties in the queue. Additionally, MEDC funded MAP to develop a Child Care Best Practice Guide and we worked together with McKenna to develop a toolkit that is gaining national attention.

These partnerships and investments allow MAP to stretch YOUR membership dues further. Our ability to develop and launch an array of tools and resources to improve planning and zoning practices wouldn't be possible without our partners and their investment in MAP.

On behalf of the entire organization, we owe a huge debt to our partners, we acknowledge their commitment to quality planning, and we look forward to identifying and advancing important projects that will create a better Michigan for many years to come.

Board Members

Christina Anderson, AICP (President) (2026)
City of Kalamazoo
andersonc@kalamazoocity.org

Scott Kree (Vice President) (2028)
Oakland County
krees@oakgov.com

Keith Baker, AICP (Secretary | Treasurer) (2026)
City of Coldwater
kbaker@coldwater.org

Shari Williams (Past President) (2026)
Detroit Future City
swilliams@detroitfuturecity.com

Jill Bahm, AICP (Professional Development Officer) (2027)
Giffels Webster
jbahm@giffelswebster.com

Christopher Germain, AICP (2026)
Lake Superior Community Partnership
christophergermain@gmail.com

Kristen Gundersen, AICP, CFM (2028)
City of Buchanan
kgundersen@cityofbuchanan.com

Pablo Majano, AICP (2028)
Michigan Economic Development Corporation
majanop@michigan.org

Megan Masson-Minock, AICP (2028)
Carlisle | Wortman Associates, Inc.
mmasson-minock@cwaplan.com

Ex-Officio Members

Kami Pothukuchi, PhD (Faculty)
Wayne State University
k.pothukuchi@wayne.edu

Kevin Martin (Elected Official)
Van Buren Township
martinkevin34@yahoo.com

Student Board Representatives

Chloe Martin
Grand Valley State University
martichl@mail.gvsu.edu

Angelina Vitale
Grand Valley State University
vitalang@mail.gvsu.edu

Staff

Andrea Brown, FAICP, Executive Director
abrown@planningmi.org

Leah DuMouchel, AICP
Director of Programs and Communication
ldumouchel@planningmi.org

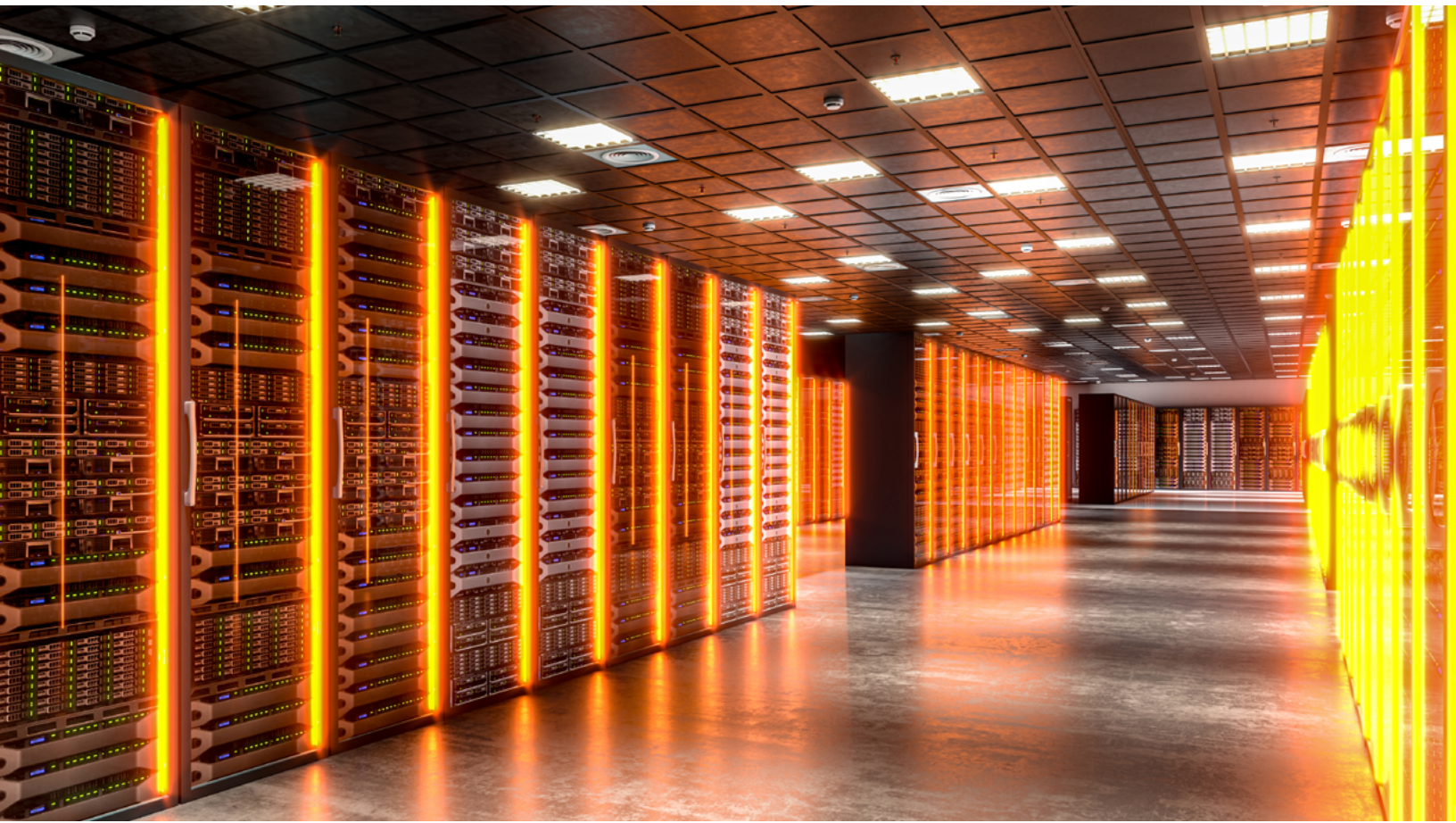
Rachel Goldstein, Director of Operations
rgoldstein@planningmi.org

Andy Larsen
Research and Programs Specialist
alarsen@planningmi.org

Amy Miller Jordan, Deputy Director
ajordan@planningmi.org

Philip Rentschler
Research and Data Specialist
prentscler@planningmi.org

Amy M. Vansen, AICP
Director of Information and Programs
avansen@planningmi.org



Data Centers and Artificial Intelligence

The editorial calendar for the *Michigan Planner* magazine is typically programmed about a year in advance. Except when things change swiftly and radically. The 2020 *MI Planner* editorial calendar was planned. Until it wasn't. The Planning in a Pandemic Edition, July/August 2020 was certainly not conceived until April 2020. And MAP had to postpone its publishing until July August because we were finalizing a Planning for Tourism grant that culminated in an edition of magazine. The May/June 2020 *MI Planner* was Planning for Tourism (which looked good in 2019, but by spring 2020 seemed pretty ironic indeed).

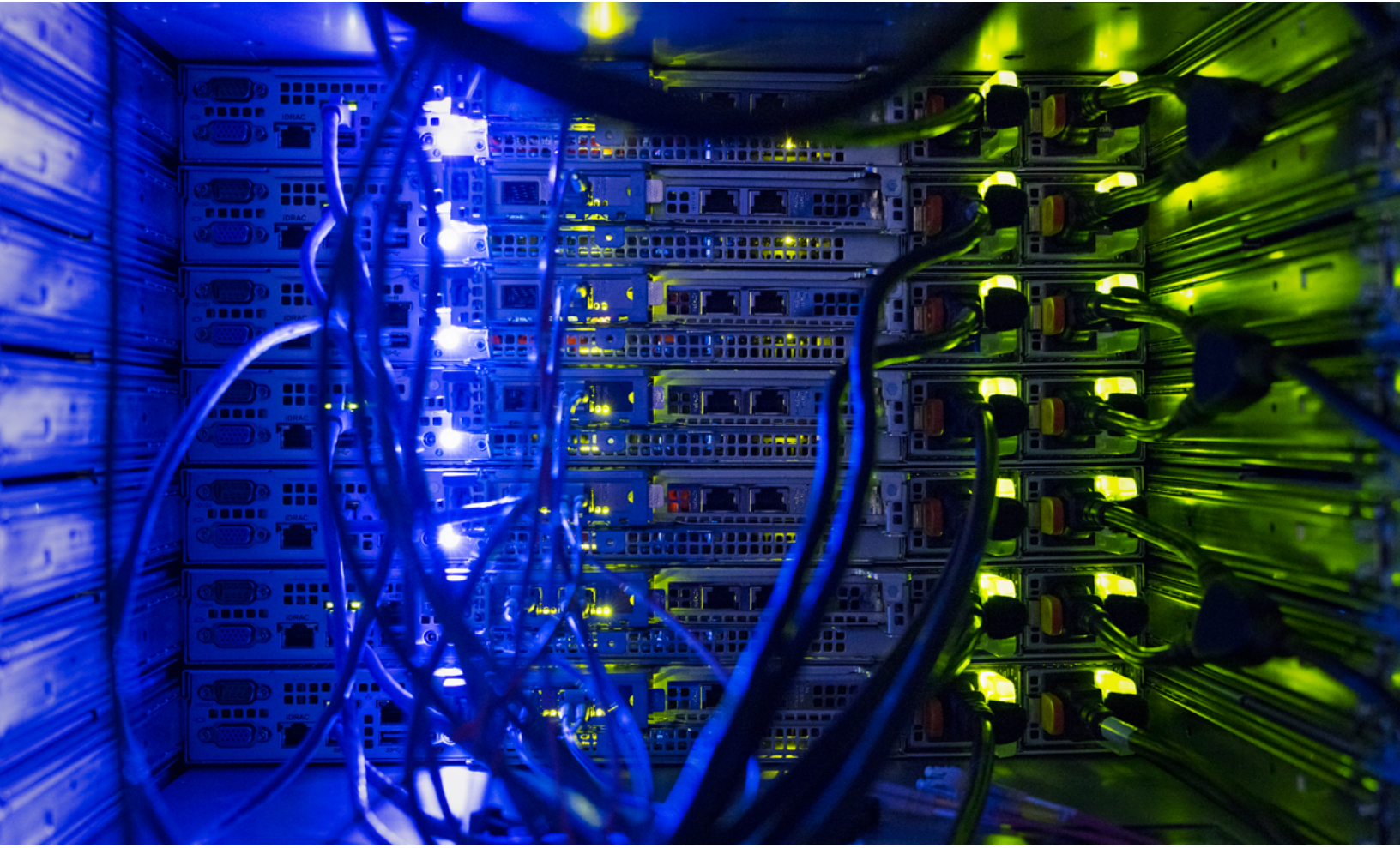
Likewise, while AI and technology have been discussed as a possible topic for the *MI Planner* since 2022, it wasn't until 2025 that artificial intelligence and data centers became a force. So many meetings, webinars, convenings in person and virtually, where planners, engineers, lawyers, and energy experts all grapple with what should and what can a community do.

While tiny data centers (server rooms as they used to be called) are not new, and the idea of "the cloud" is also not new, the scale of proposed data centers is new. As are the worries that this new and somewhat mysterious use cause around water, energy, and noise. Municipal officials and employees don't generally look at water or energy use. These resources are mostly managed by entities other than a local unit of government and are mostly abundant here. There is real worry (whether founded or not) that our leaders charged with protecting these resources for everyone's use will continue to do so in a way that is fair for everyone.

Noise, not just what is audible, but infrasound and associated health problems are factors not fully known at this time. The July *MI Planner E-dition* will have links to many resources, including health studies.

Some experts have opined that the data center technology is changing so rapidly that today's data centers will be obsolete very soon, so decommissioning is another issue to plan for and save for now.

This issue delves into this quickly changing technology –what it means as a profession in the office *and* in the community. The articles are by members who may have been thinking about AI before most of us or have been on the front line of data center proposals. MAP will continue to be at the table with experts in this space and to curate and disseminate resources to our members.



Zoning for Data Centers

Challenge Accepted

Data centers have become the next major land use issue for Michigan communities. Not long ago, cell towers were one of the most complicated – and controversial – technology-related uses appearing before planning commissions. Today, data centers represent a new generation of digital infrastructure. Most people may never think about where their emails, financial records, streaming services, cloud files, artificial intelligence tools, or local government records are stored. However, all of this digital activity depends on physical computing equipment that is located somewhere, and now, data centers are becoming more prominent in Michigan.

Data centers pose complex land use challenges for planners and the communities they serve. They combine industrial building design, utility-scale infrastructure, backup power, mechanical equipment, and security needs, all with the potential for significant land use and environmental impacts. The demand for new data center development is growing. A study by the Lawrence Berkeley National Laboratory reported that data centers consumed approximately 4.4% of total U.S. electricity in 2023, and could consume 6.7% to 12% by 2028.

A Brief History

Data centers are not new. For decades, businesses, universities, hospitals, telecommunication providers, and government agencies maintained server rooms or small technology spaces inside existing buildings. These rooms were usually accessory to the main use of the property and rarely created separate zoning concerns. As more daily activity moved online, data storage and processing became a much larger industry, with much larger physical needs. Cloud computing, streaming platforms, online banking, digital medical records, public safety systems, and artificial intelligence have increased demand for larger and more

MAP's Scholarship Program Needs You!

The Michigan Association of Planning established its Memorial Scholarship fund several decades ago to assist student members who are pursuing degrees in urban and regional planning at Michigan colleges or universities.

To keep the scholarship fund going, we are requesting tax deductible donations from you! Companies, organizations, and individuals will be acknowledged on MAP's website!

You can donate by going to www.planningmi.org or by scanning the QR code. Thank you in advance for your generosity.



specialized facilities, often called “hyper-scale” data centers. Hyperscale data centers house thousands of servers and range from ten thousand to millions of square feet in floor area.

Michigan has become an emerging market for data center development due, in part, to state tax incentives. The State's Enterprise Data Center Sales and Use Tax Exemption took effect in 2025 and eliminated Michigan's 6% sales and use tax on eligible data center construction and equipment purchases for qualified projects. To qualify, an enterprise data center must include at least \$250 million in capital investment and create at least 30 qualified new jobs meeting wage requirements, along with other statutory and environmental conditions. These incentives have increased data center developers' interest in Michigan sites, making it important for local governments to consider whether their zoning ordinances are prepared before applications arrive.

Key Planning Implications

Planning for data centers is unique in several ways. First, they challenge traditional land use categories. Many zoning ordinances classify uses based on visible activity, employment, traffic generation, or building form. Data centers do not fit neatly into those categories. They may generate fewer employees and truck trips than a warehouse, but can require significantly more electricity, cooling capacity, backup generation, utility coordination, and security infrastructure.

If an ordinance does not define data centers, a community may be forced to evaluate a data center under standards that were not designed for its actual impacts.

Second, data centers raise infrastructure capacity questions that extend beyond the boundaries of their sites. Large facilities may require electric substations, transmission upgrades, redundant power feeds, water service improvements, stormwater infrastructure, and emergency access enhancements. Local governments do not regulate utility rates or electric generation, but they do have a legitimate planning interest in understanding whether a proposed site can support a data center, and whether off-site infrastructure impacts may affect neighboring properties, public facilities, or future development patterns.

Third, data centers can create land use compatibility concerns. Noise from climate control and cooling equipment, transformers, and backup generators may affect nearby properties. Large buildings, mechanical yards, security fencing, lighting, and imposing building façades can affect community character, particularly where industrial districts are located near residential neighborhoods, schools, parks, or public facilities. These impacts may be manageable, but they are different from the impacts typically associated with conventional warehousing or light industrial development.

Finally, data centers raise long-term planning questions. These facilities may involve significant private investment, but

they can also create specialized buildings and infrastructure that may be difficult to reuse if the facility becomes obsolete. Communities should consider not only how a data center functions when constructed, but also how the site could be adapted, reused, or restored in the future.

Zoning for Data Centers

Because of these implications, communities should consider adopting zoning standards that treat data centers as a distinct land use. Beginning with clear definitions, communities may distinguish between large-scale data centers, small-scale data centers, and accessory data centers. This allows a community to regulate a large hyperscale facility differently than a small server room accessory to a hospital, university, or institutional use.

The ordinance should also identify appropriate zoning districts and approval procedures. Rather than allowing data centers broadly by right, communities may wish to regulate them as a special land use in industrial, business, technology, research, or planned development districts. This allows a community to evaluate site-specific conditions, infrastructure capacity, adjacent land uses, master plan consistency, and mitigation measures before approval.

Technical submittal requirements are especially important. A complete application should include an infrastructure impact statement identifying anticipated electric demand in megawatts, projected water use in gallons per day, cooling meth-

odology, backup generation capacity, fuel type, utility service needs, and confirmation from applicable electric, transmission, water, and sewer providers regarding service adequacy.

Design and performance standards can help manage physical and operational impacts. These may include minimum lot area, setbacks, lot coverage, building height, screening of mechanical equipment, noise limits at property lines, restrictions on generator testing hours, lighting controls, façade design, durable materials, landscaping, and security fencing. Emergency access, fire suppression, hazardous materials, generator emissions, and annual coordination with first responders should also be addressed.

Finally, zoning ordinances should establish a process for regular facility monitoring and eventual decommissioning. Annual reporting may include generator runtime logs, water consumption, energy efficiency performance, permit compliance, and sound monitor-

ing where warranted. A decommissioning and site restoration plan should identify abandonment triggers, removal standards, equipment disposal, hazardous materials handling, site stabilization, and financial assurance.

Data centers may be an important part of Michigan's economic and technological future, but they should not be treated as an ordinary use. Communities that adopt clear definitions, appropriate location limits, technical submittal requirements, measurable performance standards, as well as monitoring and decommissioning provisions will be better positioned to evaluate data center proposals consistently, transparently, and in alignment with their master plans. In short, communities should not wait to react to data centers; they should plan for where and how these facilities belong.

Benjamin R. Carlisle, LEED, AICP has more than 20 years of experience working as a professional planner, including experience

in zoning, land use and comprehensive planning, site planning, tax increment financing, and economic development. With Carlisle|Wortman Associates, Inc., Ben serves as principal planner to the cities of Troy, Wixom, and Saline, and to the townships of Pittsfield, Ypsilanti, and Superior. Ben often presents at Michigan Association of Planning, Michigan Municipal League, and Michigan Township Association events.

Mike Auerbach, AICP is a Senior Associate with Carlisle|Wortman Associates, Inc. with a professional background of working with southeast Michigan local governments and nonprofit agencies. His planning experience includes site plan review, zoning administration, facilitating public engagement, and assisting local officials in drafting new ordinance provisions and policies. Mike also has a versatile technical skillset for analyzing, evaluating, and mapping land use and socioeconomic data.



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From Moratoriums to Master Plans

Local Strategies for Data Center Development

Almost overnight, data centers have become the most discussed and most controversial topic of planning and zoning in Michigan and across the country. Residents and public officials alike have raised many concerns about the potential harms data centers can bring to a community. And at the same time, higher levels of government and private industry have been very motivated to construct and operate data centers. This tension has led to challenging public meetings, tough conversations, and perhaps above all else, increased pressure on municipal planners to draft regulations which effectively protect their communities.

Although many are likely familiar with the general concept of data centers from recent headlines, a brief background helps set the stage for discussion. At their most basic, a data center is a warehouse or series of warehouses which contain computer systems and associated technology (mostly networking equipment and power banks). These computer systems serve as the “backbone” of the internet, storing all of the information that we use every day to access the internet. In other words, “The Cloud” is a real, physical place.

There are several kinds of data centers, many of which have been around for decades with relatively little fanfare: a data center could be just a room inside a larger office building. But the newest and most newsworthy type are so-called “hyperscale” data centers, which are massive complexes designed to hold thousands of computers. The recent rise in hyperscale data centers is partly a result of the AI Boom. In order for AI chatbots like ChatGPT or Google Gemini to train themselves and process the hundreds of thousands of user inputs they receive, they need servers with substantial capacity. The easiest way to get that capacity is to construct a data center.

The recent push for hyperscale data centers also comes from the highest levels of government. In December 2025, President Donald Trump issued an executive order to establish the United States as a “dominant” force in the AI industry. His order called on regulators to “remove barriers to and encourage adoption of AI,” establish a “minimally burdensome national standard,” and allow AI companies to “innovate without cumbersome regulation.” Michigan’s government has done the same through legislation: Public Acts 181 and 207 of 2024 eliminate sales and use tax on eligible data center construction and equipment purchases and provide other incentives to data centers which invest a set amount of money and create jobs within Michigan. These combined factors have contributed to the recent growth in hyperscale data center construction.

Knowing that the installation of hyperscale data centers is on the rise, there are several key steps to take to ensure your community is ready for a potential data center. First, and most importantly, you should review your current ordinances and identify any uses which could be construed to include a data center. Remember, your ordinance does not need to use the words “data center” specifically. Many ordinances, especially in industrial districts, use very broad terminology such as “warehouses” or “industrial processing,” which could very easily be interpreted to include a data center. If your ordinance currently contains any permitted or special land uses which could be read to include a data center, you should consider amendments to provide more specific regulations or exclude data centers from those general definitions.

Second, you should consider whether your community needs to adopt moratoriums to properly consider and enact

regulations on data centers. This would be especially important if your ordinances currently allow data centers in some capacity, because those regulations are likely outdated or not comprehensive enough for hyperscale data centers. Check the sidebar for more information on moratoriums.

Third, you should consider what kinds of regulations your community needs for data centers. Some communities have considered banning them entirely, but this may not be lawful. The Michigan Zoning Enabling Act, MCL 125.3207, states that a zoning ordinance cannot completely prohibit a land use in the presence of a “demonstrated need,” unless a location does not exist within the municipality where the use may be appropriately located. Regarding “demonstrated need,” courts are likely to look to the directives of President Trump and the Michigan Legislature, which very strongly encourage and promote the necessity of data centers for industry, economy, national security, and other purposes. Regarding whether there is a suitable location, this will naturally vary from community to community. But the existence of any commercial or industrial districts will likely provide a suitable location for at least some form of data center. These factors likely make a total prohibition unlawful.

There are several important facets of hyperscale data centers that should be included in any ordinance updates:

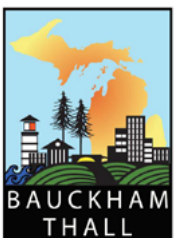
1. **Site Selection.** Evaluate your community’s current master plan and zoning ordinance to determine if there is an appropriate area within your municipality where a data center could be located, keeping in mind the rules of exclusionary zoning. A substantial amount of pushback on hyper-

scale data centers is associated with their location near residential areas or on prime farmland; your ordinance should take those locations into account.

2. **Energy Consumption.** Data centers consume large amounts of energy, which creates concerns about grid capacity, energy prices, and carbon emissions. Local authority to regulate most aspects of energy usage can be limited, but not entirely nonexistent. Planners should consult with municipal legal counsel on any regulations concerning electrical usage.
3. **Water Consumption.** Some data centers consume significant amounts of water to cool the computers, which can add strain to local systems. This is not the case for all data centers, however, and many utilize air for cooling. Your ordinance should consider both as a possibility and should require review by your local water and sewer authority.
4. **Noise.** Several components of data centers generate noise that can reach far beyond the property boundaries. Air-cooled facilities rely on air conditioners and large fans which need to run nearly 24/7. Further, because of the serious monetary loss associated with any downtime, most data centers are built with large diesel generator power backups. These generators run not only during total power loss, but also run occasionally to test their operation, or to make up for partial loss of capacity in the grid.
5. **Screening and Security.** Data centers hold extremely valuable data that companies pay a great deal of money to protect. Many data centers are constructed with walls or fences to limit access, 24/7 security, and high-power outdoor lighting. These screening and security features can impact neighboring properties and should be considered in any regulations.

This article touches on some of the most important aspects of data centers, but by no means captures all of the nuances associated with these new and rapidly evolving facilities. Planners can gain valuable insight by reviewing and conferring with other municipalities in Michigan and in other states who are currently processing applications for data centers.

Michael W. Bila is a municipal attorney at the law firm



Bauckham, Thall, Seeber, Kaufman & Koches, P.C. His work covers a wide range of municipal law issues, including planning and zoning for emerging technologies. He has recently developed and presented webinars for MAP including Nonconformities and Blight: Be Gone!.

Moratoriums

Because of the sudden rise in the popularity of hyperscale data centers, and many zoning ordinances' lack of adequate provision for this new and somewhat unanticipated use, public officials have quickly sought to enact moratoriums on data centers while they grapple with new regulations. Moratoriums are an effective tool for updating ordinances, but only when adopted properly. Importantly, a moratorium is not a tool to delay or prohibit a use, but to allow time for meaningful review and new regulations.

A moratorium on data centers in your community very likely requires the adoption of both zoning and police power ordinances. A moratorium by resolution or motion alone is usually insufficient. A zoning moratorium must be adopted in the same manner as amendments to your zoning ordinance. Both the zoning and policy power ordinance moratoriums should specifically explain the reasons for the moratorium in your community, with reference to local concerns and inadequacies in your current ordinances.

Moratoriums must also be time limited. A typical moratorium ordinance will last anywhere from three to six months. During that time the municipality must actively research and update their regulations.

For any questions regarding moratoriums, including the drafting of ordinances and required language, it is strongly recommended that you consult with your municipal attorney. Moratoriums can be complicated, and failure to include certain elements can result in the moratorium being ruled invalid.

How Planners Can Use AI for Good

Planners have reached a point in their field where they must decide whether to incorporate generative AI into their careers and, if so, how. For a profession guided by ethics, how can this evolving technology support planners in an ethical and meaningful way, benefiting both them and the communities they serve?

There are a few key considerations to keep in mind. The most important one is that AI is best used as a resource or tool, not as a final product. This maintains accuracy, transparency, and trust between planners and their communities.

One of the greatest concerns about using generative AI, regardless of the field, is the possibility of biases and inaccuracies. An AI program is only as good as the information it was trained on, and it still has a long way to go. When asking AI questions, sources will typically be cited to explain how it reached its conclusion. It is important to check these sources, as they may contain incorrect or false information. It may even produce an “AI hallucination,” a confident response that is incorrect and has no factual basis.

Many programs continue to learn from the data they are fed, raising potential privacy concerns. It is typically recommended to avoid using sensitive information unless the program being used does not store it. Adopting an office or department policy or philosophy on when it is appropriate to use AI can help maintain accuracy, transparency, and trust.

Here are some ways to use AI in your work:

Grammar and tone. One of the simplest tools at the planner's disposal is **Grammarly**. They can suggest corrections to spelling, grammar, and adjust tone.

Transcription and translation. Serving a wide variety of people and projects requires planners to adapt quickly and keep track of a lot of information. AI transcription services such as **Otter.ai** can join online meetings, take notes, and provide full transcripts. On the translation side, **Google Translate** has introduced generative AI features that provide more accurate, context-aware alternatives to word-for-word translation, making it useful for multilingual communities and communicating complex planning and zoning jargon.

Understanding ordinances and complicated text. Planners regularly navigate dense ordinance language. Chatbots such as ChatGPT typically lack enough local information to provide consistently accurate answers. Platforms like **Claude.ai** and **NotebookLM** draw only on data directly fed into them and do not use that data for training. They are helpful tools for handling sensitive information, simplifying language, comparing documents, breaking down processes into plain English for applicants, and can function as enhanced search tools within a zoning ordinance or PDF document to

continued on page 14

Note from MI Planner Editor:

To break up some of the text in this issue, I placed the contents of this article in an AI program and asked: “create an image that illustrates this article”. What started as a quick image generator turned into a bit of a journey. The top image was generated by ChatGPT. Obviously, this was not what the article was about. So I turned to Notebook LM, loaded the article and asked: “create an image that illustrates this article”. I was surprised to see “architect” appear in the image since that word does not appear in the article. I then asked Notebook LM to correct the image: “Please revise image to say Ethical Planner. Not Ethical Architect”. And the third image was created.

First Try



Second Try



Third Try

When The Cloud Drops

Planning for Data Centers

Data centers are structures that house information technology infrastructure and equipment for building, running and delivering applications as well as storage of digital data—they are also an integrated land and water policy problem.

Data centers raise a complex set of interconnected land use and water challenges, as their actual community impacts vary and depend on numerous environmental, technological and policy factors. Communities in Michigan (and the Great Lakes region) are in the infancy stage of creating regulations that not only protect their residents and stakeholders, but also allow for well-regulated investment from larger corporations that own and/or operate such systems.

Data centers lack consistent definitions, classifications and operational standards across jurisdictions and industries. In general, policies and regulations are playing catch up with technology. Fewer regulations can lead to some communities appearing more “attractive” than others for the development of these centers.

Local planning commissions often consider site plan characteristics like parking, landscaping, and setbacks, not how much water and energy a use will need. Yet water and energy are very much the topics being discussed locally around potential data centers.

Unfortunately, there is limited public disclosure of energy use, water consumption, emissions and supply chains from the data center applicants. Data center applicants should be more forthcoming and open about the infrastructure needs; this allows for greater understanding of the entirety of the development project, an increase in community awareness, meaningful participation, and informed public decision-making.



Air or Water

Air-cooled centers utilize a ‘near zero’ state of operational water usage, relying on systems such as mother nature (depending geographical location) and machine-cooled equipment. The trade-off with air-cooled systems is their higher electricity demand, which can place added strain on aging electrical infrastructure because of the heavy load they draw from transmission lines.

Evaporative / cooling tower systems, which are common in data center development, can use between one to five million gallons of water per day (MGD) for a 100 MW facility. This equates to approximately two to five gallons per kilowatt hour (kWh). This water usage is highly climate-dependent; areas with lower average daily temperatures may utilize less than those regions with higher average daily temperatures.

A third type of cooling is classified as ‘closed loop’, in which the system is sealed (closed), recirculating water coolant to remove heat from equipment, without exposing the fluid to the atmosphere. This type of system has increased in attractiveness from local communities, who worry

that a daily local draw of millions of gallons of water would have a significant impact on their local source of drinking water. To mitigate potential impact on the local water supply, some communities have required that data centers use closed-looped systems.

It is important to note that each data center and its demand for water may be different from another. The type of equipment, the size of the facility, and its proposed location all impact the water demand.

Strategies to Consider

There are hundreds of legislative bodies across the United States that have taken action on data centers, most notably in the form of moratoriums at the local level (*see sidebar on page 8*). But what else should communities know as they seek to develop regulations pertaining to data centers?

Communities must be able to conduct analyses to address the local energy and water availability. These are two of the more critical infrastructure needs for data centers, and two of the most common concerns raised by members of the

community, but they are areas that are often outside of local government control. If there is a demand for a significant amount of water or electric usage, how will this be managed? Can a local unit of government establish provisions that protect other system users from cost increases or system disruptions caused by data centers? Furthermore, how could a community tie system upgrades to a data center project?

With data centers potentially accounting for a significant amount of global electrical energy, communities may benefit from stipulating the use of renewable sources and energy efficiency in construction and operation. Federal agencies like FERC (Federal Energy Regulatory Commission) are increasingly involved in oversight as data centers connect directly to power generation. Strongly encouraging data centers to provide letters of preliminary approval from the energy provider may increase transparency on consumption and any needed infrastructure upgrades. Further, aligning municipal zoning with environmental goals of the local, county and state governments and regional grid capacity prior to approving projects may be crucial. These efforts can be further supported by mandatory, standardized reporting of energy and water usage of the data center to the local authority.

Data centers are changing quickly as emerging land uses often do, with laws

and policies needing to catch up. Taking a breath to plan for and assess what makes sense for your community before the developer is in the room with you is always a best practice. Determining what makes sense will require knowing the facts about data centers and available regulatory tools and communicating all of that to the public. As this industry continues to develop, look for laws and policies to also change.

Kyle Mucha, AICP, is a Principal Planner with McKenna. Kyle partners with suburban and rural communities across the Great Lakes Region to aid in the development of modern zoning ordinances, sustainable site development, advocacy for residents and community stakeholders, and the creation of place based on community input. Kyle serves on the APA's Water Planning Network Steering Committee, collaborating with members regarding the protection, management and use of water resources and utilities.

Manohar "Manny" Patole, LLM, MUP, is a place-based urban livability advocate working at the intersection of Community, Policy, and Technology. Currently he is Industry Assistant Professor with NYU's Center for Urban Science and Progress, Senior Fellow with NYU Alliance for Public Interest Technology, Co-Cities Fellow and on the NYU Climate Initiative.

With Special Contributions

Mary Ann Dickinson, Policy Director, Land & Water, Lincoln Institute of Land Policy. Mary Ann was the Founder and President/CEO for 15 years for the Alliance for Water Efficiency, a non-profit organization dedicated to promoting the efficient and sustainable use of water in the United States and Canada. She now works for the Lincoln Institute of Land Policy and also serves as the Co-Chair of the American Planning Association's Water and Planning Network.

Brett Gracely, PE, Water Planning Practice Lead with Plummer. Brett's project expertise includes groundwater and surface water hydrology & hydraulics, water supply development, water rights engineering, environmental permitting, planning, and assessment as well as integrated resource planning and modeling.

Authors of this article are members of the American Planning Association's Water and Planning Network (WPN). WPN's mission is to provide a professional forum to connect members to the best planning practices that reflect current research, science, policy and technology regarding the protection, management and use of water resources and utilities.

*The MAP Board extends its gratitude to **Ankita Shukla** and **Eli Fikkema** for their valuable contributions as Michigan State University student representatives during the 2025-26 fiscal year. Best wishes as you move forward with your planning careers!*

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An Argument for Sensible AI

“Once men turned their thinking over to machines in the hope that this would set them free. But that only permitted other men with machines to enslave them.”

- Frank Herbert, *Dune*

That quote has been sitting with me since I was first asked to write this article. Herbert was really writing about power, not machines, but either way, it's reckless to become comfortable outsourcing the labor of thinking. The moment people trade judgment for convenience, they create a vacuum that gets filled by whoever controls the machine, the system, or the physical and institutional infrastructure behind it.

Artificial intelligence or AI is relatively new territory for the planning profession. Depending on your level of exposure, your role, and when you entered the industry, much of what follows may feel either painfully obvious or entirely unfamiliar. The technology around AI is moving faster than our collective understanding of how to use it well. The purpose of this article is to make a practical argument for where the technology adds value and where it creates risk.

AI can be garbage much of the time (see Figure 1).

And when used incorrectly, it can be more than that: it can be dangerous. When asked point-blank open-ended questions, most AI programs will present outdated information, incomplete analysis, reference a post made by someone on Reddit as though it were peer-reviewed literature, and in some cases simply fabricate facts altogether. That should make anyone cautious, yet as the new thing, many flock to it.

A wise professor once said, *“If all you have is a hammer, everything looks like a nail.”* I remember him saying this after he introduced a new watershed modeling function that a student immediately tried to use

to identify a food desert in a low-income neighborhood. Just because a tool exists does not mean it is the right tool for the job. AI is being sold as a solution to nearly every problem we face as planners: writing, research, customer service, decision-making, and even human relationships. That is concerning. One of the quickest ways to undermine your own credibility is to accept AI-generated output without grounding it in real-world context. AI is exceptionally good at producing structured, polished, confident language. What it is not good at is understanding whether that language is correct, current, appropriate, or legally defensible.

AI should be treated like a very smart, but very green intern, not a final authority, and most certainly not a source for raw data. Like any new member of your staff, it can save you time or cost you time, depending on how closely you manage it. It can review drafts, organize information, and help you think through problems. But you would never sign your name to an intern's work without providing some serious direction, reviewing the initial draft, checking the final product, and having a few conversations in between.

Just like a calculator, email, or a capable intern, AI can reduce friction and accelerate professional work.

But used passively, it can create avoidable mistakes, and at the end of the day, those mistakes are your fault. AI doesn't take responsibility for the final product, you do. When AI is used well, you usually can't tell AI was involved at all. The writing sounds like a person who understands the situation, knows the audience, and is making specific, intentional points. The AI helped with the structure, the first draft, or the editing, but the human provided the judgment, the context, and the voice. Its use should not be the starting point or end point. It should be somewhere in the middle, but can be a starting “push” if you lack inspiration.

The goal of using AI for professional writing should not be to have AI write professionally for you, but to help you sound like a more organized version of yourself. AI should sharpen your voice, not replace it. The tools we have are particularly effective at the structural side of professional writing in the planning industry. AI can help with building outlines, organizing scattered thoughts, tightening language,

There is some lazy use of AI out there

Figure 1

You have without a doubt—and honestly, very on-brand for you, seen writing that was very obviously copied and pasted directly from AI with very little thought by the user! You can usually tell because it looks something like this:

-  Cleanly stated emoji-bullets
-  Reaffirming language that will tell you how special and smart you are
-  A very authoritative tone, even when uncertain 
-  Phrasing that is smooth and neutral when discussing controversy
-  Some other fifth thing, because everything comes in five takeaways

This type of work is a very public way to show your peers that you are putting very little effort into the beginning, middle, and end to your professional process—and you know what's the best part? It's incredibly public—and honestly, most of your peers can tell.

and reframing communication for different audiences. But that only works if you workshop the writing, push back on language you disagree with, and stress test your own ideas. For AI to serve you well, you need to set clear parameters for how it responds. Tell it not to guess. Tell it not to “hallucinate.” Tell it to acknowledge when it does not know something, identify gaps in its knowledge, and cite its sources whenever possible.

As planners, whether we are working on something as technically mundane as sign heights or as inspiring as a complete rewrite of the Master Plan, our work should be hard fought. It is to be ruminated over, scrutinized and evaluated by you, personally. The implementation of tech in your writing should pressure test your ideas, ask for holes in your thought process after you feel you’ve already exhausted them, and have it argue the other side for the sake of debate. It’s not replacing you and your abilities; it is augmenting your work.

AI without oversight is not a shortcut; it is a liability. AI can be confidently wrong and often is. Worse, it can be wrong in ways that sound polished, persuasive, and entirely believable to someone moving too fast to verify it. It does not understand your community, your politics, your board, your residents, or the history behind why something was written the way it was ten years ago. It only knows patterns. And in planning, patterns without context is problematic.

I saw this firsthand at a public meeting where an ordinance interpretation was being discussed. In the middle of the debate, an elected official entered the question into an AI program and confidently presented the response as if it were settled fact. The room, for a moment, accepted it. It sounded clean. It sounded authoritative. It sounded right.

When I asked where exactly in the ordinance that conclusion came from, the answer quickly unraveled. The software could not cite the provision because the

provision did not exist. What followed was a quiet pivot away from the topic and an uncomfortable realization amongst the elected officials. They had nearly allowed a machine-generated guess to shape a real policy discussion.

Where government functions on a lean budget, can we afford to not use AI? Staff are often expected to wear multiple hats, manage growing workloads, and respond to increasingly complex issues without corresponding increases in personnel. Time has become one of government’s most limited resources. Hours spent digging through ordinances, combing through state statutes, reviewing case law, or drafting first-pass documents are hours pulled away from enforcement, planning, resident engagement, and project implementation. AI can compress that administrative workload significantly by scanning large documents, surfacing relevant information, summarizing technical material, and generating workable draft language for professional review. That does not replace expertise; it reallocates it.

AI’s value comes from pooled knowledge. In the private sector, that raises legitimate concerns about proprietary information, trade secrets, and competitive advantage. But in municipal government, that dynamic looks very different. Most of what planners do is public information. We live in a world of pooled knowledge that should always be available to the public. And planners often share information—swapping ordinance language, staff reports, and policy ideas to solve similar problems. Local governments have borrowed ideas from each other for decades—we call it collaboration. In a public setting, AI accelerates that exchange of institutional knowledge. It can synthesize lessons from thousands of readily available government documents in seconds, giving small communities access to insights and frameworks they may otherwise never have the time or budget to develop independently.

But even when used purposefully and responsibly, we still represent the government, where process matters just as much as outcome.

Because of that, the rise of AI raises legal and ethical questions we do not yet have clear answers to. Like many professionals, I have found value in using AI as a starting point for drafting ordinance language, organizing ideas, or helping build structure where there is none. Used correctly, it can create momentum. It can help overcome the blank page and accelerate the early stages of technical writing.

One of the largest unresolved questions is how AI-assisted work fits into public records law. If a government employee uses AI to help draft a staff memo, ordinance amendment, report, or public communication, what exactly becomes the public record? Is it only the final adopted document? Or is it the process that led there? Are prompts to an AI system part of the deliberative process subject to disclosure, or are they no different than handwritten notes on a legal pad or a crumpled draft thrown in the trash two months ago? The distinction matters. Unlike private notes, AI conversations often exist on third-party servers, are stored digitally, and may materially shape public decisions in ways traditional drafts once did.

That uncertainty becomes even more complicated when government employees use personal AI accounts or personal devices for public business. If something is related to government business, it belongs in a government system where it can be retained, searched, and produced if necessary. The same logic should apply to AI. If a public employee is using a personal AI account to generate government work, who owns those records? Who retains them if that employee leaves? Who searches them in litigation? Who certifies that all responsive records have been produced? These are operational and legal questions that municipalities will inevitably have to confront.

Recent legal developments suggest these concerns may not remain theoretical for long. In early 2026, a federal court signaled that materials generated or shared through a consumer AI platform may not receive the same attorney-client privilege or work-product protections when confidential information is disclosed through a third-party system. While that case did not address public records law directly, it sends a strong signal that courts may begin treating AI-generated or AI-assisted materials under traditional disclosure and discovery principles rather than carving out entirely new protections.

Technology always moves faster than the policies designed to govern it. The reality is that many local government employees are already using AI in some capacity, formally or informally, whether their organizations have acknowledged it or not. Yet many municipalities have no clear policy on acceptable use, data entry restrictions, records retention, disclosure expectations, or security standards. Government depends

on process, accountability, and transparency. AI is changing all three at a pace the law has not yet caught up with. The real challenge for government is not resisting AI, but building the policies, safeguards, and professional discipline necessary to use it responsibly while preserving public and personal trust.

AI is not the future of planning.

Planning is still the future of planning. Judgment, experience, political awareness, legal defensibility, and understanding the communities we serve will remain the foundation of this profession long after the current AI hype cycle settles. What AI offers is not replacement, but reinforcement: a tool to move faster through the administrative drag so we can spend more time doing the work that requires professional judgment, public engagement, and policy awareness.

Use it to organize your thoughts. Use it to examine your ideas in a deeper way than you had once thought possible. Use it to

sharpen your writing. But do not outsource your judgment to it and relinquish your power in a way that Frank Herbert had warned us about so many years ago. In government especially, where public trust is increasingly fragile and accountability is not optional, our responsibility is not to chase technology for its own sake. It is to use every tool available, carefully and sensibly, in service of better public outcomes.

Jeffrey Polkowski, AICP serves as the Director of Development for Waterford Township, where he oversees Planning, Zoning, Building, Engineering, and Code Enforcement. An Oakland County 40 Under 40, Jeff continues to advance practical land use planning with a focus on redevelopment and water resources. Jeff has no authority to comment on AI other than as a user and still enjoys his iPod Classic from 2008.



continued from page 9

locate answers, such as requirements for the Site Plan Review process or a specific permitted use. However, this should not replace decision-making, especially given potential legal implications down the line.

Community engagement. Similar to how a planner might use Pinterest or a magazine for inspiration, generative AI can help generate ideas for marketing materials, branding, or flyers; however, it should not serve as the final product. While elements of images and flyers may benefit from generative AI, using these tools in public-facing materials could harm a community's reputation. Images that are clearly AI-generated or inaccurately represent the community can erode public trust.

Analyzing large quantities of data.

Community feedback can come in significant volumes, whether through public comment periods, community surveys, or public meetings. In their own ways, AI tools such as **NotebookLM**, **Qualtrics**, and **SurveyMonkey** can help planners process and synthesize large volumes of this input in a fraction of the time it would take to do manually. For example, if a municipality receives hundreds of survey responses, AI platforms can help identify recurring themes, summarize sentiment, and flag outliers. This is most useful when conducting a first pass or a gut check. Planners should still review, as it remains essential to ensure accuracy and context are not lost in the process.

Using generative AI in planning is not a requirement. Platforms today can provide a quick first pass or a springboard of ideas. Like any tool, it must be used wisely. Planners are ultimately responsible for their work so review and scrutiny is always necessary.

Maria Garcia Reyna, AICP is an Associate Planner at McKenna. She specializes in land use planning, bilingual community engagement, and data analysis, supporting a wide range of planning processes, including comprehensive plans, zoning ordinances, and other strategic planning efforts. Driven by curiosity and empathy, Maria is at the forefront of integrating AI into planning practice, using her research to promote thoughtful, data-driven decision-making.



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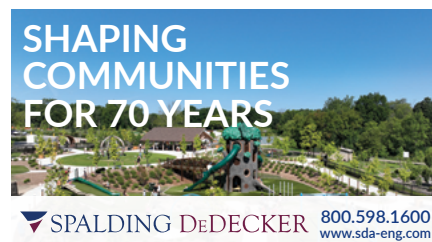
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ZONING PRACTICE

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Drone Zoning: Urban Planning's Next Frontier?



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Drone Zoning: Urban Planning's Next Frontier?

By Troy Rule

Businesses are increasingly seeking to use drones to deliver goods, inspect infrastructure, take aerial photos, and serve other valuable functions. Local land-use planners, who have governed uses of low airspace for nearly a century through setback requirements, height restrictions, and other means, could serve important new regulatory roles in that space in the drone era—if federal regulators would let them.

This issue of *Zoning Practice* explores how planners can apply zoning concepts to local regulations governing drone use. It begins with background on the emerging need for more expansive local drone-use controls and briefly summarizes existing barriers to regulating drone use locally before summarizing three potential approaches to drone zoning.

The Merging of Air Traffic Control and Land-Use Laws

Some of the nation's largest retailers hope to soon start delivering many online orders not with trucks but with small, unmanned aircraft systems or "drones." Automated drone delivery systems would free retailers from the constraints of surface roads and enable them to rapidly transport goods directly from distribution hubs to the doorsteps of American homes and businesses. Unfortunately, such widespread commercial drone use would also send millions of daily drone flights into the nation's low airspace—some of which would disrupt land uses below. Drones produce buzzing noises that can interfere with activities on the ground, and drone overflights can also threaten landowners' safety and privacy. Because these potential impacts on underlying land uses vary greatly from place to place, drone activities are particularly well suited for localized, location-based regulation.

With adequate federal and state government support, drone-use zoning—the use of municipal ordinances and overlay zoning maps to regulate drone activities—could emerge as the next great frontier for zoning law. Drones are increasingly capable tools for delivering goods, photographing real estate listings, surveying pipelines, and serving other valuable commercial functions. However, drones can also be like pigs in the parlor instead of the barnyard: In certain settings, their noise and threats to privacy can unjustifiably interfere with activities on the ground. A drone flight over a spa resort or a retirement home can be far more disruptive than an identical flight over a rail yard or a warehouse district. Drones can likewise create security or safety threats—especially over critical infrastructure facilities,



An unmanned aircraft system delivering an automated external defibrillator in Reno, Nevada (Credit: [Mollyrose89, Wikimedia](#))

schools, prisons, and other sensitive places. Accordingly, localized spatial planning may be the only way to optimally balance drone-related uses of low airspace with land-based uses of that space.

Involving municipal governments in the spatial planning and regulation of low airspace uses in the drone era would yield tremendous benefits in communities across the United States. Municipal drone-use zoning ordinances could create specific classes of drone-use zones and attach varying degrees of drone-use restrictions to each type of zone. Corresponding overlay zoning maps could then assign drone-use zoning classifications to every parcel throughout a city with the express goal of optimally balancing drone-based and land-based uses of the city's low airspace. Using geographic information systems (GIS) and geofence technologies, commercial drone operators could even program their drones to automatically comply with local drone-use zoning ordinances. Drone users could likewise consult a city's ordinance provisions and map when selecting sites for drone delivery hubs and other drone-related land development projects. By leveraging municipal planning officials' localized knowledge, such urban drone-use planning could promote much more efficient use of precious low-airspace resources—just as conventional zoning laws do on land.

With adequate federal and state government support, drone-use zoning—the use of municipal ordinances and overlay zoning maps to regulate drone activities—could emerge as the next great frontier for zoning law.

Federal and State Obstacles to Municipal Drone-Use Planning

Sadly, until federal regulators signal more support for them, drone-use zoning ordinances face some obstacles in the U.S. Unlike the land-use laws of the 1920s, today's drone-use laws are evolving in the

shadow of a federal agency, the Federal Aviation Administration (FAA). The FAA has claimed on multiple occasions that it alone should regulate where and when drones may fly (FAA 2015). Some of the nation's most powerful companies, such as Amazon and Walmart, also have reasons to favor such a top-down federal structure because it would ease their operations by largely precluding cities and landowners from participating in drone regulation. Incredibly, some federal officials have taken the questionable position that even the airspace resting a few inches above the ground is navigable by a small drone and thus constitutes “navigable airspace” subject to exclusive federal control (U.S. GAO 2020). Advocates of this controversial view often argue that allowing cities, towns, and counties to adopt local drone-use restrictions would create an unworkable patchwork of laws across the country that would stifle drone industry growth.

While the debate over implied federal preemption of municipal drone-use laws rages on, drone industry advocates have also taken their fight to state legislatures in recent years, lobbying for statutory language that expressly preempts local drone-use restrictions. These efforts have yielded some unfortunate results: At least 11 states have enacted statutes over the past decade that provide for some degree of preemption of local drone-use rules ([Table 1](#)). It will be difficult for local governments in these states to engage in significant drone-use planning and zoning until these preemption statutes are repealed. In most other states, however, significant opportunities for municipal drone-use regulation remain intact.

The Case for Local Drone-Use Laws

Ironically, while the FAA continues to argue that it alone should regulate most civilian drone activities, it is increasingly evident that the agency lacks the resources and on-the-ground information needed to effectively handle the job. If major retailers achieve their vision of making billions of drone-assisted deliveries per year, tailoring drone-use laws to fit the unique features of tens of thousands of communities

Table 1. States That Preempt Local Drone-Use Rules

State	Limit on Local Drone-Use Rules
Arizona	Prohibits all local ordinances, policies, or rules that relate to the private ownership or operation of drones, other than restrictions on takeoffs and landings from public parks or preserves (§13-3729)
Connecticut	Expressly preempts all municipal restrictions on commercial drone “ownership, possession, purchase, sale, use, transportation, or operation” (§7-149b)
Delaware	Preempts local regulation of drone testing and operations (§11-1334(e))
Florida	Prohibits municipalities and counties from regulating “the design, manufacture, testing, maintenance, licensing, registration, certification, or operation of an unmanned aircraft system, including airspace, altitude, flight paths, equipment or technology requirements; the purpose of operations; and pilot, operator, or observer qualifications, training, and certification” (though drone operations are still subject to other local regulations specifying illegal acts) (§330.41(3)(b)&(c))
Georgia	Expressly preempts any local regulation of drone testing and operations adopted after April 1, 2017, other than restrictions on noncommercial takeoffs and landings from public property (§6-1-4)
Louisiana	Preempts all local drone regulations (§2:2)
Maryland	Preempts local regulation of drone testing and operations (Economic Development §14-301(b))
Michigan	Prohibits local regulation of drone ownership or operation, with a very limited exception for jurisdictions that prohibit nonemergency motor vehicles (§259.305)
Pennsylvania	Preempts local regulation of drone ownership or operations (§53-305(a))
Rhode Island	Preempts all local drone regulations (§1-8-1)
Utah	Preempts local drone regulations, except for restrictions on operations at locally controlled airports (§72-14-103)

across America will be a gargantuan task. Empowering cities, towns, and counties to engage in drone-use planning within their jurisdictions would distribute this growing regulatory load by enlisting countless local planning officials to help.

American land-use laws provide a valuable blueprint for considering the possibilities of localized drone-use planning. Consider how different cities and towns throughout the nation would look today if a century ago Congress had opted to give one federal agency exclusive authority over all land-use planning in the United States. Specifically, suppose, hypothetically, that real estate industry lobbyists had persuaded Congress in the 1920s to create a Washington-based “Federal Land Use Administration” with exclusive power to make land-use zoning designations everywhere in the country, preempting all state and local land-use laws. The powerful industry stakeholders championing such an action might well

have benefited from such legislation by using it to secure sweeping federal land development authorizations applicable throughout much of the country. However, because the centralized federal agency operating under that system would have lacked the community-level information and resources needed to tailor land-use plans to fit each U.S. city and town, land-use laws in most communities under that structure would have been poorly suited for most locales. Such imprecise land-use laws would have led to more neighbor conflicts and ultimately lower land productivity than the country has achieved by involving municipal and county governments in the land-use planning process.

In similar ways, empowering the FAA to be the nation’s sole drone-use regulator might benefit large drone delivery companies, but it would do so by excluding highly valuable local input from the drone-use planning process. By contrast,

the patchwork quilt of drone-use laws that drone industry stakeholders portray as devastating would actually be a good thing (Bateman 2020). Such a patchwork would reflect local officials' purposeful tailoring of rules to match the distinctive characteristics and preferences of the country's diverse array of neighborhoods and communities—just as local land-use laws and traffic laws presently do on the ground. Amazon truck drivers today have no difficulties using public road systems that require them to observe speed limit signs and other traffic rules that vary as they travel from place to place. Why couldn't Amazon delivery drones handle similar location-based variability in the laws governing low airspace?

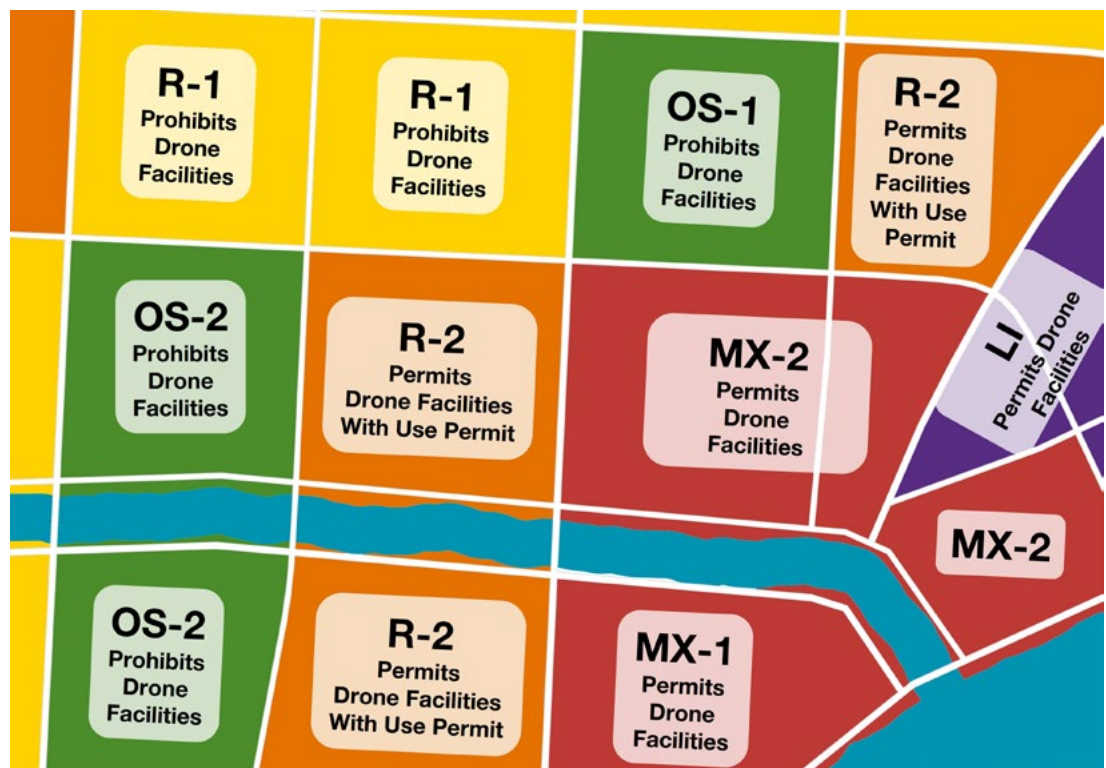
As a legal matter, local drone-use planning is also probably more permissible than the FAA or some drone industry groups would want local planners to believe. The scope of the FAA's preemptive authority over drone-use activities remains unclear in most states but is likely too narrow to preclude all state and local drone-use regulation. A 2017 case, *Singer v. City of Newton*, 284 F.Supp.3d 125 (D. Mass. 2017), seemed to at least partially embrace the FAA's preemption arguments against local drone laws. However, just three years

later a different federal court, in *National Press Photographers Association v. McCraw*, 504 F.Supp.3d 568 (W.D. Tex. 2020), showed far less willingness to recognize the FAA as the country's exclusive drone-use regulator, holding that "federal law has not completely preempted the field" of drone-use regulation and that a particular state drone law was not preempted. In short, there does appear to be room under current laws for municipalities to engage in some drone-use regulation—especially when that regulation is focused on preventing conflicts between drone uses and specific subjacent land uses.

Three Potential Categories of Local Drone-Use Planning

As local officials and planners increasingly embrace the idea of local drone-use planning, they are likely to wonder where to begin in this pioneering effort. As a starting point, it's useful to recognize the three general types of drone-use regulatory approaches potentially available to local governments: (1) land-based restrictions, (2) radius-based restrictions, and (3) zoning restrictions.

A hypothetical zoning map with land-based restrictions on commercial drone facilities (Credit: American Planning Association)



Land-Based Drone-Use Restrictions

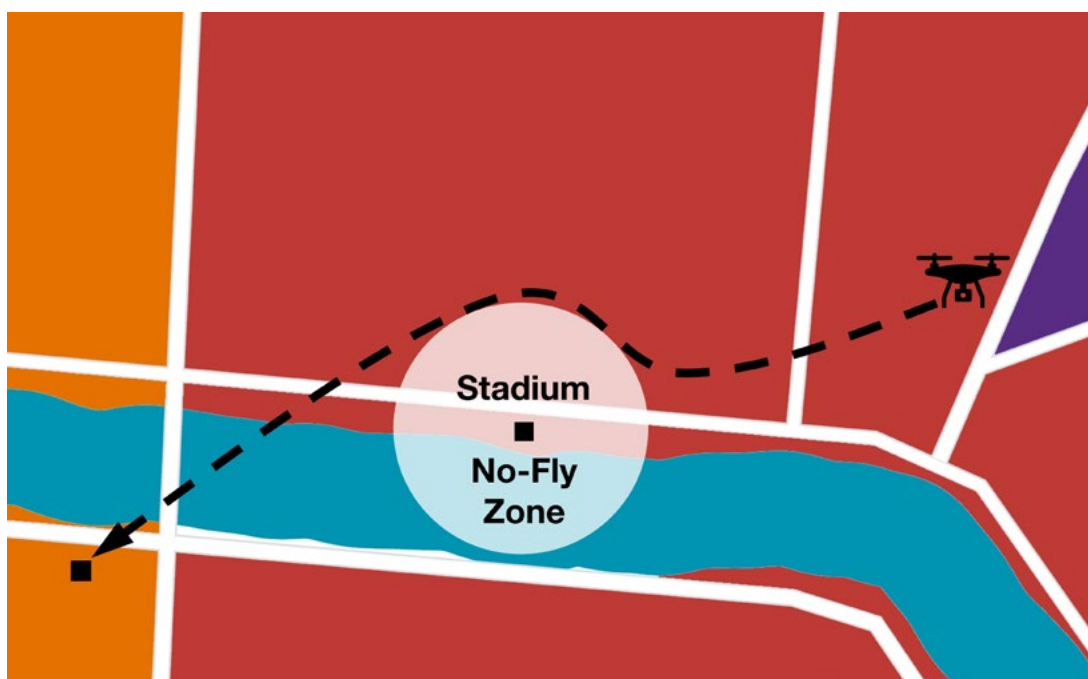
Land-based drone-use restrictions, which fall squarely within most municipalities' well-established regulatory authority, merely restrict where drone operators may launch or land drones within a community. For instance, an ordinance prohibiting the siting of certain types of commercial drone docking stations within 500 feet of the boundary of any existing residential zone would be a land-based drone-use restriction. High volumes of drone activity can occur at some kinds of commercial docking stations, so siting such stations sufficiently far away from residential areas could help to prevent conflicts with residential land uses. Such laws would be similar to existing land-use zoning restrictions designed to prevent low airport flight paths from flying over residential areas. Because land-based drone-use restrictions focus on places where drones take off and land, they obviously do relatively little to prevent conflicts between land uses and drones in mid-flight. Still, they can provide some additional protection against drone-related land-use conflicts and are less likely raise preemption questions than most other types of local drone laws.

A handful of local governments have recently added drone or “unmanned

aerial” centers or docking stations to their lists of permitted or special uses within certain zoning districts (e.g., Albion, Michigan, [§100-4.12](#)). Others, such as College Park, Georgia, have also codified a definitions of such centers to help guide developers and aid future enforcement of such rules ([Appendix A §1.4](#), defining “unmanned aircraft system dispatch and delivery center”). College Station, Texas, even amended a planned development district ordinance to make “consumer, small-scale aerial distribution” a permissible use to accommodate proposed Amazon drone delivery facilities (2022).

Radius-Based Drone-Use Restrictions

A second category of local drone laws—radius-based drone-use restrictions—can protect landowners against a broader range of potential drone-related conflicts than is reachable using land-based restrictions alone. Radius-based laws are already on the books in multiple major U.S. cities and prohibit drone activities within a specified radius of certain types of land uses. For instance, an ordinance adopted in Miami, Florida, prohibits drones from flying within a half mile of major public sports venues during events ([§37-12\(c\)](#)). A similar ordinance in Calabasas, California,



A no-fly buffer zone around a large place of public assembly (Credit: American Planning Association)

precludes drone operations within 200 feet of a school without school officials' permission and prohibits drone uses within 100 feet of many other public facilities (§9-10-030). Comparable state laws restricting drone activities near specified land uses have also been enacted in Arizona, Kentucky, New Mexico, Oklahoma, Oregon, Texas, and a few other states.

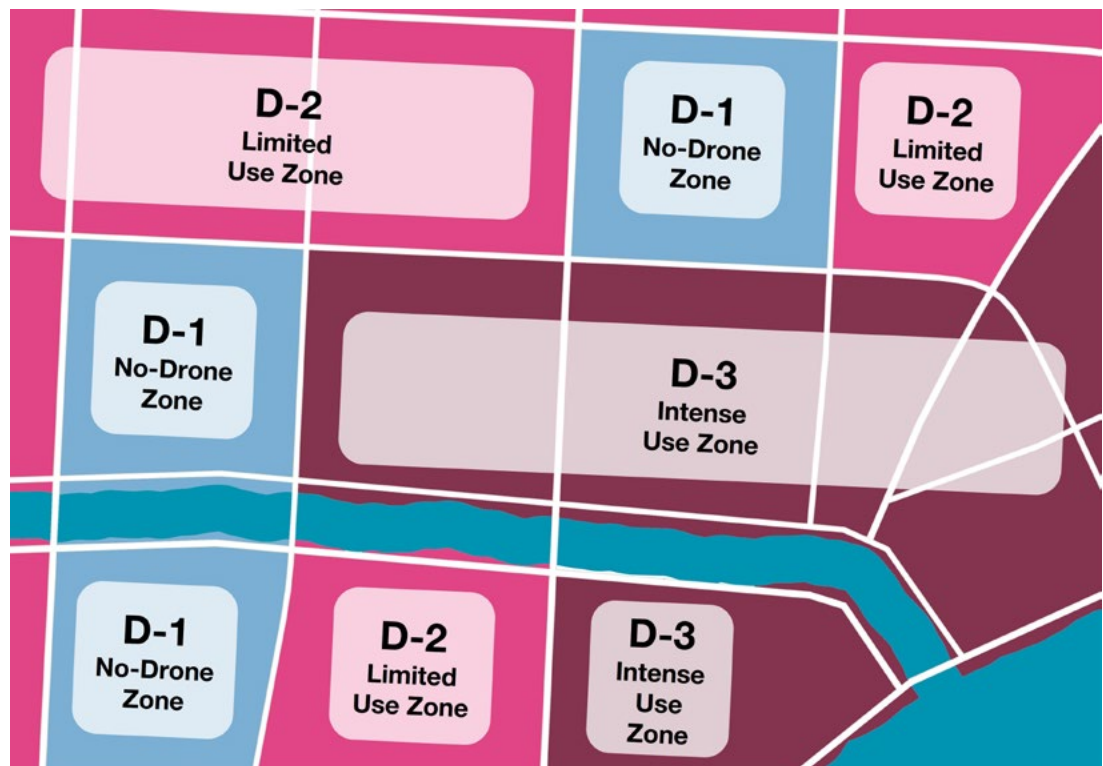
Radius-based drone use restrictions resemble certain early 20th-century laws that ultimately served as precursors to modern land-use zoning. For example, before land-use zoning became widespread, several cities had adopted restrictions on the siting of slaughterhouses or taverns within specified distances of certain incompatible land uses such as residential neighborhoods or schools. Eventually, these radius-based land-use ordinances—aimed at keeping certain disruptive land-use activities away from certain other protected ones—gave way to full-fledged land-use zoning laws in much of the country. It's quite plausible that laws similarly prohibiting drone-use activities near specified types of incompatible land uses could eventually pave the way for drone-use zoning as well.

Drone-Use Zoning

The third category of potential local drone use laws involves drone-use zoning—an approach that is more restrictive and thus more controversial than existing approaches (much like land use zoning was a century ago). Drone-use zoning ordinances would feature textual provisions describing specific types of drone-use zones and outlining the various drone-use restrictions applicable within each type of zone. Such ordinances would likewise feature a separate overlay zoning map that assigns drone-use zoning designations to every parcel within the local jurisdiction's boundaries.

One great benefit of drone-use zoning would be its ability to more effectively coordinate drone uses with land uses across a community. For instance, local planners might opt to designate certain neighborhoods near a community's beachfront, public school buildings, power plants, prison facilities, or other sensitive land uses as "D-1" or "no drone zones," subject to relatively strict drone-use rules. The planners might then designate other specific neighborhoods of the city—such as those having a mix of commercial and residential land

A hypothetical drone-use zoning map (Credit: American Planning Association)



uses—as “D-2” limited-drone-use zones, where somewhat less stringent drone-use rules apply. Still other neighborhoods with predominantly industrial and less-sensitive commercial land uses might then receive a “D-3” drone-use zoning designation and be subject to comparatively permissive drone restrictions.

To avoid violating citizens’ reasonable investment-backed expectations, drone-use ordinances could have lengthy grace periods before taking effect. Upon some future date specified in the ordinance, companies licensed to use drones within the city would then become legally responsible to ensure that their drones obeyed the ordinance’s restrictions. Some commercial drone users, such as aerial real estate photographers seeking to capture drone-assisted photos of a home for sale, would likely comply with such ordinances by simply locating specific properties on the city’s drone-use zoning map and reviewing applicable restrictions prior to launching their drones. Other companies, such as national retailers making deliveries with automated drones,

would more likely use GIS software and geofence technologies to ensure compliance. These innovations could enable drone operators to embed data reflecting a city’s drone use zoning map into delivery drones such that the drones automatically follow the ordinance’s provisions.

It is easy to imagine how cities could adapt various other common features of traditional land-use zoning into local drone-use zoning structures as well. For example, drone-use ordinance provisions might authorize drone users to apply for conditional use permits to conduct certain types of drone activities that are ordinarily not permitted within a specific zone. Other provisions might outline processes through which drone users could seek variances to drone-use zoning restrictions based on showings of undue hardship and minimal resulting harms to others. Today’s well-established legal understandings of how such provisions operate in the land-use context would help to ease their adaptation into drone-use regulatory settings.



*A drone-free zone in Helsinki, Finland
(Credit: [Eric Fischer, Wikimedia](#))*

Unique Potential Features of Drone Zoning Ordinances

Although drone-use restrictions that vary across spatial zones would share many similarities with conventional land-use zoning laws, effective drone-use ordinances would also differ from land-use ordinances in some notable ways. Among other things, the temporary nature of drone activities allows planners to build greater flexibility into drone zoning laws than is possible for land-use zoning. For instance, some cities such as Chicago ([§10-36-400](#)) and Calabasas, California, ([§9-10-030](#)) integrate the dimension of time into their drone-use restrictions by limiting most drone activities to daylight hours. Other municipalities, such as Point Pleasant Beach, New Jersey, take a similar approach and prohibit drone flights over schools only during regular school hours ([§3-50.3](#)). Future drone zoning ordinances could similarly integrate the dimension of time into their restrictions as well. For example, local officials concerned about drone noise disruptions in residential areas might opt to craft ordinance provisions to permit drone operations in a city's D-2 zones only on weekdays between 9:00 a.m. and 6:00 p.m. Likewise, officials hoping to allow real estate photographers and hobbyists sufficient opportunities to use drones even in highly restricted drone-use zones could adopt provisions allowing for a few "open drone use" periods each week or month, such as on Saturday mornings from 10:00 a.m. to noon or on the first Tuesday of each month from 4:00 to 6:00 p.m. Such restrictions and exceptions based on time are obviously not possible in the context of land-use laws, given the generally permanent nature of land development but create interesting new possibilities in the drone-use zoning context.

Another major difference between land-use zoning and drone zoning is that it's technologically possible to inexpensively enforce drone-use zoning laws using GPS-based geofence technologies. DJI and multiple other major drone manufacturers already embed remotely updatable geofence software into their drones to prevent the drones from flying near thousands of specific airports and other protected areas around the world. For instance, a

2015 update to DJI's geofence database after a drone landed in the White House lawn now prevents DJI drones from flying within a 15.5-mile radius of Washington, D.C. (Bi 2015). When drones with geofence software approach geofenced areas, they automatically begin to lose power or are otherwise programmed to be unable to proceed forward into that protected space. Embedding local drone zoning ordinance restrictions into all registered commercial drones and enforcing those restrictions using geofences could greatly simplify enforcement and make the patchwork of drone-use restrictions across communities even less burdensome for commercial drone users.

Like ordinary land-use zoning ordinances, drone-use zoning ordinances could have some unintended consequences unless carefully crafted to avoid them.

Drone Zoning and Social Justice

Like ordinary land-use zoning ordinances, drone-use zoning ordinances could have some unintended consequences unless carefully crafted to avoid them. On the one hand, many common criticisms of modern land-use zoning—such as the potentially adverse impacts of single-family zoning on suburban sprawl, housing affordability, or racial and socioeconomic integration efforts—are less applicable in the drone zoning context because drone zoning has far less influence on where citizens reside. On the other hand, if cities draw their drone zoning maps such that historically underserved or underinvested neighborhoods end up having far more drone overflights, such laws could exacerbate existing disparities and disproportionately harm marginalized residents in those communities.

Fortunately, there are ways to prevent drone-use zoning from contributing to the social injustice challenges facing American cities. Most notably, I've recently advocated for the use of digital platforms and distributed ledger technologies to



About the Author

Troy Rule is a Professor of Law and the Joseph M. Feller Memorial Chair in Law and Sustainability at Arizona State University's Sandra Day O'Connor College of Law. He has published multiple books and dozens of articles on property and land-use law issues.

help landowners temporarily license their low airspace to drone users in exchange for compensation (Rule 2022). Such an approach would empower landowners to determine how often drones fly over their land and would ensure that landowners are compensated for every drone overflight. Federal and state statutes affirming and clarifying the scope of landowners' low airspace rights could help to spur private investment in this promising approach to drone routing, which would greatly reduce the potential social injustices associated with large corporations' growing use of low airspace.

Spurring a Drone Zoning Revolution

For land-use planners intrigued by the possibilities of drone zoning, the time to start acting is now—before major retailers begin traversing our airspace with drone-delivered packages. Although some uncertainty remains regarding the scope of municipalities' power to regulate civilian drone activities, that has not stopped municipal governments throughout the United States from adopting local drone-use ordinances. From Telluride, Colorado ([§10-11](#)), to Orange Beach, Alabama ([§54-41 et seq.](#)), various municipal drone laws are already helping to reduce conflicts between drone operators and subjacent landowners. Citing what they describe as “gaps” in the country's regulatory apparatus, the National Conference of Mayors adopted a resolution in June of 2022 specifically requesting broader formal

authority from the federal government to take local actions to keep drones away from critical infrastructure and certain other land uses. Meanwhile, dozens of municipalities across the country are opting not to wait for official federal permission and are actively developing and adopting local drone-use ordinances of various kinds. Especially in states with no express statutory preemption of such ordinances, local officials should start today to consider possible ways of structuring drone-use regulations for their jurisdictions so that they're better prepared when commercial drone operators inevitably come to town.

Urban planners who personally know the communities where they live and serve have greatly enhanced land-use development across the U.S. over the past century and could do the same for drone uses in the drone era. Applying their training and localized knowledge, these trained and passionate public servants enable cities to grow in more orderly and efficient ways and prevent countless neighbor conflicts by carefully segregating incompatible land uses from each other. As drone technologies are now introducing a new class of potential spatial conflicts, local planners are again well suited to provide the community-level spatial planning needed to govern them. By embracing the important role of local planners in this massive undertaking, commercial drone users and the FAA could help them to hasten the day when hot pizzas and hamburgers hover to American doorsteps without disturbing any other landowners along the way.

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