

NEW SECTION 18-181 – DATA CENTERS

Section 18-181 Data Centers

- A. **Purpose and Intent.** The purpose of this ordinance is to establish a clear and thoughtful regulatory framework for data centers. These regulations are intended to guide the placement and design of data centers to balance local economic growth with the protection of community interests and resources. This is achieved by:
1. Directing data centers to areas with appropriate infrastructure and minimal impact on surrounding properties.
 2. Minimizing adverse effects on residents and adjacent communities, including managing noise from mechanical equipment and generators.
 3. Ensuring the efficient use of public utilities, such as water and electricity.
 4. Promoting a high standard of architectural design and effective visual screening to ensure compatibility with the surrounding context.
 5. Establishing clear expectations for developers to encourage efficient and well-designed development. Establish reasonable standards for the siting, design, and operation of data centers.
 6. Ensuring compatibility with adjacent land uses and the Township's Master Plan.
- B. **Applicability.** Section 18-181 applies to Data Center uses. Prior to a formal submittal, applicants must request a predevelopment meeting with Township Officials, including the planning consultant, engineering consultant, and Township Attorney. At the time of submission, applicants must submit materials including a site plan that contain any information necessary to evaluate conformance with all requirements of this section. Special land use and site plan approval is contingent upon the applicant demonstrating conformance to the requirements of this ordinance and other standards of the zoning ordinance.
- C. **Use Standards.**
1. **Lot and Building Requirements.**
 - a. Minimum Lot Area:
 - i. Large-scale: 10 acres
 - ii. Small-scale: 2 acres
 - b. Maximum Building Height: 45 feet; 3 stories
 - c. Maximum Lot Coverage: 60% (impervious surface)
 - d. Setbacks:
 - i. Large-scale: minimum 200 feet from all property lines.

- ii. Small-scale and accessory: minimum of 50 feet from all property lines.

2. **Screening and Landscaping.**

- a. Mechanical equipment (including HVAC, generators, transformers, and cooling towers) shall be fully screened by masonry walls, architectural panels, or evergreen landscaping.
- b. A minimum 25-foot greenbelt shall be provided along all property lines.

3. **Noise and Vibration.**

- a. Backup generators and cooling equipment shall not exceed 65 dBA at the property line, except during emergency operation.
- b. Routine generator testing shall occur only between 8:00a.m. and 6:00 p.m. on weekdays.

D. **Building Massing, Façade Requirements, and Material Requirements.**

1. **Massing and Scale.**

- a. Building mass, height, bulk, scale, and proportion shall maintain consistency with the existing character of the adjacent buildings.
- b. Building design should employ coordinated massing to produce overall unity, scale, and interest.
- c. Rooflines and pitches shall be proportionate to nearby structures so as to provide transition or mitigation of significant changes to scale.

2. **Architectural Design and Building Materials.**

- a. **Façade Variation.** Wall designs must provide minimum of three of the following elements, in addition to transparency requirements, occurring at intervals no greater than 25 feet horizontally and 10 feet vertically:
 - i. Expression of structural system and infill panels through change in plane not less than three inches.
 - ii. System of horizontal and vertical scaling elements, such as belt course, string courses, cornice, pilasters.
 - iii. System of horizontal and vertical reveals not less than one inch in width/depth.
 - iv. Variations in materials module, pattern, and/or color.
 - v. System of integrated architectural ornamentation.
 - vi. Green screen or planter walls.
 - vii. Translucent, fritted, patterned, or colored glazing.

viii. Transparency as required in Section 18-181.D.2.b.

b. **Transparency.**

- i. To ensure façade variation, the use of windows and doors is required. The first floor of any façade facing a right-of-way shall be no less than 20% clear windows and doors, and the minimum transparency for facades facing a side yard, or parking area shall be no less than 15% of the façade. Ground story transparency is measured between two and eight feet above the ground story elevation. The transparency requirement shall be measured and applied to each separate unit, address or space. Visibility through the required transparency must portray the principal use of the operation and shall not portray secondary or back of house operation areas, including, but not limited to, laundry, cleaning supply, stock or storage areas.
- ii. Windows for building sides shall be concentrated toward the front edge of the building, in locations most visible from an urban open space or public right-of-way.
- iii. Transparency Alternatives. The following alternatives may be used singularly or in combination for any side or rear facing façade which requires transparency. If used in combination, they may count toward no more than 50% of the transparency requirement set forth in Section 18-181.D.2.b.
- iv. Architectural style shall not be restricted. Rather, evaluation of the appearance of a project shall be based upon compatibility and the quality of its design and relationship to surroundings.
- v. Buildings within the same development shall be designed to provide a unified and easily identifiable image. Methods to achieve this include using similar architectural styles and materials, complementary roof forms, signs, and colors.
- vi. Minimize monotony of expansive exterior walls by incorporating the following elements: staggering vertical walls; recessing openings; providing upper-level roof overhangs; using deep score lines at construction joints; contrasting compatible building materials; use of variety and rhythm of window and door openings; use of horizontal and vertical elements; use of horizontal bands of compatible colors; and providing changes in roof shape or roofline.
- vii. Facades shall provide visual interest from both vehicular and pedestrian viewpoints.

- viii. Entrances to individual buildings shall be readily identifiable to visitors through the use of recesses or pop-outs, roof elements, columns, or other architectural elements.
- c. Material Standards.
 - i. Durable building materials, simple configurations, and solid craftsmanship are required. At least 75% of walls visible from public streets, exclusive of wall areas devoted to meeting transparency requirements, shall be constructed of brick, glass, metal (beams, lintels, trim elements, and ornamentation only), wood lap, stucco, split-faced block, or stone. Vinyl or aluminum siding shall only be used for accents. Exterior Insulation Finishing Systems (E.I.F.S.) or similar material is not permitted as a primary building material.
 - ii. Materials shall be selected for suitability to the type of buildings and the architectural design in which they are used.
 - iii. Material selection shall be consistent with architectural style in terms of color, shades, and texture; however, monotony shall be avoided.
 - iv. Materials shall be consistent with adjoining buildings.
 - v. Buildings shall have the same materials or those that are architecturally compatible, for construction of all building walls and other exterior building components wholly or partly visible from public ways and public parking lots.
 - vi. If any design in which the structural frame is exposed to view, the structural materials shall be compatible within themselves and harmonious with their surroundings.
- d. Transitional Features.
 - i. Transitional features are architectural elements, site features, or alterations to building massing that are used to provide a transition between higher-intensity uses and low- or moderate-density residential areas. These features assist in mitigating potential conflicts between these uses. Transitional features are intended to be used in combination with landscape buffers or large setbacks.
 - ii. A continuum of use intensity, where moderate-intensity uses are sited between high-intensity uses and low-intensity uses, shall be developed for multibuilding developments. An example would be an office use between commercial and residential uses.

- iii. Building height and mass in the form of building step-backs, recess lines or other techniques shall be graduated so that structures with higher-intensity uses are comparable in scale with adjacent structures of lower-intensity uses.
- iv. Similarly sized and patterned architectural features, such as windows, doors, arcades, pilasters, cornices, wall offsets, building materials, and other building articulations included on the lower-intensity use shall be incorporated in the transitional features.

E. **Parking Requirements.** Due to the building scale of data centers, parking requirements shall be based on the number of permanent employees housed at the facility. One (1) parking space is required for each employee with a maximum of twenty (20) additional spaces for guests. The Planning Commission may permit deviations from this requirement in accordance with Section 18.246.B.8.

F. **Sustainability and Energy Use Requirements.**

1. **Infrastructure Impact Statement.** Applicants shall submit an Infrastructure Impact Statement at the time of site plan review, which must identify:
 - a. Utility Capacity Impact Statement from DTE/ITC confirming service adequacy.
 - b. Anticipated electric power demand (MW).
 - c. Anticipated water usage for cooling and other operations (gallons per day).
 - d. Waste heat recovery, reuse, or discharge methods.
 - e. Planned on-site backup generation capacity (MW) and associated fuel type(s).
2. **Energy Efficiency.**
 - a. Data Centers must be designed to achieve a Power Usage Effectiveness (PUE) of 1.3 or lower or provide documentation demonstrating the highest level of efficiency reasonably achievable based on site-specific constraints.
 - b. Facilities shall incorporate best practices for energy conservation, including but not limited to high-efficiency HVAC systems, waste heat reuse, variable-speed drives, and hold/cold aisle containment.
 - c. Applicant shall provide an operations report detailing anticipated power demand and redundancy systems.
 - d. Applicant shall provide a heat recovery or reuse feasibility analysis (waste heat for district energy).

3. **Renewable Energy Integration.**

- a. Applicants are encouraged to incorporate on-site renewable energy generation (e.g., solar, wind, geothermal) or to procure renewable energy from off-site sources.
- b. At least 25% of projected annual energy demand shall be demonstrated to be met through renewable energy sources, whether on-site or through power purchase agreements, renewable energy credits, or utility green-power programs.

4. **Water Conservation.**

- a. Cooling systems shall be designed to minimize potable water use, with preference from air-cooled, hybrid, or closed-loop water systems.
- b. Facilities using water-based cooling must demonstrate the use of recycled, reclaimed, or non-potable water sources to the maximum extent possible.

5. **Green Building Practices.**

- a. New data center structures shall be designed to achieve LEED Silver certification or an equivalent third-party sustainability certification or provide documentation of equivalent performance standards.
- b. The Planning Commission may approve alternative documentation demonstrating substantially similar environmental performance.

6. **Air Quality.**

- a. All generators, cooling systems, and other emission sources shall comply with Federal Clean Air Act requirements and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) air quality rules.
- b. Facilities shall obtain and maintain any required air use permit to install (PTI) or other approvals from EGLE for stationary engines, cooling towers, or fuel storage.
- c. Generator emissions.
 - i. Generators shall meet or exceed current EPA Tier 4 Final emissions standards.
 - ii. Dispersion modeling may be required if a facility is within 500 feet of a residential district, school, park, or hospital.
- d. Cooling towers shall include drift eliminators and be managed to prevent particulate emissions or microbial contamination.
- e. Routine generator testing shall occur only between 8:00a.m. and 6:00 p.m. on weekdays.

- f. Applicants shall submit an annual statement to the Township confirming compliance with EGLE permits and reporting actual operating/testing hours of backup generators.

7. **Ongoing Reporting.**

- a. Owners and operators shall provide an annual sustainability report to the Township, including:
 - i. Actual annual energy consumption (MWh).
 - ii. Actual annual water usage (gallons).
 - iii. Actual water discharge (gallons).
 - iv. Progress toward renewable energy targets.
 - v. Documentation of any energy efficiency, cooling system upgrades, and security upgrades.
 - vi. Identification of greenhouse gas emissions or carbon intensity of energy consumed.
- b. The Township may hire consultants to review energy efficiency, water consumption usage, air quality review, renewable energy implementation, and green building practices.

G. **Security and Emergency Access.** Data centers shall be designed and operated to protect the facility, surrounding community, and public safety resources.

1. **Perimeter Security.**

- a. Data centers shall be fully enclosed with a perimeter security system, which shall include fencing, walls, or equivalent barriers not less than eight feet in height or such other systems approved by the Planning Commission.
- b. Security barriers shall be designed to balance safety with community character; opaque fencing must be screened with landscaping where visible from public roads or residential areas.

2. **Controlled Access.**

- a. All site entrances shall include controlled access gates, guard stations, or equivalent security technology to prevent unauthorized entry.
- b. Visitor and delivery access points must be separated from employee access points wherever feasible.

3. **Emergency Access.**

- a. A minimum of two points of emergency vehicle access shall be provided, with clear signage and unobstructed pathways around the building.

- b. Access drives shall be constructed to fire development standards, with sufficient load-bearing capacity for emergency apparatus.
- c. Fire lanes shall be maintained free of obstruction at all times.

4. **Camera Surveillance.**

- a. Data centers shall install and maintain a perimeter camera surveillance system capable of monitoring all vehicular and pedestrian access points, building entrances, and outdoor mechanical/equipment areas.
- b. Cameras shall be positioned to minimize intrusion into adjoining residential properties and public rights-of-way, while still providing full coverage of the site.
- c. Camera systems shall be continuously operational (24 hours per day, 7 days per week) and recordings shall be retained for a minimum of 30 days.
- d. A security plan, including camera layout, monitoring procedures, and data retention policies, shall be submitted as part of site plan review.

5. **Fire Protection and Suppression.**

- a. Data centers shall be equipped with an automatic fire detection and suppression system designed to protect both building occupants and sensitive equipment.
- b. Suppression systems shall comply with National Fire Protection Association (NFPA) standards and be approved by the Fire Marshal.

6. **Hazardous Materials Management.**

- a. Any use of hazardous materials (including fuels for backup generators, batteries, and chemicals for cooling systems) shall comply with federal, state, and local storage, reporting, and disposal requirements.
- b. Applicant shall provide a Hazardous Materials Management Plan identifying on-site materials, storage methods, spill prevention measures, and emergency response procedures.
- c. Applicant shall provide fire protection plan.

7. **Emergency Response Coordination.**

- a. Applicant shall submit an Emergency Response Plan to the Township at the time of site plan review, which must include:
 - i. Site layout for emergency responders.
 - ii. Fire suppression and alarm systems description.
 - iii. Backup generator location and fuel storage details.

- iv. Contact information for on-site security and facility management.
 - b. Operators shall provide annual training opportunities or site orientations to local fire, police, and emergency medical services.
- 8. **Lighting and Surveillance.**
 - a. Security lighting shall comply with Section 18-265, Lighting and shall be directed downward and shielded to minimize glare and off-site impacts.
 - b. Facilities shall incorporate continuous video surveillance of access points, perimeter fencing, and locating areas, with recordings maintained for a minimum of 30 days.
- H. **Decommissioning.** As a condition of site plan and special use approval, the applicant shall submit Decommissioning and Site Restorage Plan that addresses:
 - 1. **Triggers for Decommissioning.**
 - a. A data center shall be considered abandoned if it ceases operations for a period of 12 consecutive months, unless the owner provides evidence of intent to resume operations.
 - b. Decommissioning must begin within 6 months of abandonment and be completed within 12 months.
 - 2. **Performance Guarantee / Financial Assurance.**
 - a. Prior to issuance of a building permit, the applicant shall post a financial guarantee in the form of a letter of credit, bond, or escrow account acceptable to the Township.
 - b. The amount shall equal 125% of the estimated decommissioning cost, as determined by a qualified engineer and approved by the Township.
 - c. Estimates must be updated every 5 years and adjusted for inflation.
 - 3. **Removal Standards.**
 - a. All above-ground structures, including buildings, mechanical equipment, cooling towers, security fencing, and pavement not otherwise serving a reuse, shall be removed.
 - b. Below-ground infrastructure, such as foundations and utilities, shall be removed to a minimum depth of 36 inches below grade unless otherwise approved.
 - c. Materials shall be recycled to the maximum extent practicable.
 - 4. **Site Restoration.**

- a. The site shall be restored with topsoil, seeded or planted with native vegetation and stabilized to prevent erosion.
- b. The Township may approve alternate restorage plants if the site is proposed for redevelopment consistent with the Master Plan and zoning ordinance.

5. Failure to Decommission.

- a. If the owner fails to complete decommissioning in accordance with the approved plan, the Township may draw upon the financial guarantee to complete the work.
- b. Any costs exceeding the financial guarantee shall remain the responsibility of the property owner.

MODIFICATION TO OTHER ORDINANCE SECTIONS

Section 18-22, Definitions (NEW)

Data Center: A facility primarily used to house computer systems and associated components, including servers, telecommunications, storage systems backup power supplies, redundant data communications connections, and environmental controls.

Data Center, Accessory: Accessory use to hospitals, universities, or large institutions, provided floor area is under 10,000 square feet.

Data Center, Large-Scale: A data center facility exceeding 25,000 square feet of gross floor area or a site exceeding 10 acres.

Data Center, Small-Scale: A data center facility less than 25,000 square feet, often serving local or regional networks.

Section 18-68, District Use Table

- Allow small-scale and large-scale data centers as a special land use in the Industrial zoning district, prohibited in all other districts.
- Allow accessory data centers as an accessory use to an approved permitted use in the Industrial, Commercial and Mixed-Use districts.