

APPENDIX D – THOMAS TOWNSHIP GREAT LAKES TECH PARK OVERLAY ZONE

10-22-1: **INTENT:** Advances in manufacturing and technology have created uses which are related to industry and office uses, but may not be appropriate or function adequately in a typical manufacturing or office zoning district. These uses have been identified as high tech, technology that involves highly advanced or specialized systems or devices and uses. The purpose of the Solar Technology/Renewable Energy Overlay Zone is to provide an environment where high tech uses and functions such as engineering, design, research and development, manufacturing photonics/optics, computer assisted design, robotics, numerical control equipment, prototype development and limited manufacturing, biotechnology, lasers, medical research, materials testing, telecommunications and related storage and assembly operations associated with principal permitted uses can be located.

The Great Lakes Tech Park Overlay Zone is intended to be developed in a campus-type environment with generous landscaping and attractive buildings where permitted uses will not negatively impact the surrounding area.

10-22-2: **APPLICABILITY:** The standards of this Section shall apply to all lands illustrated as the Solar Technology/Renewable Energy Overlay Zone. The regulations herein apply in addition to and simultaneously with the other applicable regulations of the zoning ordinance. Permitted and special land uses with the Solar Technology/Renewable Energy Overlay Zone shall be as regulated in the underlying zoning district (as designated on the zoning map) and shall meet all the applicable requirements for that district.

10-22-3: **USES PERMITTED BY RIGHT:** All uses in the Solar Technology/Renewable Energy Overlay Zone shall be subject to the site plan requirements as set forth in Section 10-2-12. The following are the principal permitted uses by right within the Solar Technology/Renewable Energy Overlay Zone:

1. Laboratories, offices and other facilities for basic and applied research, experimentation, testing, product design, technology development, consulting and business development particularly related to solar technology.
2. Business schools and training facilities.
3. Office buildings providing for uses such as corporate offices in accordance with the purpose of this district.
4. Data processing and computer centers, including service and maintenance of electronic data processing equipment.
5. Any use charged with the principal function of research in the area of solar energy, photonics/optics, robotics and electronic equipment.
6. A high technology service use, which has as its principal function the providing of services including computer information transfer, communications, distribution, management, processing, administrative, laboratory, experimental, developmental, technical or testing services.

APPENDIX D – THOMAS TOWNSHIP GREAT LAKES TECH PARK OVERLAY ZONE

- a. A high technology manufacturing use, which has as its principal function light manufacturing, assembly, fabrication or machining from process materials. Such uses shall include but are not limited to solar technology, agricultural technology, biological or pharmaceutical research, software technology, telecommunications, biomedical technology, fluid transfer and handling technology, defense and aerospace technologies or other technology oriented or emerging industrial or business activity. Permitted high technology uses shall not include heavy manufacturing, heavy stamping operations or any manufacturing from raw unprocessed materials.
- b. Research, development, engineering, design, assembly, fabrication and limited light manufacturing of high-tech equipment including equipment involved in high tech industrial activity, instrumentation or associated computer software.
7. Engine project research, fluid transfer and handling product research, development, engineering, design, testing, assembly, production and related office, sales and administrative uses.
8. Manufacturing and assembly operations which operate within a wholly enclosed building. Manufacturing shall not include heavy manufacturing, heavy stamping operations or any manufacturing from raw or unprocessed materials.
9. Accessory structures and uses customarily incidental to the above permitted uses.
10. Parks.
11. Motels and hotels in accordance with the requirements as follows:
 - a. Minimum floor area of two hundred fifty (250) square feet per guest unit shall be provided.
 - b. Minimum lot width of one hundred fifty (150') feet and a minimum of four hundred (400) square feet of lot area for each guest unit.
 - c. Maximum lot coverage including all buildings, both principal and accessory, shall be forty (40%) percent.

10-22-4: **USES PERMITTED BY SPECIAL LAND USE PERMIT:** The following uses may be permitted in the Solar Technology/Renewable Energy Overlay Zone; however, they shall be treated as special land uses subject to approval by the Planning Commission in accordance with the additional requirements of Chapter 25, Special Land Use Permit Requirements, and subject to the public hearing requirements set forth and regulated in Section 10-25-2.

1. Medical offices, clinics research, and medical supply facilities, including auxiliary or accessory laboratories. Such uses may include sports medicine, medical wellness, physical therapy, physical medicine and similar facilities. Substance abuse (drugs and alcohol) treatment facilities and facilities principally for emergency services or that provide twenty-four (24) hour services shall not be permitted.
2. Publicly owned and operated buildings and facilities, such as fire stations.
3. Fitness centers, health spas and racquetball clubs.
4. Wireless communication facilities, subject to the conditions of Section 10-2-13.



APPENDIX D – THOMAS TOWNSHIP GREAT LAKES TECH PARK OVERLAY ZONE

10-22-5: **DEVELOPMENT REQUIREMENTS:** All principal permitted uses and special land uses shall comply with all applicable provisions of the Zoning Ordinance, including but not limited to the following:

1. Minimum Lot Size:
 - a. Each lot shall contain a minimum of forty three thousand, five hundred and sixty (43,560) square feet.
 - b. Each lot shall be a minimum width at the front building line corresponding with the underlying zoning district.
2. Minimum Yard Requirements:
 - a. Each lot shall have a minimum front yard of forty (40') feet.
 - b. Each lot shall have a total side yard of forty (40') feet for each side yard and street side yard.
 - c. Each lot shall have a minimum rear yard of forty (40') feet.
3. Maximum Building Height: The maximum building height shall be forty five (45') feet when the minimum yard requirements on all sides are met. For every additional ten (10') feet of side and rear yard added, the maximum building height may increase by twelve (12') feet.
4. General Parking Guidelines:
 - a. All parking shall be located to the rear of the building. The Planning Commission shall have the authority to designate the front of the building when located on multiple road fronts and limit parking at their discretion along the side yards. In addition, the Planning Commission shall have the authority to review and approve limited parking in the front yard not to exceed five (5%) percent of the total parking area.
 - b. All parking shall comply with Chapter 3, General Off-Street Parking and Loading.
5. Landscaping: Landscaping shall be provided along and against buildings to anchor it to the surrounding environment and soften the structure and must follow the regulations within Section 10-2-2-O of the Zoning Ordinance.
 - a. Trees shall be used throughout paved areas and along pedestrian pathways. Trees shall be so selected and planted to provide a mix of canopy and ornamental trees.
6. Buffer Zone Guidelines:
 - a. When a Great Lakes Tech Park Overlay Zone is developed adjacent to a residentially zoned parcel or a parcel used for residential under five (5) acres in size, the buffer zone between them must meet the standards as required between an R-1 zone and B-3 zone found in Section 10-2-2(P)(3)(d)(8)
7. Uses in this district are required to meet the following site development standards to ensure that this unique district develops consistent with the community's vision of a new business zone and to ensure the compatibility of the variety of uses within the district.
 - a. Building Materials: All structures visible from public roadways shall be constructed of exterior materials approved by the Planning Commission. While no specific or particular architectural aesthetic style is required for any structure, high quality, innovative and imaginative architecture is encouraged. All new buildings must contain a minimum of 50% brick fascia or be of an acceptable design as approved by the Planning Commission on the front of the building.
 - (i) All buildings shall be compatible in scale, mass and form with adjacent structures and the pattern of the surrounding area.

- (ii) Efforts to coordinate the actual and apparent height of adjacent structures are encouraged. This is especially applicable where buildings are located very close to each other. In terms of design, differing heights can often be made more compatible through placement of windows, belt courses and other horizontal elements that reflect similar elements on neighboring properties including rooflines and roof pitches.



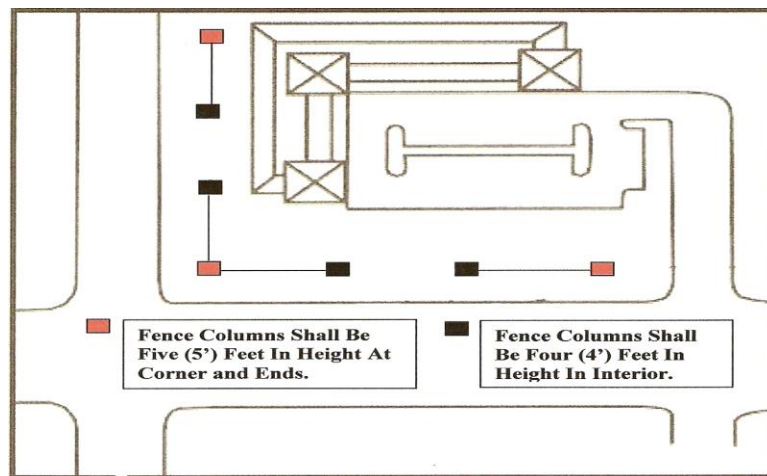
- (iii) Rear and side facades, if visible from public streets or neighboring properties, shall be carefully designed with similar detailing and should be compatible with the principal facades of the building. All elevations of the building will be evaluated during review.
 - (iv) Building frontages shall be designed with large non-reflective minimally tinted window openings at ground level.
 - (v) Variations in rooflines shall be encouraged to reduce the massive scale of the structure and add visual interest. Roofs should attempt to include two of the following features: Parapets concealing flat roofs and roof top equipment, overhanging eaves, sloped roofs and three or more roof surfaces.
- b. **Building Orientation:** Buildings shall front towards and have their primary pedestrian entrance facing onto a public street or onto a major internal drive. Walls facing a public street shall have windows and architectural features commonly associated with the front façade of a building, such as awnings, cornice work, edge detailing or other decorative finish materials.
 - c. **Utilities:** All exterior on-site utilities, including but not limited to sewers, gas lines, water lines and electrical, telephone and communications wires and equipment will be installed and maintained underground. Developers should work with utility companies to plan the most appropriate and unobtrusive location for utility boxes and other necessary utility installations. An architectural screen similar to the building shall screen all utility installations. If this is not possible, the utility installation shall be screened through landscaping.
 - d. **Greenbelt:** A twenty (20') foot wide greenbelt shall be planted along each public street right-of-way including the equivalent of one (1) canopy tree for every forty (40) linear feet of frontage. All greenbelt trees shall be uniformly spaced to create a tree lined corridor. The remaining greenbelt shall include only living materials with the exception of permitted driveways, sidewalks, signs and utilities.

- e. Driveways: All access shall comply with the principles of the Michigan Department of Transportation Access Management Guidebook. Driveways shall be located so as to minimize interference with the free movement of traffic and to provide adequate site distance. Large development projects may be required to provide a traffic study showing traffic patterns, number of generated trips, etc.
 - (i) Number of Commercial Driveways – The number of commercial driveways shall be a minimum necessary to provide reasonable access for regular traffic and emergency vehicles, while preserving traffic operations and safety along the public roadway. A single means of direct or indirect access shall be provided for each separately owned parcel. Where possible, this access shall be via a shared driveway or a service drive.
 - (ii) Spacing Between Driveways – The minimum spacing between two (2) commercial driveways on the same side of the road shall be one hundred and fifty (150') feet.
 - (iii) Offsets - To reduce left-turn conflicts, driveways should be aligned with driveways or streets on the opposite side of the roadway where possible.
- f. Facility Lighting: Building-mounted light fixtures shall be in proportion to the structure and area intended to be illuminated by the fixture. Free standing pole fixtures shall not exceed twelve (12') feet. Lighting and light fixtures shall coordinate with the other site elements, with the architecture of the building and with the lighting of surrounding developments and public spaces. All light fixtures shall be screened from all adjacent parcels.
- g. Roadway/Street Lighting: The developer is required to install street lighting along all public and internal access roadways per Thomas Township specifications. Developers must contact the Community Development Department for approved street lighting specifications prior to the installation of any roadway street lighting.
- h. Outdoor Storage: Outdoor storage shall be attractively secluded from public view through the creative use of berms, fencing, landscaping, building screening, etc.
- i. Service Area and Appurtenance:
 - (i) Screen all rooftop mechanical and communications equipment from public view from adjacent streets and adjoining developments. Rooftop screening shall be integrated into the architecture of the building in terms of materials and details.
 - (ii) Screen service area and loading docks that are visible from streets, parking areas and adjoining development with berms, plantings, structures or fences.
 - (iii) Site noise generating features such as generators, compactors and loudspeakers shall not exceed 60 decibels (dB) as measured from the surrounding property lines and shall be directed away from neighboring properties. The use of noise barriers or other means of reducing the impact is strongly encouraged.
 - (iv) Garbage collection areas shall be located at the rear of the buildings and shall be enclosed by opaque material on all four sides. The screen materials shall match the materials on the building.
- j. Storm Water Detention/Retention: Storm water detention and/or retention shall be integrated into the site and addressed as a site feature and amenity as opposed to merely an infrastructure necessity. Drainage systems, when pertaining to retention or detention, will be installed above ground but should be well planned, attractive and integrated into the site. Retention and detention areas do not require fencing.

k. Public Streetscape:

- (i) Sidewalks, Pedestrian Pathways, Crosswalks: The developer shall create a complete pedestrian pathway system within a site linking all buildings, parking areas and green spaces. The design shall ensure that this network connects to any nearby public pedestrian pathways and public amenities to adjacent land uses. Public sidewalks must be installed along all public and private road frontages. The developer shall provide crosswalks at intersections, at points of vehicular access and in front of building entrances. Crosswalks shall be designed with new paving material that will be compatible with the character of the area. Cobble stones, scored concrete with broom finish, colored, exposed aggregate concrete and brick or unit pavers are examples of appropriate materials. Large expanses of bright white or gray concrete surfaces shall be avoided.
- (ii) Street trees and landscaping shall be designed and maintained to enhance pedestrian access and levels of comfort.
- (iii) All developments will install, at key locations (at the corners of the property or at major entrances or in at least four (4) locations for every two hundred (200') feet of lineal frontage) stone columns and simulated wrought iron fencing with the following standards:
 - a. A maximum of thirty-two (32') feet length of simulated black wrought iron fence will be installed between each brick column.
 - b. All fences will be between thirty-two (32") inches and thirty-six (36") inches in height.
 - c. Stone columns will be twenty-four (24") inches by twenty-four (24") inches in width with a twenty-seven (27") inch by twenty-seven (27") inch in width limestone cap. The overall height of the column will be as follows:
 - i. At the corner where two streets, service drives or property lines intersect including where driveways enter or exit the property, the column will be five (5') feet in height.
 - ii. All remaining interior columns will be four (4') feet in height.

Exhibit 1



- d. The stone color of the columns (see exhibit 2) will match existing columns as determined by the Community Development Department.

Exhibit 2



- e. All fences will be located between four (4') feet and eight (8') feet behind the sidewalk or pathway or match the fence on adjoining properties as determined by the Community Development Department. Location of proposed fencing must be staked and approved by the Community Development Department prior to the installation of any columns/fencing.
- f. A minimum of one section of fence is required in each required direction from the corner column. In no case will sections of fence be separated from each other by more than thirty-two (32') feet.
- l. Signs: Because of the distinctiveness of the businesses locating within the Solar Technology/Renewable Energy Overlay Zone, specific identity and direction markers (signs) are necessary. Thomas Township has a substantial governmental interest in achieving the following objectives and has narrowly drawn these regulations to be the least extensive means to achieve them:
 - (i) Types of Restrictions: This section of the overlay zone regulates such things as identity and directional marker sign size, height, placement, illumination and structural components.
 - (ii) Public Safety: The regulations are intended to improve public safety by minimizing the visual obstructions, distractions and traffic hazards caused by identity and directional marker signs.
 - (iii) Aesthetics: The regulations address the aesthetic purpose of avoiding visual clutter, thus furthering the objective of protecting property values and improving public safety.
 - (iv) Balance: The regulations attempt to balance the public's need to identify locations of public and private facilities with:
 - a. The needs of businesses to attract customers and create awareness of products.

APPENDIX D – THOMAS TOWNSHIP GREAT LAKES TECH PARK OVERLAY ZONE

- b. The limitations of human ability to deal with information especially while driving a motor vehicle.
- c. The constitutional objective to preserve freedom of speech.

Any business location within the overlay zone whose site was developed utilizing the overlay zone standards shall refer to the sign ordinance regulations for Limited Manufacturing Districts section 13-1-3 to establish wall, pole or ground sign standards.

Identity Signs: In order to identify campus locations or groups of multiple businesses, two (2) ground or pole signs totaling fifty (50) square feet in area shall be permitted at every entrance. All such signs shall be setback from the road right-of-way ten (10') feet. If located within the center of a road on a median, it may be located within the road right-of-way. This will require approval from the Saginaw County Road Commission.

Directional Marker Signs: In order to direct traffic to a specific area or in a specific direction, two (2) ground or pole signs totaling fifty (50) square feet in area each shall be permitted. All such signs shall be setback from the road right-of-way ten (10') feet.

APPENDIX D – THOMAS TOWNSHIP GREAT LAKES TECH PARK OVERLAY ZONE

Thomas Township Great Lakes Tech Park Overlay Zone Map (Northwest Corner of Gratiot and North Graham Roads)

