

3.0 Zoning Districts

3.1 ZONING DISTRICTS ESTABLISHED

For the purpose of this Ordinance, the Township of Grand Blanc is hereby divided into the districts listed below.

21. TVP Tech Village Park

22. TVC Tech Village Center

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2 Definitions

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Article 3.0 Zoning Districts

- 3.1.21 TP Technology Park
- 3.1.22 TVC Tech Village Center

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A. INTENT, DEVELOPMENT AGREEMENT & REGULATING PLAN

- i. **Intent:** The Technology Park (TP) District is established in accordance with the 2012 Grand Blanc Township Master Plan to encourage and accommodate the continued growth and development of technology, medical, and manufacturing businesses that serve as economic drivers for Grand Blanc Township, Genesee County and the larger region. Together with the adjacent Technology Village Center (TVC), the TP district provides a unique area for a mix of employment, housing, and commerce that taps into existing technology, medical, and manufacturing businesses, as well as local institutions of higher learning.

The TP district shall support its workforce through access to open space and amenities that encourage walking, biking, and transit, as it becomes available. The district will feature a multi-use pathway system that connects uses within the TP district, the adjacent TVC district, and other destinations in Grand Blanc Township, the City of Grand Blanc, and the region.

To create a sense of place that attracts young adults educated in knowledge economy and high tech jobs, high-quality architectural design and natural materials that visually and physically connect to the natural environment are intended. Landscaping elements should be integrated into site design to provide walkable connectivity with the adjoining TVC district. High-quality site design and improvements will integrate energy efficient and environmentally sound (green) principles and practices. Development within this district shall include the following additional components:

- a. **Research Park Uses.** The district will provide an open, campus-like setting for medical, manufacturing, business, and scientific research and development. It will be an incubator for high-tech and medical businesses, and educational institutions. Production will be limited to research, development or evaluation of the merits of products, plans, or designs. The district is intended to accommodate research facilities, pilot plants, prototype production and other manufacturing operations that require the continual or recurrent application of research knowledge and activity as an integral part of the manufacturing process. The district will also accommodate a broad range of compatible business uses that can appropriately share infrastructure, parking, and other amenities with technology and research campus developments.
- b. **Housing.** This district will contain high-quality, unique housing in the form of townhomes or other attached or clustered single-family residential units. Live-work units are also encouraged. A variety of housing sizes to accommodate residents of all ages and abilities are desired, from one-bedroom units in the central portion of the district to larger 2-3 bedroom units at the edges.
- c. **Transportation.** This district will include a transportation network that supports motorized and non-motorized travel in and around the Technology Park, between the TP district and the TVC district, and to the surrounding township; accommodations will be made for electric vehicles, autonomous vehicles, bicycle and pedestrian facilities, and integration with mass transit.
- d. **Parking.** Compact development where parking is shared between uses is envisioned, minimizing the amount of land devoted to pavement. Bicycle parking should also be accommodated in safe, convenient, and accessible areas. Car and bicycle sharing are also encouraged. Electric vehicle charging stations are encouraged.
- e. **Placemaking.** The TP district will be unique due to its integration with the natural environment. Building design and materials will be harmonious with the woodlands, wetlands, and topography found in this area. Pathways, boardwalks, and overlooks will provide opportunities for the workforce and visitors to appreciate nature. The public realm will be framed not only by buildings, streets, and sidewalks, but also by the surrounding environment. The resulting spaces will be safe, comfortable and attractive to pedestrians. Civic spaces such as concert lawns, pavilions, or parks may also be incorporated into the district.
- f. **Sustainability.** As in the adjacent TVC district, development in the TP district will rely on mitigating stormwater runoff through bioretention systems such as rain gardens and bioswales, and alleviating concentration of runoff through the use of permeable pavement. Landscaping with native plants,



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green roofs, living walls, and the incorporation of alternative energy systems, such as solar collectors or geothermal heat pumps into building and site designs, will reinforce the unique natural character of this district. Pursuit of Leadership in Energy and Environmental Design (LEED) certification for individual buildings, and potentially of LEED-ND (LEED-Neighborhood Development) certification for coordinated development, is strongly encouraged.

- g. **Technology.** Given the name of the district, technology is expected to be both visible as well as invisible and should be incorporated into all aspects of building and site design; educational, experiential, and experimental activities relating to technology are encouraged. The Grand Blanc Township Technology Village Master Plan/Framework Study (December 2016) shall be a guiding document for development in this district.
- ii. **Development Agreement.** A Planned Unit Development (PUD) is strongly encouraged for development within this district, following the process outlined in Section 3.1.19. If that process is not utilized, a development agreement shall be provided and is subject to approval by the Township Board as part of the site plan.
- iii. **Regulating Plan.** There will be two types of roads in the TP district: A primary street that functions as the main street and secondary roads that support internal circulation, based on the Grand Blanc Township Technology Village Illustrative Plan dated November 2016.

**Regulating Plan**

In the image to the left, which shows the conceptual plan for the TP district taken from the Tech Village Master Plan, the red street is the primary street, while the purple street is the secondary street.

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User Note: For uses listed in **bold blue**, refer to Article 4, or click on use, for use-specific standards

B. PRINCIPAL PERMITTED USES

- i. Any use with the principal function of conducting research, design, testing and pilot or experimental product development, including model fabrication and prototyping
- ii. Computer services and data processing centers
- iii. Professional or administrative offices
- iv. Medical offices and research facilities including auxiliary or accessory laboratories
- v. Parks and trails
- vi. Shared production facilities for artisans, including kilns, glass-making facilities and similar facilities
- vii. Single family dwellings, attached or clustered
- viii. Multi-family dwellings
- ix. Restaurants, sit down or carry-out; no drive-through service
- x. Live/work units - galleries and showrooms permitted on the ground floor
- xi. Artisan or craft workshops
- xii. Colleges, universities, and vocational or technical education facilities
- xiii. Open space/nature preserve
- xiv. Business support services
- xv. Day Care Center
- xvi. Hotels
- xvii. Banks, credit unions, savings and loan associations, investment companies, brokerage firms and similar financial institutions, including automatic teller machines as a principal or accessory use, with up to two (2) drive through windows or tellers (including any exterior automatic tellers) § 4.19
- xviii. **Wind energy systems, building-mounted** § 4.76
- xix. Solar energy systems, building-mounted
- xx. Solar energy systems, ground-mounted (small and medium), including panels mounted over parking spaces
- xxi. **Wireless telecommunications equipment, concealed** § 4.75
- xxii. **Parking structures** § 3.1.21.G.viii
- xxiii. **Accessory uses** § 4.1 & § 4.2, **buildings and structures** § 5.2 customarily incidental to any above permitted uses, as defined in Article 2, Definitions and meeting the standards described in Article 3, General Provisions xvii.

C. SPECIAL LAND USES

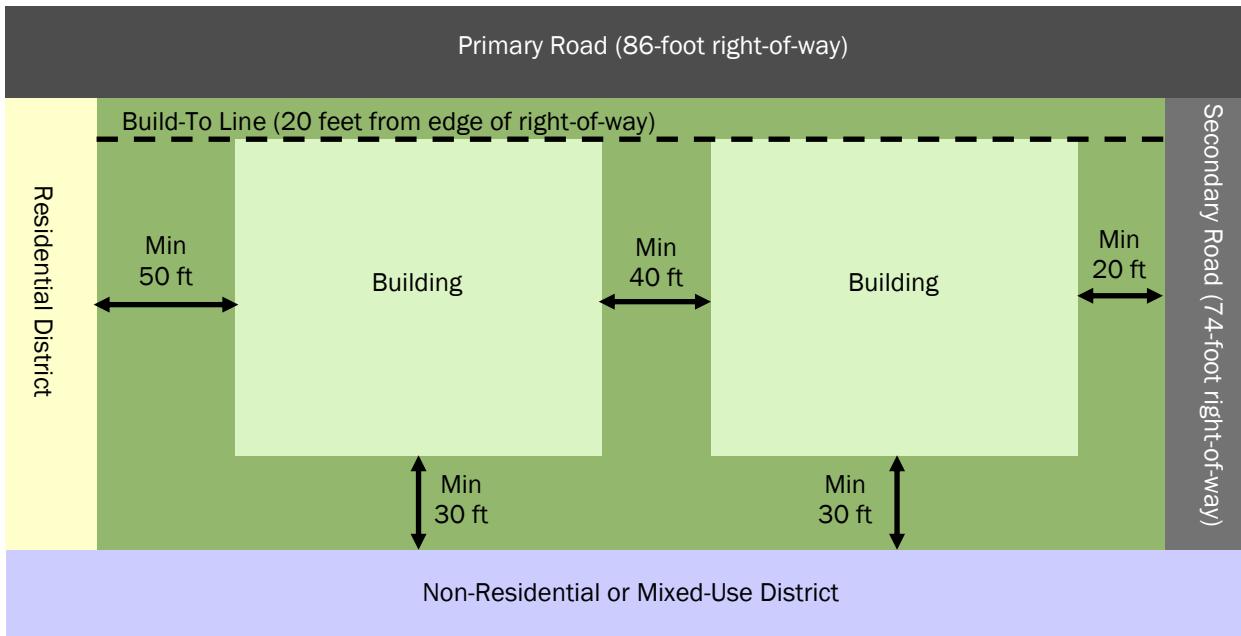
- i. Manufacturing and production, technological
- ii. **Accessory storage of hazardous materials** § 4.4
- iii. **Accessory manufacturing operations** § 4.5
- iv. **Wireless telecommunications towers** § 4.75
- v. **Wind energy systems, freestanding** § 4.76
- vi. Uses of the same nature or class as uses listed in this district as either a Principal Use Permitted or a Special Land Use, but not listed elsewhere in this Zoning Ordinance § 4.65
- vii. **Accessory uses**, § 4.2, **buildings and structures** § 5.2 customarily incidental to any above permitted uses



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D. DEVELOPMENT STANDARDS



a. Building Placement and Form

Front Yard Build-to Line (distance from the property line): Primary Street Frontage

Build-To Line (BTL): all primary street frontage	20 ft*	
Primary street frontage: percent of building constructed to BTL	50% min	

Setback (minimum distance from the property line): Secondary Street Frontage

Front yard minimum setback from edge of right-of-way	20 ft	
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Other Setbacks (minimum distance from the property line)

Minimum distance between any two buildings within TP district	40 ft**	
Minimum distance from any residential district	100 ft	
Minimum distance from I-75 right-of-way	35 ft	
Minimum distance to any non-residential or mixed-use district	50 ft	

Lot Coverage

Maximum building coverage	35%	
Maximum impervious surface coverage	60%	

* BTL may be further than 20 feet from right-of-way if the area between the building and right-of-way is occupied by a private or public park that is accessible to the public. Where multiple buildings share a zoning lot, the front yard setback shall not apply to backage buildings if one or more buildings on the same lot meet the front yard BTL and primary street frontage requirements.

** The distance between attached single family or live/work units may be less than 40 feet where one group of units is separated from another by a paseo at least 20 feet in width that is integral to the design of the units.



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E. MINIMUM DEVELOPMENT SIZE AND MINIMUM LOT SIZE

- i. Minimum Development Size. In order to qualify for development, a unified development plan shall be submitted as a Planned Unit Development or Site Plan with Development Agreement. The minimum area for a unified development plan shall be 100 acres. This unified development plan shall show a coordinated development plan for a minimum of 100 acres that reflects site circulation, building envelopes, parking fields, pedestrian and non-motorized circulation, buffer areas, and all other information required for the approval mechanism that is being requested (PUD or Site Plan with Development Agreement). If proposed as a Site Plan, the Township may defer detailed site plan information until individual phases are developed provided a phasing plan is approved as part of the Development Agreement. The entire 100-acre minimum area shall be under one owner or under more than one owner working as a coordinated master developer under one unified development plan.
- ii. Minimum Lot Size. Once a unified development plan has been approved by the Township, the minimum lot size requirement shall be five acres. Any development of a lot that is part of a unified development plan shall occur in compliance with the unified development plan.

F. BUILDING HEIGHT AND APPEARANCE STANDARDS

i. Building Height Regulations

Building height maximum (within 600 ft of I-75 right-of-way)	75 ft
Building height maximum (600 feet from I-75 or greater)	40 ft
Accessory building maximum height	15 ft

- ii. Appearance Standards. To ensure high-quality building design that creates a unique sense of place within the district and respects the district's natural setting, all buildings constructed in the TP district shall meet the following design standards:
 - a. All building façades shall be finished with high-quality, durable materials, such as brick, stone, metal, glass, wood, and cementitious cladding, that reflect the natural setting of the building.
 - b. No greater than ten percent of any façade shall be comprised of concrete masonry units. This limit shall not apply to split-faced units, half-high split-faced units, half-high integrally colored units to resemble brick, and similar units, as determined by the Planning Commission.
 - c. No greater than five percent of any façade shall be comprised of EIFS or similar exterior insulation paneling. In no case shall EIFS be used on the ground floor façade of any building.
 - d. All buildings shall have a clearly defined principal entrance.
 - e. A minimum of 30 percent on each façade shall consist of glazing.
 - f. Buildings shall be vertically and horizontally articulated so as to avoid large, flat expanses of featureless wall.
 - g. Accessory structures shall be architecturally compatible with the principal structure.
 - h. Green roofs, green walls, and other features that manage stormwater and converse with the building's natural setting are encouraged.
 - i. The development of buildings that meet the requirements for LEED and, where applicable, Green Garage certification by the United States Green Building Council is strongly encouraged.
 - j. No garages or accessory buildings shall face a primary street or internal street within a residential development. This shall not apply to residential alleys, backage roads, or service streets.

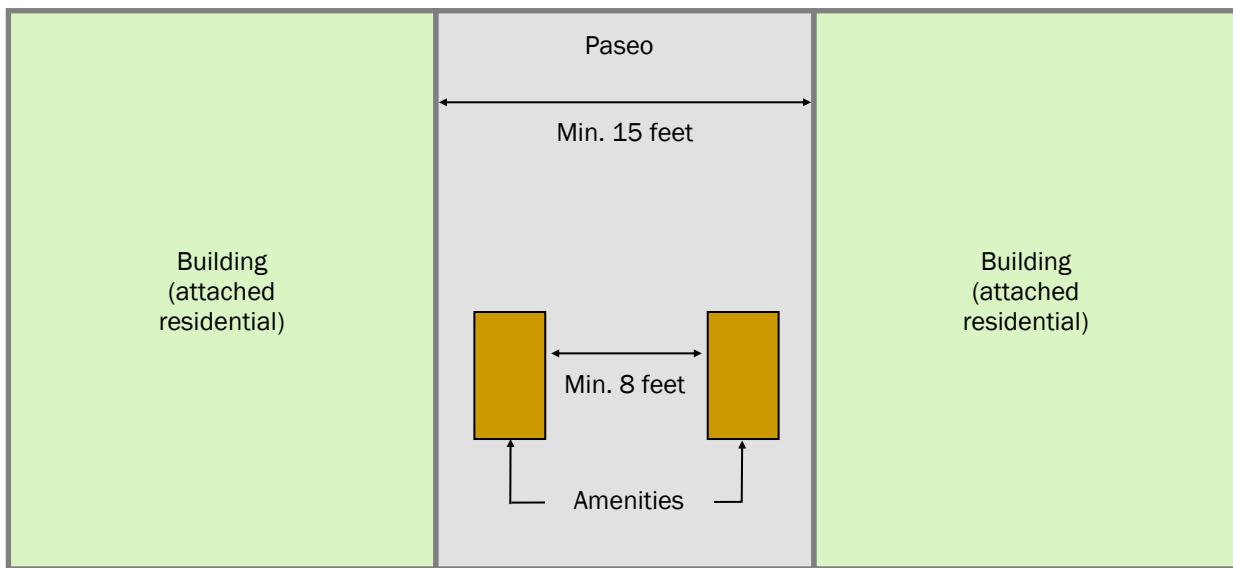


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G. NON-MOTORIZED CIRCULATION

- i. Intent. A variety of transportation modes will be available in the TP district, but this district is intended to be a model for non-motorized transportation in the Township. Walking and bicycling within the district is expected and encouraged, as are non-motorized connections to other districts. A future connection to the Lost Lake Conservation Area is envisioned and internal pathways should extend to I-75 at a point identified by the Township as a likely access point.
- ii. Pathways within the right-of-way. Pathways within the right-of-way shall meet the standards outlined in Section 3.1.21.K.
- iii. Pathways not adjacent to roadways. Pathways not adjacent to roadways shall conform to the following standards:
 - a. The minimum width of the pathway shall be ten feet.
 - b. The pathway shall be part of an easement granting public access to the pathway and extending five feet on each side of the pathway.
 - c. Pathways not adjacent to roadways shall include a point of interest every 300 feet or less. Points of interest may include sitting areas with benches, public art, nature overlooks, and other similar features or combinations of features.
 - d. Where a multi-use pathway diverges from the right-of-way, the first 500 feet shall be surfaced with concrete. Thereafter, the pathway may be compacted and surfaced with crushed limestone, a similar material, or any surface found by the Planning Commission to be more durable.
- iv. Pedestrian connections to entryways, pathways, and parking areas. Direct pedestrian connections to all public entryways of any building shall be provided to nearby pathways and parking areas by means of a sidewalk a minimum of 5 feet in width.
- v. Paseos.
 - a. Attached residential developments may be designed with paseos between groups of attached units.
 - b. Where a paseo is designed as an integral part of a residential development, the required building-to-building setbacks of the district shall not apply to those buildings separated by the paseo.
 - c. Paseos shall not have a maximum width. The minimum width of a paseo is 15 feet.
 - d. Paseos may be covered, partially covered, or fully open air.
 - e. Amenities in paseos, such as benches and planters, shall be placed in such a way that a minimum of eight feet is available for the passage of pedestrians at all points.
 - f. Paseos shall be lighted in compliance with Section 5.20.



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H. OFF-STREET PARKING

- i. Location of off-street parking lots.
 - a. Parking shall not be located between the building and the primary street, except where liner buildings exist or are approved along the roadway.
 - b. Parking located in the side yard shall be set back a minimum of 20 feet from the edge of the right-of-way when adjacent to the primary street and a minimum of 10 feet from the edge of the right-of-way when adjacent to a secondary street.
 - c. Parking lots may be located beneath a portion of a building, either at grade or below grade.
- ii. Design and size of off-street parking lots.
 - a. No single parking lot shall exceed 200 spaces. Lots requiring greater than 200 spaces shall divide parking into multiple lots, separated by a landscaped area a minimum of 40 feet wide. The landscaped area shall include a pathway meeting the standards of Section 3.1.21.K.iii. This requirement shall not apply when a minimum of 50 percent of the parking lot is surfaced with permeable pavement.
 - b. See Section 3.1.21.L for other parking lot landscaping standards.
 - c. The design of parking spaces and maneuvering aisles shall conform to the standards of Section 5.15.6.
- iii. Electric vehicle charging stations.
 - a. The underground conduit infrastructure for electric vehicle charging spaces shall be provided at a rate of one per 35 spaces in a parking lot, and operating electric vehicle charging spaces shall be provided at the rate of one per 105 spaces.
 - b. Required electric vehicle charging spaces shall be marked for the exclusive use of electric vehicles and shall be posted with township-approved signage indicating that the space is to be used solely for electric vehicle charging purposes. For purposes of this subsection, "charging," means an electric vehicle is parked at an electric vehicle charging station and is connected to the charging station equipment.
 - c. Electric vehicle charging spaces shall be included in the calculation for minimum required parking spaces.
 - d. Electric vehicle charging spaces provided above the minimum requirement may be marked for exclusive use by electric vehicles at the discretion of the property owner.
 - e. Adequate battery charging station protection, such as concrete-filled steel bollards, shall be used. Curbing may be used in lieu of bollards, if the battery charging station is set back a minimum of 24 inches from the face of the curb.
 - f. Information shall be posted identifying voltage and amperage levels and any time of use, fees, or safety information related to the electric vehicle charging station.
 - g. A phone number or other contact information shall be provided on the equipment for reporting when it is not functioning or other problems are encountered.
- iv. Bicycle parking for non-residential uses.
 - a. Bicycle parking shall be provided for each non-residential building in a ratio of 1 space per 20 vehicle parking spaces. Where buildings share parking under a recorded agreement, required bicycle spaces shall be distributed among buildings as evenly as possible.
 - b. For every ten bicycle parking spaces provided at a given building above the required number, one vehicle parking space may be eliminated.
 - c. A minimum of 50 percent of required bicycle parking offered at a given building shall be located indoors or under an all-weather shelter.
 - d. Bicycle parking shall be located so as to be safe, convenient, accessible, and secure.
 - e. Bicycle parking spaces shall provide the user with the ability to secure both the frame and the front wheel of the bicycle with a standard bike lock.



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- f. The minimum area for a bicycle parking space where the bicycle is stored with both wheels on the ground is 12 square feet.
- g. The Planning Commission shall determine the number of bicycle parking spaces provided by a given bicycle rack by referring to the manufacturer specifications, which shall be provided by the applicant.
- h. Shower and locker facilities are encouraged.
- v. Bicycle parking for residential or live/work uses.
 - a. Bicycle parking for residential or live/work uses shall meet the standards of items 3.1.21.H.iv.d-g.
 - b. A minimum of two bicycle parking spaces shall be provided for any group of residential units between one and ten units, plus two additional spaces per ten additional units.
 - c. Apartment buildings not providing indoor storage space for tenants shall provide two additional bicycle parking spaces per unit.
- vi. Solar energy canopies.
 - a. Parking spaces may be covered with canopies that provide a platform for solar energy systems.
 - b. Maneuvering lanes shall not be covered with canopies.
 - c. The minimum clearance below a solar canopy shall be 9 feet. The height of a solar energy canopy shall not exceed the maximum height for accessory structures in the district.
- vii. Lighting. Parking lot illumination shall comply with the standards of Section 5.20. Sensors that turn off or dim parking lot lighting when users are not present are strongly encouraged.
- viii. Parking structures. Parking structures in the TP district shall be subject to the following requirements:
 - a. Parking structures shall be architecturally compatible with the principal structure.
 - b. Where possible, parking structures shall be constructed as part of the structure.
 - c. The height of a parking structure shall not exceed 36 feet. Solar canopies are permitted on parking structure roofs and shall not be included in the calculation of maximum height.
 - d. Ramp slopes where parking is present shall not exceed 6%.
 - e. The minimum clearance height shall be 9 feet.
 - f. The dimensions of spaces shall conform to the standards of Section 5.15.6. Parking spaces next to a wall shall be widened by one foot.
 - g. Proponents of parking structures are encouraged to seek the United States Green Building Council's Green Garage Certification.
 - h. Facilities using parking structures shall meet the electric vehicle and bicycle parking standards of this district. These facilities may be housed in the parking structure or provided separately at the discretion of the owner.
 - i. Pedestrian access to the structure at grade level shall be provided separately from the vehicle access lanes.
 - j. Illumination in parking, maneuvering, and pedestrian areas shall not be less than two footcandles of horizontal illuminance on the floor, with a maximum to minimum uniformity ratio of 10:1. White ceilings are recommended to enhance lighting.

I. SERVICES AREAS AND UTILITIES

- i. Utilities in the TP district shall be located underground.
- ii. Above-grade utility boxes shall not be located within any clear vision area, as established in Section 5.7.

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J. OUTDOOR STORAGE

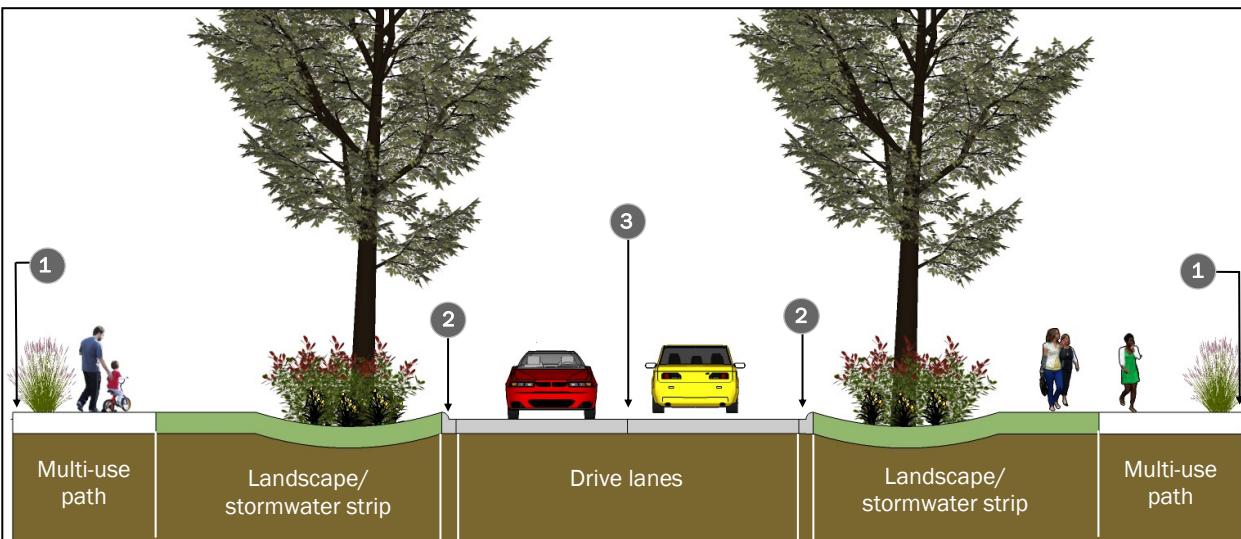
- i. Outdoor storage of materials. Non-hazardous materials used in the operations of a tenant, prototypes, and similar items may be stored outdoors, provided that the following conditions are met:
 - a. The size of an outdoor storage area shall not exceed 25 percent of the footprint of the principal building.
 - b. The outdoor storage area shall be screened with a six-foot, decorative obscuring fence or wall that is architecturally compatible with the principal building. Stored materials shall not exceed the height of the screen wall.
 - c. The outdoor storage area shall be appropriately surfaced so as to prevent the infiltration of pollutants into the soil.
 - d. In no instance shall a screening fence include barbed wire, razor wire, or other similar materials.
 - e. Outdoor storage areas shall not be located in a front or side yard.
 - f. Outdoor storage areas shall be set back a minimum of 100 feet from any residential district.
- ii. Outdoor storage of vehicles. Operational vehicles owned by a tenant of a non-residential building may store vehicles on site as follows:
 - a. Vehicles may be stored indoors.
 - b. Vehicles may be stored in an approved outdoor storage yard.
 - c. Up to five vehicles not larger than a typical family car, truck, SUV, or van may be stored in the parking area for the use. If the parking area is part of a shared parking agreement, the usage of these spaces for vehicle storage shall be added to the shared parking agreement.



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Fig. 3.1.21.J.1 Elements of the Right-of-Way



1. Edge of right-of-way
2. Curb & gutter (where present)
3. Right-of-way centerline

K. STREETS AND RIGHTS-OF-WAY

- i. Public Streets. All streets in the district shall be dedicated as public rights-of-way.
- ii. Classification of streets.
 - a. The primary street in the TP district shall be the street that affords the principal means of access to the district; this street will provide a direct connection from Baldwin Road to Saginaw Road, via the Tech Village Center district.
 - b. Secondary streets shall be those streets that provide access from the primary street to internal portions of the district.
- iii. Right-of-way Dimensions. Rights-of-way in the district shall conform to the following dimensions:

3.1.21.K.iii. Street Cross Sections: Technology Park District

Road Type	ROW Width	Multi-Use Path		Landscape/ Stormwater Strip		Curb & Gutter**		Drive Lanes	
		#	Width	#	Width*	#	Width	#	Width
Primary	80 ft	2	10 ft	2	16.5 ft	2	1.5 ft	2	12 ft

* This is an average width. The width of the landscape/stormwater strip may vary within the right-of-way to permit the 10-foot multi-use pathways to vary their course.

** Curb may not be present, depending on the design of the landscape/stormwater strip. Width may be increased to 2.5 feet at the discretion of the township engineer.

Where the Genesee County Road Commission requires deviations from these standards, such deviations may be implemented without a variance.

- iv. Landscape/Stormwater Strips. The road network of the TP district is intended to incorporate sustainable stormwater management systems into its street design in the form of bioswales in the landscape strip. Landscape strips throughout the district shall meet the following standards:
 - a. Canopy trees shall be planted in the landscape/stormwater strip not less than 30 feet apart on centers. Trees shall not be planted within the required bioswales.

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- b. Bioswales located in the landscape/stormwater strip shall not be less than 15 feet in length and 7 feet in width (generally, the minimum length-to-width ratio shall be 2:1).
- c. The total area of bioswales within the right-of-way shall not be less than 20 percent of the total paved area within the roadway.
- d. Plant materials located in bioswales shall be drawn from the following list of species native to Southeast Michigan:

3.1.21.K.v. Approved Bioswale Plant Species

Common Name	Taxonomic Name	Common Name	Taxonomic Name
Bushes and Shrubs		Wildflowers, Grasses, and Sages	
American Cranberrybush	<i>Viburnum trilobum</i>	Columbine	<i>Aquilegia Canadensis</i>
Black Chokeberry	<i>Aronia prunifolia</i>	Culver's Root	<i>Veronicastrum virginicum</i>
Common Buttonbush	<i>Cephalanthus occidentalis</i>	Horsemint	<i>Monarda punctata</i>
Meadowsweet	<i>Spiraea alba</i>	Indian Grass	<i>Sorgastrum nutans</i>
Ninebark	<i>Physocarpus opulifolius</i>	Joe-Pye Weed	<i>Eupatorium fistulosum</i>
Redosier Dogwood	<i>Cornus stolonifera</i>	Marsh Blazing Star	<i>Liatris spicata</i>
Shrubby Cinquefoil	<i>Potentilla fruticose</i>	Missouri Ironweed	<i>Vernonia missurica</i>
Shrubby St John's Wort	<i>Hypericum prolificum</i>	New England Aster	<i>Aster novae angliae</i>
Spicebush	<i>Lindera benzoin</i>	Old-Field Cinquefoil	<i>Potentilla simplex</i>
Steeplebush	<i>Spiraea tomentosa</i>	Porcupine sedge	<i>Carex hystericina</i>
Virginia Sweetspire	<i>Itea virginica</i>	Queen-of-the-Prairie	<i>Filipendula rubra</i>
Wildflowers, Grasses, and Sages		Sneezeweed	<i>Helenium autumnale</i>
Beardtongue	<i>Penstemon digitalis</i>	Spiderwort	<i>Tradescantia virginiana</i>
Bergamot (Bee-Balm)	<i>Monarda fistulosa</i>	Swamp Goldenrod	<i>Solidago patula</i>
Black-Eyed Susan	<i>Rudbeckia hirta</i>	Swamp Milkweed	<i>Asclepias incarnate</i>
Blue Flag Iris	<i>Iris versicolor</i>	Tall or Green-Headed Coneflower	<i>Rudbeckia trilobum</i>
Blue Vervain	<i>Verbena hastata</i>	Threadleaf Coreopsis	<i>Coreopsis verticillata</i>
Boneset	<i>Eupatorium perfoliatum</i>	White Turtlehead	<i>Chelone glabra</i>
Canada Anemone	<i>Anemone Canadensis</i>	White Vervain	<i>Verbena urticiflora</i>
Cardinal Flower	<i>Lobelia cardinalis</i>	Wild Strawberry	<i>Fragaria virginiana</i>

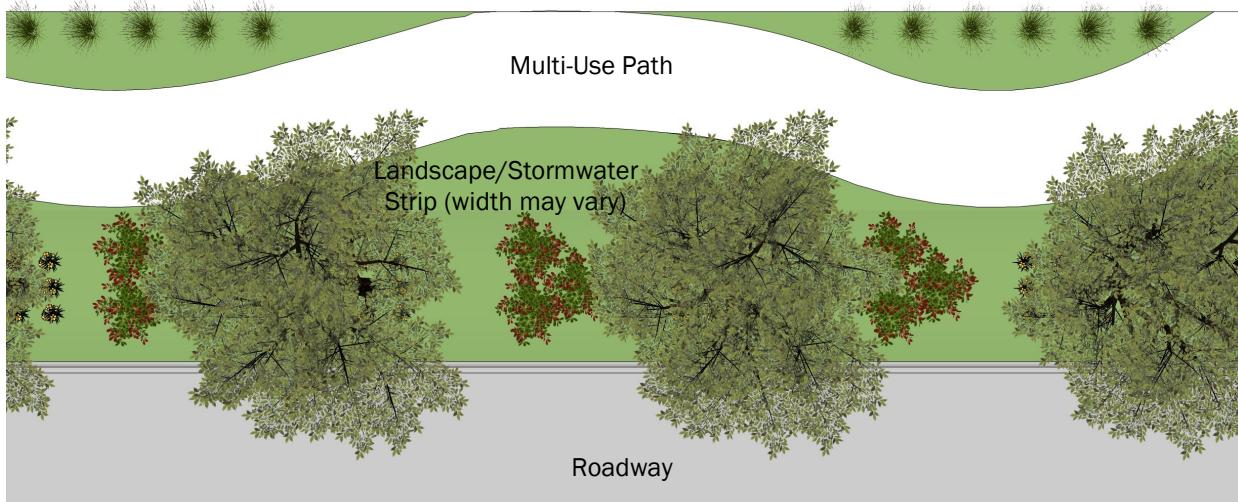
- v. Turning Lanes. Turning lanes shall be included where a traffic study determines that such lanes are necessary.
- vi. Transit Stops. Transit stops in the district shall conform to the following standards:
 - a. Transit stops shall include a dedicated stopping area for the bus or other vehicle in the form of a paved area extending from the travel lane with a minimum area of 500 square feet and tapers that conform to Genesee County Road Commission standards.
 - b. Transit stops shall include a roofed shelter enclosed on a minimum of three sides.
 - c. A bicycle rack with a minimum of two spaces shall be provided within ten feet of the shelter.
- vii. Multi-use Paths. Multi-use paths within the right-of-way shall meet the following standards:
 - a. The minimum width of a multi-use path shall be ten feet.
 - b. Multi-use paths may meander within the right-of-way and are permitted to extend outside of the



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Fig. 3.1.21.K-2 Multi-Use Path May Meander



right-of-way.

- c. Multi-use paths shall be surfaced with concrete or asphalt, as approved by the Planning Commission.
- ix. Intersections. Roundabouts are encouraged at intersections of secondary streets and the primary street.
- x. Street Lighting. All street lighting within the district shall comply with AASHTO-suggested luminance and illuminance values for roadways. LED lighting is encouraged; the color temperature of street lighting should not exceed 4,000 Kelvin.
- xi. Pedestrian Lighting. All pedestrian lighting within the district shall meet the following standards:
 - a. Shared use pathways in the right-of-way shall be illuminated. Appropriate levels of illumination on these pathways shall be determined in consultation with the Planning Commission.
 - b. Shared use pathways may be illuminated. Appropriate levels of illumination on these pathways shall be determined in consultation with the Planning Commission.
- xii. Access Management.
 - a. Driveways shall comply with Section 5.1 Access Management (Driveway) Standards.
 - b. All driveways shall comply with Section 5.7 Clear Vision Areas.

L. LANDSCAPING

- i. Right-of-way landscaping. See Section 3.1.21.L.v. for stormwater/landscape strip standards.
- ii. Parking lot landscaping. Parking lot landscaping shall meet the standards of Sections 5.10.4 and 5.10.5.
- iii. Foundation landscaping. Buildings shall have landscaping abutting the foundation; such landscaping shall meet or, preferably, exceed the following minimum standards:
 - a. Foundation landscaping beds shall be present adjacent to any public entryway.
 - b. Foundation landscaping beds shall be a minimum of four feet in depth, measured from the foundation of the building to the outer edge of the bed.
 - c. A minimum of 70 percent of the principal façade of a building, as identified on the site plan, shall be abutted by foundation landscaping.
 - d. A minimum of 50 percent of any other façade with a publicly accessible entryway shall be abutted by foundation landscaping.
 - e. A minimum of 25 percent of any façade without a public entryway shall be abutted by foundation landscaping.
 - f. Foundation landscaping shall, at a minimum, include no less than two species of shrub in any given bed.
 - g. A diverse selection of plantlife, including shrubs, ground cover, flowers, ornamental grasses, ornamental trees, and canopy trees is encouraged.

TP Technology Park District

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- iv. Road frontage landscaping. Where a building is adjacent to a public right-of-way, canopy trees shall be provided in the front yard at a rate of one per forty feet of right-of-way frontage. Trees may be clustered. The Planning Commission may approve the replacement of up to 50 percent of required canopy trees with evergreens, provided that evergreens replace the required canopy trees at a ratio of two to one.
- v. Buffering from residential districts. Where the TP district abuts a residential district, a 30-foot greenbelt shall be required. The greenbelt shall meet the following standards:
 - a. The greenbelt shall contain a 6-foot berm or 6 ft masonry screenwall meeting the standards of Section 5.10.
 - b. Canopy trees shall be planted a maximum of forty feet apart on centers.
 - c. Evergreen trees shall be planted in two rows; each row shall have a minimum of one tree per 20 feet of property line.
 - d. Selected evergreen species shall be capable of reaching a minimum height of 20 feet.
 - e. Trees may be clustered or grouped in order to provide better screening for residential uses adjacent to the district.
 - f. In any areas where existing natural vegetation provides an effective screen, the Planning Commission may permit the maintenance of the natural vegetation in lieu of new plantings.
 - g. Canopy trees shall be a minimum of 3 inches DBH at planting. Evergreens shall have a minimum height of six feet at planting.
- vi. Buffering from non-residential and mixed-use districts. The TP district shall be buffered from non-residential or mixed-use districts with a buffer meeting the standards of Section 5.10.4.
- vii. Preservation of natural features. Wherever possible, it is the intent of this district that distinctive natural features, including topographically significant features, high quality woodland, and water features, be preserved.
- viii. Rooftop gardens, rain gardens and bioswales. Rooftop gardens, rain gardens and bioswales are landscape-based retention systems that collect, infiltrate, and filter stormwater. The use of rain gardens and bioswales as a component of a site's stormwater management infrastructure is strongly encouraged. Bioswales shall be planted with native vegetation and designed in accordance with Section 3.1.21.K.v.
- ix. Retention basins. Retention basins in the TP district shall be designed with curvilinear forms and irregular shapes so as to appear as natural water bodies.
 - i. The Planning Commission may allow variation in placement and spacing of required trees to accommodate utilities, street furnishings, non-motorized pathways, visibility of business entrances, and the like.
 - ii. Maintenance. All landscaping shall be adequately maintained. Particular attention shall be paid to any landscape areas that are visible from a public street or plaza.

M. ADDITIONAL DEVELOPMENT STANDARDS

- i. Development proposals within this district are strongly encouraged to apply for development review through the Planned Unit Development process, which may allow some flexibility in the application of development standards upon findings that the proposed development offers improved public benefits, while still maintaining the intent of this district.
- ii. All development proposals shall demonstrate how a mix of uses will be encouraged and maintained.



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TVC Tech Village Center District

A. INTENT

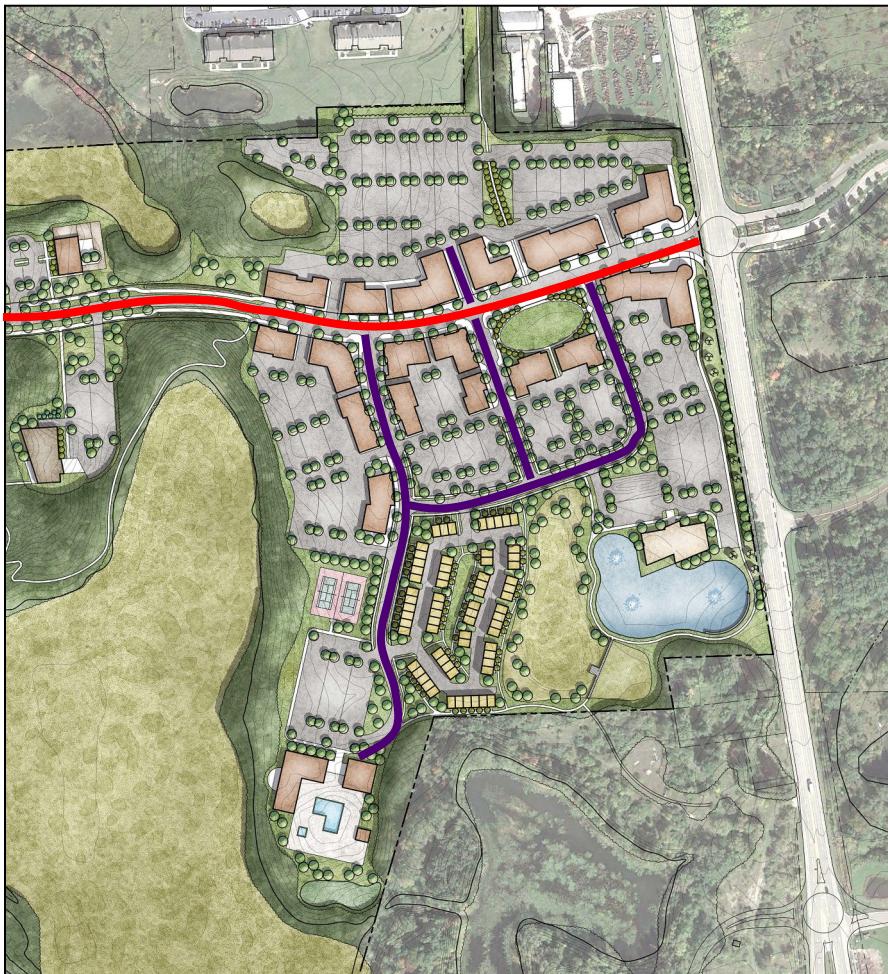
- i. Intent. The Technology Village Center (TVC) District is established in accordance with the 2012 Grand Blanc Township Master Plan and is intended to be a vibrant pedestrian-oriented district in a traditional downtown form that creates a unique identity for Grand Blanc Township. The TVC district will support development in the adjacent Technology Park (TP) District by providing housing, shopping, dining, and entertainment opportunities for those who live and work in the TP district as well as those living and working elsewhere in the region. The TVC district shall accommodate a mixture of complementary land uses, including public/civic uses that connect with each other, with adjacent development in the TP district, and surrounding uses in the township. Development in this area will reflect the township's natural setting through sustainable development techniques. Components of the district include:
 - a. **Commercial, restaurant, and entertainment uses.** This district will include high-quality working, dining, shopping, and entertainment opportunities in a traditional town center development pattern, focused along an internal primary roadway. Commercial uses in this area could include general and specialty retail and personal services that serve district and nearby residents as well as destination uses that draw visitors from the region. Restaurants and entertainment uses with outdoor patios and open spaces will contribute to a vibrant, dynamic atmosphere.
 - b. **Housing.** This district will contain high-quality, unique housing, with an emphasis on types currently undersupplied in the township and surrounding region. Residential uses may be located above commercial uses, while some ground floor residential uses such as row houses are also appropriate away from the principal street. Live-work units are also encouraged. A variety of housing sizes to accommodate residents of all ages and abilities are desired, from one-bedroom units to larger 2-3 bedroom units.
 - c. **Transportation.** This district will include a transportation network that supports motorized and non-motorized travel in and around the village, between the village and the adjacent Technology Park district, and to the surrounding township; accommodations for electric vehicles, autonomous vehicles, bicycle facilities, and integration with mass transit will be provided.
 - d. **Parking.** On-street parking will be provided within the TVC district. Compact development where off-street parking is shared between uses is envisioned, minimizing the amount of land devoted to surface parking. Generally, off-street parking will be provided behind buildings that front on the primary roadway. Bicycle parking should also be accommodated in safe, convenient, and accessible areas. Electric vehicle charging stations are encouraged.
 - e. **Placemaking.** The public realm will be framed by buildings, streets, and sidewalks that are safe, comfortable and attractive to pedestrians, as well as civic spaces such as pocket parks and plazas that support a variety of social interactions, from impromptu gatherings to community events. It is envisioned that a village green or square will be created within a typical block facing the primary street.
 - f. **Sustainability.** As in the adjacent TP district, development in the TVC will rely on mitigating stormwater runoff through bioretention systems such as rain gardens and bioswales, and alleviating concentration of runoff through the use of permeable pavement. Landscaping with native plants, green roofs, living walls, and the incorporation of alternative energy systems, such as solar collectors or geothermal heat pumps into building and site designs, will reinforce the unique natural character of this district. Pursuit of Leadership in Energy and Environmental Design (LEED) certification for individual buildings, and potentially of LEED-ND (LEED-Neighborhood Development) certification for coordinated development, is strongly encouraged.
 - g. **Technology.** Opportunities for technology are encouraged and should be incorporated into all aspects of building and site design.

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A. INTENT

- h. **Master Plan.** The Grand Blanc Township Technology Village Master Plan/Framework Study (December 2016) shall be a guiding document for development in this district.
- ii. **Development Agreement.** A Planned Unit Development (PUD) is strongly encouraged for development within this district, following the process outlined in Section 3.1.19. If that process is not utilized, a development agreement shall be provided and shall be subject to approval by the Township Board as part of the site plan.
- iii. **Regulating Plan.** There will be two types of roads in the TVC District: A primary street that functions as the main street and other roads that support the grid network, based on the Grand Blanc Township Technology Village Illustrative Plan dated November 2016.



LAND
design studio
landscape architecture / land planning
“Building community, design and place”

Grand Blanc Tech Village Illustrative Plan

Grand Blanc Twp, MI

November 2016

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User Note: For uses listed in **bold blue**, refer to Article 4, or click on use, for use-specific standards

B. PRINCIPAL PERMITTED USES

- i. Retail establishments up to 20,000 square feet
- ii. Galleries and showrooms
- iii. Personal service establishments
- iv. Business services
- v. Professional or administrative offices
- vi. Medical offices
- vii. Parks, plazas, squares, and trails
- viii. Shared commercial facilities, including business incubators, co-working spaces, commissary kitchens, pop-up retail space, artist markets, and other similar facilities
- ix. Restaurants, sit down or carry-out; no drive-through service
- x. Outdoor cafes/seating areas
- xi. Facilities for the production of fermented beverages, in association with restaurants and/or tasting rooms
- xii. Fitness Centers and indoor recreation facilities under 5,000 square feet
- xiii. Instructional studios
- xiv. Places of worship with capacities up to 500 occupants
- xv. Theaters and other places of public assembly with capacities up to 500 occupants
- xvi. Banks, credit unions, savings and loans, and other similar financial institutions, no drive-through service
- xvii. Single family dwellings, attached or clustered
- xviii. Multi-family dwellings (stand-alone, or upper floors of mixed-use buildings)
- xix. Live/work units - galleries and showrooms permitted on the ground floor
- xx. Solar energy systems, building-mounted
- xxi. Government services
- xxii. **Accessory uses** § 4.1 & § 4.2, **buildings and structures** § 5.2 customarily incidental to any above permitted uses, as defined in Article 2, Definitions and meeting the standards described in Article 3, General Provisions xvii.

C. SPECIAL LAND USES

- i. Principal permitted uses with drive-through service; access to and from drive-through lanes is not permitted from the primary street or secondary streets within 300 feet of the primary street
- ii. Places of worship with capacities over 500 occupants
- iii. Theaters and other places of public assembly with capacities over 500 occupants
- iv. Hotels
- v. **Retail establishments up to 60,000 square feet** §4.64
- vi. Fitness Centers over 5,000 square feet
- vii. Indoor and outdoor recreation facilities
- viii. Parking structures
- ix. Uses of the same nature or impact as uses listed in this district as either a Principal Use Permitted or a Special Land Use, but not listed elsewhere in this Zoning Ordinance § 4.65
- x. **Accessory uses**, § 4.2, **buildings and structures** § 5.2 customarily incidental to any above permitted uses

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D. DEVELOPMENT STANDARDS

- i. Buildings with primary street frontage, or frontage on a secondary street within 300 feet of the primary street, as established in the regulating plan, shall conform to the placement and form standards of Table 3.1.22.D.i. and the forms established in parts a-b of this subsection.

3.1.22.D.i. Building Placement and Form—Buildings with Primary Street Frontage

Build-to-Line (Distance from the Property Line)

Front (primary street frontage)	0 ft
---------------------------------	------

Side (exterior street-facing)	0 ft
-------------------------------	------

Setback (Minimum Distance from the Property Line)

Side yard (internal and adjacent to Tech Village Center)	0 ft min*
--	-----------

Side yard (adjacent to Technology Park (TP) district)	0 ft min*
---	-----------

Side or rear yard (adjacent to any Residential district)	30 ft min
--	-----------

Rear yard (adjacent to TVC or TP district)	10 ft min /30 ft min when no alley is present
--	--

Rear yard (adjacent to any Residential district)	30 ft min
--	-----------

Building Form Along Build-To Line

Primary street façade/façade facing secondary street within 300 feet of primary street: percent built to Build-to-Line (BTL)	80% min* / 50% with forecourt
---	----------------------------------

Façade facing side street greater than 300 feet from primary street: percent built to BTL	25% min*
---	----------

*Any area along any portion of the BTL that is not adjacent to a building, outdoor dining area, plaza or similar pedestrian-oriented place shall have a minimum 2.5 ft high masonry screenwall. (see Section 3.3.E.3).



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a. Primary Street Frontage Type: Single- and Multiple-Story Shopfront

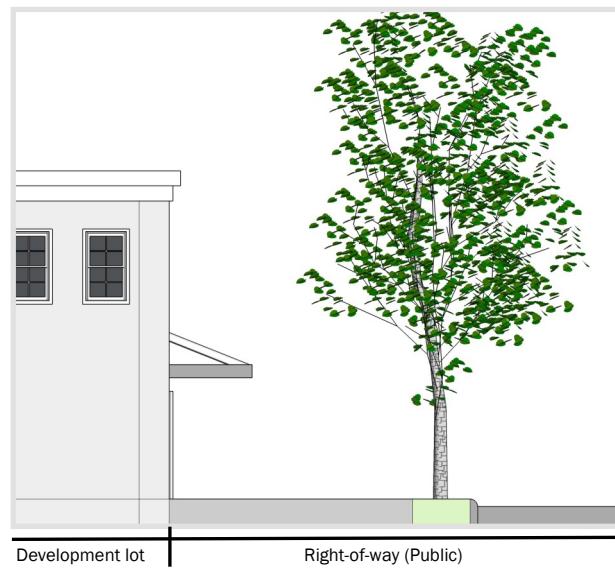
This frontage type is intended to encourage ground floor commercial uses in single-story and multiple-story buildings that are typical in a downtown setting. Buildings feature ample windows for window displays and open views into activity areas. Primary entrances are prominent and street-facing, and are placed at the adjacent sidewalk and at the build-to-line (BTL).



Frontage Type: Single- and Multiple-Story Shopfront These conceptual illustrations show a typical configuration of buildings based on the regulations of this section.



Shopfront (concept example)



Development lot Right-of-way (Public)

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b. Primary Street Frontage Type: **Forecourt**

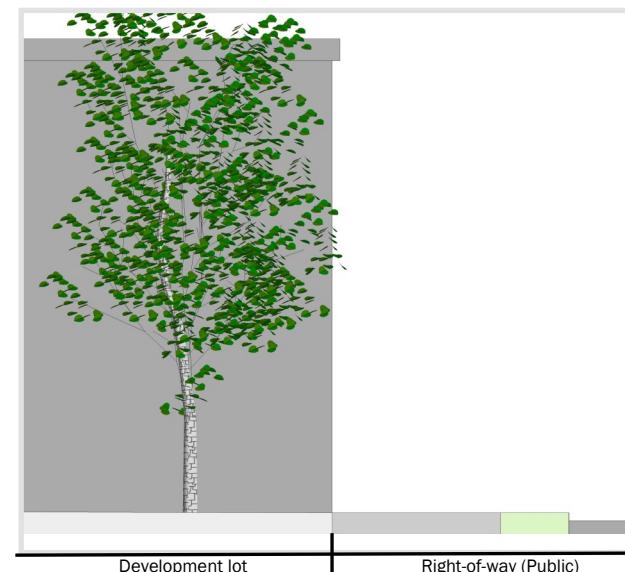
The main façade of the building is at or near the frontage line and a small percentage is set back, creating a small court space. The space could be used as an entry court or shared garden space for apartment buildings, or as an additional shopping or restaurant seating area within retail and service areas.



Frontage Type: Forecourt These conceptual illustrations show a typical configuration of buildings based on the regulations of this section.



Forecourt (concept example)

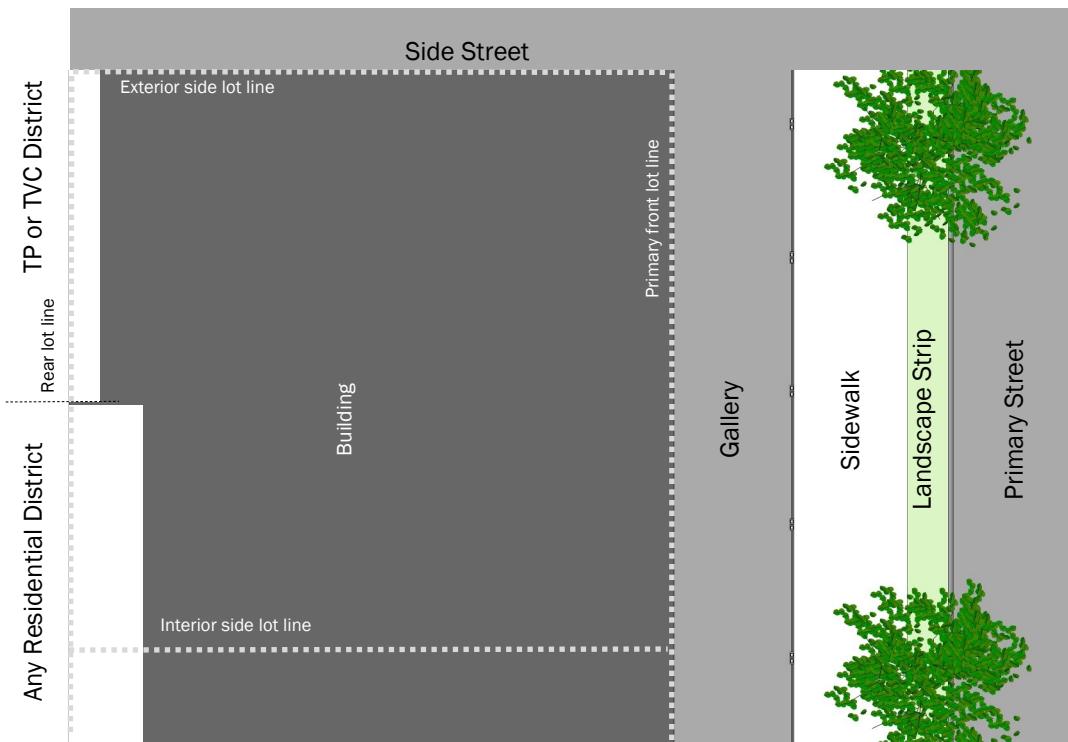


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c. Primary Street Frontage Type: **Gallery**

This frontage type is created by attaching a colonnade to a building façade that is aligned with or near the property line and typically contains ground-floor storefronts. The colonnade projects over the sidewalk and encroaches into the public right-of-way. If extension into the right-of-way is not permitted, the colonnade projects to the property line.



Frontage Type: Gallery These conceptual illustrations show a typical configuration of buildings based on the regulations of this section.



Gallery (concept example)



Colonnade may be placed at lot line when the ground floor street-facing façade is set back 10-25 ft.

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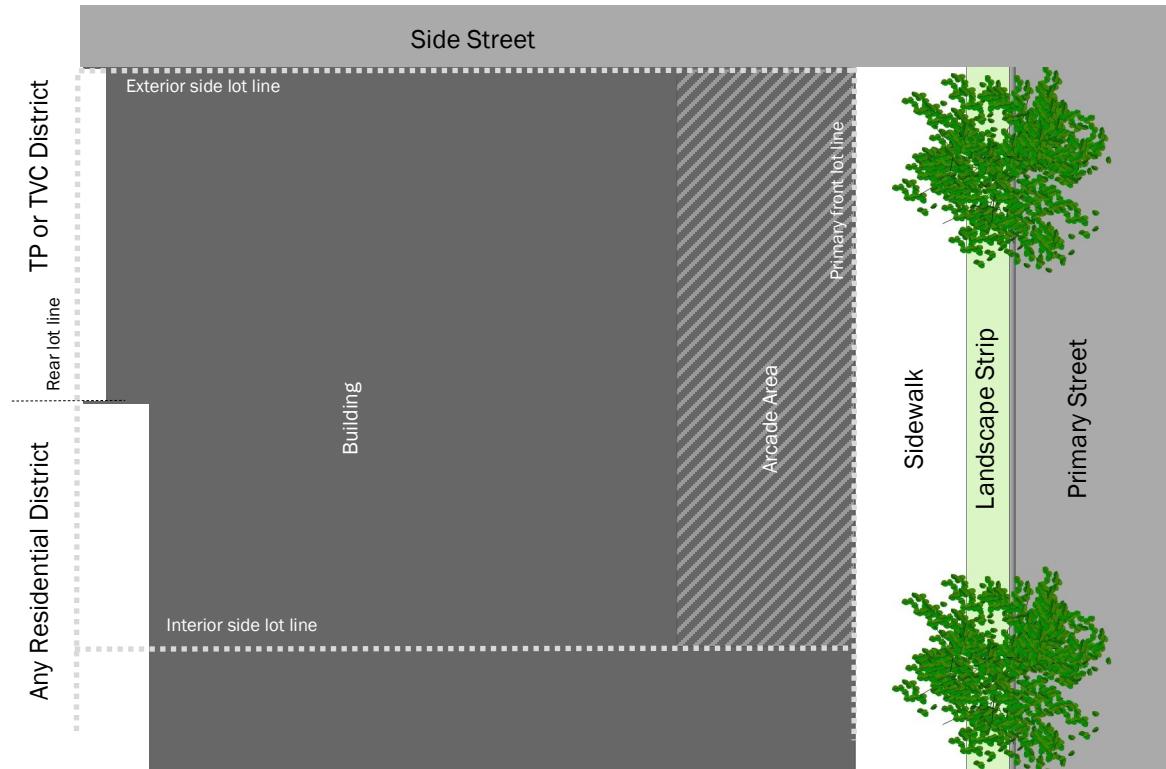
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d. Primary Street Frontage Type: Arcade

This frontage type consists of a façade that projects out towards the lot line on upper levels, but is recessed from the lot line on the ground floor. Arcades are ideal for retail use, in which case they are combined with ground floor storefronts, as well as civic buildings.



Building Frontage Type: Arcade These conceptual illustrations show a typical configuration of buildings based on the regulations of this section.



* The ground floor shall be set back 10-25 ft; 2nd floor shall have 0' setback.



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ii. Buildings fronting on the secondary street, further than 300 feet from the primary street, as established in the regulating plan, shall conform to the placement and form standards of Table 3.1.22.D.ii., as illustrated in Fig. 3.1.22.D.ii.

3.1.22.D.ii. Building Placement and Form—Buildings with Secondary Street Frontage

Build-To Zone/Setbacks (Distance from the Property Line)

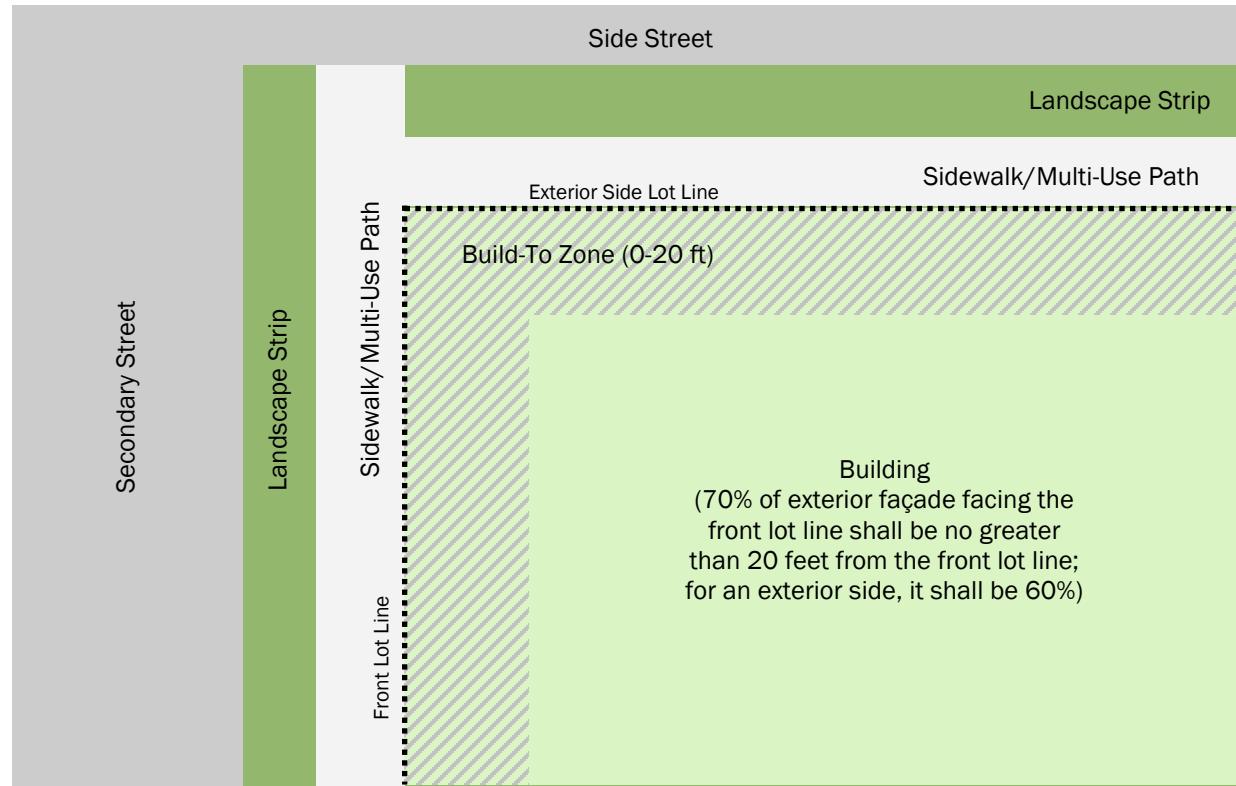
Front (primary street frontage) build-to-zone	Min 0 ft / max 20 ft*
Side (Exterior street-facing) build-to-zone	Min 0 ft / max 20 ft*
Side yard (internal and adjacent to TVC or TP district) setback	0 ft min
Side or rear yard (adjacent to any Residential district) setback	30 ft min
Rear yard (adjacent to TVC, TP, or non-residential district) setback	30 ft min

Building Form

Buildings facing front / exterior side lot line: % of façade in build-to zone	70% front / 60% exterior side
---	-------------------------------

* Maximum setback does not apply to buildings internal to a site, where a separate building between that building and the right-of-way satisfies the maximum setback requirement. The maximum setback from a secondary right-of-way for buildings that also front on the primary right-of-way shall be 0 feet.

Fig. 3.1.22.D.ii. Building Placement



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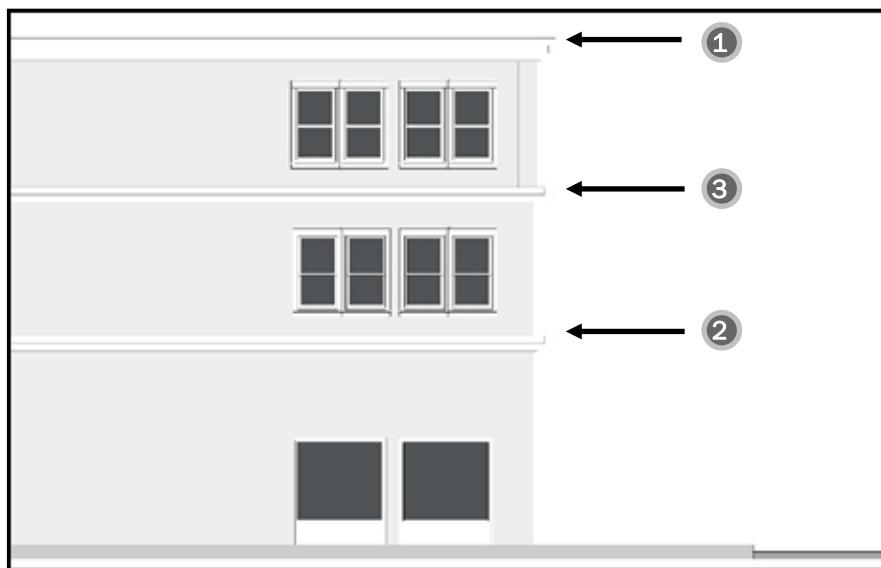
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E. MINIMUM DEVELOPMENT SIZE AND MINIMUM LOT SIZE

- i. Minimum Development Size. In order to qualify for development, a unified development plan shall be submitted as a Planned Unit Development or Site Plan with Development Agreement. The minimum area for a unified development plan shall be 30 acres. This unified development plan shall show a coordinated development plan for a minimum of 30 acres that reflects site circulation, building envelopes, parking fields, pedestrian and non-motorized circulation, buffer areas, and all other information required for the approval mechanism that is being requested (PUD or Site Plan with Development Agreement). If proposed as a Site Plan, the Township may defer detailed site plan information until individual phases are developed provided a phasing plan is approved as part of the Development Agreement. The entire 30-acre minimum area shall be under one owner or under more than one owner working as a coordinated master developer under one unified development plan.
- ii. Minimum Lot Size. Once a unified development plan has been approved by the Township, there is no minimum lot size requirement. Any development of a lot that is part of a unified development plan shall occur in compliance with the unified development plan.

F. BUILDING HEIGHT AND APPEARANCE STANDARDS



i. Building Height and Floor/Ceiling Regulations

Building height minimum	18 ft	
Building height maximum	3 stories; 42 ft	①
Accessory building maximum height	15 ft	
Finished ground floor level (max.)	6 inches above sidewalk	
First floor height (min.) - finished floor to finished ceiling	14 ft	②
Upper floor ceiling height (min)	9 ft	③

- ii. Appearance Standards. To ensure high-quality building design that creates a unique sense of place within the district and fosters walkability and a sense of traditional village design, all buildings shall conform to the following standards:
 - a. All building façades shall be finished with high-quality, durable materials, such as brick, stone,



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metal, glass, wood, or cementitious cladding.

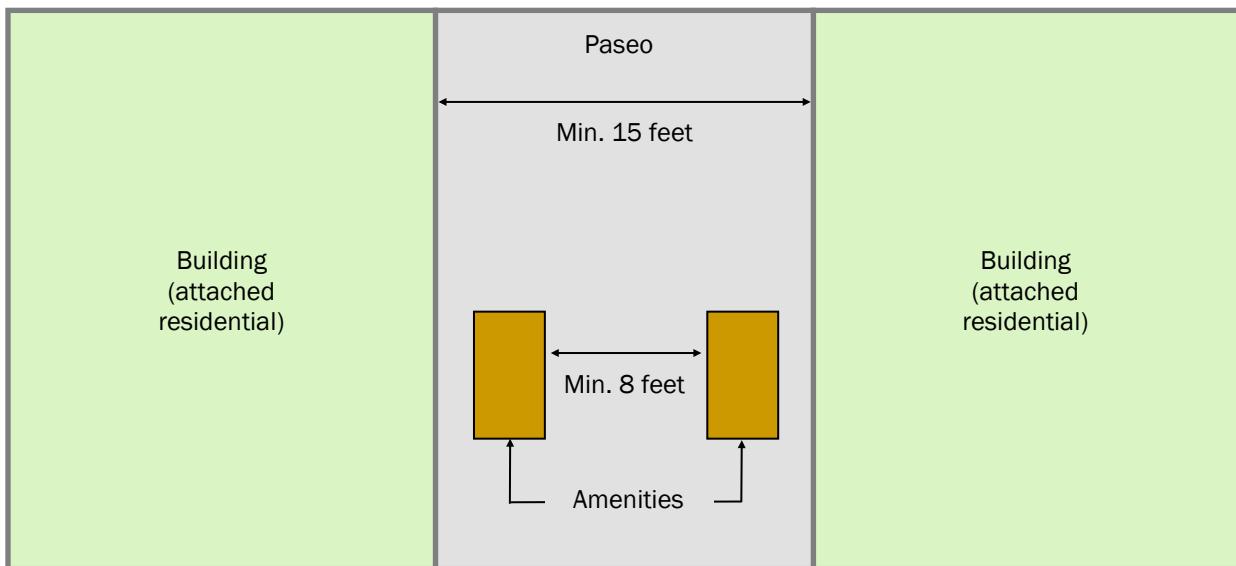
- b. No greater than ten percent of any façade shall be comprised of concrete masonry units. This limit shall not apply to half-high integrally colored units that resemble brick, and similar units, as determined by the Planning Commission.
- c. No greater than five percent of any façade shall be comprised of EIFS or similar exterior insulation paneling. In no case shall EIFS be used on the ground floor façade of any building.
- d. All buildings fronting on the primary street or a secondary street within 300 feet of the primary street shall have a public entrance oriented toward the street. These buildings may also have public entrances oriented toward other streets or rear yard parking lots.
- e. Where buildings front directly on the sidewalk, recessed entrances from three to ten feet deep are encouraged and shall count toward the minimum percentage of building form along the build-to-line in Section 3.1.22.D.ii.
- f. Ground-floor facades of buildings fronting on the primary street or a secondary street within 300 feet of the primary street shall have a minimum of 60% glazing between two and eight feet above grade. Upper floors are required to maintain 30% glazing on their street-facing facades. Window glazing shall be clear with a visible light transmittance of not less than 65% (0.65) on ground floors, and 45% (0.45) on upper floors, per glass manufacturer specifications.
- g. Buildings shall be vertically and horizontally articulated so as to avoid large, flat expanses of wall and reflect the division of space within. The top of a building shall be distinguished by a cornice or noticeable roof edge. Flat roofs shall be enclosed with parapets.
 - i. Equipment: Rooftop mechanical and other equipment shall be positioned and screened to minimize views from adjacent properties and obscure views from the public rights-of-way.

G. NON-MOTORIZED CIRCULATION

- i. Intent. A variety of transportation modes will be available in the TVC district, but this district is intended to be a model for non-motorized transportation in the Township. Walking and bicycling within the district is expected and encouraged, as are non-motorized connections to other districts.
- ii. Sidewalks and pathways within the right-of-way. Pathways within the right-of-way shall meet the standards outlined in Section 3.1.22.L.
- iii. Pathways not adjacent to roadways. Pathways not adjacent to roadways shall conform to the following standards:
 - a. The minimum width of the pathway shall be ten feet.
 - b. The pathway shall be part of an easement granting public access to the pathway and extending five feet on each side of the pathway.
 - c. Pathways not adjacent to roadways shall include a point of interest every 300 feet or less. Points of interest may include sitting areas with benches, public art, nature overlooks, and other similar features or combinations of features.
 - d. Where a multi-use pathway diverges from the right-of-way, the first 500 feet from any right-of-way shall be surfaced with concrete or asphalt. Thereafter, the pathway may be compacted and surfaced with crushed limestone, a similar material, or any surface found by the Planning Commission to be more durable.
- iii. Pedestrian connections to entryways, pathways, and parking areas. Where buildings do not front directly on a sidewalk, direct pedestrian connections to all public entryways shall be provided to nearby pathways and parking areas by means of a sidewalk a minimum of 5 feet in width.
- iv. Paseos and mid-block passages along the primary street.
 - a. A paseo, or mid-block passage, is required every 300 feet to provide pedestrian access through the center of the block.
 - b. The minimum width of a paseo is 15 feet.
 - c. Paseos may be covered, partially covered, or fully open air.

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- d. Amenities in paseos, such as benches and planters, shall be placed in such a way that a minimum of eight feet is available for the passage of pedestrians at all points.
- e. Paseos shall be lighted in compliance with Section 5.20.
- f. Paseos may be used for outdoor dining. Merchandise may be displayed during operating hours.
- g. Ground-floor building walls facing a paseo shall not be less than 30 percent glazing.
- h. Use of the same paving materials for the entire length of the paseo is encouraged. A mix of materials (such as concrete and brick) is permitted, and a change of pattern or texture is encouraged near the ends of the paseo and near any significant features within it, such as a public entrance.
- i. Entryways facing onto a paseo shall be recessed.
- j. Paseos shall be maintained by the property owner in good repair and shall provide safe and unobstructed passage.
- k. Public access through a paseo shall be guaranteed by the conveyance of a public access easement.
- l. Trellises, light canopies, green walls or murals, public art, and plantings are encouraged in paseos in order to foster a sense of place, activity, and vibrancy.

I. OFF-STREET PARKING

- i. Location of off-street parking lots.
 - a. Parking shall not be located between the building and the primary street, except where liner buildings exist or are approved along the roadway and parking is provided behind the liner building.
 - b. Parking lots shall be set back a minimum of 80 feet from the primary street.
 - c. Parking located in the side yard on secondary streets shall be set back a minimum of 20 feet from the edge of the right-of-way.
- ii. Design and size of off-street parking lots.
 - a. No single parking lot shall exceed 200 spaces. Uses or groups of uses requiring greater than 200 spaces shall divide parking into multiple lots, separated by a landscaped area a minimum of 40 feet wide. The landscaped area shall include a pathway meeting the standards of Section 3.1.22.L.iii. This requirement shall not apply when a minimum of 50 percent of the parking lot is surfaced with permeable pavement.
 - b. See Section 3.1.22.M for other parking lot landscaping standards.
 - c. The design of parking spaces and maneuvering aisles shall conform to the standards of Section 5.15.6.

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- iii. Electric vehicle charging stations.
 - a. The underground conduit infrastructure for electric vehicle charging spaces shall be provided at a rate of one per 25 spaces in a parking lot, and operating electric vehicle charging spaces shall be provided at the rate of one per 105 spaces.
 - b. Required electric vehicle charging spaces shall be marked for the exclusive use of electric vehicles and shall be posted with township-approved signage indicating that the space is to be used solely for electric vehicle charging purposes. For purposes of this subsection, "charging," means an electric vehicle is parked at an electric vehicle charging station and is connected to the charging station equipment.
 - c. Electric vehicle charging spaces shall be included in the calculation for minimum required parking spaces.
 - d. Electric vehicle charging spaces provided above the minimum requirement may be marked for exclusive use by electric vehicles at the discretion of the property owner.
 - e. Adequate battery charging station protection, such as concrete-filled steel bollards, shall be used. Curbing may be used in lieu of bollards, if the battery charging station is set back a minimum of 24 inches from the face of the curb.
 - f. Information shall be posted identifying voltage and amperage levels and any time of use, fees, or safety information related to the electric vehicle charging station.
 - g. A phone number or other contact information shall be provided on the equipment for reporting when it is not functioning or other problems are encountered.
- iv. Bicycle parking for non-residential uses or mixed uses.
 - a. At all locations in the district, bicycle parking shall be provided in a ratio of 1 space per 40 vehicle parking spaces. Required bicycle spaces shall be distributed among blocks as evenly as possible.
 - b. For every ten bicycle parking spaces provided at a given building above the required number, one vehicle parking space may be eliminated.
 - c. A minimum of 50 percent of required bicycle parking offered at a given building shall be located indoors or under an all-weather shelter.
 - d. Bicycle parking shall be located so as to be safe, convenient, accessible, and secure.
 - e. Bicycle parking spaces shall provide the user with the ability to secure both the frame and the front wheel of the bicycle with a standard bike lock.
 - f. The minimum area for a bicycle parking space where the bicycle is stored with both wheels on the ground is 12 square feet.
 - g. The Planning Commission shall determine the number of bicycle parking spaces provided by a given bicycle rack by referring to the manufacturer specifications, which shall be provided by the applicant.
- v. Bicycle parking for residential or live/work uses.
 - a. Bicycle parking for residential or live/work uses shall meet the standards of items 3.1.22.I.iv.d-g.
 - b. A minimum of two bicycle parking spaces shall be provided for any group of residential units between one and ten units, plus two additional spaces per each ten additional units.
 - c. Apartment buildings not providing indoor storage space for tenants shall provide two bicycle parking spaces per unit.
- vi. Solar energy canopies.
 - a. Parking spaces may be covered with canopies that provide a platform for solar energy systems.
 - b. Maneuvering lanes shall not be covered with canopies.
 - c. The minimum clearance below a solar canopy shall be 9 feet. The height of a solar energy canopy shall not exceed the maximum height for accessory structures in the district.
- vii. Lighting. Parking lot illumination shall comply with the standards of Section 5.20. Sensors that turn off or dim parking lot lighting when users are not present are strongly encouraged.

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- viii. Parking structures. Parking structures in the TVC district shall be subject to the following requirements:
 - a. Parking structures shall be architecturally compatible with nearby buildings in the district.
 - b. The height of a parking structure shall not exceed 36 feet. Solar canopies are permitted on parking structure roofs and shall not be included in the calculation of maximum height.
 - c. Ramp slopes where parking is present shall not exceed 6%.
 - d. The minimum clearance height shall be 9 feet.
 - e. The dimensions of spaces shall conform to the standards of Section 5.15.6. Parking spaces next to a wall shall be widened by one foot.
 - f. Proponents of parking structures are encouraged to seek the United States Green Building Council's Green Garage Certification.
 - g. Facilities using parking structures shall meet the electric vehicle and bicycle parking standards of this district. These facilities may be housed in the parking structure or provided separately at the discretion of the owner.
 - h. Pedestrian access to the structure at grade level shall be provided separately from the vehicle access lanes.
 - i. Illumination in parking, maneuvering, and pedestrian areas shall not be less than two footcandles of horizontal illuminance on the floor, with a maximum to minimum uniformity ratio of 10:1. White ceilings are recommended to enhance lighting.
 - j. Parking structures shall not front directly on the primary street.
 - k. Parking structures shall be so designed as to avoid a monolithic appearance and shall generally be designed in a manner that conceals the use of the building.
- ix. Drive-through uses.
 - a. Drive-through lanes for vehicular use shall not be accessed from or provide access to the primary street or a secondary street within 300 feet of the primary street. This restriction shall not apply to pick up windows that serve pedestrians and bicyclists.
 - b. The number and dimensions of stacking spaces shall conform to the standards of Section 5.15.

I. SERVICES AREAS AND UTILITIES

- i. Utilities in the TVC district shall be located underground.
- ii. Above-grade utility boxes shall not be located within any clear vision area, as established in Section 5.7.
- iii. Where utility boxes are located above grade, they shall be screened with decorative fencing or obscuring landscaping.

J. OUTDOOR STORAGE

Outdoor storage is not permitted in the TVC district.

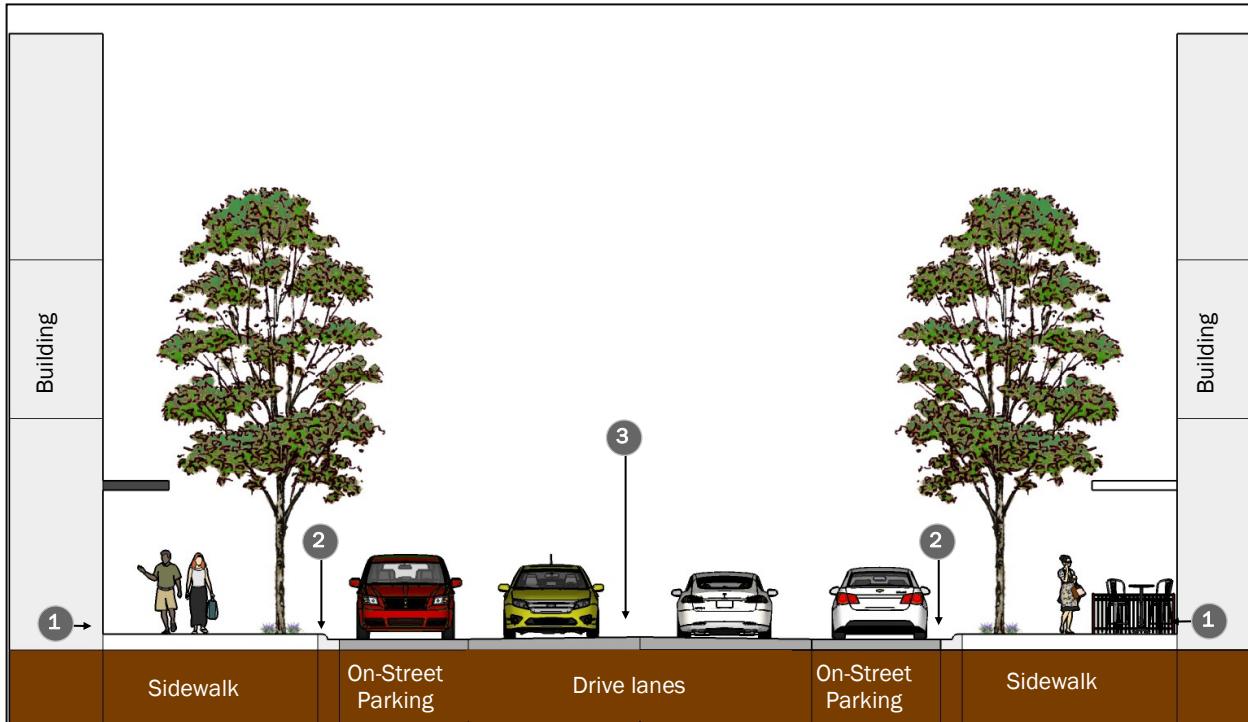


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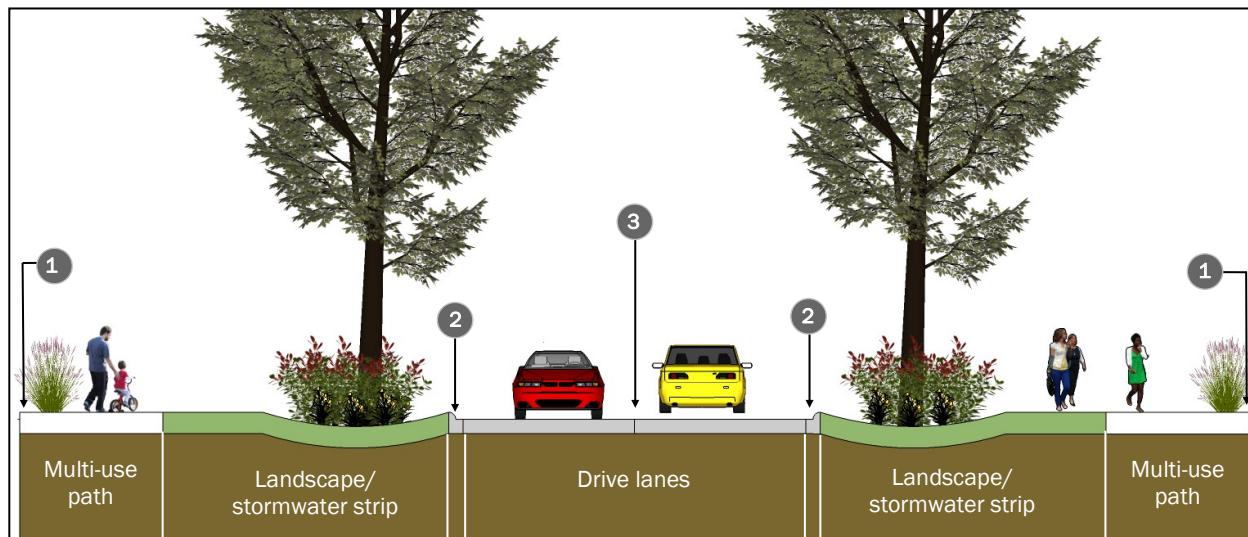
K. STREETS AND RIGHTS-OF-WAY

Fig. 3.1.22.K-1 Elements of the Right-of-Way: Primary Street & Secondary Street within 300 feet of Primary



1. Edge of right-of-way
2. Curb & gutter (where present)
3. Right-of-way centerline

Fig. 3.1.21.K-2 Elements of the Right-of-Way: 300 or more feet from Primary Street



1. Edge of right-of-way
2. Curb & gutter (where present)
3. Right-of-way centerline

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- i. Public Streets. All streets in the district shall be dedicated as public rights-of-way.
- ii. Classification of streets.
 - a. The primary street in the TVC district shall be the street that affords the principal means of access to the district; this street will provide a direct connection from Baldwin Road to Saginaw Street, via the Tech Village Center district.
 - b. Secondary streets shall be those streets that provide access from the primary street to internal portions of the district.
- iii. Right-of-way Dimensions. Rights-of-way in the district shall conform to the following dimensions:

3.1.21.K.iii. Street Cross Sections: Technology Village Center District

Road Type	ROW Width	Sidewalk or Multi-Use Path		Landscape/Stormwater Strip		On-Street Parking Lane (Parallel)		Curb & Gutter		Drive Lanes	
		#	Min. Width (ft)	#	Width (ft)	#	Width (ft)	#	Width (ft)	#	Width (ft)
Primary	74 ft	2	15	—	—	2	9	2	1.5	2	11
Secondary, within 300 feet of Primary	74 ft	2	15	—	—	2	9	2	1.5	2	11
Secondary, further than 300 feet from Primary	66 ft	2	10 ft	2	9.5 ft**	—	—	2	1.5*	2	12

* Curb may not be present, depending on the design of the landscape/stormwater strip. Width may be increased to 2.5 feet at the discretion of the township engineer.

** This is an average width. The width of the landscape/stormwater strip may vary within the right-of-way to permit the 10-foot multi-use pathways to vary their course.

Where the Genesee County Road Commission requires deviations from these standards, such deviations may be implemented without a variance.

- iv. Right-Of-Way Landscaping and Amenities on the Primary Street and Secondary Streets within 300 Feet of the Primary Street.
 - a. Street Trees & Plantings
 - 1) Spacing: Trees must be provided along the Primary Road streetscape, with a typical spacing of fifty (50) feet on center.
 - 2) Tree wells: Tree wells in sidewalks must be 5 feet by 5 feet with a 3.5 foot minimum depth. Perimeter fencing shall not be permitted.
 - 3) Clear vision: Landscaping shall comply with Section 5.7 Clear Vision Areas.
 - 4) Irrigation: Irrigation systems must be installed at the time of development.
 - 5) Maintenance of public realm: The owner shall maintain the portion of the street between the lot line and back-of-curb and, if applicable, the portion of the alley between the lot line and the edge of pavement.
 - 6) Plant Selections: Plants should be chosen for specific locations based on size and mass at maturation as well as ease of maintenance.
 - b. Street Furniture
 - 1) Street furnishings must be placed within the Amenity Zone, which is defined as the five (5) feet between the curb face and the pedestrian zone.
 - 2) Street furnishings shall be placed at least 2.5 feet from the curb face, subject to road



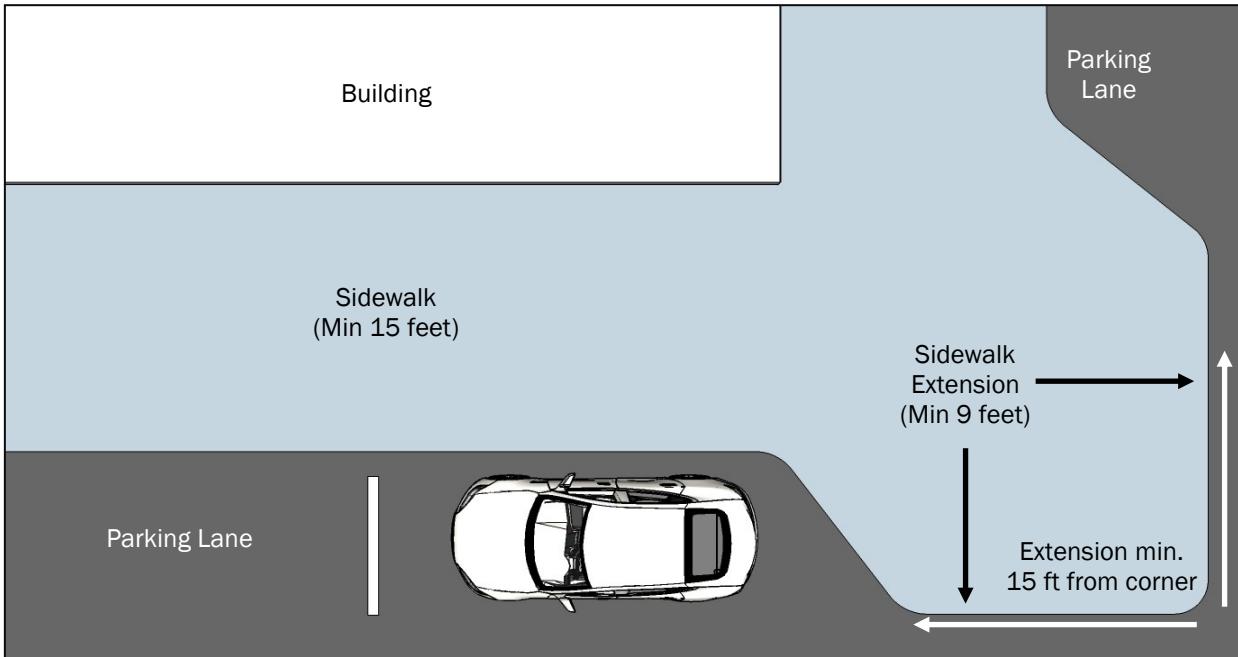
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commission approval, where required.

- v. On-Street Parking Spaces. On-street parking spaces shall meet the design standards of Section 5.15.
- vi. Extension of Sidewalks at Corners. On the primary street and secondary streets within 300 feet of the primary street, sidewalks shall be extended by nine feet in each direction at corners in order to shield on-street parking spaces from traffic. Where diagonal spaces are installed in lieu of parallel spaces, the sidewalk shall be extended the full length of the diagonal spaces. The extension shall extend a minimum

3.1.22.K.vi. Sidewalk Extensions



of 15 feet in each direction from the corner.

- vii. Blocks. The width of a block shall not be greater than 300 feet, as measured from the furthest edge of the sidewalk to the furthest edge of the opposite sidewalk.
- viii. Street Lighting. All street lighting within the district shall comply with AASHTO-suggested luminance and illuminance values for roadways. LED lighting is encouraged; the color temperature of street lighting should not exceed 4,000 Kelvin.
- ix. Pedestrian Lighting. All pedestrian lighting within the district shall meet the following standards:
 - a. On sidewalks, pedestrian-scaled lighting shall provide a minimum of one foot candle of warm light (less than 4,000 Kelvin) between the building face and the curb.
 - b. Shared use pathways in the right-of-way shall be illuminated. Appropriate levels of illumination on these pathways shall be determined in consultation with the Planning Commission.
 - c. Shared use pathways may be illuminated. Appropriate levels of illumination on these pathways shall be determined in consultation with the Planning Commission.
- x. Access Management.
 - a. Driveways directly onto the primary street or a secondary street within 300 feet of the primary street are not permitted.
 - b. Driveways shall comply with Section 5.1 Access Management (Driveway) Standards.
 - c. All driveways shall comply with Section 5.7 Clear Vision Areas.
- xi. Turning Lanes. Turning lanes shall be included where a traffic study determines that such lanes are necessary.
- xii. Transit Stops. Transit stops in the district shall conform to the following standards:
 - a. Transit stops shall include a dedicated stopping area for the bus or other vehicle in the form of a paved area extending from the travel lane with a minimum area of 500 square feet and tapers that conform to Genesee County Road Commission standards.
 - b. Transit stops shall include a roofed shelter enclosed on a minimum of three sides.

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- c. A bicycle rack with a minimum of two spaces shall be provided within ten feet of the shelter.
- xiii. Multi-use Paths. Multi-use paths within the right-of-way shall meet the following standards:
 - a. The minimum width of a multi-use path shall be ten feet.
 - b. Multi-use paths may meander within the right-of-way and are permitted to extend outside of the right-of-way.
 - c. Multi-use paths shall be surfaced with concrete or asphalt, as approved by the Planning Commission.
- xiv. Landscape/Stormwater Strips. The secondary road network of the TVC district is intended to incorporate sustainable stormwater management systems into its street design in the form of bioswales in the landscape strip. Landscape strips throughout the district shall meet the standards of Section 3.1.21.J.iv.
- xv. Café Railings: An outdoor dining area for a restaurant shall separate the dining area from the sidewalk pedestrian zone with a café railing, or similar feature, approved by the township.
 - a. The café railing may extend not more than 8 feet beyond the front lot line, and a clear pedestrian path at least 5 feet in width shall be maintained on the sidewalk.
 - b. The café railing shall be at least 30 inches and not more than 36 inches high. The café railing shall be constructed of a decorative material such as black metal, wrought iron or similar quality material that is durable and keeping within the aesthetic qualities of the district.
 - c. The café railing shall be anchored to the sidewalk in a manner that permits removal and storage during months when not in use.

L. LANDSCAPING

- i. Generally. Sites should include landscaping as an integral part of site design and should give consideration as to the use of landscaping for stormwater management.
- ii. Buildings, Fronts & Backs.
 - a. Street frontage: Building façades facing streets are the public 'face' of the TVC district. The use of well-maintained, quality plant materials with 2.5 feet of the building façade attracts and engages pedestrians and shall be permitted subject to administrative review of a sidewalk permit.
 - b. Rooftops and Rear yards: Rooftops and privately-owned, back yard portions of lots provide opportunities for businesses to provide a semi-private space for patrons to enjoy, or allow residents to have private or semi-private (for apartments or condominiums) open spaces, gardens and courtyards.
- iii. Right-of-way Landscaping. See Section 3.1.21.K.v. for stormwater/landscape strip standards and Section 3.1.22.M. for other right-of-way landscaping standards.
- iv. Parking Lot Landscaping. Parking lot landscaping shall meet the standards of Sections 5.10.4 and 5.10.5.
- iv. Road Frontage Landscaping on Secondary Streets Further than 300 Feet from the Primary Street. Where a building is adjacent to a public right-of-way and a front setback of greater than ten feet is provided, canopy trees shall be provided in the front yard at a rate of one per forty feet of right-of-way frontage. Trees may be clustered.
- v. Foundation Landscaping. Buildings that are not required to be built to the lot line shall have landscaping abutting the foundation; such landscaping shall meet or, preferably, exceed the following minimum standards:
 - a. Foundation landscaping beds shall be present adjacent to any public entryway.
 - b. Foundation landscaping beds shall be a minimum of four feet in depth, measured from the foundation of the building to the outer edge of the bed.



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- c. A minimum of 70 percent of the principal façade of a building, as identified on the site plan, shall be abutted by foundation landscaping.
- d. A minimum of 50 percent of any other façade with a publicly accessible entryway shall be abutted by foundation landscaping.
- e. A minimum of 25 percent of any façade without a public entryway shall be abutted by foundation landscaping.
- f. Foundation landscaping shall, at a minimum, include no less than two species of shrub in any given bed.
- g. A diverse selection of plantlife, including shrubs, ground cover, flowers, ornamental grasses, ornamental trees, and canopy trees is encouraged.
- h. As an alternative to the provisions above, the Planning Commission may permit the setback area to be, in whole or in part, an active pedestrian area with amenities including benches, art, and other streetscape elements that support pedestrian activity.
- vi. Buffering from residential districts. Where the TP district abuts a residential district, a 30-foot greenbelt shall be required. The greenbelt shall meet the following standards:
 - a. The greenbelt shall contain a 6-foot decorative masonry screen wall or berm meeting the standards of Section 5.10.
 - b. Canopy trees shall be planted a maximum of 30 feet apart on centers.
 - c. Evergreen trees shall be planted at a minimum rate of one tree per 20 feet of property line.
 - d. Selected evergreen species shall be capable of reaching a minimum height of 20 feet.
 - e. Trees may be clustered or grouped in order to provide better screening for residential uses adjacent to the district.
 - f. In any areas where existing natural vegetation provides an effective screen, the Planning Commission may permit the maintenance of the natural vegetation in lieu of new plantings.
 - g. Canopy trees shall be a minimum of 3 inches DBH at planting. Evergreens shall have a minimum height of six feet at planting.
- vii. Buffering from non-residential and mixed-use districts. The TVC district shall be buffered from non-residential or mixed-use districts with a buffer meeting the standards of Section 5.10.4.
- viii. Preservation of natural features. Wherever possible, it is the intent of this district that distinctive natural features, including topographically significant features, high quality woodland, and water features, be preserved.
- ix. Rain gardens and bioswales. Rain gardens and bioswales are landscape-based retention systems that collect, infiltrate, and filter stormwater. The use of rain gardens and bioswales as a component of a site's stormwater management infrastructure is strongly encouraged. Bioswales shall be planted with native vegetation and designed in accordance with Section 3.1.21.K.v.
- x. Retention basins. Retention basins in the TVC district shall be designed with curvilinear forms and irregular shapes so as to appear as natural water bodies.
- i. The Planning Commission may allow variation in placement and spacing of required trees to accommodate utilities, street furnishings, non-motorized pathways, visibility of business entrances, and the like.
- ii. Maintenance. All landscaping shall be adequately maintained. Particular attention shall be paid to any landscape areas that are visible from a public street or plaza.

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M. OPEN SPACE STANDARDS

- i. Generally. Public spaces are meant to provide a means for social interaction.
- ii. Location. Public open spaces should be practically located so that the public is aware of their location.
- iii. Function. All open spaces should be functional and purposeful, yet flexible to provide for a variety of uses.
- iv. Amenities. Outdoor furniture (benches and tables), art or sculptures, landscaping, change in the type of pavement, semi-enclosure to define the space, drinking fountains, trash receptacles should be added to defined open spaces.
- v. Awareness. Wayfinding signs should be used to direct the public to the location of open spaces, municipal parks or trailheads.
- vi. Security. Open spaces shall be well-lit, well-maintained and allow for clear views to create a safe environment

N. ADDITIONAL DEVELOPMENT STANDARDS

- i. Development proposals within this district are strongly encouraged to apply for development review through the Planned Unit Development process, which may allow some flexibility in the application of development standards upon findings that the proposed development offers improved public benefits, while still maintaining the intent of this district.
- ii. All development proposals shall demonstrate how a mix of uses will be encouraged and maintained.



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