

## ARTICLE 19.00

### LANDSCAPING, LIGHTING AND SIDEWALKS

#### Section 19.01 Intent and Scope of Requirements

##### A. Intent

Landscaping enhances the visual image of the Township, preserving natural features, improving property values, and alleviating the impact of noise, traffic, and visual distraction associated with certain uses. Screening is important to protect less intensive uses from the noise, light, traffic, litter and other impacts of more intensive, nonresidential uses. Lighting and sidewalks create, where appropriate, an important part of the Township's visual image. These provisions are intended to set minimum standards for the design and use of landscaping, greenbelts, screening, lighting, and walkways, and for the protection and enhancement of the Township's environment. More specifically, the intent of these provisions is to:

1. Improve the appearance of off-street parking areas, vehicular use areas, and property abutting public rights-of-way,
2. Protect and preserve the appearance, character, and value of the neighborhoods that abut non-residential areas, parking areas, and other intensive use areas, thereby protecting the public health, safety and welfare,
3. Create a safe and efficient means of pedestrian circulation,
4. Reduce soil erosion and depletion, and
5. Increase soil water retention, thereby helping to prevent flooding.

##### B. Scope of Application - Single Family Dwellings Exempt

No site plan shall be approved unless it shows landscaping, lighting and sidewalks consistent with the requirements of this Article. A building permit shall not be issued until the required landscape plan is submitted and approved, unless provisions set forth in this section have been met or a performance guarantee has been posted in accordance with the provisions set forth in this Ordinance. The requirements in this Article shall not apply to single family detached homes, unless otherwise specifically noted.

##### C. Minimum Requirements

The requirements in this Article are minimum requirements, and under no circumstances shall they preclude the developer and the Township from agreeing to more extensive standards.

#### Section 19.02 General Landscaping Requirements

##### A. General Site Requirements

All developed portions of the site shall conform to the following general landscaping standards, except where specific landscape elements, such as a greenbelt, berms, or screening are required:

1. All unpaved portions of the site shall be planted with grass, ground cover, shrubbery, or other suitable live plant material, which shall extend to any abutting street pavement edge. Grass areas in the front yard of all non-residential uses shall be planted with sod or hydro-seeded. Gravel or crushed stone may be used only as an edge, or for areas unsuitable for survival of grass or other ground cover, and may not be the only site ground cover.
2. A mixture of evergreen and deciduous trees shall be planted on non-residential parcels at the rate of one (1) tree per 3,000 square feet or portion thereof of any unpaved open area for which specific landscaping requirements do not appear later in this Article. Required trees may be planted at uniform intervals, at random, or in groupings.

**B. Design Creativity for Landscaping**

Creativity in landscape design is encouraged. Accordingly, required trees and shrubs may be planted at uniform intervals, at random, or in groupings, depending on the designer's desired visual effect and, equally important, the intent of the Township to coordinate landscaping on adjoining properties.

**C. Landscaping Adjacent to Roads**

**1. Planting Requirements**

Any residential or non-residential parcel of land that is adjacent to a public or private road shall comply with the following planting requirements:

<b>Plant Type</b>	<b>Minimum Requirements</b>
Deciduous or evergreen trees	1 per 40 linear feet of road frontage
Ornamental Trees	1 per 100 linear feet of road frontage
Shrubs	8 per 40 linear feet of road frontage

For the purposes of computing length of road frontage, openings for driveways and sidewalks shall be excluded from the calculations. Trees and Shrubs may be planted at uniform intervals, at random, or in groupings. All requirements shall be rounded up. (See illustration of Landscaping Adjacent to Roads). (amended 01/07/08)

**2. Location and Dimensions**

Required landscaping adjacent to roads shall be located totally on private property within a planting strip adjacent to the road right-of-way. The minimum width of the planting strip shall be fifteen (15) feet. No off-street parking, except necessary drives, or other structures shall be located within the required planting strip.

**D. Screening and Buffering Requirements**

The following types of screening have been established and are referenced in the table below. For those zoning districts listed below, there shall be provided and maintained on those sides of the property abutting, adjacent to, or across the street from the zoning districts specified, screening and buffering.

		Zoning District Being Developed								
Adjacent Zoning District		R <sup>1,3</sup>	RM <sup>2,3</sup>	RMH <sup>4</sup>	O-1	C-1	C-2	C-3	I-1	I-2
	R <sup>1</sup>	C	C	C	B	B	A	A	A	A
	RM <sup>2</sup>	C	--	C	B	B	B	A	A	A
	RMH	C	C	--	B	B	B	B	A	A
	O-1	C	--	--	--	C	C	C	B	B
	C-1	C	--	--	C	--	C	C	B	B
	C-2	C	--	--	C	C	--	C	B	B
	C-3	C	--	--	C	C	C	--	B	B
	I-1	C	--	--	C	C	C	C	--	--
	I-2	C	--	--	C	C	C	C	--	--

<sup>1</sup> Includes property within the R-1, R-2, and R-3 Zoning Districts

<sup>2</sup> Includes property within the RM-1, RM-2, and RM-3 Zoning Districts

<sup>3</sup> Where property is being developed for use as single-family residential dwellings, no screening shall be required.

<sup>4</sup> Not applicable to manufactured home park developments.

1. **Type A Screening:** Where required, this type of screening and buffering shall, at a minimum, include the following:

**Opaque Screen:** A six (6) foot high opaque screen consisting of an earthen berm, solid masonry wall, or fence.

**Buffer Width:** A minimum buffer width of fifty (50) feet shall be provided along and away from the property line within which no structures, off-street parking or loading, signs or other such uses may be located. Grass, ground cover, or other suitable live plant materials shall be planted over the entire buffer area, except where paved walkways are used or mulch is provided around trees.

**Natural Screening:** Screening shall consist of closely spaced evergreen trees planted in a staggered row. Plantings shall be planted a maximum of fifteen (15) feet on center. One (1) large canopy tree shall also be required for each fifty (50) linear feet or fraction thereof. Plantings will be expected to provide a complete visual barrier at least eight (8) feet above ground within two (2) years of planting.

2. **Type B Screening:** Where required, this type of screening and buffering shall, at a minimum, include the following:

**Opaque Screen:** A six (6) foot high opaque screen consisting of an earthen berm, solid masonry wall, or fence.

**Buffer Width:** A minimum buffer width of twenty (20) feet shall be provided along and away from the property line within which no structures, off-street parking or loading, signs or other such uses may be located. Grass, ground cover, or other suitable live plant materials shall be planted over the entire buffer area, except where paved walkways are used or mulch is provided

around trees.

**Natural Screening:** Screening shall consist of a minimum of one (1) large deciduous tree and one (1) evergreen tree for each thirty (30) linear feet or fraction thereof of required screening. Plantings will be expected to provide a complete visual barrier at least eight (8) feet above ground within two (2) years of planting.

3. **Type C Screening:** Where required, this type of screening and buffering shall, at a minimum, include the following:

**Buffer Width:** A minimum buffer width of twenty (20) feet shall be provided along and away from the property line within which no structures, off-street parking or loading, signs or other such uses may be located. Grass, ground cover, or other suitable live plant materials shall be planted over the entire buffer area, except where paved walkways are used or mulch is provided around trees.

**Natural Screening:** Screening shall consist of a minimum of one (1) large deciduous tree and one (1) evergreen tree for each thirty (30) linear feet or fraction thereof of required screening. Plantings will be expected to provide a complete visual barrier at least eight (8) feet above ground within two (2) years of planting.

## E. Opaque Screen Design Standards

### 1. Walls

#### a. Materials

Walls shall be constructed of brick or decorative block. Such materials shall be architecturally compatible with the materials used on the façade of the principal structure on the site.

#### b. Height

The height of the wall shall be measured from ground level adjacent to the wall, provided that fill shall not be permitted for the purpose of achieving a higher wall than otherwise would be permitted.

#### c. Maintenance

Walls shall be maintained in good condition. Crumbled or broken components shall be replaced, repaired or removed. As required and as necessary to maintain a neat and finished appearance, surfaces shall be painted, stained, or similarly treated.

### 2. Fences

#### a. Materials

Fences shall be constructed of redwood, cedar, plastic composite or No. 1 pressure treated wood. The Planning Commission may permit other similar wood-like fence materials. Chain link fence and barbed wire shall be prohibited.

#### b. Height

The height of the fence shall be measured from ground level adjacent to the fence, provided that fill shall not be permitted for the purpose of achieving a higher fence than otherwise would be permitted.

c. **Maintenance**

Fences shall be maintained in good condition. Crumbled, rotten, or broken components shall be replaced, repaired or removed. As required and as necessary to maintain a neat and finished appearance, surfaces shall be painted, stained, or similarly treated.

3. **Berms**

a. **Dimensions**

Unless otherwise indicated or appropriate, required berms shall be measured from the grade of the parking lot or flat ground adjacent to the berm, and shall be constructed with slopes no steeper than one (1) foot vertical for each four (4) feet horizontal (25 percent slope). The exterior face of the berm shall be constructed as an earthen slope. The interior face may be constructed as an earthen slope or retained by means of a wall.

Berms may undulate in height, subject to review and approval of berm design as shown on the site plan.

b. **Protection from Erosion**

Any required berm shall be planted with sod, ground cover, or other suitable live plant material to protect it from erosion so that it retains its height and shape. The use of railroad ties, cement blocks, and other types of construction materials to retain the shape and height of a berm shall be prohibited unless specifically reviewed and approved by the Planning Commission.

F. **Screening of Trash Receptacles and Ground-Mounted Equipment**

In addition to other required screening, trash receptacles and ground-mounted equipment shall be screened as follows:

1. Mechanical equipment, such as air compressors, pool pumps, transformers, sprinkler pumps, satellite dish antennae over three (3) feet in height, and similar equipment shall be screened on at least three (3) sides. Insofar as practical, said screening shall exceed the vertical height of the equipment being screened by at least six (6) inches within two (2) years of planting.
2. When stored outdoors, dumpsters, trash compactors, trash bins and other trash and garbage collection devices shall be located only in a side or rear yard and shall be screened on three (3) sides by a masonry or solid board fence enclosure. A gate shall be installed to provide access to the storage device on the fourth side. The gate shall be maintained in good operating condition and shall be kept closed except during trash loading or removal operations.

G. **Off-Street Parking Lot Landscaping**

In addition to required screening, all off-street parking areas shall be landscaped as follows:

1. **Landscaping Ratio**

Off-street parking areas containing greater than ten (10) spaces shall be provided with at least twenty (20) square feet of interior landscaping per parking space. Whenever possible, parking lot landscaping shall be designed to improve the safety of pedestrian and vehicular traffic, guide traffic movement, and improve the appearance of the parking area.

2. **Minimum Area and Design**

Landscaped areas in parking lots shall have a minimum width of ten (10) feet in any single dimension and no less than one hundred-sixty (160) square feet in area. To improve maneuvering, the length of islands should be two (2) feet less than the length of the adjacent parking space. Landscaped areas in or adjacent to parking lots shall be protected with curbing or other means to prevent encroachment of vehicles. Landscaped areas shall be protected by curbing.

**3. Other Landscaping**

Required landscaping elsewhere on the parcel shall not be counted in meeting the parking lot landscaping requirements.

**4. Required Plantings**

Requirements for plant material shall be based on the location, size, and shape of the parking lot landscaped area. A minimum of one (1) tree shall be planted per one hundred sixty (160) square feet or fraction thereof of interior landscaped area. At least fifty (50) percent of each interior landscaped area shall be covered by living plant material, such as sod, shrubs, ground cover, or trees. The landscape plan shall indicate the area of interior landscaping and the types, sizes, and quantities of plant material proposed for such area.

**H. Landscaping of Rights-of-Way**

Public rights-of-way located adjacent to required landscaped areas and screening and buffering areas shall be planted with grass or other suitable live ground cover, and shall be maintained by the owner or occupant of the adjacent property as if the rights-of-way were part of the required landscaped areas. No plantings except grass or ground cover shall be permitted closer than three (3) feet from the edge of the road pavement.

**I. Maintenance of Unobstructed Visibility For Drivers**

No landscaping shall be established or maintained on any parcel or in any parking lot that will obstruct the view of drivers. Accordingly, all landscaping shall comply with the provisions concerning clear vision area set forth in Article 5.00

**J. Potential Damage to Utilities**

In no case shall landscaping material be planted in a way that will interfere with or cause damage to underground utility lines, public roads, or other public facilities. Species of trees whose roots are known to cause damage to public roadways, sewers, or other utilities shall not be planted closer than fifteen (15) feet from any such roadways, sewers, or utilities. Trees shall be setback from overhead utility lines as indicated in the following chart:

<b>Mature Tree Height</b>	<b>Minimum Distance from Center of Trunk to Nearest Utility Line</b>
Up to 15 feet	10 feet
15 to 25 feet	20 feet
Over 25 feet	30 feet

**K. Landscaping of Divider Medians**

Where traffic on driveways, maneuvering lanes, private roads, or similar vehicle access ways are separated by a divider median, the median shall be curbed and have a minimum width of ten (10) feet. A minimum of one (1) deciduous or evergreen tree shall be planted for each twenty (20) linear feet or portion thereof of median. Trees may be planted at uniform intervals, at random, or in groupings, but in no instance shall the center-to-center distance between trees exceed thirty (30) feet.

**L. Irrigation**

The site plan shall indicate the proposed method of watering landscaped areas. Each landscaped area, including parking lot landscaped islands, shall be provided within an irrigation system or a readily available and acceptable water supply, as approved by the Planning Commission.

**Section 19.03 Standards for Landscape Materials**

Unless otherwise specified, all landscape materials shall comply with the following standards:

**A. Plant Quality**

Plant materials used in compliance with the provisions of this Ordinance shall be nursery grown, free of pests and diseases, hardy in east-central Michigan, in conformance with the standards of the American Association of Nurserymen, and shall have passed inspections required under state regulations. Plant materials installed in locations in close proximity to areas exhibiting environmental impacts (for example, exhaust fumes, salt runoff) commonly associated with motorized vehicles shall be hardy under such conditions.

**B. Non-Living Plant Material**

Plastic and other non-living plant materials shall not be considered acceptable to meet the landscaping requirements of this Ordinance and are expressly prohibited.

**C. Plant Material Specifications**

The following specifications shall apply to all plant material proposed in accordance with the landscaping requirements of this Ordinance:

**1. Deciduous Shade Trees**

Deciduous shade trees shall be a minimum of three (3) inches in caliper measured twelve (12) inches above grade with the first branch a minimum of four (4) feet above grade when planted.

**2. Deciduous Ornamental Trees**

Deciduous ornamental trees shall be a minimum of two (2) inches in caliper measured six (6) inches above grade with a minimum height of four (4) feet above grade when planted.

**3. Evergreen Trees**

Evergreen trees shall be a minimum of six (6) feet in height when planted, except as otherwise specified in this ordinance. Furthermore, evergreen trees shall have a minimum spread of two and one-half (2 ½) feet.

4. **Shrubs**  
Shrubs shall be a minimum of two (2) feet in height when planted. Low growing shrubs shall have a minimum spread of twenty-four (24) inches when planted.
5. **Hedges**  
Hedges shall be planted and maintained so as to form a continuous, unbroken, visual screen within two (2) years after planting, barring unusual growing conditions, such as drought or disease. Hedges shall be a minimum of two (2) feet in height when planted.
6. **Ground Cover**  
Ground cover used in lieu of turf grasses in whole or in part shall be planted in such a manner as to present a finished appearance and reasonably complete coverage after one (1) complete growing season. Stone or synthetic materials shall not be used as ground cover.
7. **Grass**  
Grass area shall be planted using species normally grown as permanent lawns in east-central Michigan. Grass, sod, and seed shall be clean and free of weeds, pests, and diseases. Grass must be sod or hydro-seed.
8. **Mulch**  
Mulch used around trees, shrubs, and vines shall be a minimum of four (4) inches deep, and installed in a manner as to present a finished appearance. Mulch used in planting beds shall be a minimum of three (3) inches deep.
9. **Topsoil**  
A minimum of four (4) inches of topsoil shall be provided for all lawn areas, ground covers and planting beds.

10. **Undesirable Plant Material**

Use of plant materials that cause disruption to storm drainage or are susceptible to pests or disease is not encouraged. The following plant materials exhibit such characteristics, and therefore their use is not permitted within the Township:

Undesirable Plant Materials	Notes
Box Elder	
Tree of Heaven	
European Barberry	
Catalpa varieties	
Ginkgo	Female variety
Black Locust	
Poplar varieties	White variety, Cottonwood
Mulberry	White variety
Olive varieties	
Austrian Pine	
Willow	Except in appropriate wetland ecosystem areas
Silver Maple	
Purple Loosestrife	
Ash varieties	
Elm	Except disease resistant cultivars, such as “Regal”, “Pioneer”, “Homestead”, “Jacan”, and “Accolade

**Section 19.04 Installation and Maintenance**

The following standards shall be observed where installation and maintenance of landscape materials are required:

**A. Installation**

Landscaping shall be installed in a sound, workmanlike manner to ensure the continued growth of healthy plant material. Trees, shrubs, hedges, and vines shall be generously mulched in accordance with the standards established herein at the time of planting.

**B. Installation of Perimeter Landscaping**

Landscaping along the site perimeter shall be installed prior to construction, except where such landscaping would be destroyed during construction.

**C. Seeding or Sodding**

Lots or parcels shall be seeded, hydro-seeded or sodded prior to occupancy or within the thirty (30) days of the next planting season, whichever occurs first, including single-family detached homes.

**D. Protection from Vehicles**

Landscaping shall be protected from vehicles through use of curbs in all parking lots. Landscape areas shall be elevated above the pavement to a height that is adequate to protect the plants from snow removal, salt, and other hazards and a gravel or concrete edge shall be provided.

**E. Off-Season Planting Requirements**

If development is completed during the off-season when plants cannot be installed, the owner shall install the required landscaping within thirty (30) days of the next planting season.

**F. Maintenance**

Landscaping required by this Ordinance shall be maintained in a healthy, neat, and orderly appearance, free from refuse and debris. All unhealthy and dead plant material shall be replaced immediately, unless the season is not appropriate for planting, in which case such plant material shall be replaced at the beginning of the next planting season. The developer or owner(s) shall insure perpetual and mandatory maintenance and replacement of vegetative plantings pursuant to the approved landscape plan.

All landscaped areas shall be provided with a readily available and acceptable supply of water subject to the review and approval of the Planning Commission. Trees, shrubs, and other plantings and lawn areas shall be watered regularly throughout the growing season.

All constructed or manufactured landscape elements, such as but not limited to benches, retaining walls, edging, and so forth, shall be maintained in good condition and neat appearance. Rotted, deteriorated, or damaged landscape elements shall be repaired, replaced, or removed.

**Section 19.05 Treatment of Existing Plant Material**

The following regulations shall apply to existing plant material:

**A. Consideration of Existing Elements in the Landscape Design**

In instances where healthy plant material exists on a site prior to its development, the Planning Commission may permit substitution of such plant material in place of the requirements set forth previously in this Section, provided such substitution is in keeping with the spirit and intent of this Article and the Ordinance in general.

Existing hedges, berms, walls, or other landscape elements may be used to satisfy the requirements set forth previously, provided that such landscaping is in conformance with the requirements of this section.

**B. Preservation of Existing Plant Material**

Site plans shall show all existing trees which are located in the portions of the site that will be built upon or otherwise altered, and are eight (8) inches or greater in caliper, measured four and one-half (4 ½) feet above grade.

Trees shall be labeled "To Be Removed" or "To Be Saved" on the site plan. If existing plant material is labeled "To Be Saved" on the site plan, protective measures shall be implemented, such as the placement of fencing or stakes at the drip line around each tree. No vehicle or other construction equipment shall be parked or stored within the drip line of any tree or other plant material intended to be saved.

In the event that healthy plant materials that has been identified as "To Be Saved" are cut down, damaged or destroyed during construction, said plant material shall be replaced with the same species as the damaged or removed tree, in accordance with the following schedule, unless otherwise approved by the Township based on consideration of the site and building configuration, available planting space, and similar considerations:

<b>Replacement Tree Specifications</b>		
<b>Damaged Tree: Caliper at 4.5 ft.</b>	<b>Replacement Tree: Caliper at 6 inches</b>	<b>Replacement Ratio</b>
Less than 8 inches	3 inches	1 for 1
More than 8 inches	3 inches	1 replacement tree for each 8 inches in caliper or fraction thereof of damaged tree

### **Section 19.06 Modifications to Landscape Requirements**

In consideration of the overall design and impact of a specific landscape plan, and in consideration of the amount of existing plant material to be retained on the site, the Planning Commission may modify the specific requirements outlined herein, provided that any such adjustment is in keeping with the intent of this Article and Ordinance in general. In determining whether a modification is appropriate, the Planning Commission shall consider whether the following conditions exist:

- A. Topographic features or other unique features of the site create conditions such that strict application of the landscape regulations would result in a less effective screen than an alternative landscape design.
- B. Parking, vehicular circulation, or land use are such that required landscaping would not enhance the site or result in the desired screening effect.
- C. The public benefit intended by the landscape regulations could be better-achieved with a plan that varies from the strict requirements of the Ordinance.

### **Section 19.07 Sidewalks**

The uses identified in A. 1. and A. 2. below shall be subject to all of the requirements and conditions of this section pertaining to sidewalks which are intended to be for the use, benefit, protection, convenience, health, safety and welfare of the general public.

#### **A. General Requirements**

Sidewalks may be required by the Planning Commission along all public roads or approved private roads and within either the road right of way or the front yard setback area as a condition of site plan approval for the uses hereafter designated in A. 1 or A. 2. If site plan approval is not required, sidewalks will be required as a condition of securing a building permit for all new construction on a lot for the uses hereafter designated in A. 1 or A. 2. New construction is hereby defined as all improvements on a lot that has no buildings or structures located thereon at the time of applying for a building permit. Any person who constructs, alters, remodels, restores, rebuilds or repairs any building or structure on a lot and the completed building or structure (i) exceeds one hundred fifty per cent (150%) of the true cash value for the lot as determined by the Township Assessor, or (ii) exceeds fifty per cent (50%) of the volume of the current structures on the lot as determined by the Township Building Inspector, will also be required to construct sidewalks for all uses hereafter designated in A. 1 or A. 2.

- 1. All new residential subdivisions, condominiums, or multiple-family dwelling developments within the Township of Bangor; and,

2. All uses, whether permitted or allowed by special exception, along the following described roads, to-wit:
  - a. The north side of Wilder Road from Two Mile Road to Patterson Road;
  - b. The south side of Wilder Road from Two Mile Road to the City of Bay City limits;
  - c. Both sides of Shrestha Drive and Katalin Court;
  - d. West side of Euclid Avenue from Fisher Avenue to Wilder Road;
  - e. The east side of Euclid Avenue from North Union to Wilder Road;
  - f. Both sides of Kiesel Road between Two Mile Road and Euclid Avenue;
  - g. The east side of Two Mile Road from Kiesel Road to Wilder Road;
  - h. Both sides of State Street Road from Wilder Road north a distance of 2,640 feet.

**B. Planning Commission Recommendation**

Subject to the provisions of this section, the Planning Commission may recommend waiver of sidewalks as a condition of site plan approval for any use identified in subsection A. 2. above, following a public meeting relating to the matter with notice to the site plan applicant and property owner. The Planning Commission shall review the proposed use in light of the following factors before deciding whether or not to waive the sidewalk requirement for a particular lot:

1. The size, character and nature of the proposed use;
2. The size, character, nature and location of buildings/structures and accessory buildings/structures already constructed or to be constructed pertaining to the proposed use;
3. The location of the proposed/existing use;
4. The distance of the proposed/existing use from neighboring uses;
5. The likelihood or proximity of other sidewalks in the area;
6. The nature of neighboring uses;
7. The development density in the surrounding area;
8. The days/hours of operation of the proposed use and neighboring uses;
9. The type of roadway abutting the proposed use; and,
10. If the site is located at a corner of the above described roadway, the Planning Commission shall designate whether the sidewalks will be constructed along either roadway or along both roads.

The Planning Commission shall make specific findings of fact relating to the above-listed factors. It shall also clearly state the reasons why sidewalks should, or should not be required.

**C. Public Hearing**

Before the Township may require any owner of any lot to construct, replace or to pay for the expense of construction or replacement of a sidewalk across or adjoining their lot or premises, the Township Board shall first hold a public hearing in conformity with the Bangor Township Sidewalk Ordinance.

**D. Permit**

No sidewalk may be constructed or repaired in any place open to the general public within the Township without first obtaining a permit from the Township Building Inspection office. To obtain a permit to construct a sidewalk, the applicant shall submit a site plan, complete an application for a permit and pay any required fee. The drawing shall contain sufficient detail and information so that the Building Inspector can determine compliance with all of the specifications set forth in the Bangor Township Sidewalk Ordinance. If the sidewalk is to be located in a public road right of way, the applicant shall also submit written evidence of consent of the Bay County Road Commission or Michigan Department of Transportation, or its successor. If the sidewalk is to be located outside of the public road right of

way, the applicant shall dedicate the sidewalk to the Township at which time the Township shall, after construction and acceptance thereof, become responsible for the ordinary maintenance and replacement thereof, but the applicant may use the property line in computing the front yard setback.

**E. Construction or repair**

Construction or repair of sidewalks shall be in accordance with the specifications set forth in the Bangor Township Sidewalk Ordinance.

**Section 19.08 Exterior Lighting**

The regulations in this section are intended to require sufficient lighting for parking areas, walkways, driveways, building entrances, loading areas, and common areas to ensure the security of property and safety of persons. These regulations are also intended to prevent the adverse effects of in appropriate lighting, including glare, light trespass onto adjoining properties, light pollution and sky glow, and energy waste.

**A. General Requirements**

1. Sufficient lighting shall be required for parking areas, walkways, driveways, building entrances, loading areas, and public common areas to ensure the security of property and safety of persons.
2. Outdoor lighting shall be shielded and directed downward as indicated by the Chart in Section 19.08 B.
3. Non-essential lighting shall be turned off after business hours, leaving only that lighting that is necessary for site security.
4. Light trespass from a property shall not exceed 0.5 foot candles at the property line, measured five (5) feet from the ground.
5. To prevent sky glow, lighting shall be shielded or designed to prevent light to project above ninety (90) degree horizontal plane.
6. Up-lighting of buildings for aesthetic purposes shall be confined to the target surface.
7. Gas station canopies and similar structures shall have fully recessed lighting fixtures and the total initial lamp output under the canopies shall be limited to forty (40) lumens per square foot of canopy.

All subdivision and site condominium development road entrances shall be lighted and shall be subject to review by the Planning Commission.

**B. Permitted Lighting Sources and Shielding Requirements**

Outdoor lighting shall comply with the following use and shielding requirements. Existing developments shall be required to comply with the following requirements when deemed appropriate by the Planning Commission.

Lamp Type	Permitted Use	Shielding Requirement
Low Pressure Sodium	Roadways, walkways, parking areas	Fully
High Pressure Sodium & Low Pressure Sodium	Parking and security areas; sports parks, tennis courts; residential/agricultural security lighting	Fully
Metal Halide (filtered and in enclosed luminaries only)	Street lighting; signage, display and sports lighting, where color rendering is critical	Fully
Fluorescent (warm white and natural lamps preferred)	Residential lighting	Fully
Incandescent greater than 100 watt	Sensor activated residential lighting	Fully
Incandescent less than 100 watt	Porch lighting and other low-wattage residential uses	None
Any light source of 50 watts or less	Any	None
Glass tubes filled with neon, argon, and krypton	Display/advertising	None
Other sources	Subject to administrative review.	

**C. Height**

Lighting fixtures shall not exceed a height of twenty (20) feet, or the height of the principal building, whichever is less, measured from the ground level to the centerline of the light source. Fixtures should provide an overlapping pattern of light at a height of approximately seven (7) feet above ground level.

The Planning Commission may modify these height standards in commercial and industrial districts, based on consideration of the following: the position and height of buildings, other structures, and trees on the site; the potential off-site impact of the lighting; the character of the proposed use; and, the character of surrounding land use. In no case shall the lighting exceed the maximum permitted building height in the district in which it is located.

**D. Prohibited Lighting**

**1. Recreational Facility Lighting**

No outdoor recreational facility, public or private, shall be illuminated after 11:00 p.m. except to conclude a permitted recreational or sporting event or other activity in progress prior to 11:00 p.m.

**2. Outdoor Building and Landscaping Lighting**

Unshielded illumination of the exterior of a building or landscaping is prohibited except with incandescent fixtures having lamps of one hundred (100) watts or less.

**3. Mercury Vapor and Wall Pack Lighting**

The installation of mercury vapor fixtures is prohibited. Wall pack fixtures are also prohibited, except where the lens is fully shielded.

4. **Laser Source Light**  
The use of laser source light or any similar high intensity light for outdoor advertising or entertainment, when projected above the horizontal, is prohibited.
5. **Searchlights**  
The operation of searchlights is prohibited.

**E. Exceptions**

1. **Fossil Fuel Light**  
Fossil fuel light produced directly or indirectly from the combustion of natural gas or other utility-type fossil fuels (e.g., gas lamps).
2. **Temporary Carnival and Civic Uses**  
Lighting for permitted temporary circus, fair, carnival, or civic uses is exempt from the provisions of this Section.
3. **Construction and Emergency Lighting**  
Lighting necessary for construction or emergencies is exempt from the provisions of this article provided that said lighting is temporary and is discontinued immediately upon completion of the construction work or abatement of the emergency.
4. **Flag Lighting**  
Lighting necessary for the illumination of government or political flags are exempt from the provisions of this Section provided said lighting does not impose any hazard on the public and further provided said lighting is not utilized as a form of advertisement.
5. **Special Conditions**  
Additional exception may be permitted, subject to site plan review, and upon finding that unique or special conditions on the site warrant the exception.

**F. Approval Requirements**

1. Any person applying for site plan approval or for a building, electrical or sign permit to install outdoor lighting fixtures shall submit evidence that the proposed work will comply with this Section.
2. The site plan or building, electrical, or sign permit application shall identify the location, type, height, method of mounting, and intensity of proposed lighting. If available, the manufacturer's catalog specifications and documents, drawings, and certified test reports shall be submitted. The information submitted shall be sufficiently complete to demonstrate compliance with Ordinance requirements.

**G. Site Plan Requirements**

All lighting, including ornamental lighting, shall be shown on site plans in sufficient detail to allow determination of the effects of such lighting upon adjacent properties, traffic safety, and overhead sky glow. The objective of these specifications is to minimize undesirable off-site effects. A photometric plan may be required by the Planning Commission to evaluate compliance with this section.