

## ARTICLE 9.00

### ENVIRONMENTAL PROVISIONS

#### Section 9.0 Intent and Purpose

It is the intent and purpose of this article to carry out the recommendations of the Master Plan and the commitment of the Township to prevent physical harm, impairment and/or destruction of natural features. Through the provisions of this Article the Township works to accomplish these goals with protective regulations for resources such as flood plains, wetlands, watercourses, wildlife, natural topography, and vegetation. These regulations recognize there is a special relationship between natural features and the adjoining land in terms of: spatial relationship; interdependency in terms of physical location, plant species, and an encouragement of diversity and richness of plant and animal species; overland and subsurface hydrology; water table; water quality; erosion or sediment deposition.

#### Section 9.1. Reserved for future use.

#### Section 9.2. Creation or Alteration of Water Bodies

**9.2.1.** Intent: The intent of this section is as follows:

- A. To promote and maintain in the interest of the public health, safety and general welfare, a harmonious and compatible land use balance within the township and to prevent any undesirable nuisance conditions which could arise with the indiscriminate development of any channel, pond, lake, river, creek, stream, wetland, or other natural or artificial water body;
- B. To provide for the protection, preservation, proper maintenance and use of township water resources in order to minimize disturbance to them;
- C. To establish standards for agricultural, scenic, and recreational ponds.
- D. To prevent damage caused by erosion, scarification, sedimentation, turbidity or siltation;
- E. To provide for the protection of soils capable of providing necessary filtration for the maintenance of aquifer stability;
- F. To protect against loss of wildlife, fish or other beneficial aquatic organisms, or vegetation, and also against the destruction of the natural habitat thereof;
- G. To minimize the phenomenon of environmental deterioration;
- H. To secure safety from the dangers of flood and pollution, to prevent loss of life, property damage and other losses and risks associated with flood conditions;
- I. To protect individual and community riparian rights;
- J. To preserve the location, character and extent of natural water bodies.

**9.2.2. Special Use Permit Required.** Except for activities which comply with Section 9.2.3. of this Ordinance, the creation or alteration of a water body requires a Special Use Permit from the Township in

accordance with the provisions of Section 3.5. An application for a Special Use Permit may be obtained from the Zoning Administrator.

All applications for the creation or alteration of a water body shall comply with the intent of this section.

If a permit from the State of Michigan is required, applicants must submit two completed copies of the State permit application at the time of application for a Township Special Use Permit. The State and Township permits may be processed concurrently.

If a final wetlands determination is required per Section 3.6.3, the Zoning Administrator shall forward the completed application to the environmental consultant for review and recommendation prior to the hearing by the Planning Commission.

If a final wetlands determination is not required, the Zoning Administrator shall forward the completed application to the Planning Commission according to the procedures in Section 3.5.

Planning Commission approval of a Township Special Use Permit for the creation or alteration of a water body shall be granted contingent upon the approval of any applicable State permit and subject to any conditions established by the State.

**Section 9.2.3. Exemptions from Special Use Requirements.** The following activities that create or alter a water body shall be exempt from the Special Use Permit requirements of Section 3.5. when conducted in compliance with applicable Federal, State, and Local regulations and affecting only single family residential dwellings:

- A. Filling or dredging activities involving a total of thirty (30) cubic yards or less during a twenty-four (24) month period.
- B. Construction of a sea wall.
- C. Filling or dredging of wetlands conducted as part of an activity allowed within an wetland under the Goemere-Anderson Wetland Protection Act, P.A. 203 of 1979, as amended.
- D. Filling or dredging of wetlands conducted as part of an activity which has received a wetland use permit from the State under the Goemere-Anderson Wetland Protection Act, P.A. 203 of 1979, as amended.

These activities shall be subject to the following minimum standards:

- 1. Any fill, dredging, or construction shall not extend beyond the bulkhead line as established by review of the State of Michigan.
- 2. Shoreline fill, dredging, or construction of bulkheads or seawalls shall be permitted for the following:
  - a. To stabilize the shoreline;
  - b. To improve access to the water;
  - c. To protect or improve the natural flow of water; and
  - d. To improve the aesthetic value of the property.

3. In no case shall shoreline fill, dredging, or construction of bulkheads or seawalls impede the natural flow of water or obstruct the access of boaters to deeper waters.
4. No bulkheads, seawalls, or fill shall project beyond an existing bulkhead, seawall or shoreline in such a manner as to interfere with the normal flow of water, result in the deposit of debris, or cause a hindrance to navigation.
5. Bulkheads, seawalls, or fill shall not be constructed to exceed six (6) inches above the finished grade, or two (2) feet above the ordinary high water mark which ever is higher.
6. Proposed fill shall avoid the appearance of being added on. Any extension of land shall blend into the existing shoreline in a natural appearing manner including the use of natural materials such as rocks, rip-rapping materials, and native shoreline plant life.
7. Fabric for soil containment shall be used when appropriate.
8. Prior to final inspection of the project for shoreline filling or construction of bulkheads or seawalls, the land shall be graded and seeded so as to provide proper drainage within the applicants property, away from buildings and to leave the surface fit for other land uses permitted in the district. The grade must be established with 90 days of the completion of construction.
9. Stabilization of shoreline fill, dredging, or construction of bulkheads or seawalls within the Natural Rivers District shall utilize natural materials approved by the Zoning Administrator. This requirements may be waived where it is demonstrated by the applicant that alternative materials are necessary.

These activities shall require a Land Use Permit. Application for a Land Use Permit may be obtained from the Zoning Administrator. Applicants must submit two completed copies of the State of Michigan-permit application (where applicable) at the time of application for a Township Land Use Permit. The Zoning Administrator may if deemed necessary forward the completed application to the environmental consultant for review. Following review by the environmental consultant and subject to the approval and conditions of any applicable State permit, the Zoning Administrator may issue a Land Use Permit.

**9.2.4. Standards for Agricultural, Scenic, or Recreational Ponds.** In addition to any conditions the State of Michigan may place on an applicable permit, water bodies created or altered to serve as a pond for agricultural, recreational or scenic purposes shall be subject to the following minimum standards:

- A. A new artificial or manmade pond must be located on a parcel which is at least one (1) acre in area.
- B. Following the procedures stated in this section, construction of a new pond or the alteration of an existing water body may be approved by action of the Zoning Administrator. Construction of a new pond in excess of 0.5 acres or the alteration affecting more than 0.5 acres shall be subject to the review of the Township Engineer.

- C. All earth excavated during construction of the pond shall be disposed of on the parcel, unless it is determined by the Zoning Administrator or the State of Michigan that the parcel could not adequately accommodate the spoils. The placement and final disposition of any spoils removed from the parcel must be approved by the Township Zoning Administrator.
- D. The creation or alteration of a pond within a single parcel must provide minimum yard setbacks from the pond equal to those required for a structure as stated in Section 7.6.1.including footnotes. Setbacks from other natural features do not apply.
- E. The creation or alteration of a pond which encompasses parts of more than one parcel shall be approved only if the owners of all properties involved are joint applicants on the Land Use Permit. Minimum yard setbacks equal to those required for a structure in Section 7.6.1. (including footnotes) shall be maintained to all adjacent unaffected parcels.
- F. Each pond shall be constructed or altered in compliance with the design standards established by the U.S. Department of Agriculture and State of Michigan through the Soil Conservation Service.
- G. Any application for an alteration or creation of a pond which proposes stabilized side slopes steeper than five (5) horizontal to one (1) vertical shall include a written statement by the applicant detailing proposed safety measures to be taken by the applicant in the construction and operation of the pond.
- H. Written evidence shall be provided from the County Health Department or a Licensed Professional Engineer that the distance and soil conditions separating the pond from any septic system is sufficient to prevent contamination. In no case shall a pond be located closer than one hundred (100) feet to any septic system.
- I. For the protection of the general public, appropriate safety measures such as warning signs, rescue equipment, fencing and/or safety ramps may be required to be installed as deemed necessary by the Zoning Administrator upon review.
- J. No pond shall be maintained or operated in any manner which causes it to become a public nuisance.

### **Section 9.3. Reserved for future use**

### **Section 9.4 Landscape Standards: Greenbelts, Screening, and Plant Materials**

**9.4.1 Purpose.** The purpose of this section is to promote the public health, safety and welfare by establishing minimum standards for the design installation and maintenance of landscaping. 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 negative impacts of more intensive, nonresidential uses. Accordingly, these provisions are intended to set minimum standards for design and use of landscaping, greenbelts, and screening, and the protection and enhancement of the Township's environment. More specifically, the intent of these provision is to:

- A. Improve the appearance of off-street parking area, vehicular use areas, and property abutting public rights-of-way;
- B. Protect and preserve the appearance, character, and value of the neighborhoods which abut non-residential areas, parking areas, and other intensive use areas, thereby protecting the public, health, safety and general welfare;
- C. Integrate the various elements of a site;
- D. Integrate and link a development with the surrounding environment;
- E. Reduce soil erosion and depletion;
- F. Increase soil water retention, thereby helping to prevent flooding;
- G. Remove air pollutants, and control glare and reflection;
- H. Assist in directing safe and efficient traffic flow and prevent vehicular and pedestrian circulation conflicts; and,
- I. Create a more desirable microclimate.

#### **9.4.2 Scope of Application.**

- A. No site plan, condominium, or subdivision plat shall be approved unless it shows landscaping consistent with the requirements of this section. A land use permit shall not be issued for any use that requires site plan approval or any division of land that requires condominium, or subdivision plat approval until the required landscape plan is submitted and approved.
- B. No land use permit for construction of a new single family or two family dwelling shall be issued unless the required greenbelt along the street frontage is provided consistent with the requirements of Section 9.4.6.B.5. Lots with an existing principle single family or two family residential structure shall be specifically exempted, provided said structure is retained.

**9.4.3 General Provisions.** Whenever a landscape buffer strip, greenbelt, or planting screen is required by this Ordinance, the provisions of this Section shall be met.

- A. **Minimum Requirements.** The requirements in this Section are minimum requirements. Applicants are encouraged to provide additional landscaping to improve the function, appearance, and value of property.
- B. **Design Creativity.** Creativity in landscape design is encouraged. In several instances, the standards are intentionally flexible to encourage flexibility and creative design. Required trees and shrubs may be planted at uniform intervals, at random, or in groupings, depending on the designer's desired visual effect and the intent of the Township to coordinate landscaping on adjacent properties.
- C. **Plant Quality.** Plant materials used in compliance with the provisions of this Ordinance shall be nursery grown, free of pests and diseases, hardy in Livingston County, in conformance with the

standards of the American Association of Nurserymen, and shall have passed inspections required under state regulations.

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

**D. Installation.**

1. The required landscaping shall be planted with permanent living plant materials prior to the date of occupancy and shall be continuously maintained in a sound, healthy, and vigorous growing condition.
2. If the development is completed, at such time that the requirements of D.1. above, can not be complied with, the owner shall provide a performance guarantee, satisfactory to the Township, to ensure installation of required landscaping in the next planting season, in accordance with Section 4.6.

**9.4.4 Definitions.** For the purpose of this Section, the following definitions shall apply:

- A. **Berm.** A continuous, raised earthen mound with a flattened top and sloped sides, capable of supporting live landscaping materials, and with a height, width, and slope which complies with the requirements of this Ordinance.
- B. **Buffer Zone.** A strip of land often required between certain zoning districts reserved for plant material, berms, walls or fencing to serve as a visual barrier.
- C. **Bush.** A woody plant of one (1) to thirteen (13) feet in height with several erect, spreading or prostrate stems and a general bushy appearance.
- D. **Common Open Space.** Designated areas unoccupied and unobstructed from the ground upward except for living plant material, recreational or grounds maintenance facilities, sidewalks, bike paths, necessary drives and other improvements shown on the approved site plan within a PUD, Open Space Community, subdivision or condominium projects designed and intended for the use and enjoyment of the public or residents of the development and/or for the protection of natural features.
- E. **Critical Root Zone.** A circular region measured outward from a tree trunk representing the essential area of the roots that must be maintained or protected for the trees survival. Critical root zone is one foot of radial distance for every inch of tree caliper, with a minimum of eight (8) feet.
- F. **Grass, Turf.** Any family of plants with narrow leaves normally grown as permanent lawns in southern Michigan.
- G. **Grass, Ornamental.** Members of Gramineae, 6" to 15' in height, with individual spreads of 9" to 7' which are used for enhancement and screening purposes in commercial strips to provide summer to fall interest and winter effects.

- H. **Greenbelt.** A strip of land of definite width and location reserved for the planting of a combination of shrubs, trees and ground cover to serve as an obscuring screen or buffer for noise or visual enhancement, in accordance with the requirements of this Ordinance. In some cases a wall or fence may be permitted as part of the greenbelt.
- I. **Ground Cover.** Low-growing plants (including turf and ornamental grass, perennials and annuals) that form a dense, extensive growth, and tend to prevent weeds and soil erosion.
- J. **Shrub.** A woody plant with one, erect spreading stem and less than fifteen (15) feet in mature height with flowers conspicuous or not.
- K. **Tree.** A woody plant with an erect perennial trunk, which at maturity is fifteen (15) feet or more in height, which has a more or less definite crown of foliage. For purposes of this Ordinance the following definitions of types of trees shall apply:
1. **Deciduous Tree.** A tree which has foliage that is shed at the end of the growing season.
  2. **Evergreen Tree.** A tree which has foliage that is lost throughout the year and may or may not show winter color effects.
  3. **Ornamental Tree.** A deciduous tree which is typically grown because of its shape, flowering characteristics, or other attractive features, and which grows to a mature height of twenty five (25) feet or less.
  4. **Canopy Tree.** A deciduous tree which has a mature crown spread of greater than fifteen (15) feet and a mature height of forty (40) or more feet in southern Michigan, and which has a trunk with at least five (5) feet of clear stem at maturity.

#### 9.4.5 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 in 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 six (6) inches or greater in caliper, measured twelve (12) inches 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 should be implemented, such as the placement of a tree guard at the dripline around each tree. No vehicle or other construction equipment shall be parked or stored within the dripline of any tree or other plant material intended to be saved.

In the event that healthy plant materials which are intended to meet the requirements of the Ordinance are cut down, damaged or destroyed during construction, said plant material shall be replaced with the same species as the damaged or removed tree or approved substitute, in accordance with the following schedule, unless otherwise approved by the Zoning Administrator based on consideration of the site and building configuration, available planting space, and similar considerations:

Damaged Tree*	Replacement Tree	Replacement Ratio
Less than 6 inches	2 1/2 to 3 inches	1 for 1
More than 6 inches	2 1/2 to 3 inches	1 replacement tree for each 6 inches in caliper or fraction thereof of damaged tree
*CALIPER MEASURED 12 INCHES ABOVE GRADE		

**9.4.6 Greenbelts and Buffer Zones.**

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.
2. Open or natural areas should be maintained through the use of Open Space Community (Planned Unit Development) regulations.

B. **Required Greenbelt along Street Frontage.**

1. Within all multiple family residential, mobile home park, commercial and industrial districts, a twenty (20) foot wide greenbelt shall be planted along the public right-of-way including the equivalent of one (1) canopy tree and four (4) shrubs, rounded upward, for every forty (40) linear feet of frontage, planted within the greenbelt. The width of this greenbelt may be reduced by the Planning Commission in the Village Center zoning district.
2. The Planning Commission may require the provision of a planting berm at least three (3) feet in height in addition to the plant materials required along the public right-of-way parallel to a major arterial.
3. The Planning Commission may approve substitution of evergreen trees for up to fifty percent (50%) of the required trees.



4. The Planning Commission may require the preservation of existing trees and vegetation within the 20 foot wide greenbelt along any arterial street right-of-way.
  5. All single or two family residential lots, that fall under the scope of application of Section 9.4.2, shall provide the following street tree plantings within twenty (20) feet of the front lot line:
    - a. Along any arterial street: 3 canopy trees per lot.
    - b. Along any collector or local street: 2 canopy trees per lot.
    - c. Substitution for preserving existing trees within the required front yard setback may be allowed in accordance with Section 9.4.5.
- C. **Landscaping in Cul-De-Sacs, at Entrances and Within Medians.** Cul-de-sacs, site entrances and boulevard medians shall be landscaped with species tolerant of roadside conditions. The landscape plan shall be approved by the Planning Commission in consideration of sight distance, size of planting area, location of sidewalks, maintenance of adequate overhead clearance, accessibility to fire hydrants, visibility to approved signs and compatibility with the visual character of the surrounding area.
- D. **Berms.** Where required, berms shall conform to the following standards:
1. **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 three (3) feet horizontal (33 percent slope), with at least a two (2) foot flat area on top. Berms may undulate in height, subject to review and approval of berm design as shown on the site plan. Unless otherwise indicated, the minimum height of required berms shall be three (3) feet.
  2. **Protection for Erosion.** Any required berm shall be planted with sod, ground cover, adequately mulched plant bed areas 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 reviewed and approved by the Planning Commission.
  3. **Required Plantings.**
    - a. Berms located in the front yard of non-residential parcels shall be landscaped in accordance with the requirements for Required Greenbelt along Street Frontage Section 9.4.7, sub-section B.
    - b. Berms used for screening other than in the front yard shall be landscaped in accordance with the requirements for Required Buffer Zones Section 9.4.7, sub-section E.
- E. **Required Buffer Zones.** In order to provide protective screening and buffers between land uses, the Planning Commission shall require a greenbelt, and wall or berm to be provided by the applicant in accordance with the following:

REQUIRED BUFFER ZONES				
Proposed Use:	Adjacent to Single Family District	Adjacent to Multiple Family or Mobile Home Park	Adjacent to Commercial District	Adjacent to Industrial District
Single Family Residential	None	None	None	C <sup>1</sup>
Multiple Family Residential	B	B	C	C
Mobile Home Park	B	B	C	C
Commercial	B	B	C	None
Industrial	A	A	B	None

Footnote:

1. Buffer zone may be included in lot area. Buffer zone requirement applies to applications for subdivision plat or condominium site plan approval. Single family residential lots of record existing prior to the effective date of this ordinance are exempt from this requirement.

DESCRIPTION OF REQUIRED BUFFER ZONES			
Buffer Zone	Minimum Width	Minimum Wall/Berm	Minimum Plant Materials
A	50 feet	6 foot high continuous wall <sup>1</sup> or required berm	1 canopy tree, 2 evergreen trees and 4 shrubs per each twenty (20) linear feet along the property line, rounded upward.
B	20 feet	6 foot high continuous wall <sup>1</sup> or required berm	1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward.
C	10 feet	None required	1 canopy or evergreen tree or 4 shrubs per each twenty (20) linear feet along the property line, rounded upward.

Note: The Planning Commission may waive or reduce the above requirement if equivalent screening is provided by existing or planned parks, parkways, recreation areas, or by existing woodlands on the lot, and topographic or other natural conditions. Existing quality trees (hickory, oak, maple, ash) with a caliper at least eight (8) inches shall count as two (2) trees toward the above requirements.

Footnote:

1. Where a six (6) foot high continuous wall is required, such wall shall be a masonry wall, except that the Planning Commission may allow the substitution of a six (6) foot high pressure-treated wood fence.

F. **Waivers and Modifications.** The Planning Commission may waive or modify the fencing or landscape buffering requirements upon a determination that a solid fence or landscaping buffer will not be necessary or effective for screening. In making such a determination, the following shall be considered.

1. Need for security;
2. Abutting district or existing use;
3. Extent that existing natural vegetation provides the desired screening;
4. Topography which would eliminate the benefits of required landscaping;
5. Building heights and views in relation to existing topography and vegetation as well as views from adjacent uses;
6. Similar conditions existing such that no good purpose would be served by providing the required landscaping plan.

#### **9.4.7 Natural Open Space.**

- A. Notwithstanding required open space preservation/design as part of the site plan review process, the Planning Commission may additionally require that portions of a site not included within a proposed development area be protected from damage during construction and maintained in a natural condition until such time as required for use. Said preservation measures may be required by the Planning Commission in areas which are important for one or more of the following:
1. Preservation of the Township's rural character.
  2. Maintenance of wildlife habitat or migration routes.
  3. Protection of fragile ecosystems such as wetlands, streams and wildlife habitats.
  4. Maintenance of air quality by filtering out airborne particulate matter.
  5. Minimization of stormwater runoff and preservation of areas for ground water recharge.
  6. Buffering between potentially incompatible land uses.
- B. For areas of a site not proposed for immediate use, the Planning Commission may require that any combination of the following methods of natural area preservation be employed by an applicant as a condition of site plan approval.
1. Provide a silt fence to prevent any construction related debris from impacting natural areas not included within the development area during construction;
  2. Provide adequate protective barricading outside the critical root zone for individual trees and woodland areas not included within the development area during construction;
  3. Avoid storage of any equipment, debris, refuse or materials within natural areas not included within the development area during construction and operation of the site;

4. Avoid alteration, blockage or removal of any on-site natural watercourse passing through any natural area not included within the development area during construction and operation of the site; and
5. Avoid alteration, blockage or removal of any on-site wildlife habitat area within natural areas not included within the development area during construction and operation of the site.

#### **9.4.8 Parking Lot Landscaping.**

- A. All of the required parking lot trees shall be placed within the parking lot envelope, described as the area including the parking lot surface and extending 18 (eighteen) feet from the edge of the parking lot, as illustrated in Figure 9.4.8. Where a parking lot contains fifty (50) or more parking spaces, a minimum of one-third (1/3) of the trees shall be placed in landscape islands within the interior of the parking area.
  1. In an Industrial District one canopy tree shall be required for each three thousand (3,000) square feet of the total of the paved driveway and parking lot surface. In all commercial and multiple family districts, one canopy tree shall be required for each two thousand (2,000) square feet of paved driveway and parking lot surface, provided that in no case less than two (2) trees provided.
  2. Each tree shall be surrounded by an open land area a minimum of one hundred fifty (150) square feet to provide for adequate infiltration of water and air, and surrounded by a minimum unobstructed area of six (6) feet around the diameter of the trunk for protection. If irrigation is provided, the open land area can be reduced to a minimum of seventy five (75) square feet. Tree plantings shall also be protected from automobiles with curbing or other suitable device.
- B. In no case shall the required parking area landscaping be credited toward required greenbelts, or buffers.
- C. Landscaping shall be installed such that, when mature, it does not obscure traffic signs or lighting, obstruct access to fire hydrants, interfere with adequate sign distance for motorists, nor disrupt drainage patterns on the site or adjacent properties.
- D. Landscaping shall be dispersed throughout the parking lot in order to break up large expanses of pavement and help direct smooth traffic flow within the lot.
- E. Landscaped areas shall be covered by grass or other living ground cover. Woodchips or similar material is permitted for planting beds immediately surrounding plant material. Such material should be identified on the landscape plan. Mulches shall be three (3) inches depth around woody plants and one half (2) inch depth around herbaceous plants, and in both cases shall not be placed within two and one half (22) inches of mainstem or clump crown.

**9.4.9 Landscape Standards.** The following specifications shall apply to all plant material proposed in accordance with the landscaping requirements of this Ordinance.

A. **Size.** The following table specifies the minimum required plant sizes at planting.

MINIMUM PLANT MATERIAL SIZE			
Plant Type	Minimum Caliper <sup>1</sup>	Minimum Height	Minimum Spread
Deciduous Canopy Trees	2 1/2 inches	4 feet <sup>2</sup> first branch	--
Deciduous Ornamental Trees	2 inches	4 feet <sup>3</sup>	--
Evergreen Trees	--	6 feet	2 1/2 feet
Shrubs	--	2 feet	2 feet

Footnotes:

1. Measured 12 inches above grade.
2. Trees planted along pedestrian routes (i.e. sidewalks, plazas, etc.) shall not have branches lower than six (6) feet. Trees planted within streetline and sidewalk or along bikeways shall maintain a vertical clearance to obstructions of a minimum of ten (10) feet.
3. Clumped trees (i.e. birch) shall have a minimum height of six (6) feet above grade.

B. **Spacing.** Planting in informal groupings to create a naturalistic appearance is desirable. Wherever possible, plant materials shall not be placed closer than four (4) feet from the fence line or property line. The following guidelines are for on-center spacing of plant materials used together in informal groupings:

Plant Material Types	Evergreen	Narrow Evergreen Trees	Large Deciduous Trees	Deciduous Ornamental Trees	Large Shrubs	Small Shrubs
Evergreen Trees	Min. 10' Max. 20'	Min. 12'	Min. 20'	Min. 12'	Min. 12'	Min. 5'
Narrow Evergreen Trees	Min. 12'	Min. 5' Max. 10'	Min. 15'	Min. 10'	Min. 5'	Min. 4'
Deciduous Canopy Trees	Min. 20'	Min. 15'	Min. 20' Max. 30'	Min. 15'	Min. 5'	Min. 3'
Deciduous Ornamental Trees	Min. 12'	Min. 10'	Min. 15'	Min. 8' Max. 15'	Min. 6'	Min. 3'

Large Shrubs	Min. 12'	Min. 5'	Min. 5'	Min. 6'	Min. 4' Max. 6'	Min. 5'
Small Shrubs	Min. 5'	Min. 4'	Min. 3'	Min. 3'	Min. 5'	Min. 3' Max. 4'

- C. **Mixing of Species.** The overall landscape plan shall not contain more than 33% of any one plant species. The use of trees native to the area and Southeast Michigan, and mixture of trees from the same species associates, is encouraged. Botanical genera containing trees native to southeast Michigan are identified with an asterisk (\*) in the table of recommended Plant Materials.
- D. **Suggested Plant Materials.** The following table lists recommended plant materials for required landscaping. Plant materials of equal or better quality may be substituted for suggested plant materials.

<b>RECOMMENDED PLANT MATERIALS</b>	
COMMON NAME	GENUS
<b>Deciduous Canopy Trees</b>	
1. Oaks*	Quercus
2. Hard Maples (Except Japanese)*	Acer
3. Hackberry*	Celtis
4. Planetree (Sycamore)*	Platanus
5. Birch*	Betula
6. Beech*	Fagus
7. Ginkgo (male)	Ginkgo
8. Honeylocust (Thornless Cultivars only)*	Gleditsia
9. Sweetgum	Liquidambar
10. Hophornbeam (Ironwood)*	Ostrya
11. Linden	Tilia
12. Ashes*	Faxinus
13. Hickory*	Carya
14. Hornbeam (Blue Beech)*	Carpinus
Please note: Although the use of ashes is suggested, due to recent disease and pest problems associated with ashes in the area, it is recommended that more disease resistant ash cultivars be used and that no one cultivar be planted as the dominant tree type.	
<b>Deciduous Ornamental Trees</b>	
1. Amelanchier*	Amelanchier
2. Redbud*	Cercis
3. Dogwood (Tree Form)*	Cornus

4.	Hawthorn*	Crataegus
5.	Flowering Crabapple (Disease Resistant Cultivars)	Malus
6.	Flowering Plum (Tree Form)	Prunus
7.	Flowering Pear	Pyrus
8.	Magnolia	Magnolia
9.	Hornbeam*	Carpinus
10.	Rose of Sharon	Hibiscus
<b>Evergreen Trees</b>		
1.	Fir	Abies
2.	Hemlock	Tsuga
3.	Spruce	Picea
4.	Pine*	Pinus
5.	Douglas Fir	Pseudotsuga
Please note: Dwarf, Globe, Pendulous species/Cultivars are not permitted.		
<b>Narrow Evergreens</b>		
1.	Juniper*	Juniperus
2.	Arborvitae	Thuja
Please note: Dwarf, Globe, Spreading Species/Cultivars are not permitted.		
<b>Large Shrubs</b>		
<b>1. Deciduous</b>		
a.	Dogwood (Shrub Form)*	Cornus
b.	Cotoneaster	Cotoneaster
c.	Forsythia	Forsythia
d.	Mock-Orange	Philadelphus
e.	Sumac*	Rhus
f.	Lilac	Syringa
g.	Viburnum*	Viburnum
h.	Witchhazel*	Hamamelis
l.	Euonymus	Euonymus
j.	Privet	Ligustrum
k.	Ninebark*	Physocarpus
<b>2. Evergreens</b>		
a.	Juniper (Hetz, Pfitzer, Savin)	Juniperus
b.	Yew (Pyramidal Japanese)	Taxus
<b>Small Shrubs</b>		
<b>1. Deciduous</b>		

a.	Barberry	Berberis
b.	Boxwood	Buxus
c.	Quince	Chaenomeles
d.	Cotoneaster	Cotoneaster
e.	Euonymus*	Euonymus
f.	Forsythia	Forsythia
g.	Hydrangea	Hydrangea
h.	Holly*	Ilex
I.	Privet	Ligustrum
j.	Potentilla*	Potentilla
k.	Currant*	Ribes
l.	Lilac	Syringa
m.	Viburnum*	Viburnum
n.	Weigela	Weigela
<b>2.</b>	<b>Evergreens</b>	
a.	Fir	Abies
b.	False Cypress	Chamaecyparis
c.	Juniper (Low Spreading)*	Juniperus
d.	Spruce	Picea
e.	Pine	Pinus
f.	Yew (Globe, Spreading, Upright)*	Taxus
g.	Arborvitae (Globe/Dwarf)	Thuja

E. **Undesirable Plant Material.** Use of the following plant materials (or their clones or cultivars) is not encouraged because of susceptibility to storm damage, drainage conflicts, disease, and other undesirable characteristics.

1. Box Elder
2. Soft Maples (Silver)
3. Elms (American, Siberian, Slippery, Red, and Chinese)
4. Poplars
5. Willows
6. Horse Chestnut (nut bearing)
7. Tree of Heaven
8. Catalpa
9. Ginkgo (female)
10. Cottonwood
11. Black Locust
12. Mulberry
13. Honey Locust (with thorns)



The Planning Commission, however, may allow trees from this list when associated with an appropriate ecosystem, such as a wetland area.

**F. Ground Cover/Grass.**

1. **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 three (3) complete growing seasons.
2. **Grass.** Grass area shall be planted using species normally grown as permanent lawns in Livingston County. Grass, sod, and seed shall be clean and free of weeds, pests, and diseases. Grass may be sodded, plugged, sprigged or seeded. When grass is to be established by a method other than complete sodding or seeding, nurse grass seed shall be sown for immediate effect and protection until complete coverage is otherwise achieved. Straw or other mulch shall be used to protect newly seeded areas.
3. **Mulch:** Mulch used around trees, shrubs, and vines shall be three (3) inches depth around woody plants and not be placed within two and one half (2 1/2) inches of main stem or clump crown, and installed in a manner as to present a finished appearance.

**Section 9.5 Performance Standards**

No use otherwise allowed shall be permitted within any district which does not conform to the following standards of use, occupancy, and operation, which standards are hereby established as the minimum requirements to be maintained within said area.

**9.5.1 Fire and Explosion Hazards.** All buildings, storage and handling of flammable materials and other activities shall conform to Township building and fire ordinances and to any applicable state and federal regulations or requirements. No use or building shall in any way represent a fire or explosion hazard to a use on adjacent property or to the public on a public street. Any activity involving the use or storage of flammable material shall be protected by adequate fire fighting and fire suppression equipment and by such safety devices as are normally used in the handling of any such material.

**9.5.2 Smoke.** It shall be unlawful for any person, firm, or corporation to permit the emission of any smoke from any source whatever to a density greater than that density described as No. 1 on the Ringlemann Chart; provided that the following exceptions shall be permitted: smoke, the shade or appearance of which is equal to but not darker than No. 2 of the Ringlemann Chart for a period or periods, aggregating four (4) minutes in any thirty (30) minutes. For the purpose of grading the density of smoke, the Ringlemann Chart, as now published and used by the United States Bureau of Mines, which is hereby made a part of this Ordinance, shall be the standard. However, the umbrascopes readings of smoke densities may be used when correlated with Ringlemann's Chart.

**9.5.3 Dust, Dirt, and Fly Ash.** No person, firm, or corporation shall operate or cause to be operated, maintain or cause to be maintained, any process for any purpose, or furnace or combustion device for the burning of coal or other natural or synthetic fuels, without maintaining and operating, while using said process or furnace or combustion device, recognized and approved equipment, means, methods, device or contrivance to reduce the quantity of gasborne or airborne solids or fumes emitted into the open air, which is operated in conjunction with said process, furnace, or combustion device so that the

quantity of gasborne or airborne solids shall not exceed 0.20 grain per cubic foot of the charring medium at the temperature of five hundred (500) degrees Fahrenheit. For the purpose of determining the adequacy of such devices, these conditions are to be conformed to when the percentage of excess air in the stack does not exceed fifty (50) percent of full load. The foregoing requirements shall be measured by the ASME Test Code for dust-separating apparatus. All other forms of dust, dirt, and fly ash shall be completely eliminated insofar as escape or emission into the open air is concerned. The Building Inspector may require such additional data as is deemed necessary to show that adequate and approved provisions for the preventions and elimination of dust, dirt, and fly ash have been made.

**9.5.4 Odor.** The emission of odors which are generally agreed to be obnoxious to any considerable number of persons at their place of residence shall be prohibited.

**9.5.5 Gasses.** SO<sub>2</sub>, as measured at the property line, shall not exceed an average of 0.3 ppm over a 24-hour period; provided, however, that a maximum concentration of 0.5 ppm will be allowed for a one-hour period out of a 24-hour period; H<sub>2</sub>S shall not exceed 0.1 ppm; fluorine shall not exceed 0.1 ppm; nitrous fumes shall not exceed 5 ppm; CO shall not exceed 15 ppm.

**9.5.6 Airborne Matter, General.** In addition to 9.5.1 through 9.5.4. above, there shall not be discharged from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment or nuisance to the public or which endanger the comfort, repose, health, or safety of persons or which cause injury or damage to business or property.

**9.5.7 Glare and Radioactive Materials.** Glare from any process (such as or similar to arc welding, or acetylene torch cutting) which emits harmful ultraviolet rays shall be performed in such a manner as not to be seen from any point beyond the property line, and as not to create a public nuisance or hazard along lot lines. Radioactive materials and wastes, and including electro magnetic radiation such as X-ray machine operation, shall not be emitted to exceed quantities established as safe by the U.S. Bureau of Standards, when measured at the property line.

**9.5.8 Noise.** The emission of measurable noises from the premises shall not exceed sixty-five (65) decibels as measured at the boundary property lines, except that where normal street traffic noises exceed sixty-five (65) decibels during such periods, the measurable noise emanating from premises may equal, but not exceed, such traffic noises. In addition, objectionable sounds of an intermittent nature, or characterized by high frequencies, even if falling below the aforementioned decibel readings, shall be controlled so as not to become a nuisance to adjacent uses.

**9.5.9 Vibration.** Machines or operations which cause vibration shall be permitted in industrial districts, but no operation shall cause a displacement exceeding 0.003 of one (1) inch as measured at the property line.

**9.5.10 Waste Disposal.** All solid, liquid, and sanitary waste shall be treated and disposed in accordance with the standards of the Township of Hamburg, Livingston County Health Department, Michigan Department of Natural Resources and Michigan Department of Public Health and other applicable agencies.

**9.5.11 Lighting.** All exterior lighting shall be so installed that the surface of the source of light shall not be visible from the nearest residential district boundary and it shall be so arranged to reflect light away from any residential use. In no case shall any lighting become a nuisance as regulated in the Township Nuisance Ordinance.

**9.5.12 Engineering.** Proposed development shall conform to the adopted Hamburg Township Engineering and Design requirements. These requirements are intended to help protect the health, safety, and environmental resources of the Township.

## **Section 9.6 Regulation of Floodplain Areas**

### **9.6.1 Purpose**

- A. The floodplains of Hamburg Township are subject to periodic inundation of flood waters which result in loss of property, health and safety hazards, disruption or commerce and governmental services and impairment or tax base.
- B. These regulations are adopted to comply with the rules and regulations of the National Flood Insurance Program, codified as 44 Code of Federal Regulations Parts 59—78, so as to maintain the community's eligibility in the National Flood Insurance Program.
- C. The provisions of this Section are intended to:
  - 1. Help protect human life, prevent or minimize material losses, and reduce the cost to the public of rescue and relief efforts;
  - 2. Restrict or prohibit uses which are dangerous to health, safety, or property in times of flooding or cause excessive increases in flood heights or velocities;
  - 3. Require that uses vulnerable to floods, including public facilities which serve such uses, shall be protected against flood damage at the time of initial construction;
  - 4. Protect individuals from buying lands which are designated to be unsuited for intended purposes because of flooding;
  - 5. Permit reasonable economic use of property located within a designated floodplain area.

### **9.6.2 Delineation of Floodplain Areas (One percent annual chance flood)**

- A. Designated floodplain areas shall overlay existing zoning districts delineated on the Zoning District Map of Hamburg Township. The following maps together with all attached material are hereby adopted by reference and declared to be a part of the Hamburg Township zoning map and this ordinance. The attached material includes the Flood Insurance Study for Livingston County, Michigan (all jurisdictions) and the Flood Insurance Rate Map panels enumerated below, dated September 17, 2008, all prepared by the Federal Emergency Management Agency. These materials are on file with the Hamburg Township zoning department. The most updated Flood Insurance Rate Maps adopted by Hamburg Township will be incorporated for the administration of this ordinance.

Flood Insurance Rate Map panel numbers of 26093CINDOA, 26093C0320D, 26093C0340D, 26093C00345D, 26093C00431D, 26093C0432D, 26093C00433D, 26093C0434D, 26093C0445D, 26093C0451D, 26093C0452D, 26093C0453D, 26093C0454D, 26093C0456D, 26093C0458D, 26093C0465D, 26093C0470D.

- B. The standard applied to establish the floodplain area is the base floodplain delineated by the base flood. In areas associated with riverine flooding, a floodway is designated within the floodplain area.
- E. Where there are disputes as to the location of a floodplain area boundary, the Zoning Board of Appeals shall resolve the dispute in accordance with Section 6.5.B.

### **9.6.3 Application of Regulations.**

- A. In addition to other requirements of this Ordinance applicable to development in the underlying zoning district, compliance with the requirements of this Section shall be necessary for all development occurring within designated floodplain areas. Conflicts between the requirements of this Section and other requirements or this Ordinance or any other ordinance shall be resolved in favor of this Section, except where the conflicting requirement is more stringent and would further the objectives of this Section. In such cases the more stringent requirement shall be applied.
- B. Upon application for Land Use Permits in accordance with Section 3.3., the Zoning Administrator shall determine whether said use is located within a designated floodplain area utilizing the documents cited in Section 9.6.2. The issuance of a Land Use Permit within the floodplain area shall comply with the following standards:
  - 1. The requirements of this section shall be met.
  - 2. The requirements of the underlying districts and all other applicable provisions of this Ordinance shall be met.
  - 3. All necessary development permits shall have been issued by appropriate local, State and Federal authorities, including a floodplain permit, approval, or letter of no authority from the State of Michigan. Where a development permit cannot be issued prior to the issuance of a zoning compliance permit, a letter from the issuing agency indicating intent to issue contingent only upon proof of zoning compliance shall be acceptable.

### **C. Floodplain Management Administrative Duties**

- 1. With regard to the National Flood Insurance Program, and the regulation or development within the flood hazard area zone as prescribed in Article 9.6., the duties of the zoning administrator shall include, but are not limited to:
  - a. Notification to adjacent communities and the State of Michigan of the proposed alteration or relocation of any watercourse, and the submission of such notifications to the Federal Insurance Administration;
  - b. Verification and recording of the actual elevation in relation to mean sea level of the lowest floor, including basement, of all new or substantially improved structures constructed within the flood hazard area, and in the case of floodproofed structures, the elevation to which the structure was floodproofed;

- c. Recording of all certificates of floodproofing, and written notification to all applicants to whom variances are granted in a flood hazard area zone indicating the terms of the variance, the increased danger to life and property, and that the cost of flood insurance will increase commensurate with the increased flood risk, and may reach amounts in excess of \$25.00 for \$100.00 of insurance coverage per year. A record of all variance notifications and variance actions shall be maintained together with the justification for each variance.
2. All records and maps pertaining to the National Flood Insurance Program shall be maintained in the office of the zoning administrator and shall be open for public inspection.
3. It shall be the responsibility of the zoning administrator to obtain and utilize the best available flood hazard data for purposes of administering this Ordinance in the absence of data from FEMA.

#### **9.6.4. Floodplain Standards and Requirements**

- A. The following general standards and requirements shall be applied to all uses proposed to be located within the floodplain area:
  1. All new construction, substantial improvements, and/or reconstruction due to substantial damage within a floodplain, including the placement of prefabricated buildings and mobile homes, shall:
    - a. Be designed and anchored to prevent flotation, collapse, or lateral movement of the structure;
    - b. Be constructed with materials and utility equipment resistant to flood damage
    - c. Be constructed by methods and practices that minimize flood damage.
    - d. Be constructed with electrical, heating, ventilation, plumbing, air conditioning equipment, generators, and other service facilities elevated a minimum of one (1) foot above the base flood elevation and designed to prevent water from entering or accumulating within the components during conditions of flooding.
  2. All new and replacement water supply systems shall minimize or eliminate infiltration of flood waters into the systems.
  3. All new and replacement sanitary sewage systems shall minimize or eliminate infiltration of flood waters into the systems and discharges from systems into flood waters. On-site waste disposal systems shall be located to avoid impairment to the system or contamination from the system during flooding.
  4. All public utilities and facilities shall be designed, constructed, and located to minimize or eliminate flood damage.
  5. Adequate drainage shall be provided to reduce exposure to flood hazards.

6. The Township Engineer or his representative shall review development proposals to determine compliance with the standards in this section, and shall transmit his determination to the Zoning Administrator.
  7. Land shall not be divided in a manner creating parcels or lots which cannot be used in conformance with the requirements of this Article.
  8. The flood carrying capacity of any altered or relocated watercourse not subject to State or Federal regulations designed to ensure flood carrying capacity shall be maintained.
  9. Available flood hazard data from Federal, State, or other sources shall be reasonably utilized in meeting the standards of this section. Data furnished by FEMA shall take precedence over data from other sources.
- B. The following specific standards shall be applied to all uses proposed to be located within the floodplain area but not within the floodway portion of the floodplain area.
1. Residential structures: new construction, substantial improvements, and/or reconstruction due to substantial damage shall have the lowest floor, including basement, elevated at least one (1) foot above the base flood elevation.
  2. All new construction and substantial improvements of nonresidential structures shall have either:
    - a. The lowest floor, including basement, elevated at least one (1) foot above the base flood elevation.
    - b. Be constructed such that below base flood elevation, together with attendant utility and sanitary facilities, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered professional engineer or architect shall certify that the standards of this subparagraph are satisfied, and that the floodproofing methods employed are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with a base flood in the location of the structure.
- C. Mobile Home Standards. The following general standards and requirements shall be applied to all mobile homes placed, substantially improved, and/or reconstructed due to substantial damage located within flood plain areas:
1. All mobile homes shall be anchored to resist flotation, collapse, or lateral movement by providing over-the-top and frame ties in accord with the following specifications:
    - a. Over-the-top ties shall be provided at each of the four corners of the mobile home, with two (2) additional ties per side at intermediate locations, except that on mobile homes less than fifty (50) feet in length one (1) tie per side shall be required.

- b. Frame ties shall be provided at each corner of the home with five (5) additional ties per side at intermediate points, except that on mobile homes less than fifty (50) feet in length four (4) ties per side shall be required.
  - c. All components of the anchoring system shall be capable of carrying a force of 4800 pounds.
  - d. All additions to a mobile home shall be similarly anchored.
2. All mobile homes located either outside of a mobile home park, in a new mobile home park, in an expansion to an existing mobile home park, or in an existing mobile home park where the mobile home has suffered substantial damage shall be elevated on a permanent foundation such that the lowest floor and electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities including ductwork, are elevated to one foot above the base flood elevation and securely anchored to adequately anchored foundation system to resist flotation, collapse and lateral movement.
  3. An evacuation plan indicating alternate vehicular access and escape routes shall be filed with the Livingston County Sheriff Department for mobile home parks and mobile home subdivisions.
- D. The following standards shall be applied to all uses proposed to be located within the floodway portion of the floodplain area.
1. Encroachments, including fill, new construction, substantial improvements, and other development shall be prohibited. Exception to this prohibition shall only be made upon certification by a registered professional engineer or the State of Michigan that the development proposed will not result in any increases in flood levels during a base flood discharge, and compliance with Act 245, Public Acts of 1929, as amended by Act 167, Public Acts of 1968.
  2. The placement of mobile homes shall be prohibited.
  3. The uses of land permitted in an underlying zoning district shall not be construed as being permitted within the regulatory floodway, except upon compliance with the provisions of this section.

#### **9.6.5. Warning and Disclaimer of Liability.**

- A. The degree of flood protection required by provisions of this section is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on rare occasions.
- B. These provisions do not imply that areas outside the floodplain or land uses permitted within such districts will be free from flooding or flood damages nor shall the Township or any officer or employee thereof be liable for any flood damages that result from reliance on the provisions of this section or any administrative decision lawfully made thereunder.

**Section 9.7. Regulations for Waterfront Lots**

9.7.1 Newly created waterfront lots or existing lots with newly created riparian frontage shall provide the following riparian width requirements:

Zoning District	Riparian width per lot served
WFR	50 feet/lot
NR	100 feet/lot
All other districts	75 feet/lot

9.7.2 The lot width from the property line adjacent to the waterbody shall at no point be less than the required riparian width in section 9.7.1.

**Section 9.8. Common Use (Keyhole) Ordinance**

**9.8.1. Intent.** Special use provisions in accordance with Section 3.5. of the Hamburg Township Zoning Ordinance are established to regulate land uses adjoining water bodies in any Zoning District. The purpose of these regulations is to protect the public health safety and welfare which could be threatened by the over-usage of inland lakes, and avoid situations which may create a nuisance, impair important irreparable natural resources and destroy property values. These regulations are intended to reinforce the implementation of the Michigan Inland Lakes and Streams Act (Public Act 346 of 1972).

**9.8.2. Common Use Lot (Keyhole) Defined.** A common use riparian lot (keyhole) shall be defined as any private site, platted lot or other parcel held in common by a subdivision, association, similar agency or group of individuals, or held in common by virtue of the terms of a plat of record; which provides common use riparian access to non-riparian lots or land owners.

**9.8.3. Applicability.** These regulations shall apply to the following common use lots:

- A. Those lots created after the effective date of this ordinance.
- B. Those lots of record existing prior to the effective date of this ordinance that did not provide common use access to a water body (riparian rights to non-riparian land owners) prior to the effective date of this ordinance.
- C. Lots that have been providing common use access to a water body for a defined geographical area or a specific number of lots through an association or subdivision/condominium deed prior to the effective date of this ordinance, and where it is proposed to expand the geographical area or number of lots that are provided common use access to a water body through said common use access lot.

Lots of record existing prior to the effective date of this ordinance that have been providing common use access to a water body for a defined geographical area or a specific number of lots



may continue to provide riparian rights subject to the marina operating permit requirements of the Michigan Department of Natural Resources under the Michigan Inland Lakes and Streams Act (Public Act 346 of 1972).

**9.8.4. Uses Subject to Special Use Permit.** The following uses shall be permitted in any district upon approval of the Planning Commission and subject to conditions as specified under Section 3.5.

- A. Recreational sites, including bathing beaches, playgrounds, boat launching sites, and other recreational areas.
- B. Scenic sites.
- C. Trails, bicycle paths and access routes, other than dedicated streets.
- D. Boat docks provided that all of the requirements of Section 9.8.7 are met.

**9.8.5. Area and Bulk Requirements.** Waterfront sites dedicated to common use shall conform in all respects to the area and bulk requirements of the adjacent districts which they are intended to serve.

**9.8.6. General Requirements.**

- A. The deed to such lot or parcel shall specify the non-riparian lots or parcels which shall have rights to its use.
- B. Such riparian lot or parcel shall have a minimum frontage of 150 feet, measured by a straight line which intersects each side lot line at the water's edge; a minimum lot depth of 100 feet, measured as the minimum distance between the water's edge and the lot line which is opposite the water's edge; and a minimum area of 30,000 square feet.
- C. For uses other than boat docks, such riparian lot shall have the minimum amount of riparian frontage identified in the following table for each non-riparian lot served:

Zoning District	Riparian frontage per lot served
WFR	50 feet/lot
NR	100 feet/lot
All other districts	75 feet/lot

Riparian frontage shall be measured by a straight line which intersects each side lot line at the water's edge. Artificially created shoreline may not be used to increase the calculated riparian frontage.

**9.8.7. Boat Docks.**

- A. The maximum number of boats which can be docked, moored or stored at a common use riparian parcel shall be one boat for the required riparian frontage identified in the following table:

Zoning District	Riparian frontage per boat
WFR	50 feet/boat
NR	100 feet/boat
All other districts	75 feet/boat

Riparian frontage shall be measured by a straight line which intersects each side lot line at the water's edge. Artificially created shoreline may not be used to increase the calculated riparian frontage.

- B. The boat dock facility must obtain a permit for marina operation from the Michigan Department of Natural Resources in accordance with Administrative Rules of the Michigan Inland Lakes and Streams Act (P.A. 346 of 1972, as amended). Design for a boat dock facility shall meet all of the Michigan Department of Natural Resources standards for marinas.

**Section 9.9 Natural Features Setback Requirements**

**9.9.1 Intent and Purpose.** It has been determined that, in the absence of such a minimum setback, intrusions in or onto natural features would occur, resulting in harm, impairment and/or destruction of natural features contrary to the public health, safety and general welfare and the intent and purpose of this Article. This regulation is based on the police power, for the protection of the public health, safety and welfare, including the authority granted in the Township Rural Zoning Act. The setback requirements shall achieve the following objectives in relation to the required setback areas:

- A. Protect unique wildlife habitat and habitat transition, including, without limitation, feeding, nesting, resting and traveling areas for numerous animals.
- B. Protection of surface water run-off and water quality for pollution prevention purposes, and assistance in beneficial water recharge for drinking, irrigation and other purposes.
- C. Provide water storage area in storm events.
- D. Provide areas for recreational or other functional uses which are unique due to geographic relationship to natural features.
- E. Preserve aesthetic views and areas for the enjoyment of natural resources.
- F. Preserve threatened and endangered species habitat, including upland species.
- G. Reduce the need for on-site and off-site stormwater storage capacity based upon the availability of a greater area or absorption and a smaller impervious area.
- H. Stabilize and protect soil resources, including the prevention of erosion and prohibition of loss due to moving water resulting in destruction of upland, structures and infrastructure and infrastructure on the upland, and prevention of the alteration of the course of moving waters.

### 9.9.2 Authorization and Prohibition

- A. The natural features setback shall be an area or feature with boundaries and limitation determined in accordance with the standards and provisions in this article in relation to respective types of natural features.
- B. In conjunction with the review of plans submitted for authorization to develop property or otherwise undertake an operation in or on, or adjacent to, a natural feature setback shall be determined, and authorizations and prohibitions established, by the body undertaking the plan review.
- C. Within an established natural feature setback, unless and only to the extent determined to be in the public interest by the body undertaking plan review, there shall be no: deposit of any material; removal of any soils, minerals and/or vegetation; dredging, filling or land balancing; constructing permanent or temporary structures; or, undertaking seasonal or permanent operations. This prohibition shall not apply with regard to those activities exempted from this prohibition, below.
- D. In determining whether proposed construction or operations are in the public interest, the benefit which would reasonably be expected to accrue from the proposal shall be balanced against the reasonably foreseeable detriments of the construction or other operation, taking into consideration the local, state and national concern for the protection and preservation of the natural feature in question. If, as a result of such a balancing, there remains a debatable question whether the proposed project and/or operation is clearly in the public interest, authorization for the construction and/or operation within the natural feature setback shall not be granted. The following general criteria shall be applied in undertaking this balancing test:
1. The relative extent of the public and private need for the proposed activity.
  2. The availability of feasible and prudent alternative locations and methods to accomplish the expected benefits from the activity.
  3. The extent and permanence of the beneficial or detrimental effects which the proposed activity may have on the public and private use to which the area is suited, including the benefits the natural feature and/or natural feature setback provides.
  4. The probable impact of the proposed construction and/or operation in relation to the cumulative effect created by the other existing and anticipated activities in the natural feature to be protected.
  5. The probable impact in recognized historic, cultural, scenic, ecological, or recreational values, and on fish, wildlife and the public health.
  6. The size and quantity of the natural feature setback being considered.
  7. The amount and quantity of the remaining natural feature setback.

8. Proximity of the proposed construction and/or operation in relation to the natural feature, taking into consideration the degree of slope, general topography in the area, soil type and the nature of the natural feature to be protected.
9. Economic value, both public and private, of the proposed construction and/or operation, and economic value, both public and private, if the proposed construction and/or operation were not permitted.
10. The necessity for the proposed construction and/or operation.

**9.9.3 Setback Standards**

- A. The point of measurement in establishing the natural features setback shall be from the delineated boundary of the natural feature. The delineated boundary shall be determined by a qualified individual such as an environmental scientist. The applicant or the applicant’s agent shall supply a written description of the natural feature (s) and the name, address, telephone number, a resume and list of experience of the applicant’s agent, firm or individual preparing the determination. If required an NFIS is required, this information may be included with the report and will be subject to review and approval of the ZA.
- B. Unless otherwise determined by the body undertaking the plan review, the following setbacks shall apply to any new development excluding the following: open space developments; developments within the Village Center (VC), Village Residential (VR), Neighborhood Service (NS), Community Service (CS), Limited Industrial (LI), and General Industrial (GI) districts. All terms related to natural features setback standards are defined in Article 2.00. The Zoning Administrator or body undertaking plan review may reduce or eliminate the following setbacks upon review of a request which details the future protection of the natural feature(s) and or mitigation of the natural feature(s).
  1. A 50-foot setback from the boundary or edge of any regulated wetland. Wetland boundary as determined by the applicant consistent with Section 9.10 Wetland Determination.
  2. A 50-foot setback from any watercourse, including but not limited to, streams and creeks, excluding rivers and lakes. The setback shall be measured from an established high water mark.
  3. A 50-foot setback from the outlet of areas constructed to receive, control and filter stormwater run-off prior to entering any fragile ecosystem (i.e. wetlands, lakes, streams) Defined as a stormwater first flush or sediment forebay area in the Township Stormwater Ordinance. The setback shall be measured from the edge of the forebay.

<b>REQUIRED NATURAL FEATURES SETBACKS</b>		
<b>Type of Natural Feature</b>	<b>Width of Setbacks</b>	<b>Point of Measurement</b>
Regulated Wetland Non-Regulated Wetland	50 feet	Delineated wetland boundary

Watercourse	50 feet	High Water Mark
Stormwater Forebay	50 feet	Edge of Forebay

### Section 9.10 Wetland Determination

**9.10.1 Filing Procedure/Wetlands Determination.** Any person desiring a land use permit for any activity requiring a Township permit or land use review such as: constructing a building, filing a tentative preliminary plat, submitting a site plan, a planned unit development, condominium or site condominium, a special use permit or requesting a lot split shall apply to the Zoning Administrator for a preliminary wetland determination.

**9.10.2 Preliminary Wetland Determination.** If the Zoning Administrator or the Planning Commission determines, after reviewing available wetland maps, the USDA Soil Survey maps, and other related information, that the proposed activity may encroach into a MDNR regulated wetland as defined, then a final wetland determination shall be conducted by the applicant prior to further processing of the land use permit application. If the Zoning Administrator or the Planning Commission determines that a site is buildable that there is no potential for the activity to impact a MDNR regulated wetland, and finds all other applicable Township requirements satisfied, the Zoning Administrator can issue a land use permit without submittal of a final wetland determination.

**9.10.3 Final Wetland Determination.** If the Zoning Administrator or the Planning Commission determines the proposed activity may encroach into a MDNR regulated wetland area, the applicant shall arrange to have a final wetland determination completed by an experienced wetland consultant before the land use permit can be processed. The study shall be prepared by an experienced consultant in the delineation and composition of wetlands. This does not preempt any responsibility of the applicant to also apply to MDNR for the required wetland permits.

A. **Required Information (Final Wetland Determination).** The applicant or his/her agent shall supply the following information for a final wetland determination. The wetland boundary shall be flagged on-site at an interval of not more than twenty five (25) feet to permit on-site inspection and verification by Township officials.

1. The name, address and telephone number of the applicant.
2. The name, address, telephone number, a resume and list of experience of the applicant's agent, firm or individual preparing the wetland determination
3. The owner of the property if different from the applicant, and the applicant's interest in the property.
4. A legal description of the property, including the total area, exclusive of public road right-of-way, accurate to the nearest hundredths of an acre.
5. Written and graphic descriptions of the proposed activity.
6. An accurate graphic description of the wetlands complete with all of the following. The Zoning Administrator or the Planning Commission may reduce the requirements for minor projects at his/her discretion.

- A written summary of how and when the wetland was delineated;
- Major plant species and animal breeding habitat that are present and an estimation of how the wetland functions or relates to its general environment;
  
- The presence of any hills or springs;
  
- An accurate measurement of the wetland area in acres and square feet, to the nearest hundredth of an acre; and,
  
- Any proposed remedial or mitigating actions to be completed as part of the activity proposed in the land use request.

**B. Submittal Review Process.** Upon receipt of the final wetland determination, the Zoning Administrator or the Planning Commission shall review the proposed activity to determine if it encroaches into a regulated wetland. The Zoning Administrator or the Planning Commission may refer final wetland determinations to an environmental consultant for review and comment, as described in Section 3.7. If the proposed activity is determined to encroach into a State regulated wetland, the applicant shall be required to produce written evidence of compliance with the Goemere-Anderson Wetland Protection Act, P.A. 203 of 1979 or any other applicable State and/or Federal regulation, in the form of a permit or a letter of non-jurisdiction from the State. The applicant shall provide the Zoning Administrator with a copy of any application to the State for a wetland use permit, at the time that the application is filed with the State. The Zoning Administrator shall forward a copy of the State wetland use permit application to an environmental consultant review under the provisions of section 3.7.

## 9.11 Outdoor Lighting.

**Sec. 9.11.1. Intent.** The purpose of this section is to improve the travel conditions for persons and vehicles on public ways by reducing glare, to reduce light trespass, to protect the general health, safety and welfare of the public in Hamburg Township, to decrease the expense of lighting, to decrease light pollution that unnecessarily contributes to a sky glow and to improve the aesthetics of the township in general while providing adequate night-time safety, utility, and security.

**Sec. 9.11.2. Applicability.** The standards in this section shall apply to any light source that is visible from any property line, or beyond, for the site from which the light is emanating. The Zoning Administrator may review any building or site to determine compliance with the requirements under this section. Whenever a person is required to obtain a land use permit, building permit, electrical permit for outdoor lighting or signage, a special land use permit, subdivision approval, minor site plan approval, or site plan approval from the township, the applicant shall submit sufficient information to enable the Zoning Administrator and/or Planning Commission to determine whether the proposed lighting will comply with this section.

**Sec. 9.11.3. Submittal requirements.** The following information must be included for all site plan submissions. The Planning Commission may waive or modify any of the following submission requirements. Where site plan approval is not required, some or all of the items may be required by the Zoning Administrator prior to lighting installation:

1. Location of all freestanding, building-mounted and canopy light fixtures on the site plan and building elevations.
2. Photometric grid overlaid on the proposed site plan indicating the overall light intensity throughout the site (in footcandles) as deemed necessary by the Zoning Administrator.
3. Specifications and details for the type of fixture being proposed including the total lumen output, type of lamp and method of shielding.
4. Use of the fixture proposed.
5. Any other information deemed necessary by the Planning Commission or Zoning Administrator.

**Sec. 9.11.4. General Standards.** Unless exempted under Section 9.11.6, all lighting must comply with the following standards for the CS, NS, VC, and MD zoning districts:

1. Exterior lighting shall be fully shielded and directed downward toward the Earth's surface, away from residential uses, roads, glass, water or other reflective materials which would create excessive off-site glare or incident rays.
2. The Zoning Administrator and/or Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare and the proposed fixtures will improve the appearance of the site.
3. Lights on poles shall not be taller than the building whose area they illuminate nor taller than fifteen (15) feet whichever is shorter. Lights on poles may exceed fifteen (15) feet up to twenty (20) feet if the fixtures are located a minimum of seventy-five (75) feet from any planned, zoned or used residential areas.
4. Lighting shall not be of a flashing, moving or intermittent type.
5. Except where used for security purposes, all outdoor lighting fixtures, existing or hereafter installed and maintained shall be turned off between 11:00 p.m. and sunrise, except when used for commercial and industrial uses, such as in sales, assembly and repair areas, where such use is open for business after 11:00 p.m. but only for so long as such use open for business. Businesses with light fixtures used for security purposes are encouraged to use a motion detection device which is directed to detect motion within the property.
6. Any light fixture must be placed in such a manner that no light emitting surface is visible from any residential area or public/private roadway, walkway, trail or other public way when viewed at ground level.
7. The intensity of light within a site shall not exceed ten (10) footcandles or one (1) footcandle at any property line, except where it abuts a residentially used or zoned site whereby a maximum of 0.5 footcandles is permitted. The only exception is with gas station canopy and automobile dealership lighting, where a maximum of twenty (20) footcandles is permitted within the site but the above standards shall apply to intensity at the property line.

8. Any canopy structure used at a business location must have recessed lights with diffusers which do not extend below the surface of the canopy.
9. All lighting within the Village Center (VC) and Village Residential (VR) zoning districts must comply with the lighting guidelines and standards outlined in Section 7.7.9.1.H.

**Sec. 9.11.5. Sign Lighting Standards.** Unless exempted under Section 9.11.6, all sign lighting must comply with the following standards:

1. Indirect illumination of signs, canopies and buildings is permitted provided a maximum 125 watt bulb is utilized and there is no glare.
2. The use of laser light source, searchlights or any similar high intensity light for outdoor advertisement or entertainment is prohibited.
3. Luminous tube and exposed bulb fluorescent lighting is prohibited as part of a sign provided the proposed luminous tube or exposed bulb fluorescent lighting is determined to be consistent with the architectural character of the building.
4. Internally illuminated signs shall have a minimum of 60% of the sign face composed of an opaque surface which allows no light to transmit through.

**Sec. 9.11.6. Installation and Operation Cost.** The cost of installing and operating approved roadway lighting on any public road shall be through a financial method approved by the township board of trustees or by the Livingston County Road Commission. The costs of all other lighting systems shall be borne by the developer/property owner.

**Sec. 9.11.7. Exceptions.** In a proposal that requires planning commission review, the planning commission may waive any of the provisions stated in Section 9.11.4. In a proposal that does not require planning commission review, the Zoning Administrator may waive any of the provisions stated in Section 9.11.4. A waiver may be granted only after a request for such an exception has been made and reviewed. Requests for such an exception shall include, but not be limited to, a description of the lighting plan, a description of the efforts that have been made to comply with the provisions of these regulations and the reasons such an exception is necessary. In reviewing a request for such exception, safety, design, and other factors deemed appropriate along with the following shall be considered:

1. The new or replacement luminaire is a full-cutoff luminaire when the rated output of the luminaire is greater than one thousand eight hundred (1,800) lumens.
2. If a lighting recommendation or regulation applies, the minimum/maximum illuminance specified by the recommendations or regulation is used.
3. If no lighting recommendations or regulation applies, the minimum illuminance adequate for the intended purpose is used, giving full consideration to safety, energy conservation, glare, and minimizing light trespass.
4. For roadway lighting, a determination is made that the purpose of the lighting installation or replacement cannot be achieved by installation of reflectorized roadway markers, lines, warning signs, informational signs, or other passive means.



5. Adequate consideration has been given to conserving energy and minimizing glare, light pollution, and light trespass.

**Sec. 9.11.8.** Exemptions from the provisions of this section are permitted only when:

1. Federal or state laws, rules and regulations take precedence over these provisions.
2. Fire, police, rescue, or repair personnel need light for temporary emergency situations.
3. There are special requirements, such as sports facilities and monument or flag lighting; all such lighting shall be selected and installed to shield the lamp(s) from direct view to the greatest extent possible, and to minimize upward lighting and light trespass.
4. A determination has been made by the township zoning board of appeals established through an open, public hearing process, that there is a compelling safety interest that cannot be addressed by any other method.
5. Decorative lighting is used on a temporary basis during recognized holidays.

**Sec. 9.11.9. Lamp or Fixture Substitution.** Should any light fixture regulated under this article, or the type of light source therein, be changed after the permit has been issued, a change request must be submitted to the Zoning Administrator for his/her approval, together with adequate information to assure compliance with this code, which must be received prior to substitution.