

6. DEVELOPMENT STANDARDS

6.1 PURPOSE AND INTENT

The general intent of this section is to provide standards for development to help ensure the safe and convenient development of land on sites and in locations adequate for the uses proposed. No Zoning Compliance Permit or Certificate of Occupancy shall be issued for uses of land, structures and/or buildings, or for a change in the use, unless the requirements of this Chapter are met. The standards set forth in this section are to be used in conjunction with the other sections of this Ordinance in the development of projects and submittal of site plans.

For the purpose of *Section 6.20.16 Riparian Buffers*, “development” includes any impact or use within the riparian buffer or outside the riparian buffer with hydrological impacts on the riparian buffer.

6.2 Reserved for future codification

6.3 GENERAL DIMENSIONAL STANDARDS

The following section includes dimensional standards for both residential and non-residential zoning districts. These general dimensional standards apply to all properties unless otherwise specified in this Ordinance or by the permit-issuing authority.

There are three tables in this section:

- 6.3.1** Residential Dimensional Requirements includes a summary table that specifies the area, maximum height, and yard setbacks for each of the respective types of residential zoning districts
- 6.3.2** Non-residential Dimensional Requirements includes a summary table that specifies the area, maximum height, and yard setbacks for each of the respective types of non-residential zoning districts
- 6.3.3** Side and Rear Setback for lots abutting a different Zoning District includes a summary table that specifies yard setbacks for lots when the adjacent property is of a different zoning district.
 - 6.3.3.1** Bona fide farm operations in the AR district are exempt from the side yard and rear yard setback requirements provided (a) the bona fide farm is a lot or parcel located outside the corporate limits of Hillsborough (i.e., is in the extraterritorial zoning jurisdiction, and (b) the lot line with respect to which the setback exemption is sought lies adjacent to other property zoned AR or to property outside Hillsborough’s zoning jurisdiction.

6.3.1 TABLE: DIMENSIONAL REQUIREMENTS –RESIDENTIAL

	AR	R-40	R-20	R-15	R-10	MF & MFSU	MHP	ALN	PW ¹	PWCA ¹
Minimum Lot Area (sf)	40,000	40,000	20,000	15,000	10,000	1 acre	5 acres 5,714 sf per dwelling	1 acre	1 acre	2 acres
Minimum Lot Width	200	150	100	100	75	200	200	200	150	150
Minimum Side Yard Width	30	30	20	15	15	40	40	40	30	30
Minimum Rear Yard Width	30	30	20	20	20	40	40	40	30	30
Minimum Front Setback	40	40	30	25	25	35	35	35	30	30
Maximum Building Height	65	45	45	45	45	45	35	35	45	45
Maximum Impervious Surface (% of gross lot)	NA	NA	NA	NA	NA	NA	NA	NA	30%	6%

¹ Refer to Section 4.5 for additional requirements in the PW and PWCA districts.

² The maximum density for attached dwellings in the MF or MFSU district is 20 units per acre (subject to rounding as defined in Section 9.1.4).

³ An attached dwelling application that proposes all units to be affordable to households making 80% AMI or less at the time of construction may propose up to 30 units per acre as a maximum density (subject to rounding as defined in Section 9.1.4).

6.3.2 TABLE: DIMENSIONAL REQUIREMENTS –NON-RESIDENTIAL													
	ARU	OI	NB & NBSU	CC & CCSU	GC	HIC	LI	GI	LO	ESU	EDD	BP	SDSU
Minimum Lot Area (sf or acre)	3 acres	10,000	10,000	None	10,000	10,000	40,000	40,000	1 acre	2 acres	40,000	40,000	TBD
Attached dwelling minimum lot size (min sf per unit)	3,630 sf 12 DU/ac	NA	NA TBD (SUP)	NA TBD (SUP)	NA	NA	NA	NA TBD (SUP)	NA	TBD	NA	NA	TBD
Minimum Lot Width	100	75	75	0	75	75	100	200	75	100	75	75	TBD
Minimum Side Yard Width	20*	20*	15*	0	15*^	15*^	50*	50*	20	20	25	25	TBD
Minimum Rear Yard Width	20*	20*	20*	0	20*^	20*^	50*	50*	20	20	25	25	TBD
Minimum Front Setback	20	20	20	0	20+	20+	35	35	20	50	25	25	TBD
Maximum Building Height	65	40	35	40	40	65	65	65	60	60	45	60	60
<p>* Refer to Table 6.3.3 for Side and Rear Setbacks for Zoning Lots Abutting a Different Zoning District. ^ For parcels abutting South Churton Street between Interstate-40 and the Eno River, parking must observe at 10' landscaped setback from a side or rear property line. Please refer to Section 6.10.3 + For parcels abutting South Churton Street between Interstate-40 and the Eno River, the minimum front yard setback is 30 feet and the maximum front yard setback is 100 feet, measured from the Churton Street right of way boundary. TBD – This standard will be determined during the SPECIAL Use Permit review process</p>													

6.3.3 TABLE: SIDE AND REAR SETBACKS FOR LOTS ABUTTING A DIFFERENT ZONING DISTRICT																			
Adjacent -> Proposed	R-40	R-20	R-15	R-10	MF	AR	ARU	OI	NB	CC	GC	HIC	GI	LI	EDD	NB-SU	CC-SU	PW	PWCA
ARU	50	50	50	50	50	50	0	20	20	0	0	0	20	20	20	20	0	50	50
OI	20	20	20	20	20	20	0	0	0	0	0	15	20	20	20	0	0	20	20
NB	15	15	15	15	15	15	0	0	0	0	0	15	15	15	15	0	0	15	15
GC	30	30	20	20	20	30	0	0	0	0	0	0	20	20	20	0	0	30	30
HIC	30	30	20	20	20	30	0	15	15	15	0	0	20	20	20	0	0	30	30
LI	50	50	50	50	50	50	0	50	50	50	50	30	0	0	20	0	0	50	50
GI	50	50	50	50	50	50	0	50	50	50	50	30	0	0	20	0	0	50	50
EDD	25	25	25	25	25	25	25	20	25	25	25	25	25	20	25	25	25	25	25

6.4 AIR POLLUTION

6.4.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by regulating air pollution and contaminants in order to provide clean air. Any permitted principal use, special use, or accessory use that emits any "air contaminant" as defined in North Carolina General Statutes, Section 143-213, shall comply with applicable State of North Carolina standards concerning air pollution, as set forth in Article 21B of Chapter 143 of the North Carolina General Statutes.

6.4.2 STANDARDS AND REQUIREMENTS

No Zoning Compliance Permit shall be issued with respect to any development emitting an "air contaminant" until the NC Department of Environment and Natural Resources, Division of Air Quality, has certified to the Planning Director that the appropriate State permits have been received by the applicant (as provided in North Carolina General Statutes, Section 143-215.108) or that the applicant will be eligible to receive such permits and that the development is otherwise in compliance with applicable air pollution control regulations. If a State permit is required, but has not yet been approved at the time the Town is about to issue a Zoning Compliance, the Town's Zoning Compliance shall be issued subject to a condition that no CO may be issued until the State permit has been issued.

6.5 BUFFERS

6.5.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by regulating the spacing of adjacent land uses. Buffers are required where differences in adjacent zoning designations suggest that spatial separation is necessary to offset potential adverse impacts of adjacent uses. Screening requirements to mitigate the impacts of specific activities like parking or solid waste storage are addressed in Section 6.16, *Screening*.

6.5.2 APPLICABILITY

- 6.5.2.1** Buffers will generally be established at the earliest review phase (for example: lot creation), once uses and densities are proposed in accordance with applicable regulations. However, a buffer standard may be amended prior to the issuance of a Zoning Compliance Permit subsequent to any changes including but not limited to zoning classification or development adjacent to the subject parcel.
- 6.5.2.2** This Subsection applies to any of the following, except where exempted by Section 6.5.2.3 below:
- 6.5.2.2.a** The construction or erection of any new building or structure for which a Zoning Compliance Permit, Special Use Permit, or Site Plan approval is required; or
 - 6.5.2.2.b** Any enlargement exceeding 5,000 square feet or 25% in area, whichever is less, of the gross floor area an existing building for which a development approval is required; or
 - 6.5.2.2.c** Any construction of a new parking lot or expansion of an existing parking lot OR establishment or expansion of an accessory use not involving a structure by more

than 2,000 square feet or 10% in area, whichever is greater.

- 6.5.2.3** This Subsection does not apply to the following situations:
 - 6.5.2.3.a** Single-family dwelling units and mobile/manufactured homes on existing lots of record.
 - 6.5.2.3.b** Agricultural uses.
 - 6.5.2.3.c** Non-residential uses that abut other non-residential uses in the same zoning district.
 - 6.5.2.3.d** Interior finish work or remodeling in a portion of a building unless the work results in an increase as described in Section 6.5.2.2.b.
 - 6.5.2.3.e** Any use, building or structure for which only a change of use is requested, and which use does not increase the gross floor area of the existing building.

6.5.3 LOCATION OF BUFFERS

Buffers shall be located on commonly held open space or the outer perimeter of a lot or parcel, extending to the lot or parcel boundary line. Buffers shall not be located on any portion of an existing or dedicated public or private street or right-of-way.

6.5.4 BUFFER DESCRIPTIONS AND STANDARDS

6.5.4.1 The following tables describe four types of buffer (A, B, C, and D) and different width, plant density, and structure combinations which meet the standard. Buffer requirements are stated in terms of the width of the buffer and the number of plant units required per 100 linear feet of buffer. The requirements of a specific buffer may be satisfied by any of the types provided. The type and quantity of plant materials required by each buffer type are specified in this Section. Specific species allowed and prohibited are listed in the Administrative Manual by size.

Table 6.5.4.1: Standards for Type A Buffers

Buffer Type	Required Buffer Width	Minimum # Plantings Required Per 100 Linear Feet of Buffer		Structure Type & Height Required
A1	10 Feet	Large Trees	1	Not Required
		Small Trees or Large Shrubs	2	
		Mid-size or Small Shrubs	4	
A2	15 Feet	Large Trees	0	Not Required
		Small Trees or Large Shrubs	3	
		Mid-size or Small Shrubs	4	
A3	20 Feet	Large Trees	0	Not Required
		Small Trees or Large Shrubs	5	
		Mid-size or Small Shrubs	0	

Table 6.5.4.2: Standards for Type B Buffers

Buffer Type	Required Buffer Width	Minimum # Plantings Required Per 100 Linear Feet of Buffer		Structure Type & Height Required
B1	15 Feet	Large Trees	3	8-foot Fence
		Small Trees or Large Shrubs	0	
		Mid-size or Small Shrubs	0	
B2	20 Feet	Large Trees	2	6-foot Fence
		Small Trees or Large Shrubs	4	
		Mid-size or Small Shrubs	0	
B3	25 Feet	Large Trees	3	Not Required
		Small Trees or Large Shrubs	4	
		Mid-size or Small Shrubs	0	
B4	30 Feet	Large Trees	3	Not Required
		Small Trees or Large Shrubs	0	
		Mid-size or Small Shrubs	16	
B5	40 Feet	Large Trees	2	Not Required
		Small Trees or Large Shrubs	2	
		Mid-size or Small Shrubs	10	
<p>Fences in the Type B buffer shall be wood, metal, brick, masonry, or stone and are not required to be opaque. Acceptable styles include picket, post and rail, alternating board, stockade, and pierced or open block. The use of chain link with vinyl slats, vinyl, galvanized or sheet metal are not acceptable.</p>				
<p>At least 50% of the shrubs for Type B buffers shall be evergreen, based on the number of plants required in the table</p>				

Table 6.5.4.3: Standards for Type C Buffers

Buffer Type	Required Buffer Width	Minimum # Plantings Required Per 100 Linear Feet of Buffer		Structure Type & Height Required
C1	25 Feet	Large Trees	3	8-foot Masonry Wall or stockade fence
		Small Trees or Large Shrubs	6	
		Mid-size or Small Shrubs	0	
C2	30 Feet	Large Trees	3	6-foot Masonry Wall or stockade fence
		Small Trees or Large Shrubs	2	
		Mid-size or Small Shrubs	10	
C3	40 Feet	Large Trees	3	5-foot Earthen Berm
		Small Trees or Large Shrubs	7	
		Mid-size or Small Shrubs	12	
C4	50 Feet	Large Trees	5	4-foot Earthen Berm
		Small Trees or Large Shrubs	5	
		Mid-size or Small Shrubs	14	
C5	60 Feet	Large Trees	4	Not Required
		Small Trees or Large Shrubs	7	
		Mid-size or Small Shrubs	34	
Walls may be brick, concrete, concrete block with stucco finish, masonry, stone or a combination of these materials.				
At least 50% of the shrubs for Type C buffers shall be evergreen, based on the number of plants required in the table.				
Berms shall have a slope not greater than the slope created in 3 horizontal feet with a 1-foot vertical rise. The surface of the berm that is not planted with trees and shrubs shall be covered with grass, perennial ground cover, vines, and woody and herbaceous perennials, with mulch. Grass or other coverings shall be maintained in conformance with applicable Town of Hillsborough codes.				

Table 6.5.4.4: Standards for Type D Buffers

Buffer Type	Required Buffer Width	Minimum # Plantings Required Per 100 Linear Feet of Buffer		Structure Type & Height Required
D1	100 Feet	Large Trees	8	5-foot Earthen Berm
		Small Trees or Large Shrubs	13	
		Mid-size or Small Shrubs	34	
D2	100 Feet	Large Trees	12	Not Required
		Small Trees or Large Shrubs	10	
		Mid-size or Small Shrubs	20	
D3	100 Feet	Large Evergreen Trees	20	
Berms shall have a slope not greater than the slope created in 3 horizontal feet with a 1-foot vertical rise. The surface of the berm that is not planted with trees and shrubs shall be covered with grass, perennial ground cover, vines, and woody and herbaceous perennials, with mulch. Grass or other coverings shall be maintained in conformance with applicable Town of Hillsborough codes.				

6.5.5. SPECIAL CASES AND CONSIDERATIONS

- 6.5.5.1. Where existing or proposed overhead electric lines exist, small trees may be substituted for large trees.
- 6.5.5.2. If the development on the adjoining use is existing, planned or deed restricted for solar access, understory trees may be substituted for canopy trees where canopy trees would destroy solar access.
- 6.5.5.3. Any existing plant material which otherwise satisfies the requirements of this Section may be counted toward satisfying all such requirements.
- 6.5.5.4. The exact placement of required plants and structures shall be the decision of each user except that the following requirements shall be satisfied:
 - 6.5.5.4.a Evergreen plant materials shall be planted in clusters rather than singly in order to maximize their chances of survival.
 - 6.5.5.4.b When a masonry wall is a component of the buffer, a planting area at least 5 feet wide containing 15% of the total plant requirements shall be located between the masonry wall and the higher intensity class use. These plants shall be chosen to provide species and sizes to reduce noise in conjunction with the wall.
 - 6.5.5.4.c All buffer areas shall be seeded with lawn or other non-invasive ground cover unless ground cover is already established.

6.5.6. PLANT MATERIAL AND STRUCTURE SUBSTITUTIONS

- 6.5.6.1. In Type B and C buffers, evergreen trees may be substituted for deciduous trees of the same size category without limitation.
- 6.5.6.2. In Type A buffers, evergreen trees of the same size category may be substituted up to a maximum of 50% of the total number of the deciduous large trees otherwise required and without limitation for required deciduous small trees.
- 6.5.6.3. In all buffers, evergreen shrubs may be substituted for deciduous shrubs without limitation.
- 6.5.6.4. The following structures are equivalent and may be used interchangeably:

Structure	Equivalent
6-foot Fence	4-foot Earthen Berm
8-foot Fence	5-foot Earthen Berm
6-foot Masonry Wall	6-foot Earthen Berm
8-foot Masonry Wall	4-foot Berm with 6-foot Masonry Wall
4-foot Earthen Berm	6-foot Wood Stockade Fence
5-foot Earthen Berm	8-foot Wood Stockade Fence

6.5.7. SPECIAL CIRCUMSTANCES BASED ON ADJACENT CONDITIONS

- 6.5.7.1. Where the buffer required between a land use and vacant land turns out to be greater than that buffer which is required between the first use and the subsequently developed use, the

subsequent use may provide one-half (.5) of the required buffer. The existing use may expand its use into the original buffer area, provided the resulting total buffer between the two uses meets the buffer requirements of Table 6.5.10.

- 6.5.7.2.** When a parcel to be developed is adjacent to an Interstate or railroad right of way, a 100-foot undisturbed buffer shall be provided along the adjacent property line, regardless of the requirement in Table 6.5.10. This buffer shall be planted to meet the standard of a Type D buffer if the existing vegetation does not meet that standard.

Exceptions to this requirement are as follows:

- 6.5.7.2.a** If an existing public road separates the parcel where development is proposed from an Interstate or railroad right of way, no buffer shall be required. This section applies to constructed public roads, regardless of where the road right of way exists in relation to the railroad or Interstate right of way.
- 6.5.7.2.b** If the applicant property is the redevelopment of an existing parcel with a platted land use buffer from a previous development code, the maintenance of that previously required buffer shall be taken to satisfy the Type D buffer.
- 6.5.7.2.c** If the applicant property is of an existing single-family parcel where a land use buffer was not shown on the recorded plat creating the parcel, the Type D buffer will not be required.
- 6.5.7.2.d** If the applicant property is the development or redevelopment of a train station, passenger platform, walkways or other related items to serve rail or transit passengers such as parking, maintenance, or loading of the railroad the 100-foot buffer standards do not apply.

- 6.5.7.3.** When a non-residential parcel is adjacent to a street classified as arterial or collector, no buffer shall be required along the street frontage, regardless of the requirement in Table 6.5.10, unless modified by the permit-issuing authority.

6.5.8 USE AND DEVELOPMENT WITHIN BUFFERS

- 6.5.8.1** Buffers shall not contain any development, impervious surfaces or site features that do not function to meet the standards of this Subsection unless otherwise allowed.
- 6.5.8.2** Fences not required to satisfy buffer requirements may be placed in buffers provided that no canopy tree is removed and damage to existing vegetation is minimized.
- 6.5.8.3** 6.5.8.3 New utility corridors are not permitted in buffers unless no reasonable alternative exists. Crossings at angles between 60 and 90 degrees are acceptable where utility corridors are necessary. New utilities may only run coincident or parallel with a required buffer if:
- 6.5.8.3.a** The utility is installed on the new development side of the buffer and in a manner that allows the installation of an A1, B1, or C1 buffer, as required by Table 6.5.10, between the utility and the property line. If a Type D buffer is required, a buffer meeting the requirements of Table 6.5.4.4 shall be installed on the development side of the utility and the utility placed as close to the property line as reasonable.

- 6.5.8.4** When a development plan is proposed on land adjacent to or encumbered with an existing utility easement (overhead or underground) and the proposed development will not modify or relocate the utility, no buffer is required to be installed by the development plan. The development plan must maintain any existing buffer (vegetative, built, or topographic) existing at the time of development plan application between the existing utility easement and adjoining properties requiring a buffer under this ordinance.
- 6.5.8.5** When a development plan is proposed on land adjacent to or encumbered with an existing utility easement (overhead or underground) and the proposed development will not modify or relocate the utility, no buffer is required to be installed by the development plan. The development plan must maintain any existing buffer (vegetative, built, or topographic) existing at the time of development plan application between the existing utility easement and adjoining properties requiring a buffer under this ordinance.
- 6.5.8.6** A buffer may be used for passive recreation and contain pedestrian trails provided that:
- 6.5.8.6.a** No canopy trees are eliminated.
 - 6.5.8.6.b** The total width of the buffer is maintained, and
 - 6.5.8.6.c** The required buffer standards (width, plantings, and fences) are met between the trail and the adjoining use triggering the buffer.
- 6.5.8.7** In no event shall playfields, swimming pools, tennis courts and other active recreation areas, storage of materials, parking or structures (except for necessary utility boxes and equipment) be allowed in buffers.

6.5.9 OWNERSHIP OF BUFFERS

- 6.5.9.1** No required buffer in a residential development shall be included within any single-family lot or be wholly owned (in fee simple absolute) by the owner of an individual residential building lot zoned for residential uses. Buffers in residential developments shall be owned by a homeowner's association or other entity charged with its preservation and the preservation of existing landscaping. Buffers may be collocated in areas designated as open space are required in Section 6.12 of this ordinance.
- 6.5.9.2** The required buffer for a non-residential or multi-family site may be owned by a property owner's association or by the property owner.

Figure 6-2: Required Buffer Placement



6.5.10 MAINTENANCE OF BUFFERS

- 6.5.10.1 Where a buffer is owned by a property owners association, the covenants for the development shall require that association to maintain the buffers and shall include a buffer maintenance plan.
- 6.5.10.2 For parcels that contain a buffer as part of a permit requirement, the property owner shall maintain the buffer. The site will be inspected at the end of the second growing season following permit issuance for compliance and during any subsequent development review to ensure continued compliance.

6.5.10 TABLE: REQUIRED BUFFERS										
Applicant Zoning ↓	Adjacent Zoning									
	AR	R-40	R-20	R-15	R-10	MF	MFSU	MHP	ALN	RSU
AR										
R-40										
R-20										
R-15										
R-10										
MF	B	B	B	A	A		A	A		
MFSU	B	B	B	A	A	A		A	A	
MHP	B	B	B	B	B	A	A		A	
ALN	A	A	A	A	A	A	A	A		
RSU										
NB	A	A	A	A	A	A	A	A	A	
NBSU	A	A	A	A	A	A	A	A	A	
LO	B	B	B	A	A	A	A	A	A	A
OI	B	B	B	A	A	A	A	A	A	A
CC										
GC	B	B	B	B	B	B	B	B	B	B
HIC	C	C	C	B	B	B	B	B	B	B
LI	C	C	C	B	B	B	B	B	B	B
GI	C	C	C	B	B	B	B	B	B	B
ESU	C	C	C	B	B	B	B	B	B	B
BP	C	C	C	B	B	B	B	B	B	B
SDD	C	C	C	B	B	B	B	B	B	B
EDD	C	C	C	C	C	C	C	C	C	C

6.5.10 TABLE: REQUIRED BUFFERS (CONTINUED)

Applicant Zoning ↓	Adjacent Zoning												
	NB	NBSU	LO	OI	CC	GC	HIC	LI	GI	ESU	BP	SDD	EDD
AR	A	A	A	A		A	B	B	C	B	B	B	
R-40	A	A	A	A		A	B	B	C	B	B	B	
R-20	A	A	A	A		A	B	B	C	B	B	B	
R-15	A	A	A	A		A	B	B	C	B	B	B	
R-10	A	A	A	A		A	B	B	C	B	B	B	
MF	A	A	A	A		A	B	B	C	B	B	B	
MFSU	A	A	A	A		A	B	B	C	B	B	B	
MHP	A	A	A	A		A	B	B	C	B	B	B	
ALN	A	A	A	A		A	B	B	C	B	B	B	
RSU	A	A	A	A		A	B	B	C	B	B	B	
NB													
NBSU													
LO				A		A	A	A	A	A	A	A	
OI			A			A	A	A	A	A	A	A	
CC													
GC	A	A		A				A	A	A	A	A	A
HIC				B									A
LI				B									
GI				B									
ESU		C	C	C		C	C	C	C		C	C	A
BP		B	B	B		B	A	A	A			B	
SDD			B	A		B	B	B	B	A	A		B
EDD	A	A	A	A	A					A		B	

6.5.11 SOUTH CHURTON NON-RESIDENTIAL BUFFER

6.5.11.1 Intent

The intent of the South Churton non-residential buffer is to create visually appealing and landscaped frontage to the commercial core located along South Churton Street between Interstate-40 and the Eno River.

6.5.11.2 Applicability

All development of currently undeveloped parcels or significant redevelopment of parcels which abut the public right of way of South Churton Street between the Eno River and Interstate-40 shall include buffers satisfying the standards established herein as part of any site plan, Special Use Permit. This subsection provides implementation options to accommodate a variety of situations. "Significant redevelopment" shall mean redevelopment or renovation of an existing structure or vehicle accommodation area that disturbs 50% or more of the parcel area.

6.5.11.3 Requirements

6.5.11.3.a The South Churton buffer area shall be measured from the property edge of the South Churton Street right of way. The 1999 Feasibility Study for the widening of this facility required 100 feet of right of way for the improved South Churton Street. Any property undergoing development or significant redevelopment will need to dedicate any right of way not already secured for this project before certificates of occupancy will be issued for the property's requested improvements.

6.5.11.3.b The buffer shall be at least 30 feet wide and shall be improved with trees and landscaping consistent with Section 6.5.11.4 below.

6.5.11.3.c New structures shall be setback at least 30 feet, but not more than 100 feet, from the edge of the right of way.

6.5.11.4 Options

6.5.11.4.a A landscaping density score will be calculated for each site subject to this buffer. The landscape density score for a parcel is determined by multiplying the length of property frontage along Churton Street by the width of the buffer. Table 6.5.11.4.g illustrates how the landscape density score is calculated.

6.5.11.4.b The landscaping density score calculation takes into consideration whether there is parking located between the building and the buffer, as shown on Table 6.5.11.4.g.

6.5.11.4.c Preservation of existing landscaping is strongly encouraged and credit for preserved materials is greater than credit for new plantings, as indicated on Table 6.5.11.4.h.

6.5.11.4.d An applicant shall provide a landscaping plan and point calculation that demonstrates compliance for the site based on the two tables.

6.5.11.4.e Applicants are encouraged to group plantings within the required buffer to create a more natural appearance.

6.5.11.4.f Landscaping in the buffer need not be continuous. Breaks are expected at perpendicular driveway and sidewalk crossings. Breaks up to 30 feet in width are also allowed to support the grouping of plant material and allow visibility for signage and buildings.

Table 6.5.11.4.g: Landscape density points by site characteristics			
Development option	Buffer formula	Example- 100-foot wide lot	Example – 200-foot wide lot

Building adjacent to buffer	.5 * (length*width)	.5(100 *30) = 1500	.5(200 *30) = 3000
Drive aisle between building and buffer	.6 * (length*width)	.6(100*30) = 1800	.6(200*30) = 3600
Parking and drive aisle between building and buffer	.7 * (length*width)	.7(100*30) = 2100	.7(200*30) = 4200

Table 6.5.11.4.h: Plant Material Points				
Plant Material Type	Planted deciduous	Preserved deciduous	Planted evergreen	Preserved evergreen
Large Tree (species mature height = > 50')	625	900	725	1000
Small Tree (species mature height between 20' and 50')	64	100	70	110
Large Shrub (Species mature height greater than 6' but less than 20')	36	49	40	54
Small shrub (species mature height less than 6')	20	25	22	28

Evergreens are given higher point scores than deciduous materials due to the year-round screening and shading capacity.

Point values may be less than species reported canopy cover areas in landscaping resources because materials planted in urban settings often do not reach their full potential due to limits on soil quality, moisture availability, and fertilizer.

6.5.11.5 Development within Buffer

The following amenities and installations may be allowed by the permit issuing

authority within this buffer if (i) the amenity is available for general public use or (ii) the installation is required by the Town of Hillsborough or other public utility:

- 6.5.11.5.a** Plazas
- 6.5.11.5.b** Sidewalks or walkways
- 6.5.11.5.c** Gardens
- 6.5.11.5.d** Seating areas
- 6.5.11.5.e** Decorative fences or walls not exceeding 4' in height
- 6.5.11.5.f** Freestanding signs otherwise compliant with the ordinance
- 6.5.11.5.g** Underground utilities
- 6.5.11.5.h** Overhead utilities only if in existence at the time of development

6.5.11.6 Maintenance of buffer

The buffer will be inspected at the end of the second growing season following permit issuance and during any subsequent development review for compliance with the South Churton non-residential buffer requirements. The town may pursue enforcement action against any property owner who does not maintain this buffer as allowed in Section 8 *Enforcement*.

6.6 CREATION OF NEW BUILDING LOTS

6.6.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by regulating the creation of new building lots in order to protect and preserve the appearance, character, and value of adjacent properties.

6.6.2 APPLICABILITY

All new residential and non-residential lots must meet the following requirements.

6.6.3 NEW LOT REQUIREMENTS

- 6.6.3.1** New lots shall generally have four sides and generally not have more than 8 sides to facilitate the enforcement of setback requirements and ensure that each lot is generally usable for its intended building proposed, unless existing topographic or natural features such as a stream or ridgeline acts as a boundary.
- 6.6.3.2** New building lots shall not have appendages less than twenty (20) feet in width and more than twenty (20) feet in length created to provide street access or to enable the lot to meet minimum lot size or frontage requirements.
- 6.6.3.3** Lots in residential zoning districts must have at least thirty (30) feet of frontage on a public or private street the lot uses for access.
- 6.6.3.4** Unless otherwise approved by the permit issuing authority, all lots shall meet the lot width requirement specified in Section 6.3, *General Dimensional Standards* at the front setback line. The permit issuing authority may waive this requirement during review of a Special Use Permit for a development after consideration of lot depth, lot width, general usability of the

building envelop on the parcel, and compatibility of the proposed lots with existing and proposed neighboring lots.

6.6.4 USABILITY OF LOTS

- 6.6.4.1** New lots created for building purposes must contain a buildable area at least 10 feet wide and at least 10 feet deep after application of setbacks requirements.
- 6.6.4.2** No new lot shall be created for building purposes that contains an area wholly within the required setbacks of opposing lot sides.

6.6.5 DIVERSITY IN SINGLE-FAMILY DETACHED HOME NEIGHBORHOODS

In an effort to prevent monotonous and sterile built environments in areas containing single-family detached dwellings, and to mimic the diverse character of many residential neighborhoods in the planning jurisdiction, variability of lot widths and lot sizes within new developments is encouraged.

- 6.6.5.1** Single-family detached home developments containing 20 or more lots must have at least 3 different lot widths on each straight street section (may be multiple blocks) longer than 400 feet. Contiguous lot widths must vary by at least 10 feet to meet this standard.
- 6.6.5.2** Single-family detached home developments containing 20 or more lots may provide an equal number of lots 10% smaller than the minimum lot size for each lot proposed that is 30% or more larger than the minimum lot size.
- 6.6.5.3** Single-family detached home developments requiring a Special Use Permit may include lots up to 10' narrower than the district minimum standard and/or 10% smaller than the district minimum standard to meet the diversity standard established above and to maximize lot diversity, provided, however, that the average lot width and acreage lot area in the development must meet the district minimum standards.

6.7 DESIGN REQUIREMENTS FOR NEW NON-RESIDENTIAL AND MULTI-FAMILY BUILDINGS

6.7.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by regulating the appearance of non-residential construction in order to protect and preserve the appearance, character, and value of adjacent properties. These requirements help create a pedestrian scale environment to encourage walkability and connect people to the built environment.

6.7.2 APPLICABILITY

The following principles will apply to all new non-residential buildings and multi-family buildings containing 5 or more dwelling units. Some of the standards dependent on the building gross square footage. When a numbered standard contains a phrase "On buildings with at least one tenant space 30,000 sf or larger," only the language that follows this phrase applies to larger buildings for that numbered standard. If there is no language regarding building size, the numbered standard applies in all circumstances. Section 6.7.11, *Parking and Circulation, Site Layout*, applies only to buildings without a tenant space 30,000 sf or larger and multi-family buildings containing 5 or more dwelling units.

These requirements are applied during development review. If renovation occurs that is non-

compliant with these standards and such renovation did not require a zoning compliance permit, the town may issue a stop work order or notice of violation to bring the building back into compliance. Subdivision or changes to parcel lines that impact compliance with these requirements but trigger no development will not create an illegal non-conformity and is not sufficient reason to deny a subdivision application.

6.7.2 ARTICULATION

- 6.7.3.1** The facade shall be articulated with bays, recesses and projections, door and window rhythm, columns, piers, and/or varied rooflines to divide the building mass.
- 6.7.3.2** Design elements such as bays, recesses and projections, door and window rhythm, columns, piers, and/or varied rooflines shall be kept consistent along the front façade.

6.7.4 DRIVE-UP WINDOWS, CANOPIES, AND PORTE COCHERES

- 6.7.4.1** Drive-up windows, canopies, and porte cocheres shall be located on the side or rear of the building.
- 6.7.4.2** Drive-up windows, canopies, and porte cocheres shall feature architectural materials and design elements that match the primary building.

6.7.5 FENESTRATION

- 6.7.5.1** Buildings shall not have a blank wall oriented to a street.
- 6.7.5.2** Ground-floor building facades adjacent to existing or proposed public or private streets shall include window and glass door openings comprising a minimum of 40% of ground floor façades and 25% of upper floor facades. On buildings with at least one tenant space 30,000 sf or larger, openings such as windows and doors shall account for a minimum of 30% of the front façade.
- 6.7.5.3** Street level glazing shall be visually transparent, although UV coatings are permitted. Mirrored glass is prohibited. Spandrel and faux glass are permitted where interior views are not possible or feasible due to interior location of equipment, kitchens, production or stock areas, restrooms, and other uses where interior views are not appropriate. Transom windows are encouraged and may be used in meeting the requirements of 6.7.5.2 in these locations to provide natural light to the interior of the structure.
- 6.7.5.4** Windows shall have a vertical-to-horizontal ratio of 1:2 except where storefront glass is employed. Two or more vertically oriented windows may be grouped together provided grouped windows are the same size. This does not apply to buildings with at least one tenant space 30,000 sf or larger.
- 6.7.5.5** Design treatments intended to simulate windows that have been covered or filled in are prohibited. Example below:



6.7.6 MATERIALS

- 6.7.6.1 Changes of building materials shall occur at a change of plane, such as a recess, projection.
- 6.7.6.2 Buildings shall not have material changes at their outside corners.
- 6.7.6.3 Dominant building materials shall consist of wood, brick, stone, fiber cement, pre-cast concrete, ceramic tile, or glass. Concrete block, stucco, EIFS, plywood, metal and vinyl siding are prohibited as exterior finishes. Architectural metal may be used as a secondary building material to accent or complement the dominant building material.

6.7.7 MULTISTORY BUILDINGS

- 6.7.7.1 The first floor shall be architecturally differentiated from upper floors using porches, colonnades, canopies, awnings, storefronts, or other design features.
- 6.7.7.2 The front façade shall be integrated with the overall building architecture. False facades are prohibited.

6.7.8 ORIENTATION AND BUILDING ACCESS

- 6.7.8.1 The primary building access for non-residential and mixed-use buildings shall be oriented toward and clearly identifiable from the street or if located on a corner lot may be oriented toward the corner that is nearest the street intersection. When there is more than one street in the vicinity, staff shall determine which street is applicable to meet the purpose and intent of this standard.
- 6.7.8.2 The primary building access for residential buildings shall be oriented toward and clearly identifiable from the street and the intended residential parking area.
- 6.7.8.3 ADA compliant sidewalks shall be provided between building entrances and public sidewalks.
- 6.7.8.4 ADA compliant handicap ramps shall be provided where sidewalks intersect streets or

parking areas.

6.7.8.5 Crosswalks shall be provided where sidewalks intersect streets or parking areas.

6.7.9. POSTS AND COLUMNS

6.7.9.1 The proportion of structural elements such as posts, piers and columns shall be appropriately scaled to the weight they appear to be carrying.

6.7.10. ROOF PITCH

6.7.10.1 Flat roofs shall be capped by a parapet wall to provide screening of rooftop equipment. The backside of a parapet wall shall not be visible from a street.

6.7.10.2 Rooftop equipment shall be screened from view when standing at ground level 20 feet from the structure.

6.7.11 PARKING AND CIRCULATION, SITE LAYOUT

6.7.11.1 Applicability

This section applies to all buildings unless at least one tenant space within a building is 30,000 sf or larger. A building size equal to or exceeding 30,000 sf but divided into smaller tenant spaces, the presence of multiple buildings, multiple primary buildings, or buildings oriented in different directions does not affect applicability. If multiple buildings are considered primary, the requirements will be applied to each building to the extent that such application does not create a clear violation of these requirements for the site overall.

6.7.11.2 Primary buildings shall be placed along the right-of-way at the front of lot or immediately behind any allowed parking or circulation areas, sidewalks, and landscape areas.

6.7.11.3 On corner lots, primary buildings shall be placed along the right-of-way at front or front corner of the lot or immediately behind any allowed parking or circulation areas, sidewalks, and landscape areas.

6.7.12 SERVICE AREAS AND ACCESSORY BUILDINGS

6.7.12.1 Delivery areas shall be located to the side or rear of the building.

6.7.12.2 Service bay and garage doors shall be located to the side or rear of the building.

6.7.12.3 Solid waste areas shall be constructed primarily of masonry.

6.7.12.4 Accessory buildings shall not be located between the front façade of the primary building and the street.

6.7.12.5 Accessory buildings shall be architecturally compatible with the primary building.

6.8 DESIGN REQUIREMENTS FOR ALL NEW RESIDENTIAL BUILDINGS

6.8.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare

by regulating the appearance of residential construction in order to protect and preserve the appearance, character, and value of adjacent properties. Where existing conditions such as limited visibility of the building or features make satisfying these requirements unnecessary or non-compliance with the design requirements achieves another town goal, the permit-issuing authority may modify the requirements based on competent evidence provided by the applicant to establish that alternatives provided by the applicant will satisfy the purpose and intent of the design requirements, and will protect the use, enjoyment and value of adjoining properties.

6.8.2 APPLICABILITY

All new single-family detached dwellings in residential developments requiring a Special Use Permit must meet the following general principles.

6.8.3 ENTRANCES

6.8.3.1 The front door shall face the front of the lot.

6.8.4 GARAGES, CARPORTS, AND ACCESSORY STRUCTURES

6.8.4.1 Garage, carport, and other accessory structure entries shall not be located closer to the front lot line than the façade wall which contains the front door.

6.8.4.2 Garages, carports, and accessory structures shall not exceed 40% of the primary structure's building footprint.

6.8.4.3 Garages, carports, and accessory structures shall not be greater in height than the primary structure.

6.8.4.4 Garages, carports, and accessory buildings shall not exceed fifty percent (50%) of the width of the front facade of the primary structure.

6.8.4.5 Detached garages are encouraged.

6.8.5 VARIATION

6.8.5.1 Variation of exterior building materials and exterior façade arrangements from house to house is encouraged to allow easy identification of houses from the street. Excessive variation of façade planes, roof pitches, and building materials on an individual structure is discouraged.

6.9 DRIVEWAY CONNECTIONS

6.9.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by requiring that driveways shall be designed and located so as to minimize the number of conflict points among vehicular movements, to coordinate the location and the alignment of major driveway connections (ingress to or egress from heavy traffic generators such as shopping centers and supermarkets) and roadway intersections on opposite sides of the intersected street, to discourage dangerous vehicular movements, to minimize conflicts with pedestrian traffic, to avoid driveway connections at locations where adequate, safe sight distances cannot be provided, and to ensure

driveway connections are designed to accommodate storm water runoff. The use of cross access easements connecting independent, adjacent developments is encouraged, so as to reduce the number of driveway curb cuts to the public right-of-way.

6.9.2 APPLICABILITY

These requirements shall apply to all development types, except one and two-family dwellings.

Figure 6-4: Driveway Connections



6.9.3 DRIVEWAY REQUIREMENTS

- 6.9.3.1 No driveway shall be located within two hundred fifty (250) feet of the intersection of a public street with an arterial or collector street unless no other site access is legally practicable.
- 6.9.3.2 No drive shall be located closer than twenty-five (25) feet to the right-of-way of any local street intersection. At intersections with traffic signals, the Planning Director shall specify distances from the right-of-way to allow for sufficient stacking of vehicles in the street prior to the driveway location.
- 6.9.3.3 When access is available to a lot from streets of different classifications (e.g., arterial, collector, sub-collector), the driveway will be located so as to provide access to the lot from the street with the lower classification.
- 6.9.3.4 In parking lots where large hourly volumes of entering traffic may be expected, the developer shall provide a setback between pavement edge of the public roadway and the edge of proposed internal drives to accommodate stacking within the parking lot. This setback shall be determined by the Planning Director based on standards required by NCDOT, the Institute of Traffic Engineers, or other recognized standard.
- 6.9.3.5 On curb and gutter streets, the North Carolina Department of Transportation standard concrete driveway ramp shall be used. The Planning Director may allow street type driveway entrances for high volume traffic uses.
- 6.9.3.6 Driveway connections shall be designed to accommodate stormwater to ensure that gravel

does not wash into the public street. Connections which are above the grade of the existing street shall be graded so that drainage is directed into ditches designed to accommodate the drainage, or into the street gutters. The driveway shall be at the same elevation as the existing street across the width of the street right-of-way. If gravel or other materials wash onto the public street, the property owner shall be responsible to remove the material and establish safe conditions.

- 6.9.3.7** Driveways shall be a minimum of one hundred feet (100') apart when access is to a collector or arterial street.
- 6.9.3.8** Driveways shall be clearly defined with the use of curbs and/or landscaping.
- 6.9.3.9** Driveways on opposite sides of the street shall either be offset by at least fifty feet (50') or aligned, unless such standards cannot be met for safety reasons.

6.10 LANDSCAPING (PARKING LOT)

6.10.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by requiring the landscaping of parking areas in order to reduce radiant heat from surfaces, reduce glare of automobile lights, minimize stormwater and drainage problems, and protect and preserve the appearance, character, and value of adjacent properties. Where existing conditions such as topography, structures, or other existing features make satisfying these requirements impractical, the permit-issuing authority may modify the requirements based on competent evidence provided by the applicant to establish that alternatives provided by the applicant will satisfy the purpose and intent of the buffer and landscape requirements, and will protect the use, enjoyment and value of adjoining properties.

6.10.2 APPLICABILITY

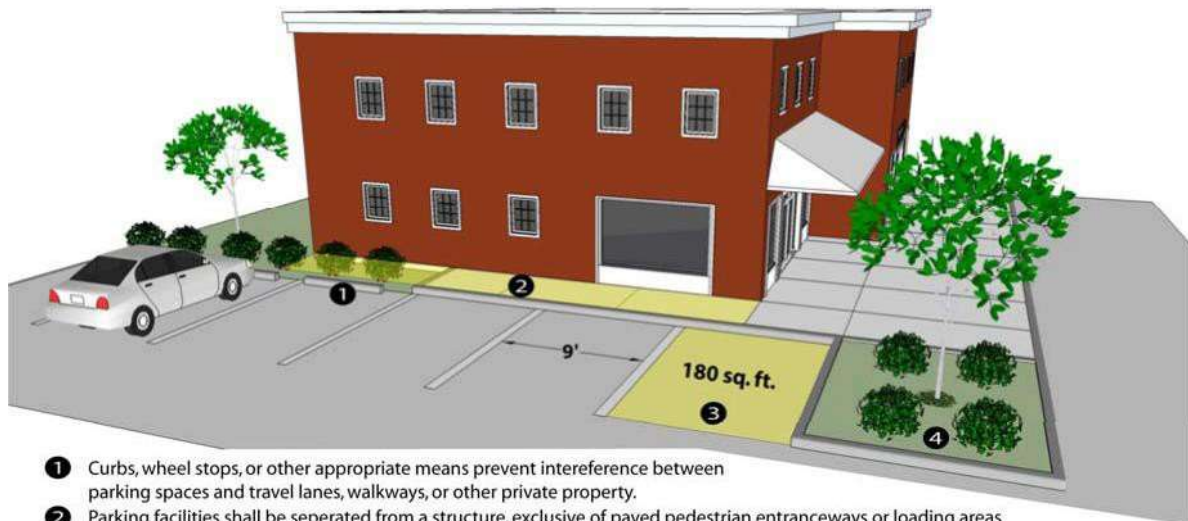
These requirements shall apply to all development types with the exception of one and two- family dwellings.

6.10.3 LANDSCAPING REQUIREMENTS

- 6.10.3.1** Parking lots shall contain at least 1 shade tree for every seven parking spaces required for the site. These trees shall be located a sufficient distance from existing overhead utility lines to ensure the health and growth of the tree.
- 6.10.3.2** Trees shall be evenly distributed throughout the parking areas and parking perimeter at the required ratio.
- 6.10.3.3** No more than 14 continuous parking spaces shall be allowed without a minimum of 1 landscape island containing a shade tree.
- 6.10.3.4** All planting medians or islands in parking lots shall be at least 10 feet X 10 feet measured from back of curb to back of curb (or pavement edge if the island is not curbed for stormwater purposes). When an island contains one or more shade trees, the island must have at least 300 square feet of unpaved space per shade tree.

- 6.10.3.5** Linear planting strips between the lengths of parking isles are encouraged rather than numerous small tree islands. If a linear strip is used, 15 shrubs (no taller than 3 feet at maturity) per 100 feet of planting strip must be planted in addition to the required trees.
- 6.10.3.6** A minimum 10-foot wide continuous planted median shall be installed in off-street parking areas for every 2 double loaded parking bays exceeding 122 feet in length. Alternative landscaping layouts and arrangements which similarly visually break up large parking areas will be considered by the permit issuing authority.
- 6.10.3.7** Parking facilities, unless located on or within a structure, shall be separated from the exterior wall of a structure by a landscaped area at least five (5) feet in width.
- 6.10.3.8** Ground level parking facilities and the ground level of any parking structure shall provide a minimum of 10' planted setback area around parking perimeter, whether along a side street, property line, driveway, or undeveloped portion of the site. Within this setback, an opaque screen or fence to a height of at least 3 feet shall be required when the adjoining land is in residential use or a street.
- 6.10.3.9** In meeting these standards, the retention of existing significant vegetation shall be encouraged. The site plan submitted shall locate and identify all existing and proposed trees and shrubs used for parking standards.
- 6.10.3.10** Landscaping and walkways shall be installed to indicate the preferred travel pattern for pedestrians.
- 6.10.3.11** Landscaping shall be protected from damage by motor vehicles.
- 6.10.3.12** Lot areas not covered with paving, parking, buildings, or walkways shall be landscaped. The preferred surface is grass outside of planting beds although reasonable use of mulch and other materials will be considered.

Figure 6-5: Landscaping (Parking Lot)



- ❶ Curbs, wheel stops, or other appropriate means prevent interference between parking spaces and travel lanes, walkways, or other private property.
- ❷ Parking facilities shall be separated from a structure, exclusive of paved pedestrian entranceways or loading areas by an area of at least 3 feet in width.
- ❸ Parking spaces shall contain a minimum area of 180 square feet with a minimum width of 9 feet.
- ❹ Landscape islands of sufficient size to accommodate at least one shade tree shall separate parking spaces from adjacent drive aisles.

6.11 LIGHTING

6.11.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by establishing criteria and standards for providing uniform lighting in outdoor public places where safety and security are concerns, protecting drivers and pedestrians from disabling glare from non-vehicular light sources that shine directly into their eyes and thereby impair safe traverse, protecting neighbors from nuisance glare from poorly aimed or inadequately shielded light sources, and providing lighting which is efficient and compatible with surrounding uses and structures.

6.11.2 APPLICABILITY

Lighting plans shall demonstrate that sufficient light will be available to provide security for property and people using public facilities and common areas after dark. This includes, but is not limited to, roads, driveways, walkways, bikeways, parking lots, and recreational areas.

Lighting plans will be reviewed as part of the review process for all permit applications. Modifications to approved or existing lighting shall be submitted to the Planning Director for review and compliance with applicable requirements.

6.11.3 LIGHTING REQUIREMENTS

Lighting plans shall include a layout of proposed fixture locations (including wall mounted lights, ground mounted lights, and illuminated signs), foot candle data that demonstrate conforming intensities and uniformities; and a description of the equipment (catalog cuts), glare control devices, lamps, mounting heights and means, hours of operation, and maintenance methods proposed. Illumination intensities (lighting contours) may be shown on an independent plan or integrated with other required plans.

6.11.4 MINIMUM LIGHT LEVELS

- 6.11.4.1** Parking areas, whether surface or in a structure, generally will have a minimum light intensity of 1.0 footcandles. A compliant lighting plan may show proposed light contours or light intensity grid with less 1.0 footcandle rating for no more than 25 percent of parking and walkway area if the flexibility prevents the site from exceeding the maximums described in 6.11.5, *Maximum Light Levels*, or the flexibility prevents intensity differences of greater than 5 footcandles across the illuminated portion of the site.
- 6.11.4.2** Interior sidewalks, those sidewalks that connect buildings to parking areas, common areas, of facilities within a development that are likely to be used at night, shall have a minimum light intensity of 0.5 footcandles.
- 6.11.4.3** Minimum lighting levels in this subsection are not required to be met by non-residential uses during non-business hours.

6.11.5 MAXIMUM LIGHT LEVELS

- 6.11.5.1** All outdoor lighting shall be designed and located such that the maximum illumination measured in foot candles at the light source's property line shall not exceed two tenths (0.2) foot candle measured at ground level where the adjoining property is zoned or used for residential purposes.

- 6.11.5.2** Light intensities shall not exceed fifteen (15) foot-candles at any location on the site to limit glare and blinding caused by significant light variations across a site.
- 6.11.5.3** Use Specific Exceptions
The following uses have unique operating or safety concerns related to site lighting and may have light intensities of 30 footcandles under canopies, outdoor sales areas, or in walk-up or drive-up service areas:
- 6.11.5.3.a** banks and financial institutions, including freestanding automated teller machines
 - 6.11.5.3.b** motor vehicle sales
 - 6.11.5.3.c** motor vehicle fuel stations
- 6.11.5.4** Use Specific Exceptions Limited
The light intensity from the excepted areas in 6.11.5.3 must be reduced to the following limits at property lines as described:
- 6.11.5.4.a** 1.0 footcandles at any property line adjoining a public or private right of way if the use across the right of way is not zoned or used for residential purposes.
 - 6.11.5.4.b** 0.2 footcandles at any property line adjoining a public or private right of way if the use across the right of way is zoned or used for residential purposes.
 - 6.11.5.4.c** 0.2 footcandles at any property line adjoining land zoned or used for residential purposes.

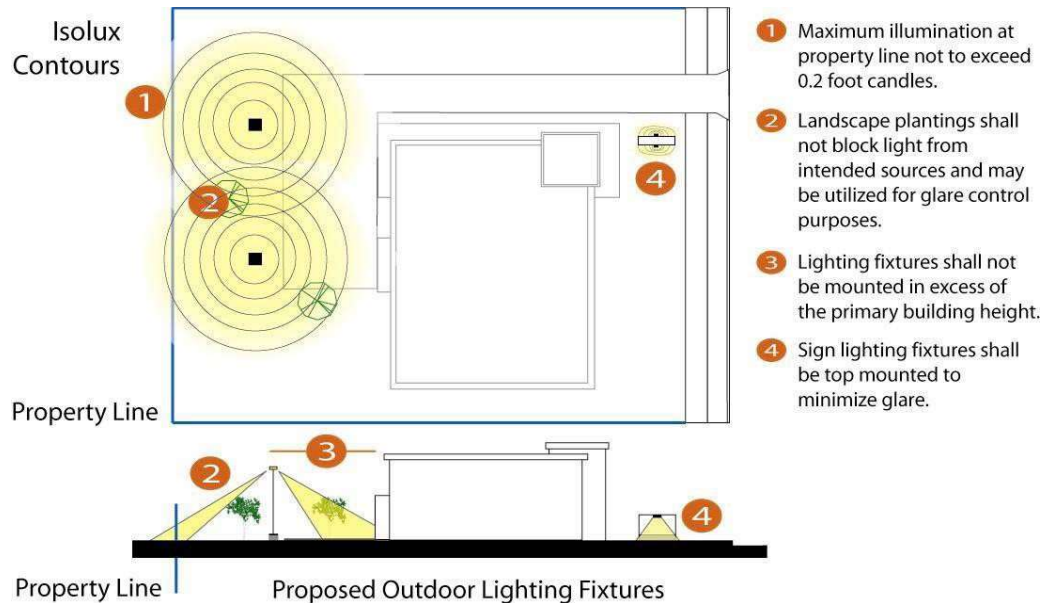
6.11.6 INSTALLATION

- 6.11.6.1** Lighting fixture height shall not exceed twenty-five (25) feet or the maximum height of the main portion of the primary buildings on the site (excluding spires, towers, parapet walls and the like), whichever is taller. For sites where no building is proposed, mounting height for fixtures shall not exceed fifteen (15) feet for non-cutoff type fixtures or twenty-five (25) feet for cut-off type fixtures. This provision shall not apply to outdoor athletic field or outdoor performance area lighting provided the other applicable requirements of this section are met.
- 6.11.6.2** Electrical feeds to lighting standards shall be run underground, not overhead.
- 6.11.6.3** Lighting standards in parking areas shall be protected from vehicle impact with protective barriers or by location. Standards should not be placed so as to obstruct pedestrian movement along sidewalks or medians.
- 6.11.6.4** Directional lighting fixtures used for sign lighting shall be top mounted, so lighting is aimed down. Ground mounted signs with a height of five (5) feet or less may be ground lit, provided that the lights are shielded so as to illuminate the sign only, and the light shall not exceed 10 foot-candles at the sign surface.
- 6.11.6.5** Fixtures shall be of the sharp cut-off type. No portion of the fixture bulb may extend below the fixture housing. Non-cutoff type fixtures may be used if approved by the permit issuing authority with good cause shown during the permit review and such fixtures meet the other standards of this section.
- 6.11.6.6** Unshielded wall fixtures shall not be used as security or general lighting adjacent to

residential uses or to a public right of way.

- 6.11.6.7** Landscape plantings shall be located and maintained so that they do not block light from reaching the intended surfaces.
- 6.11.6.8** The placement of light fixtures should indicate the desired traffic flow and aid pedestrian safety, especially in areas with potential conflict between pedestrians and vehicles.
- 6.11.6.9** Low intensity strings of lights or individual lighting fixtures may be installed in outdoor seating areas to create visibility for nighttime use or as part of window displays oriented toward pedestrians in areas with significant foot traffic. Lights may remain illuminated when the business is closed if the lights are not installed on the same floor level and/or installed within 100 feet of a dwelling. No individual bulb may exceed a lighting intensity of 250 lumens or color temperature of 3000 Kelvin. Fixtures of this type are not subject to the requirements of 6.11.6.5 or 6.11.6.6. This section will be enforced in concert with 6.18.9.5 so the intent of both sections is met.

Figure 6-6: Exterior Lighting Requirements



6.11.7 CONTROL OF NUISANCE AND DISABLING GLARE

- 6.11.7.1** All outdoor lighting, shall be designed, installed and maintained in a manner which does not present a disabling glare hazard to drivers or pedestrians; and all reasonable means shall be taken to prevent projection of nuisance glare onto neighboring properties or into the night sky.
- 6.11.7.2** Lighting for sports and athletic fields must include glare control features and must be designed so that primary illumination is directed onto the play area and ancillary areas such as bleachers, stands, and similar areas. All lighting fixtures for sports fields must be equipped with a glare control package including louvers, shields, or similar devices. The

fixtures must be aimed so that their beams are directed and fall within the primary playing or performance area.

6.11.7.3 In reviewing lighting plans, the permit issuing authority may consider the impact of lighting on neighboring properties based on stated hours of operation, topographical differences across sites, and other considerations.

6.11.7.4 Glare control shall be accomplished primarily through the proper selection and application of lighting equipment and shielding. Only after those means have been exhausted shall vegetation, fences, or similar buffer methods be considered for reducing glare.

6.11.8 MAINTENANCE

6.11.8.1 Lighting fixtures used for safety and security lighting shall be maintained in proper working order so as to always meet the requirements of this Ordinance.

6.12 OPEN SPACE

6.12.1 PURPOSE AND INTENT

The intent of this subsection is to conserve open land, including those containing unique and sensitive natural features and/or cultural resources, by setting them aside from development.

6.12.2 APPLICABILITY

This subsection’s requirements shall apply to any development subject to the following approvals:

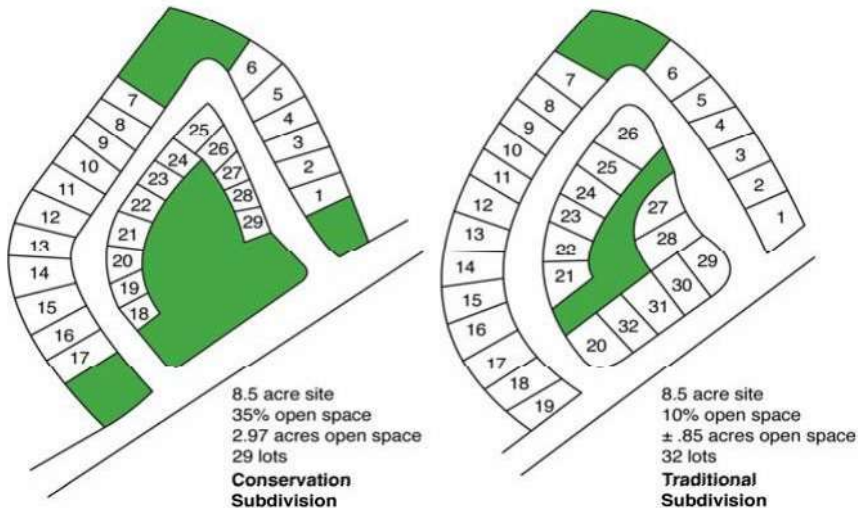
- (a) Conservation Subdivision,
- (b) Major Subdivision,
- (c) Special Subdivision subject to a Special Use Permit, and
- (d) Planned Development.

6.12.3 DEDICATION REQUIREMENTS

6.12.3.1 Minimum Amount: Open space dedication/reservation shall be required in the following amounts:

6.12.3.1.a Table: REQUIRED OPEN SPACE DEDICATION/RESERVATION	
Development Type	Required Open Space (Gross Parcel Area)
Conservation Subdivision	35%
Major and Special Subdivision	10%
Planned Development	15%

Figure 6-7: Open Space Illustrations



6.12.3.2 Contiguity: Sixty percent (60%) of required open space shall be in a contiguous tract with a minimum width of 30 feet. “Contiguous” includes any common open space bisected by any residential street.

6.12.3.3 Buffer Adjacent to Public Parks and Greenways: A 30-foot-wide/deep natural buffer shall be provided along a development’s common boundary with a public park or greenway. No new structures shall be constructed, and no clearing of trees or understory growth shall be permitted except as necessary for street or trail construction. Where this buffer is unwooded, the applicant shall either:

- (a) install vegetation meeting Type B buffer standards as provide in Section 6.5, Buffers, or
- (b) arrange for buffer management to encourage natural forest succession through "no-mow" policies and periodic removal of invasive plant and tree species.

6.12.3.4 Ownership: Open Space shall generally remain undivided and shall be owned and maintained by a homeowners' association, public or private land trust, or other conservation organization recognized by the Town, County, or State. These ownership options may be combined so different parts of the open space may be owned by different entities.

6.12.4 PERMITTED USES WITHIN OPEN SPACE

All open space shall be permanently restricted from future subdivision and development. Under no circumstances shall any development be permitted in the open space at any time, except for those uses listed as follows. Uses not listed are prohibited.

- 6.12.4.1** Buffers required by subsection 6.5, *Buffers*, and riparian buffers required by paragraph 6.20.16, *Riparian Buffers*.
- 6.12.4.2** Undeveloped, open land in its natural state (e.g., woodland, fallow field or managed meadow).
- 6.12.4.3** Agricultural and horticultural uses, including raising crops or livestock, and associated structures specifically needed to support the use. Residential structures, wholesale and commercial nurseries, and commercial livestock operations involving swine, poultry, mink and other animals likely to produce highly offensive odors are prohibited.
- 6.12.4.4** Pastureland for horses used solely for recreational purposes. Equestrian facilities are permitted but may not consume more than one-half of the minimum required open space land.
- 6.12.4.5** Forestry, in keeping with established best management practices for selective harvesting and sustained-yield forestry.
- 6.12.4.6** Neighborhood open space uses such as village greens, commons, picnic areas, community gardens, trails and similar low-impact, passive recreational uses. Motorized off-road vehicles, rifle and shooting ranges, and other uses similar in character and potential impact are prohibited.
- 6.12.4.7** Active non-commercial recreation areas, such as playing fields, playgrounds, courts and bikeways, provided such areas do not consume more than one-half the minimum required open space or five acres, whichever is less. Playing fields, playgrounds and courts shall not be located within 100 feet of abutting properties.
- 6.12.4.8** Water supply and sewage disposal systems, and stormwater detention areas designed, landscaped, and available for use as an integral part of the open space.
- 6.12.4.9** Easements for drainage, access, sewer or water lines, or other public purposes.
- 6.12.4.10** Underground utility rights-of-way. Above-ground utility and street rights-of-way may traverse open space areas but shall not count toward the minimum required open space.

6.12.5 OPEN SPACE DESIGN REQUIREMENTS

6.12.5.1 Prioritized List of Resources to be Conserved

Open space shall be laid out to ensure an interconnected network of open space is provided. Open space design shall, to the fullest extent possible, incorporate all the following resources if they occur on the tract (listed in order of significance):

1. Stream channels, riparian buffers, 100-year floodplains, wet soils/wetlands, swales, springs and other lowland areas, including adjacent buffer areas required to insure their protection.
2. Significant natural areas of species listed as endangered, threatened, or of special concern, such as those listed with the North Carolina Wildlife Resources Commission.
3. Slopes above 25% in a contiguous area of at least 25,000 square feet.

4. Slopes between 15% and 25%, particularly those adjoining water courses and ponds, where disturbance and resulting soil erosion and sedimentation could be detrimental to water quality.
5. Healthy woodlands, particularly those performing important ecological functions such as soil stabilization and protection of streams, wetlands, and wildlife habitats.
6. Areas where precipitation is most likely to recharge local groundwater resources because of topographic and soil conditions affording high rates of infiltration and percolation.
7. Hedgerows, groups of trees, individual canopy trees and trees of botanic significance.
8. Historic structures and sites.
9. Visually prominent topographic features such as knolls, hill tops and ridges, and scenic viewsheds as seen from public roads (particularly those with historic features).
10. Existing trails connecting the development parcel with other locations in the Town, County or State.

6.12.5.2 Open Space Design Standards

Open space land shall comply with the following design standards:

1. No portion of any non-open space lot or street may be used in meeting the minimum open space requirement.
2. It shall be free of all structures except historic buildings, stone walls and structures related to uses permitted within open space. The permit-issuing authority may grant approval of structures and improvements required for storm drainage, sewage treatment and water supply provided such facilities will not be detrimental to the open space. The acreage of lands required for such uses shall not be credited towards minimum open space acreage requirements for the development parcel unless the land they occupy is appropriate for passive recreational use.
3. Open space parcels must be at least three acres in area and have a length-to-width ratio of at least 4:1 or be at least 75 feet in width. Lands specifically designed as neighborhood greens, playing fields or trail links are not subject to this requirement.
4. It shall be directly accessible to the largest practicable number of lots within the development. Non-adjoining lots shall be provided with safe and convenient pedestrian access to open space land.

5. It shall be suitable for active recreational uses to the extent deemed necessary by the permit-issuing authority, without interfering with adjacent dwelling units, parking, driveways and streets.
6. It shall be interconnected wherever possible to provide a continuous network of open space within and adjoining the development.
7. It shall provide buffers to adjoining parks, preserves or other protected lands.
8. It shall contain pedestrian pathways for use by the residents of the development. Consideration shall be given to providing for public access on such trails if they are linked to other publicly accessible pathway systems within the Town, County or State. Provisions must also be made for access to the open space for land management and emergency purposes.
9. It shall be undivided by public or private streets, except where necessary for proper traffic circulation.
10. It shall be suitably landscaped either by retaining existing natural cover and wooded areas and/or according to a landscaping plan to protect open space resources.
11. It shall be subject to conservation easements duly recorded in the Orange County Register of Deeds office, if required by the permit-issuing authority, for the purpose of preserving the open space for such uses.
12. It shall be consistent with the Comprehensive Plan.

6.12.5.3 Access to Open Space

Pedestrian and maintenance access, excluding those lands used for agricultural or horticultural purposes in accordance with paragraph 6.12.4, *Permitted Uses Within Open Space*, shall be provided to open space land subject to the following requirements:

- (a) Each development shall provide one centrally located access point of 35 feet in width for every 15 lots or dwelling units.
- (b) Access to open space used for agriculture may be appropriately restricted for public safety and to prevent interference with agricultural operations.

6.12.6 OPEN SPACE OWNERSHIP

6.12.6.1 Open space shall be protected in perpetuity by one of the following methods:

- (a) A deed of conveyance of title to the Town, County, State or land trust that states the restrictions governing its use, improvement, maintenance and preservation as conditions to the deed of conveyance.
- (b) A deed of conveyance to a homeowners’/property owners’ association.
- (c) A permanent conservation or development easement in favor of the Town,

County, State or land trust; a permanent restrictive covenant for conservation purposes; or prohibiting development in favor of the Town, County, State or land trust.

6.12.6.2 If open space is deeded to a homeowners'/property owners' association, a declaration of covenants, conditions and restrictions shall be recorded with the Orange County Register of Deeds office before any property is sold. The recorded document shall include, but not be limited to, all the following:

- (a) The homeowners'/property owners' association shall own, manage, maintain, preserve and govern the open space and restrict its uses to those specified in this ordinance and in the approved development plans;
- (b) The association shall be self-perpetuating and adequately funded by regular assessments, special assessments, or both, to accomplish its purposes, and the association shall be authorized to adjust assessments to meet changing needs;
- (c) The association shall not be dissolved, and shall not dispose of any open space or associated facilities, by sale or otherwise, except to an organization conceived and established to own and maintain the open space and facilities, and the conditions of a transfer shall conform to the approved development plans and be subject to the dedicatory or reservation instrument(s);
- (d) Association membership shall be mandatory for each property owner and successive owner;
- (e) The association shall be responsible for liability insurance and local taxes for the open space and facilities;
- (f) Property owners shall pay their pro rata share of the cost of managing and maintaining the open space, and assessments levied by the association shall be a lien on their property;
- (g) A lien on the open space to secure collections of assessments levied by the homeowners association;
- (h) They shall grant the Town the authority to maintain open, assess the cost of maintenance against the owners of the property jointly and severally, and enforce the recorded covenants, conditions and restrictions;
- (i) Control shall be transferred to the property owners when the development project is 75% complete;
- (j) They shall run with the land in perpetuity; and

- (k) They shall be filed with the approved development plan.

6.13 PARKING, LOADING, AND CIRCULATION

6.13.1 PURPOSE AND INTENT

It is the general intent of this section to provide for off-street parking and loading areas that are safe, convenient and of adequate size for the particular use or uses proposed. No Zoning Compliance Permit or Certificate of Occupancy shall be issued for uses of land, structures, and buildings, either initially, or for a change in use, or expansion of an existing use, unless the off-street parking and loading requirements of this section are met.

6.13.2 APPLICABILITY

The requirements of this section apply to all developments, regardless of zoning designation, with the exception of one and two family detached houses.

6.13.3 OFF-STREET PARKING PROVISIONS

6.13.3.1 General

Except as detailed in Section 6.13.3.2, *Minimum Number of Parking Spaces Required in the CC District*, the required number of off-street parking spaces shall be calculated using Table 6.13.3.4, *Minimum Number of Parking Spaces Required*. When a calculation results in a fraction, fractions of less than 0.5 shall be rounded down and fractions of 0.5 or more shall be rounded up. This same rounding convention applies when calculating allowable reductions or additions as detailed in this section. The term "per employee" shall mean per employee at the time the maximum number of employees is present.

6.13.3.2 Minimum Number of Parking Spaces Required in the CC District

Due to the presence of on street and off-street public parking and the overlapping and walkable nature of areas zoned Central Commercial, the requirement of parking applies by square feet of building within the entire Central Commercial district rather than use by use.

In 2010, the town prepared an inventory of downtown parking. Any off-street parking shown in that inventory (Parking Study, Phase 2) should be retained by the private property owner or replaced space for space if proposed to be built over.

In the CC district, parking shall be provided at a rate of one parking space per 500 square feet of gross floor area. If a property owner proposes to build additional building area or renovate space not occupied during the 2010 inventory, the owner shall provide additional parking to reflect the demand generated by the addition of occupied square footage.

6.13.3.3 Number of Parking Spaces Required outside the CC District

The following Table establishes the formulas to be used to calculate the number of parking spaces required for a particular use. If no specific parking standard is established in this Table for a particular use, the permit issuing authority shall apply the most analogous standard. Some uses identified in this Table are not identified in the Table of Permitted Uses as specific uses. Nevertheless, parking standards for the most similar use shall apply.

6.13.3.3.a Allowable Parking Reductions and Additions

The number generated by applying the parking standard is the required number of parking spaces for a defined use. This constitutes both a minimum and maximum with the following exceptions:

- (a)** Uses requiring 5-20 spaces after rounding are allowed to build up to 2 more or 2 fewer spaces.
- (b)** Uses requiring 21-99 spaces after rounding are allowed to build up to 5 more or 5 fewer spaces.
- (c)** Uses requiring 100 spaces or more after rounding are allowed to build up to 10 more or 10 fewer spaces.

6.13.3.4 Table: MINIMUM NUMBER OF PARKING SPACES REQUIRED	
Use Type	Parking Standard
Adult Day Care	1 per staff person plus 1 per 8 clients
Adult Use	1 per 200 sf GFA
Amusement arcade	1 per game table, video game or amusement device
Athletic Field	10 spaces
Artisan Studio	1 per 300 sf GFA
Bank & Financial Institution	1 per 300 sf GFA
Bar	1 per 2 seats
Bed and Breakfast Facility	1 per guest room + 2 for owner's residence
Billiard or Pool Hall	2 per table or lane
Botanical Garden & Arboretum	2 spaces per acre
Brewery	1 space per employee + 1 space per every 2 seats in a public tasting room area + 1 space per 300 sf GFA of any retail/merchandise areas + 1 space per 75 sf GFA of any restaurant areas
Building/Trade Contractor's office	1 per 300 sf GFA
Cemetery	None
Child Day Care	1 per staff person plus 1 per 8 students
Church, Place of worship	1 per 8 seats (minimum) or 1 per 2.5 seats (maximum)
Detention facility	1 per staff person on max employment shift plus 10 visitor spaces
Dwelling: Accessory	2 per primary dwelling plus 1 per bedroom in accessory dwelling
Dwelling: Attached (1-4 units)	2 per unit
Dwelling: Attached (5-19 units)	2 per unit
Dwelling: Attached (20+ units)	2 per unit when the development has 100 or fewer units, 1 per bedroom plus 1 visitor space per 25 units when the development has more than 100 units
Dwelling: attached (20+ units, 100% of units affordable to households making 80% AMI or less at time of construction)	1 space per bedroom and no more than 2 spaces per unit.
Dwelling: Mobile Home A	NA
Dwelling: Mobile Home B	NA
Dwelling: Mobile Home C	NA
Dwelling: Single-family	NA
Electronic Gaming Operation	none
Event Center	1 per 100 sf GFA
Extended Care Facility	0.3 per room
Family Care Home	0.3 per room

6.13.3.4 Table: MINIMUM NUMBER OF PARKING SPACES REQUIRED	
Use Type	Parking Standard
Family Child Care Home	1 per 375 sf GFA
Farm, Bona fide	None
Farmer's Market	1 per 300 sf GFA of public sale area
Flex Space	1 per 300 sf GFA
Food Preparation Business	1 per staff person on max employment shift plus retail standard if direct retail sales allowed
Funeral Home	1 per 4 seats
Gallery/Museum	1 per 1000 sf GFA
Government Facilities & office Buildings	1 per 300 sf GFA
Government Maintenance Yard	1 per 375 sf GFA
Greenhouses/Nursery	1 per 375 sf GFA
Group Care Facility	0.3 per room
Health Care Facility	1 per 250 sf GFA
Health/Fitness Club	1 per 250 sf GFA
Homeless Shelter	1 per 3 residents at maximum capacity
Hospitals	1 per 400 sf GFA
Hotels & Motels	0.8 per room plus 1 per 800 sf public mtg and restaurant space
Junkyard/Outside Storage of Junked or Wrecked Motor Vehicles	1 per employee
Kennels, Boarding	1 per 300 sf GFA
Library	1 per 300 sf GFA
Mail Order Houses	1 per employee plus 3 visitor spaces
Manufacturing Complex	1 per employee plus 3 visitor spaces
Meeting Facility	1 per 6 seats or 1 per 30 sf GFA if no permanent seats
Micro-brewery	1 space per employee + 1 space per every 2 seats in a public tasting room area + 1 space per 300 sf GFA of any retail/merchandise areas + 1 space per 75 sf GFA of any restaurant areas
Mobile Home Park	2 spaces per dwelling unit, plus 1 visitor space per 5 units
Motor Vehicle Fuel Station	1 per 300 sf GFA of building

6.13.3.4 Table: MINIMUM NUMBER OF PARKING SPACES REQUIRED	
Use Type	Parking Standard
Motor Vehicle Maintenance, & Service	1 per 375 sf GFA
Motor Vehicle Repair	1 per 375 sf GFA
Motor Vehicle Sales & Rentals	1 per 375 sf GFA
Office operations	1 per 250 sf GFA
Offices and professional services	1 per 250 sf GFA
Outlet sales	1 per 300 sf GFA
Park, Athletic or Community	Facility requirements
Park, Cultural or Natural	4 per developed acre plus facility requirements
Park, Neighborhood	None
Park and Ride Facility	None
Parking as Principal Use, Surface or Structure	None
Performance Facility	1 per 6 seats or 1 per 30 sf GFA if no permanent seats
Personal service business	1 per 250 sf GFA
Personal Vehicle Sales	1 per 375 sf GFA
Petroleum Products (storage & distribution)	1 per employee
Postal and Parcel Delivery Services	1 per employee plus 1 per 250 sf of public access area
Processing Facility	1 per employee plus 3 visitor spaces
Public Safety Services	1 per 250 sf GFA
Public Utilities	1 per employee
Recreational Facilities	Broken out by type
Research Facility	1 per employee plus 3 visitor spaces
Restaurant	1 per 75 sf GFA
Retail sales/rentals of goods with outside display/storage of merchandise	1 per 300 sf GFA
Retail sales/rentals of goods within wholly enclosed structure	1 per 300 sf GFA
School: Art & Music	1 per 4 students
School: Dance, Martial Arts	1 per 4 students
School: Elementary, Middle & Secondary	2.5 per classroom
School: secondary	1 per 4 students
School: Higher Education	1 per 4 students
School: Low Impact	2.5 per classroom
School: Vocational	1 per 200 sf
Skating Rink	5 per 1000 sf GFA
Storage & Warehousing: Inside building, excluding explosives & hazardous wastes	1 space per employee plus 3 visitor spaces

6.13.3.4 Table: MINIMUM NUMBER OF PARKING SPACES REQUIRED	
Use Type	Parking Standard
Storage & Warehousing: Outside	1 space per employee plus 3 visitor spaces
Storage & Warehousing: Self	1 per employee plus 2 customer spaces plus 1 space per 20 units for facilities with interior access only
Swimming pool	1 per 100 sf of pool area
Telecommunication Tower, 200' or taller	1 per service employee
Telecommunication Tower, less than 200' tall	1 per service employee
Tennis/Squash/Racquetball	2 spaces per court
Transit Passenger Terminal	1 per employee plus spaces required to satisfy projected peak parking needs
Transmission Lines	None
Vehicle Restoration	1 per 375 sf GFA
Veterinarian/Animal Hospital	1 per 300 sf GFA
Water and sewer pump stations	None
Wholesale sales, indoor	1 per 375 sf GFA
Wholesale sales, with outdoor storage/display	1 per 375 sf GFA

6.13.4 JOINT PARKING FACILITIES

The required parking for multiple, separate and complementary uses located in any zoning districts may be combined in one lot, subject to the following requirements:

- 6.13.4.1** The off-street parking spaces allotted to each use shall be shown on the application for a Zoning Compliance Permit.
- 6.13.4.2** The distance between the primary entrance of the structure housing the use to be served and the farthest allotted parking space for that use shall not exceed one thousand three hundred twenty (1,320) feet.
- 6.13.4.3** Spaces assigned to one use may not be assigned to another use at the same time or any other time, except that upon the presentation of competent evidence demonstrating the adequacy of shared parking facilities, up to one-half of the parking spaces required for uses such as, but not limited to, churches, theatres, and assembly halls, the peak attendance at which is expected to be outside typical business hours (Monday through Friday 8 a.m. to 5 p.m.) may be assigned to another use which will experience peak usage during the day. The Planning Director shall make the determination relative to peak usages.
- 6.13.4.4** Cross easements shall be executed and recorded at the Orange County Register of Deeds to ensure the continued availability of the parking facility to the use it serves.

6.13.5 OFF-SITE PARKING

The permit issuing authority may allow off-site parking to account for up to 50% of the required parking for any single use if sufficient operational specificity and rationale are provided during the permit review including some of the following:

- 6.13.5.1** Public transit service is available between the remote parking site and the use(s) it is intended to serve.
- 6.13.5.2** Private shuttle or transit or valet is available between the remote parking site and the use(s) it is intended to serve.
- 6.13.5.3** Private shuttle or transit service is provided for customers of the business, bringing them to and taking them away from the site at their request or scheduled intervals.
- 6.13.5.4** Shared parking with another facility utilizing spaces not needed to meet the second facility's requirements under this Ordinance.
- 6.13.5.5** Leasing of off-site spaces not allocated to another use under this Ordinance.

6.13.6 COMPACT PARKING SPACES

In parking lots with more than twenty-five (25) parking spaces, compact car spaces may constitute up to twenty-five (25) percent of the total number of spaces provided. Compact spaces shall be clearly and permanently designated on the site plan and in parking areas.

6.13.7 OFF-STREET PARKING SETBACK AND LOCATION

- 6.13.7.1** Parking spaces are considered structures for the purpose of determining setback requirements as described in Section 6.3, *General Dimensional Standards*
- 6.13.7.2** All parking required by this ordinance shall be located on the parcel where the use that required the parking is located with the following exceptions:
 - 6.13.7.2.a** Uses that are specifically approved to use on street parking to meet the ordinance requirements or uses occupying buildings in the CC district that existed on the date of this ordinance and have not been enlarged.
 - 6.13.7.2.b** Uses that have approved joint parking arrangements.
 - 6.13.7.2.c** Uses that have approved off-site parking arrangements
- 6.13.7.3 Access to Off-Street Parking**
 - 6.13.7.3.a** Adequate vehicle accommodation area shall be provided for each parking space in accordance with the standards of the American Society of Highway and Traffic Officials.
 - 6.13.7.3.b** Common driveways with necessary cross-access easements to parking facilities on adjacent properties shall be required where practicable, giving consideration to the nature of the site and the traffic patterns on adjacent streets.
 - 6.13.7.3.c** Access drives or driveways to off-street parking spaces or lots shall conform to the design standards of the North Carolina Department of Transportation or this Ordinance, whichever is stricter.

6.13.8 OFF-STREET PARKING GEOMETRIC REQUIREMENTS

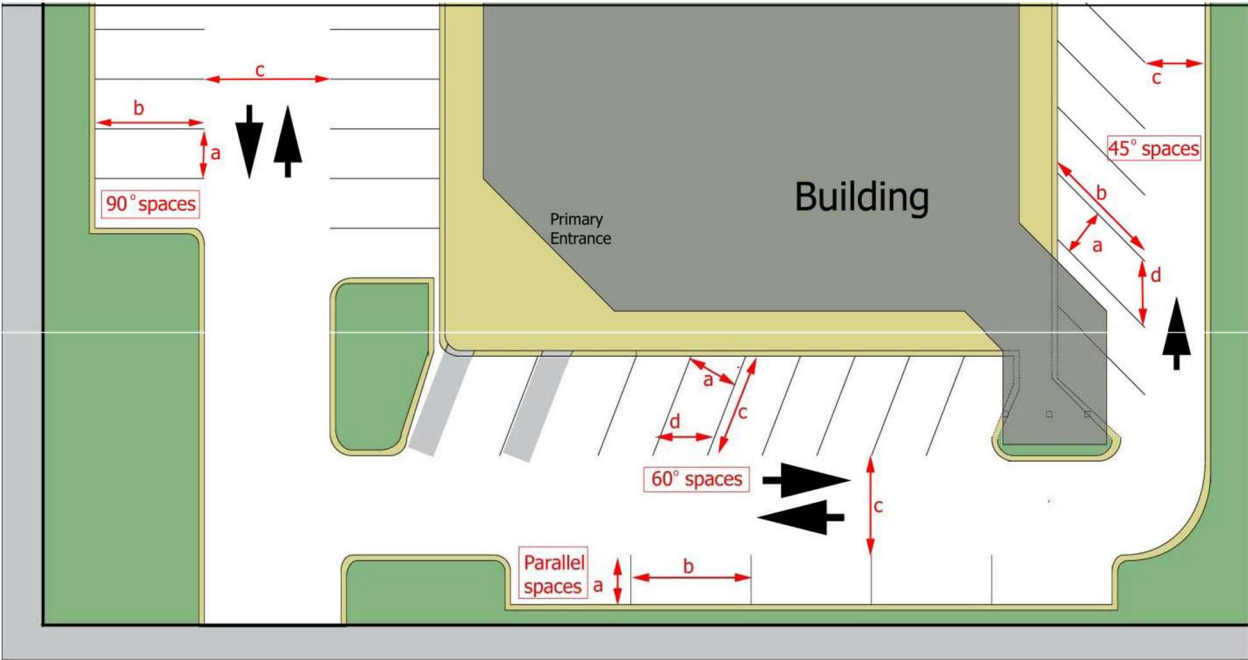
Table 6.13.8 details the minimum geometric requirements for different types of off- street parking spaces, which are shown in Figure 6-8:

Table 6.13.8: Off-Street Standard Parking Geometric Requirements				
Parking Angle	Stall Width	Stall Depth	Aisle Width Two-way traffic	Aisle Width One-way traffic
x	a	b	c	c
90	9' (8')	18' (16')	25' (22')	25
60	9' (8')	20' (16')	20' (18')	16
45	9' (8')	19' (16')	19' (18')	12
0 (parallel)	9' (8')	23' (20')	20' (20')	12

Dimensions given are for standard parking spaces, compact space dimensions are in parentheses.

The permit-issuing authority may adjust these requirements to accommodate compact parking, parking of different angles, expected traffic volumes, or Fire Code requirements.

Figure 6-8: Parking stall measurements



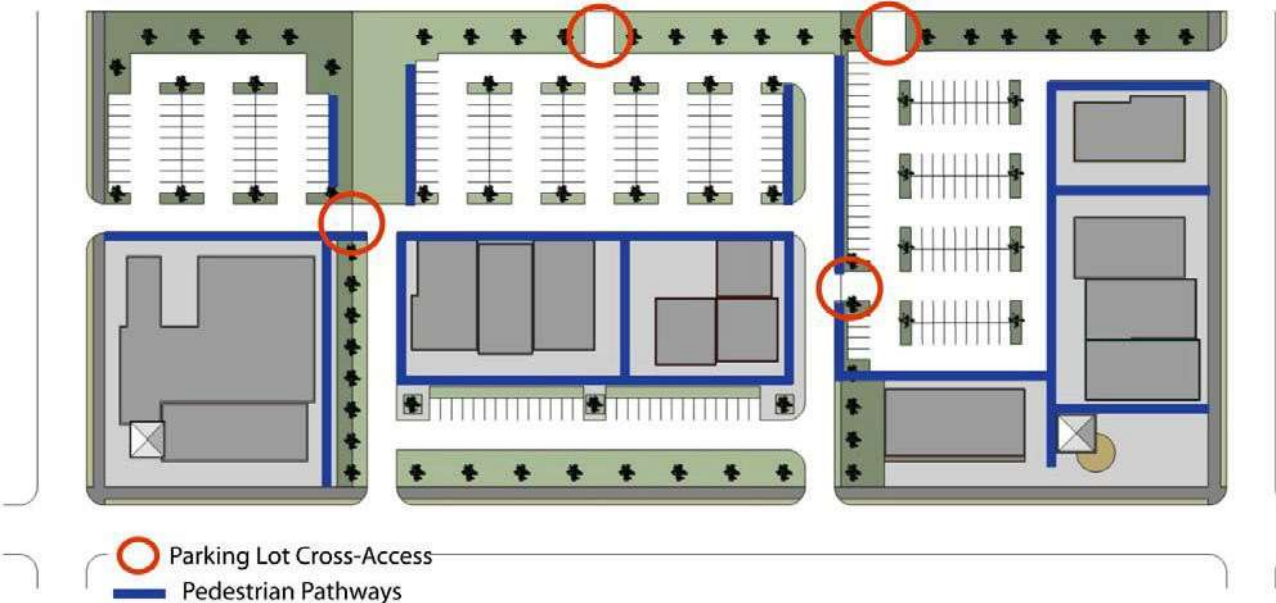
6.13.9 OFF-STREET PARKING DESIGN REQUIREMENTS

- 6.13.9.1** One row of parking spaces and one drive aisle, which together shall not exceed 44 feet in width, may be located between the primary building(s) and the street right-of-way. All other off-street parking areas shall be located to the side or rear of the primary building(s) behind the front façade(s).
- 6.13.9.2** Except as otherwise allowed under subsection 6.13.9.1, visual impact of parking areas shall

be reduced by locating the parking areas away from rights-of-way.

- 6.13.9.3 Surface parking shall not be located at street corners.
- 6.13.9.4 Parking areas shall be broken up into groups of no more than 14 contiguous spaces separated by landscaped areas. Parking areas shall be divided into a series of lots that are interconnected but separated by planted areas.
- 6.13.9.5 Adjacent parking lots shall be connected by cross access easements to provide shared parking areas whenever possible.
- 6.13.9.6 Off street parking shall not be located along any street frontage that also has on- street parking.
- 6.13.9.7 All off-street parking spaces, vehicle accommodation areas, and access areas shall be surfaced with an all-weather paving material, such as asphalt, and maintained in a safe, sanitary, and neat condition. The use of innovative and pervious surfaces for the use of parking is encouraged. Parking is not permitted on landscaped areas.
- 6.13.9.8 Off-street parking spaces shall be designed to prevent interference of parked vehicles with travel lanes, walkways, public property, or other private property by means of walls, curbs, wheel stops, or other appropriate means.
- 6.13.9.9 All parking areas shall be properly maintained by the owner of the property.

Figure 6-9: Off-Street Parking Design Requirements



6.13.9.10 See Section 6.10 for Landscaping (Parking Lot).

6.13.10 OFF-STREET LOADING REQUIREMENTS

6.13.10.1 Industrial and commercial structures shall provide space for off-street loading of vehicles, unless the applicant for such use can demonstrate that such space is not required for the use.

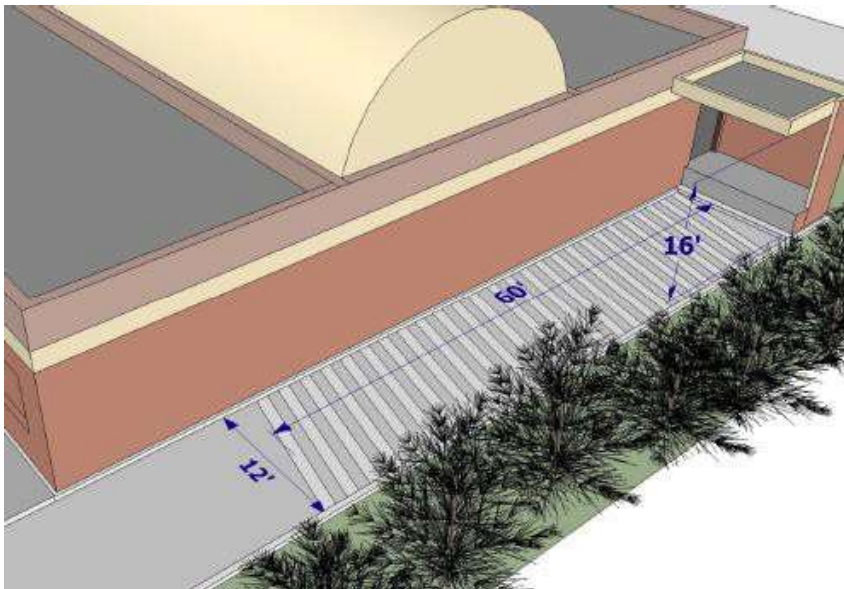
- 6.13.10.2** The requirements for off-street loading are in addition to the requirements for off- street parking. Space designated for compliance with off-street parking requirements shall not be used to comply with the requirements for off-street loading space and vice versa.
- 6.13.10.3** An off-street loading space, for the purposes of this section, shall have a minimum width of twelve (12) feet, a minimum length of sixty (60) feet and a vertical clearance of sixteen (16) feet above the finished grade of the space.
- 6.13.10.4** Each off-street loading space shall be located and arranged so that a semi-trailer truck can use it safely.

6.13.11 TABLE: USE TYPE AND OFF-STREET LOADINGS PACES	
Each new use shall provide the following off-street loading spaces:	
USE TYPE	MINIMUM LOADING REQUIREMENTS
Retail Business	One (1) space for each five thousand (5,000) square feet of floor space or major fraction thereof; no more than three (3) spaces are required
Wholesale and Industrial Uses	One (1)

6.13.12 DESIGN REQUIREMENTS

- 6.13.12.1** Delivery areas, loading docks, and service areas shall be located behind the primary building.
- 6.13.12.2** Delivery areas, loading docks, and service areas shall be screened from view so as not to be visible from the street

Figure 6-10: Off-Street Loading Requirements



6.14 PUBLIC SCHOOL FACILITIES, ADEQUACY

6.14.1 PURPOSE AND INTENT

The purpose of this ordinance is to ensure that, to the maximum extent possible, approval of new

residential development will become effective only when it can reasonably be expected that adequate public school facilities will be available to accommodate such new development.

6.14.2 CERTIFICATE OF ADEQUACY OF PUBLIC SCHOOL FACILITIES

- 6.14.2.1** Subject to the remaining provisions of this section, no approval under this ordinance of a subdivision preliminary plat, minor subdivision final plat, Site Plan, Or Special Use Permit for a residential development shall become effective unless and until Certificate of Adequacy of Public School Facilities (CAPS) for the project has been issued by the School District.
- 6.14.2.2** A CAPS shall not be required for a general use or conditional use rezoning or for a master land use plan. However, even if a rezoning or master plan is approved, a CAPS will nevertheless be required before any of the permits or approvals identified in 6.14.2.1 shall become effective, and the rezoning of the property or approval of a master plan provides no indication as to whether the CAPS will be issued. The application for rezoning or master plan approval shall contain a statement to this effect.
- 6.14.2.3** A CAPS must be obtained from the School District. The School District will issue or deny a CAPS in accordance with the provisions of the Memorandum of Understanding among Orange County, Hillsborough, and the Orange County School District dated July 14, 2003.
- 6.14.2.4** A CAPS attaches to the land in the same way that development permission attaches to the land. A CAPS may be transferred along with other interests in the property with respect to which such CAPS is issued but may not be severed or transferred separately.

6.14.3 SERVICE LEVELS

This section describes the service levels regarded as adequate by the parties to the Memorandum of Understanding described in 6.14.2.3 with respect to public school facilities.

- 6.14.3.1** As provided in the Memorandum of Understanding among Orange County, Hillsborough, and the Orange County School District, adequate services levels for public schools shall be deemed to exist with respect to a proposed new residential development if, given the number of school age children projected to reside in that development, and considering all the factors listed in the Memorandum of Understanding, projected school membership for the elementary schools, the middle schools, and the high school(s) within the Orange County School District will not exceed the following percentages of the building capacities of each of the following three school levels:

- 6.14.3.1.a** Elementary school level 105%
- 6.14.3.1.b** Middle school level 107%
- 6.14.3.1.c** High school level 110%

For purposes of this ordinance, the terms "building capacity" and "school membership" shall have the same meaning attributed in the Schools Adequate Public Facilities Memorandum of Understanding among the Town of Hillsborough, Orange County and the Orange County Board of Education.

6.14.4 EXPIRATION OF CERTIFICATES OF ADEQUACY OF PUBLIC SCHOOL FACILITIES

A CAPS issued in connection with approval of a subdivision preliminary plat, minor subdivision final plat, Site Plan, Or Special Use Permit shall expire automatically upon the expiration of such plat, plan, or permit approval.

6.14.5 EXEMPTION FROM CERTIFICATION REQUIREMENT FOR DEVELOPMENT WITH NEGLIGIBLE STUDENT GENERATION RATES

In recognition of the fact that some new development will have a negligible impact on school capacity, a CAPS shall not be required under the following circumstances:

- 6.14.5.1** For residential developments restricted by law and/or covenant for a period of at least thirty years to housing for the elderly and/or adult care living and/or adult special needs.
- 6.14.5.2** For residential developments restricted for a period of at least thirty years to dormitory housing for university students.
- 6.14.5.3** If the use of a development restricted as provided above changes, then before a permit authorizing such change of use becomes effective, a CAPS must be issued just as if the development were being constructed initially.

6.14.6 APPLICABILITY TO PREVIOUSLY APPROVED PROJECTS AND PROJECTS PENDING APPROVAL

- 6.14.6.1** Except as otherwise provided herein, the provisions of this ordinance shall only apply to applications for approval of subdivision preliminary plats, minor subdivision final plats, Site Plans and Special Use Permits that are submitted for approval after the effective date of this ordinance.
- 6.14.6.2** The provisions of this ordinance shall not apply to amendments to subdivision preliminary plats, minor subdivision final plats, Site Plans, or Special Use Permit approvals issued prior to the effective date of this ordinance so long as the approvals have not expired and the proposed amendments do not increase the number of dwelling units authorized within the development by more than five percent or five dwelling units, whichever is less.
- 6.14.6.3** The Town Board shall issue a special exception to the CAPS requirement to an applicant whose application for approval of a subdivision preliminary plat, minor subdivision final plat, Site Plan or Special Use Permit covers property within a planned unit development or master plan project that was approved prior to the effective date of this ordinance, if the Town Board finds, after an evidentiary hearing, that the applicant has (1) applied to the School District for a CAPS and the application has been denied, (2) in good faith made substantial expenditures or incurred substantial binding obligations in reasonable reliance on the previously obtained planned unit development or master plan approval, and (3) would be unreasonably prejudiced if development in accordance with the previously approved development or plan is delayed due to the provisions of this ordinance. In deciding whether these findings can be made, the Town Board shall consider the following, among other relevant factors:

- 6.14.6.3.a** Whether the developer has installed streets, utilities, or other facilities or expended substantial sums in the planning and preparation for installation of such facilities which were designed to serve or to be paid for in part by the development of portions of the planned unit development or master planned project that have not yet been approved for construction.
- 6.14.6.3.b** Whether the developer has installed streets, utilities, or other facilities or expended substantial sums in the planning and preparation for installation of such facilities that directly benefit other properties outside the development in question or the general public.
- 6.14.6.3.c** Whether the developer has donated land to the School District for the construction of school facilities or otherwise dedicated land or made improvements deemed to benefit the School District and its public school system.
- 6.14.6.3.d** Whether the developer has had development approval for a substantial amount of time and has in good faith worked to timely implement the plan in reasonable reliance on the previously obtained approval.
- 6.14.6.3.e** The duration of the delay that will occur until public school facilities are improved or exist to such an extent that a CAPS can be issued for the project, and the effect of such delay on the development and the developer.

6.14.6.4 The decision of the Town Board involving a special exception application under Section 6.14.6.3 is subject to review by the Orange County Superior Court by proceedings in the nature of certiorari. Any petition for review by the Superior Court shall be filed with the Clerk of Superior Court within 30 days after a written copy of the decision of the Town Board is delivered to the applicant and every other party who has filed a written request for such copy with the Clerk to the Town Board at the time of its HEARING on the application for SPECIAL exception. The written copy of the decision of the Town Board may be delivered either by personal service or by certified mail, return receipt requested.

6.14.6.5 The Mayor or any Board member temporarily acting as Mayor may, in his or her official capacity, administer oaths to witnesses in any hearing before the Town Board concerning a special exception.

6.14.7 APPEAL OF SCHOOL DISTRICT DENIAL OF A CAPS

The applicant for a CAPS which is denied by the School District may, within 30 days of the date of the denial, appeal the denial to the Town Board. Any such appeal shall be heard by the Town Board at an evidentiary hearing before it. At this hearing the School District will present its reasons for the denial of the CAPS and the evidence it relied on in denying the CAPS. The applicant appealing the denial may present its reasons why the CAPS application should have, in its view, been approved and the evidentiary basis it contends supports approval. The Town Board may (1) affirm the decision of the School District, (2) remand to the School District for further proceedings in the event evidence is presented at the hearing before the Town Board not brought before the School District, or (3) issue a CAPS. The Town Board will only issue a CAPS if it finds that the CAPS should have been issued by the School District as prescribed in the Memorandum of Understanding among the School District, Orange County and the Town. A decision of the Town Board affirming the School District may be appealed by the applicant for a CAPS by proceedings in the nature of certiorari and as prescribed for an appeal under Section 6.14.6.4.

6.14.8 INFORMATION REQUIRED FROM APPLICANTS

The applicant for a CAPS shall submit to the School District all information reasonably deemed necessary by the School District to determine whether a CAPS should be issued under the provision of the Memorandum of Understanding between the Town Board, Orange County, and the School District. An applicant for a CAPS special exception or an applicant appealing a CAPS denial by the School District shall submit to the Town Board all information reasonably deemed necessary by the Town Board to determine whether a special exception should be granted as provided in Section 6.14.6.3 or for the HEARING of an appeal of a School District denial of a CAPS as provided in Section 6.14.7, *Appeal of School District Denial of a CAPS*. A copy of a request for a CAPS special exception or of an appeal of a School District denial of a CAPS shall be served on the superintendent of the School District. Service may be made by personal delivery or certified mail, return receipt requested.

6.15 RECREATION SITES

6.15.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by requiring the dedication of a portion of land for the purpose of providing recreation space and/or equipment in accord with the Town of Hillsborough Parks and Recreation Master Plan.

6.15.2 APPLICABILITY

Every development proposal containing 5 or more residential units, whether attached or detached, shall include dedication of a portion of the land for public recreation to serve the leisure needs of the residents of the development.

If a development is proposed in a location recommended for recreation improvements in the adopted Parks and Recreation Master Plan or adopted small area plan, the development plan shall indicate the extent to which the proposal fulfills the intent of the adopted plan.

6.15.3 CALCULATION OF REQUIRED AREA

The applicant shall provide land for recreation, provide improvements for recreation, provide fees in lieu of land and improvements, or provide a combination of the above according to the following:

- 6.15.3.1 At least one thirty fifth (1/35) of an acre (.029 acres) shall be dedicated for each dwelling unit shown in the plan, or
- 6.15.3.2 Detached dwelling units shall be assigned 12 recreation points per dwelling. Points for each attached dwelling unit based on the number of bedrooms per units shown in the plan shall be required for recreational improvements according to Table 6.15.4; or
- 6.15.3.3 Fees in lieu of dedication of recreational area and improvements may be paid according to Section 6.15.9, *Payments in Lieu of Dedication*, for each dwelling unit shown in the subdivision plan; or
- 6.15.3.4 A combination of the three above methods may be used to satisfy the recreational dedication requirements, provided, however, that the final approval of the applicant's plan shall at all times remain with the permit issuing authority.

6.15.4 TABLE: RECREATION POINTS AND ATTACHED DWELLING UNITS	
Dwelling Units	Minimum Points Required
One-bedroom unit	6.0
Two-bedroom units	9.5
Three or more bedrooms	12

In the computation of recreational requirements: four hundred (420) points shall be deemed to equal one (1) acre; and, when calculating a combination of the above, the recreational space cannot be utilized more than once (for example, a swimming pool which equals 356 points cannot use its 768 square feet of land in the acreage calculation).

6.15.5 CHARACTERISTICS OF REQUIRED AREA

6.15.5.1 Site Suitability for Active Recreation Areas

- 6.15.5.1.a** Land provided or dedicated for active recreational purposes shall be of a character, slope and location suitable for use as play areas, tennis courts, multi-purpose courts, picnic areas, ball fields and other similar recreation uses.
- 6.15.5.1.b** Active recreation areas shall be located on land that is relatively flat (0 to 7 1/2% slopes), free of wetlands and/or flood plains, free of easements for public utility transmission lines, and otherwise capable of accommodating active recreation uses.
- 6.15.5.1.c** Play equipment suitable for children under twelve shall comprise at least five (5) percent of the total points required.

6.15.5.2 Site Suitability for Passive Recreation Areas

Land provided or dedicated for passive recreation and open space purposes shall be of a character, slope and location suitable for use for walking, jogging, reading and similar quiet activities, and the preservation of natural features and cultural resources such as steep slopes, rock outcrops, native plant life and wildlife cover, nature woodlands and water resources.

6.15.5.3 Location

Land dedicated for recreation purposes shall be located so as to serve the needs of the immediate residents of the subdivision. Recreation areas shall be centrally located so as to provide relatively easy accessibility to all residents of the subdivision; provided, however, recreation areas may be approved in other locations where land more suited for recreation purposes due to shape, level slopes and/or dry soil conditions is present.

6.15.5.4 Unity

Land dedicated for recreation purposes shall be a single lot except where it is determined that two (2) or more lots are suited to the needs of a particular subdivision. The Planning Board may recommend, and the Town Board may require, the dedication of a path connecting two or more recreation areas, in addition to the land required in Section 6.15.3, *Calculation of Required Area*.

6.15.6 SITE IMPROVEMENTS

Private recreation facilities either required or provided at the option of the applicant, shall meet the standards for site improvements contained herein. When choosing improvements for a recreational area, the anticipated characteristics and needs of the residents/businesses shall be considered in conjunction with the size of the development, any physical constraints posed by the site, and the availability of other improvements within the same general area as the subdivision. As an example, the existence of a multi-purpose court in an adjacent, existing subdivision and the availability of the facility for use by residents of the proposed subdivision may indicate to the applicant that another facility, such as a tennis court, would be more appropriate. Recreation facilities which are suitable for various age groups include but are not limited to those shown on the following pages. Trash receptacles shall be provided for all recreational areas regardless of the number and type of other improvements located thereon.

In addition to land provided or dedicated for active recreation purposes, sufficient area shall be provided to meet off-street parking requirements for the proposed improvements as shown in Table 6.13.3.5, *Minimum Number of Parking Spaces Required*.

6.15.7 POINTS SYSTEM

Active recreation areas shall be easily visible from and have direct access to public street(s) and shall be designated as such on preliminary and final plats.

Active recreation areas and facilities shall be provided to such extent that the sum total of recreation points assigned to each recreational area and facility in table 6.15.7.1 equals or exceeds the number of recreation points required in that development in accordance with the provisions of this section.

For purposes of this subsection, a recreation point is a unit of measurement that allows various types of recreational areas and facilities to be compared to one another. The principal criterion upon which recreation points are assigned to various facilities is the cost associated with the development of such facilities. The following table establishes the recreation points assignable to the facilities listed. Points for facilities not included on the table below shall be determined by the permit issuing authority.

Active recreational facilities and areas should be located throughout the development so that they can be reached safely and easily by their anticipated users. Such facilities and areas must be on land that is suitable for the use intended, have a minimum of twelve hundred (1200) square feet per area, and be sufficiently buffered to minimize the impacts on adjacent residences.

Table 6.15.7.1 – Recreation Points by facility type		
Facility	Points Per SF	Minimum requirements
Multipurpose Field/ festival lawn	0.01	less than 5% slope, turf surface, min 20,000 sf
Sports Field (baseball/football/soccer)	0.01	turf surface, perimeter fence, backstops, goals as appropriate
Community garden	0.01	perimeter fence, water source, min 5,000 sf
Dog park	0.01	perimeter fence, water source, min 10,000 sf
Volleyball Court	0.01	
Multipurpose trail - natural surface	0.01	Mulch or Chapel Hill gravel. Minimum 5-foot surface width. Available for public use. Points calculated by linear feet
Multipurpose trail - paved surface	0.02	Asphalt. Minimum 8-foot surface width. Available for public use. Points calculated by linear feet
Swimming Pool Patio	0.02	
Fitness Station	0.02	
Hard Surface Court (tennis/pickleball/basketball)	0.1	perimeter fence, sized for intended sport
Shelter/gazebo/covered space	0.2	
Amphitheater	0.2	available for public use
Water feature/natural pond	0.2	cannot be part of the stormwater management system
Play Equipment	0.3	
Natural Play areas/equipment	0.35	
Swings	0.35	
Swimming Pool	0.4	
Skate Park	0.4	available for public use
Splash Park	0.4	available for public use
Clubhouse	0.5	

6.15.7.2 RECOGNITION OF TOWN PRIORITIES

The town has established recreation facility priorities in response to requests and current lack of facilities. Any development awarded points under this section will not be deemed out of compliance with this provision if the town amends the list or discontinues the double point system. Any development installing priority improvements will receive double the points noted in table 6.15.7.1 for the priority item provided. The Parks and Recreation Board will review the priority facility list annually in January and adopt a revised list.

6.15.8 METHOD OF PROVISION OR DEDICATION

Land dedicated for public recreation area shall be designated on both the preliminary and final plat(s) of the development and must be dedicated to an appropriate unit of local government. Determination of the appropriate unit of local government shall be made by the permit issuing

authority. The Town Board must formally accept any dedication offered or required before the dedication is deemed final. Acceptance of the dedication may be one in trust if deemed appropriate by the Town Board.

Land provided for private recreation purposes must be conveyed to a property owners' association subject to covenants and easements to be approved by the permit issuing authority and which provide for the continued maintenance and control of the recreation area in a manner which assures its continuing use for its intended purpose. The formal declaration of covenants and restrictions shall be recorded in the Register of Deeds Office.

6.15.9 PAYMENTS IN LIEU OF DEDICATION

Any applicant required to dedicate or provide recreation area pursuant to this Ordinance may, with the approval of the permit issuing authority, make a payment in lieu of dedication or make a combination of land dedication and payment. Before approving a payment in lieu of dedication, the permit issuing authority shall find that no recreation sites have been designated on the Master Parks and Recreation Plan for the property in question.

The amount of a payment in lieu of dedication shall equal the number of acres required to be dedicated multiplied by the fair market value of the land to be dedicated. Fair market value shall be determined by dividing the tax appraisal of the property at last re-evaluation by the current year assessment ratio.

Payment in lieu of dedication shall be made at the time of final plat approval or within one year of approval of the construction drawings, whichever occurs first. All monies received by the Town of Hillsborough pursuant to this section shall be used only for the acquisition and/or development within the same park district as shown in the Master Parks and Recreation Plan of land for a public park facility. The Town Board has the authority to sell land dedicated pursuant to these provisions, provided that the proceeds of any such sale shall be used solely for the acquisition and/or development of other recreation or park sites within the same park district.

Developments within the extraterritorial jurisdiction and those with less than twenty (20) dwellings will be encouraged to pursue payment in lieu of dedication if they wish provide public ownership of any required recreational facilities due to the town's inability to maintain facilities outside the city limits or in small installations.

6.16 SCREENING

6.16.1 PURPOSE AND INTENT

It is the general intent of this section to provide for screening of utilities and mechanical equipment that may have adverse impacts on residential and pedestrian areas. Non-residential developments require service areas to accommodate utilities, waste handling, air handling, and supplementary power. This section of the Ordinance provides guidance on reducing any adverse impacts while still maintaining convenience and walkability. Buffers between different zoning districts are addressed in Section 6.5, *Buffers*.

6.16.2 APPLICABILITY

Where non-residential development is adjacent to residentially zoned or used property or adjacent

to areas that encourage pedestrian activity or access, the applicant shall address the potential adverse impacts of service areas to the residential and pedestrian uses.

The permit issuing authority shall consider the potential impacts including, but not limited to, the following on adjacent residents and pedestrian areas:

- 6.16.2.1** Dumpsters and recycling collection areas
- 6.16.2.2** Air handling equipment
- 6.16.2.3** Supplementary power
- 6.16.2.4** Electric Utilities and Transformers
- 6.16.2.5** Phone, Cable and other utility services
- 6.16.2.6** Hot boxes & sprinkler connections
- 6.16.2.7** Grease traps
- 6.16.2.8** Service courts
- 6.16.2.9** Lighting
- 6.16.2.10** Satellite Dishes/ Solar Panels

6.16.3 REQUIREMENTS

The screening requirement will be based on the type of impact to be mitigated.

6.16.3.1 Noise

Solid waste areas, air handling equipment, supplementary power, parking and service courts can have noise impacts at the time of use, or the sound generated by the machinery itself. Applicants shall provide noise level documentation for equipment located adjacent to the residential or pedestrian use. The permit issuing authority may require any one, or a combination of fencing, distance, and baffling as needed to minimize noise generated by such facilities. Areas that are serviced between 9 p.m. and 7 a.m. shall be located at least 50 feet from a structure in residential use.

6.16.3.2 Visual

6.16.3.2.a Solid waste areas, utility meters, hot boxes and sprinkler connections, and service courts shall be screened from residences, pedestrian areas, and adjacent streets through landscaping, fences, walls, or grade changes of sufficient height to mitigate the visual impact of the utility being screened when viewed from the adjacent parcel, pedestrian area or street.

6.16.3.2.b Solid waste areas shall be screened by a fence or wall tall enough to screen the solid waste from view. The solid waste storage area shall be enclosed and secured by a gate.

6.16.3.2.c Air handling units, condensers, satellite dishes and other equipment that is placed on the roof shall be screened from view by building elements in order to shield from sight at grade as well as from nearby publicrights-of-way

6.16.3.3 Light

Parking areas, service courts, delivery areas or others than include overhead and security lighting shall satisfy the lighting of this Ordinance. Further, local streets and residential properties shall be protected from headlight trespass through the installation of sufficiently tall landscaping or screening.

6.17 SIDEWALKS AND PEDESTRIAN ACCESS

6.17.1 PURPOSE AND INTENT

The regulations in this subsection are designed to advance identified goals and strategies found in the Town's adopted Comprehensive Sustainability Plan, and promote the public health, safety, and welfare by improving air quality and the quality of life for town residents and visitors. Providing sidewalks and other multi-modal travel methods adjacent to and within developments furthers the purposes for which these regulations are intended.

6.17.2 APPLICABILITY

The requirements of this subsection apply to developments that are subject to the following review procedures:

- (a) Creation of New Lots/Division of Land involving a Conservation, Major or Special Subdivision,
- (b) Site Plan Review,
- (c) Special Use Permit, including their modification, or
- (d) Zoning Compliance Permit involving a non-residential change of use if required by subparagraph 7.3.3, *Nonconforming Characteristics of Nonresidentially Zoned Properties*.

6.17.3 EXCEPTIONS TO SIDEWALK CONSTRUCTION REQUIREMENTS

6.17.3.1 Sidewalk construction, payment in-lieu of sidewalk construction (pursuant to paragraph 6.17.5, *Sidewalk Payment In-lieu of Construction*), or a combination of the two, is required where:

- (a) the permit-issuing authority determines:
 - (1) the sidewalk will interfere with or disrupt drainage if constructed where required,
 - (2) construction is infeasible, impractical, or undesirable due to special circumstances including, but not limited to, topography, streams, or other environmental limitations such as the presence of regulatory floodplains and riparian buffers, or
 - (3) if constructed, the sidewalk will not provide any present or future public safety benefit;
- (b) the sidewalk will be provided as part of a Town or State scheduled and funded roadway project to be built within three years of the proposed development's approval; or

- (c) an impending road widening project affecting the development is scheduled to begin within three years of the proposed development's approval.-

6.17.4 EXEMPTIONS FROM SIDEWALK CONSTRUCTION AND PAYMENT IN-LIEU REQUIREMENTS

Sidewalk construction and/or payment in-lieu of construction is not required where:

- (a) the development project:
 - 1. does not front on, or lie between, a street segment(s) identified as "recommended" on the Comprehensive Sustainability Plan's Sidewalk System Map, and
 - 2. no sidewalk or other pedestrian accessway exists, or is planned to be constructed, within 500 feet of the boundary of the land to be developed,
- (b) only a change of use or occupancy will occur with no substantial site improvements required or proposed,
- (c) only site grading and/or utility improvements are involved,
- (d) vehicular access to lots or other development will be provided by alleys connecting to streets with existing sidewalks or streets that will be constructed with sidewalks as part of the proposed development,
- (e) the sidewalk would be located within unimproved right-of-way not requiring improvement as part of the development, or
- (f) the required sidewalk is committed as part of another development project's permit, provided the permit is still valid and unexpired.

6.17.5 SIDEWALK PAYMENT IN-LIEU OF CONSTRUCTION

6.17.5.1 Where allowed by paragraph 6.17.3, *Exceptions to Sidewalk Construction Requirements*, the applicant shall make a payment to the Town in-lieu of sidewalk construction. A combination of construction and payment in-lieu may be made when an applicant chooses to construct a portion of sidewalk instead of making a full in-lieu payment. Nothing in this paragraph shall prevent an applicant from constructing sidewalks instead of making an in-lieu payment.

6.17.5.2 Payment shall be made to the Town at a rate set annually in the Town budget. Payment value shall equal the average linear foot of total sidewalk cost, including accessible ramps and required shade tree installation, as determined by a professional engineer or other professional qualified to provide the estimate. The calculation shall include the time and material cost in place at the time of the request.

- 6.17.5.3** Payment shall be made prior to (i) issuance of a Certificate of Occupancy, or (ii) release of any financial security held in association with the development project. Payments shall be deposited in the Town's sidewalk construction capital fund and used for sidewalk installation or repair within a 0.5-mile radius of the property for which the fee was collected.
- 6.17.5.4** Acceptance of payment-in-lieu shall not remove the requirement for sidewalks under paragraph 6.17.2, *Applicability*, for future property development unless exempted under paragraph 6.17.4, *Exemptions from Sidewalk Construction and Payment In-lieu Requirements*.

6.17.6 DESIGN REQUIREMENTS

- 6.17.6.1** Sidewalks shall be provided for all new developments and shall:

- (a) be provided within street rights-of-way along all adjacent and perimeter public streets on which the development tract has frontage. Additional street right-of-way of a sufficient width to accommodate the required sidewalk shall be dedicated along the street frontage in cases where the existing right-of-way is not wide enough to accommodate a sidewalk;
- (b) be provided on both sides of all internal streets within a development;
- (c) align vertically and horizontally with abutting sidewalks;
- (d) connect via a direct link to primary building entrances;
- (e) within unsubdivided developments (e.g., attached dwelling projects), link buildings with other buildings, adjacent public streets, on-site activity centers such as parking areas, laundry facilities, and recreational areas and facilities,
- (f) accommodate sidewalk shade trees required by paragraph 6.17.11, *Sidewalk Shade Trees*,
- (g) avoid conflicts or obstruction with above-ground structures or trees, and
- (h) maintain required width around any existing or anticipated obstructing object in the sidewalk's path.

- 6.17.6.2** During the development review process, reviewing agencies may designate areas where prior approval is required for any alteration to sidewalk locations. No other changes are permitted without the approval of all agencies that approved the original plans.

- 6.17.6.3** The Public Works Manager may approve changes in sidewalk location for a maximum linear distance of 200 feet without the need for amended plans. The approved plans will be annotated to reflect any approved changes.

6.17.7 CONSTRUCTION REQUIREMENTS

Sidewalks shall be constructed:

- (a) behind curb and gutter or a roadside swale,
- (b) to meet standards found in Appendix A, *Street Construction Standards and Specifications*, of the Town Code of Ordinances and the Town's adopted Street Manual. NCDOT standards must be met for sidewalks constructed within State-maintained street rights-of-way,
- (c) to meet all applicable ADA (Americans with Disabilities Act) requirements,
- (d) of concrete with a width of at least five feet and thickness of at least five-inches (six-inches at driveway entrances), unless use of alternative materials is approved by the Public Works Manager,
- (e) with a constructed barrier wherever a sidewalk is located within five-feet of a retaining wall 30-inches or greater in height, or steep grades exceeding a 1:1 ratio, and
- (f) with sidewalk shade trees required by paragraph 6.17.11, *Sidewalk Shade Trees*.

6.17.8 ENCROACHMENT AGREEMENTS REQUIRED FOR STATE-MAINTAINED STREETS

Sidewalks constructed within State-maintained-street rights-of-way shall be subject to a three-party encroachment agreement between the developer, NCDOT and Town.

6.17.9 ALTERNATIVE SIDEWALK PLANS

The permit-issuing authority may approve alternative sidewalk plans where it is shown that the alternative provides equal or greater internal and external pedestrian circulation and connectivity through use of off-street trails or multi-use pathways connecting to sidewalks, off-street trails, or multi-use pathways on the perimeter of the development tract.

6.17.10 ADDITIONAL MEANS OF PEDESTRIAN ACCESS

- (a) Whenever the permit-issuing authority determines a means of pedestrian access is necessary to connect a residential development to schools, parks, open space, playgrounds, other streets or facilities, and access is not conveniently provided by sidewalks adjacent to the streets, the applicant may be required to provide an improved pedestrian accessway located within an easement of at least 10 feet in width to provide pedestrian access.

- (b) The pedestrian accessway must be either paved with concrete, asphalt, pervious pavement, gravel, or other suitable material approved by the permit-issuing authority. Gravel or other loose materials used for paving must be contained by framing to prevent paving material wash-out.
- (c) The accessway shall be owned and maintained by a property or homeowners’ association.

6.17.11 SIDEWALK SHADE TREES

6.17.11.1 Shade trees shall be installed in front yards behind the sidewalk along all development street frontages and internal streets according to the following table. This requirement does not apply where non-residential buildings are built to within 10 feet of the street right-of-way or designed with front courtyards or other site features providing similar shading.

SIDEWALK SHADE TREE PLANTING REQUIREMENTS				
<i>Tree Size¹</i>	<i>Dbh at Planting (inches)²</i>	<i>Minimum Height at Installation (feet)</i>	<i>Minimum Distance from Sidewalk (feet – sidewalk edge to tree center point)</i>	<i>Spacing (feet on center)³</i>
Small	1.5	6	5	30
Large	3	10	10	40
¹ Refer to Town’s recommended planting list for acceptable species. ² Dbh (Diameter at breast height) is defined in Section 9, <i>Definitions</i> . ³ Permit-issuing authority may approve varied spacing if there are conflicts between utilities and tree placement provided required number of trees are provided.				

6.17.11.2 Where shade trees are planted on the development property behind street rights-of-way, a minimum 10-foot wide, private tree easement shall be provided for the planting and maintenance of required trees. Tree easements must be shown on site plans and subdivision plats and subject to a tree easement, planting, and maintenance agreement to be recorded in the register of deeds office.

6.17.11.3 Where non-residential buildings are built within 10 feet of a street right-of-way, shade trees shall be installed in “tree lawns” between the curb and sidewalk as follows:

TREE LAWN PLANTING REQUIREMENTS					
<i>Lawn Width (feet)</i>	<i>Tree Size¹</i>	<i>Dbh at Planting (inches)²</i>	<i>Minimum Height at Installation (feet)</i>	<i>Minimum Distance from Sidewalk (feet - sidewalk edge to tree center point)</i>	<i>Spacing (feet on center)³</i>
4 – 8	Small	1.5	6	2 - 2.5	30
≥8	Large	3	10	3.5	40
¹ Refer to Town’s recommended planting list for acceptable species. ² Dbh (Diameter at breast height) is defined in Section 9, <i>Definitions</i> . ³ Permit-issuing authority may approve varied spacing if there are conflicts between utilities and tree placement provided required number of trees are provided.					

6.17.11.4 All shade tree planting areas and tree lawns shall be planted with grass, ground cover, or treated with other suitable cover material.

6.17.11.5 The following table lists recommended distances to be maintained between planted trees and various infrastructure and improvements:

RECOMMENDED MINIMUM DISTANCE FROM INFRASTRUCTURE AND IMPROVEMENTS	
<i>Use</i>	<i>Minimum Distance (feet)</i>
Back of curb/pavement	2
Catch basins	10
Driveways	10
Fire hydrants	10
Light poles	20
Manholes	10
Other trees	15 or 25 (depending on species)
Overhead and underground power distribution lines	½ average mature canopy width + 15 feet (measured from center of distribution corridor)
Sewer easements	Planting prohibited
Stop signs	30
Structures	10
Traffic signs (except Stop signs)	10
Utility boxes	3 feet sides and rear; 3 feet from doors
Water easements	Planting prohibited
Water meters	5
Water and sewer lines	Dependent on easement width; 10 feet where easement doesn't exist (measured from center of pipe)
All other services	10

6.18 SIGNAGE

6.18.1 INTENT

It is the general intent of this section to help protect and preserve the historic and aesthetic character of Hillsborough while balancing with those interests the need of businesses, government and the traveling public to safely and accurately identify and read information on permitted signs. Toward that end, the Town adopts these regulations regarding the number, area, location and other characteristics of signs.

6.18.2 SIGNS SUBJECT TO CONTROL

All signs visible from vehicular rights-of-way, both new and existing, shall be erected, maintained, and operated in accordance with this Ordinance and other relevant controls unless specifically exempted. The definition of “sign” also includes those messages inside a building specifically oriented to persons outside the building. The provisions of this section do not apply to window displays of merchandise but do apply to signs mounted in windows.

6.18.3 ZONING COMPLIANCE PERMIT REQUIRED

Before any sign, except those specifically exempted from such a requirement, shall be erected or structurally altered, a Zoning Compliance Permit must be obtained.

In the case of a multi-tenant development, the Zoning Compliance Permit shall be issued in the name of the owner of the multi-tenant development or his agent rather than in the name of any individual tenant thereof, and it shall be the sole responsibility of such owner or agent to allocate among the tenants the permissible maximum sign surface area established by this Ordinance. Upon application by the owner of a multi-tenant development, the Planning Director may issue a master sign permit that allocates permissible maximum sign surface area among the various buildings, businesses or tenancies in the development according to a formula established and furnished by the owner, and thereafter sign permits shall be issued to individual tenants only in accordance with the allocation formula on record with the Planning Director. No sign permit shall be issued for any sign which conflicts with the allocation formula on record, and no new freestanding sign may be erected except in accordance with the then existing sign regulations established by this Ordinance, and with the allocation formula on record.

6.18.4 PERMANENT SIGNS NOT SUBJECT TO PERMIT REQUIREMENTS

The following permanent signs are allowed and are not subject to the permit requirements of this Ordinance, but are subject to all other applicable provisions of this Ordinance, including Historic District requirements for Certificates of Appropriateness as described in Section 3.12, *Certificate of Appropriateness* of this Ordinance when located in the Historic District.

- 6.18.4.1** Non-illuminated signs not exceeding two (2) per lot and six (6) square feet each in area, bearing only property identification numbers and names, post office box numbers, and names of occupants of the premises.
- 6.18.4.2** Signs two (2) square feet in area posted on private property relating to private parking, warning the public against trespass or danger from animals.
- 6.18.4.3** Flags or insignia of any governmental or non-profit organization when not displayed in connection with commercial activity or promotion. One flag (each) of the United States and of the State of North Carolina no larger than 100 square feet may be displayed in connection with a commercial activity without being subject to the permit requirements of this section.
- 6.18.4.4** Legal notices, identification and informational signs installed by the Town of Hillsborough
- 6.18.4.5** Local traffic directional signs erected in the travel right of way by or on behalf of a governmental entity provided such signs are consistent with the Manual of Uniform Transportation Control Devices or Town's official wayfinding plan.
- 6.18.4.6** Memorial signs or tablets, and names and construction dates of buildings when cut into any masonry surface or when placed as a cast iron (or similar) plaque affixed to the building structure.
- 6.18.4.7** Signs not exceeding four (4) square feet and bearing no advertising matter directing and guiding traffic on multi-family or non-residential property.
- 6.18.4.8** At each entrance to a residential, multi-family, or non-residential development or recognized neighborhood, there may be not more than two (2) signs identifying such development

and/or the tenants within. A single side of any such sign may not exceed sixteen (16) square feet, nor may the total surface area of all such signs exceed thirty-two (32) square feet. Such signs must be made of natural materials.

- 6.18.4.9** In addition to the signs allowed in Section 6.18.4.8, the owner, property manager, homeowners' association or residents association of a residential or multi-family development may install a community event bulletin board at each entrance to the development. A community event bulletin board shall not be located in the public right of way, nor shall it be located in such a way as to interfere with lines of sight for vehicular traffic on, entering or exiting the public right of way. Each sign shall meet the following criteria: one unlighted, single-sided sign per entrance, 3' X 4' maximum dimensions, and 6' maximum installation height. The sign face (i.e., the single side of the sign on which information may be posted) shall be oriented toward traffic exiting the development, so that the sign face is not visible from the public right of way outside the subdivision or multi-family development it serves. Postings on the bulletin board shall be maintained in a neat and orderly condition and monitored by the homeowners' association or property manager.
- 6.18.4.10** Notwithstanding any other regulation to the contrary in this section 6.18, the name and/or logo of the Town of Hillsborough may be displayed on the water storage area (or container portion) of any Town-owned water tank, PROVIDED that no single display area may exceed the lesser of (a) 500 square feet or (b) the area calculated by multiplying (i) the height of the storage container portion of the tank by (ii) the diameter (for round) or width (for multi-lateral) of the storage container portion of the tank. No more than three (3) display areas may be placed on any tank, and all such display areas shall be placed a uniform distance from each other display area on the tank. The display area shall be painted or otherwise adhered flat against the exterior water tank surface and may not be illuminated in any way.

6.18.5 TEMPORARY SIGNS NOT SUBJECT TO PERMIT REQUIREMENTS

No temporary sign may be affixed, attached, or painted upon any utility pole, or upon any tree, rock, or other natural object. All temporary signs referring to commercial operations must include the name of the business entity sponsoring the sign and must be professionally printed. The following temporary signs are not subject to the permit requirements of this Ordinance but are otherwise subject to the requirements of this Ordinance except as specifically indicated herein:

- 6.18.5.1** Temporary real estate signs on lots of less than one (1) acre, a single sign on each street front. The sign shall not exceed four (4) square feet in area and may contain the message that the property is for sale, lease, or rent and the name, address, and phone number of the property owner or agent. For lots of one (1) acre or more acres in area, a sign not exceeding thirty-two (32) square feet in area may be displayed. Such signs must be located on the property but are not subject to the setback requirements.
- 6.18.5.2** Temporary real estate signs advertising an existing single-family dwelling for sale or rent may use up to two off site "pointer" signs not to exceed four (4) square feet in area and only displaying "for sale," "for rent," and either "by owner," or the logo of the agent. This type of sign is exempted from the provision requiring the business entity name. Such signs must be located on the property but are not subject to the setback requirements.

- 6.18.5.3** Construction site identification signs identifying the project, the architect, engineer, contractor, funding sources and/or other individuals or firms involved with the construction, the intended use or name of the building, and the expected completion date. Not more than one sign may be erected per site. The sign may not exceed four (4) square feet in area for single-family or duplex construction, or thirty-two (32) square feet for multi-family or non-residential construction. The sign may not be erected prior to issuance of a Building Permit, and shall be removed within seven (7) days after of issuance of a Certificate of Occupancy for construction projects for which a Certificate of Occupancy will be issued or otherwise within seven (7) days of completion of the work. This section also applies to signs identifying renovation and/or maintenance work on an existing, developed site.
- 6.18.5.4** Yard or garage sale signs announcing yard or garage sales, provided such signs do not exceed one (1) sign per lot and four (4) square feet in area per display surface, and are removed within seven (7) days of erection.
- 6.18.5.5** Temporary signs or banners announcing grand openings of new businesses only, which may be displayed for no more than 30 consecutive days. There shall be no more than one sign or banner for each business, such sign or banner shall not exceed 32 square feet in area, and shall be affixed to the structure the business is located within or at the driveway access for the building.
- 6.18.5.6** Temporary political signs advertising candidates or issues, provided such signs do not exceed nine (9) square feet in area per display surface, are mounted on stakes, do not exceed 3 feet in total height, are not erected more than 45 days before the date designated as election day, and are removed within seven (7) days after the election (in cases of run-off election, the political signs of the run-off candidates may remain until seven (7) days after the run-off election). Political signs may be located within the public right-of-way and setbacks provided that they do not intrude on the sight preservation triangle.
- 6.18.5.7** Banners or flags that are decorative or seasonal in nature or that are displayed in connection with the observance of holidays not to exceed three (3) per lot located in any zoning district. Banners or flags advertising SPECIAL sale events of for-profit organizations are not covered by this section.
- 6.18.5.8** Directional or “pointer” signs for events. Any event may have up to off-site 2 signs, not exceeding 2 square feet each. Events do not have to meet the definition of “public event” in this ordinance to use this sign. The signs may be displayed for no more than one 24-hour period only that coincides with the event.

6.18.6 TEMPORARY SIGNS SUBJECT TO PERMIT REQUIREMENTS

The following temporary signs are subject to the permit requirements of this Ordinance and are subject to Historic District requirements for Certificates of Appropriateness as described in Section 3.12, *Certificate of Appropriateness* when located in the Historic District.

- 6.18.6.1** **Sandwich board** signs may be displayed by businesses to advertise information beyond identifying the name and location of the business upon issuance of a Zoning Compliance Permit and approval by the Historic District Commission if the business is located in the

Historic District, provided that the sign:

- 6.18.6.1.a** Has a maximum area of six (6) square feet per side.
- 6.18.6.1.b** Does not exceed four (4) feet in height;
- 6.18.6.1.c** Is located on a public sidewalk or walkway outside the clear pedestrian path as defined by the Town Code.
- 6.18.6.1.d** Is limited to a maximum of one per parcel, provided that if a single business establishment occupies more than one parcel or is located on a corner lot, it may have only one sandwich board sign;
- 6.18.6.1.e** Is displayed only during the open hours of the business; and
- 6.18.6.1.f** Is made of wood or metal.
- 6.18.6.1.g** Businesses which have permitted outdoor seating in the public right of way may display a single sided sign attached to the barrier installed to separate the outdoor seating from the clear pedestrian path. This sign must meet all of the requirements in subsections a-f above and receive the same permits as a sandwich board.

6.18.6.2 Announcements of public events as defined by this ordinance taking place within the Town or its extraterritorial jurisdiction may be permitted subject to the following standards. If an event that otherwise meets the definition occurs monthly or more frequently, the event does not qualify for the signage allowed in this section.

- 6.18.6.2.a** The event is sponsored by a non-profit, unit of state or local government, or formal association of merchants. For the purposes of this section, the entity that wishes to qualify may be requested to provide documentation of their status as an association, organization by the Planning Director.
- 6.18.6.2.b** Signs may be erected no more than 14 days prior to the event and shall be removed no later than 48 hours after the event has concluded. For any event lasting more than 2 days, signs may not be displayed for more than 17 days.
- 6.18.6.2.c** No event shall display more than 100 square feet of signage, including all off-site and on site signage allowed under this ordinance.
- 6.18.6.2.d** No event shall display more than 6 signs, as detailed below. The Planning Director will issue a Zoning Compliance Permit detailing the approved sign number, size, and locations.
 - (a) One sign may be located on the lot hosting the event for the same display period. This sign may be a banner if it is securely fastened and adequately vented to not pose a threat to traffic. This sign shall be no larger than 32 square feet.
 - (b) One sign may be a banner posted at the “Welcome to Hillsborough” sign as detailed below. No event is required to have a banner. If an event decides to not use a banner, the total number of signs permitted is reduced to five.
 - (c) Four off-site signs, displayed in different locations, may be located in the public right of way, but not in a driveway or intersection sight triangle. These signs must be of rigid construction (not banners) and a single side may not exceed 8 square feet. The sign locations must be included in the permit application materials.

6.18.6.3 Banners advertising public events, as defined by this ordinance, may only be installed at the “Welcome to Hillsborough” sign on South Churton Street. The Planning Director shall issue a

Zoning Compliance Permit for each banner on a first come first served basis. The Planning Director will resolve any overlapping requests for banner displays. Banners that are part of a public event sign package authorized in Section 6.18.6.2 shall be displayed for a time period matching the other event signage. Otherwise the display period shall not exceed 14 days. Banners shall conform to written standards and safety guidelines as established by the Planning Director.

6.18.7 PROHIBITED SIGNS & PROHIBITED CHARACTERISTICS

- 6.18.7.1** Temporary signs, both new and existing, other than those expressly allowed in this Ordinance, are prohibited.
- 6.18.7.2** Devices consisting of flags other than those exempted by Section 6.18.4.3, banners, streamers, pennants, windblown propellers, balloons, strung light bulbs, flashing lights, rotating lights, strobe lights, fluorescent lights, rotating or other moving or apparently moving installations, are prohibited.
- 6.18.7.3** Vehicles, persons, and other creatures, devices, equipment or materials decorated in such a way as to promote a business or product and located or placed so as to be visible from the public right-of-way are prohibited.
- 6.18.7.4** Freestanding signs shall be securely fastened to the ground or to some other substantial supportive structure to minimize the danger that either the sign or the supportive structure may be moved by the wind or other forces of nature and cause injury to persons or property.
- 6.18.7.5** All non-exempt signs shall comply with the construction requirements of the North Carolina State Building Code. Trailer mounted signs do not meet these requirements.
- 6.18.7.6** Off-premise signage, both new and existing, other than those expressly allowed in this Ordinance, are prohibited.
- 6.18.7.7** Changeable message components, including but not limited to, marquees, push-up/drop-down tracks, sign lettering rails, and rotating LED or video screens are prohibited on all permanent signs. This does not apply to temporary signs, including sandwich boards.

6.18.8 TRAFFIC SAFETY PRECAUTIONS

Notwithstanding any other provisions in this Ordinance, the following practices in relation to signs are prohibited in order to preserve the safety of pedestrian and vehicular movement:

- 6.18.8.1** No part of any permanent sign may intrude into the sight preservation triangle.
- 6.18.8.2** No privately owned sign shall use words such as "stop," "slow," "caution," "danger," or similar admonitions in a format or manner which could be confused with traffic directional signs erected by government agencies.
- 6.18.8.3** No sign shall be erected which, by its location, color, nature, or message, (a) might be confused with or obstruct the view of traffic signals or signs or (b) might be confused with the warning lights of an emergency or public safety vehicle.

6.18.9 RESTRICTIONS ON ILLUMINATION

Unless otherwise prohibited by this chapter, signs may be illuminated only in accordance with this section. All illuminated signs allowed by this Ordinance must also comply with duly adopted regulations regarding light emissions as described in *Section 6.11, Lighting*. Notwithstanding the foregoing, internally illuminated signs are prohibited in the Historic District.

- 6.18.9.1** Directional lighting fixtures used for sign lighting shall be top mounted, so lighting is aimed down. Ground mounted signs with a height of five (5) feet or less may be ground lit, provided that the lights are shielded so as to illuminate the sign only, and the light shall not exceed 10 foot candles at the sign surface.
- 6.18.9.2** No illuminated signs are allowed in any residential zoning district, except signs at the entrance to a residential subdivision, neighborhood or multi-family development allowed by Section 6.18.4.8 above may be illuminated.
- 6.18.9.3** Freestanding signs and window signs may not be illuminated when the business is closed. Those signs advertising multiple businesses may not be illuminated when all the businesses advertised are closed.
- 6.18.9.4** Lighting directed toward a sign shall be shielded so that it illuminates on the face of the sign and does not shine directly into a public right-of-way or residential premises.
- 6.18.9.5** Subject to Section 6.18.9.7 illuminated tubing or strings of lights that outline property lines, outdoor sales areas, roof lines, or similar areas in an attempt to draw attention to a structure or area from a vehicular right of way are prohibited. This section will be enforced in concert with 6.11.6.9 so the intent of both sections is met.
- 6.18.9.6** Subject to Section 6.18.9.7 no sign may contain or be illuminated by flashing or intermittent lights or lights of changing degrees of intensity, except signs indicating the time, date, or weather conditions.
- 6.18.9.7** Sections 6.18.9.5 and 6.18.9.6 do not apply to temporary signs erected in connection with observance of holidays.
- 6.18.9.8** Within the historic overlay district, illuminated tubing signs shall not be permitted. For purposes of this subsection, the term "illuminated tubing sign" includes all signs in which illuminated tubing constitutes or forms all or part of the message of the sign, as well as signs in which the message area of the sign is outlined, underlined, or otherwise highlighted by illuminated tubing.
- 6.18.10 BILLBOARDS**

Billboards within one hundred (100) feet of the right-of-way along all roads are prohibited, with the exception of existing billboards as of February 17, 1986. These pre-existing billboards shall be subject to the following restrictions:

 - 6.18.10.1** They shall not be enlarged or expanded,
 - 6.18.10.2** A signed statement with the name and address of the owner and current lease for each sign shall be kept on file with the Planning Director,
 - 6.18.10.3** They shall be subject to yearly inspections,
 - 6.18.10.4** They shall conform to the requirements set forth in North Carolina General Statutes, Section 136-126, et seq.

6.18.11 COMPUTATION OF SIGN AREA

For the purpose of determining the number of signs permitted, a sign shall be considered to be a single display device containing elements organized, related, and composed to form a unit.

Without limiting the generality of the above, a multi-sided sign shall be regarded as one sign.

- 6.18.11.1** The surface area of a sign shall be computed by including the entire area within a single, continuous, rectilinear perimeter of not more than eight (8) straight lines, or a circle or an ellipse, enclosing the extreme limits of the writing, representation, emblem or other display, together with any material or color forming an integral part of the background of the display or used to differentiate the sign from the backdrop or structure against which it is placed, but not including any supporting framework or bracing that is clearly incidental to the display itself.
- 6.18.11.2** If the sign consists of more than one section or module, all of the area, including that between sections or modules, shall be included in the computation of the sign area.
- 6.18.11.3** With respect to three dimensional or multi-sided signs, the surface area shall be computed by including the area of all sides designed either to attract attention or communicate information.
- 6.18.11.4** Generally, parcels and businesses are permitted to have both freestanding and wall mounted signs to the extent to which signs can be erected and maintained to be in full compliance with this ordinance. The area of these signs is calculated independently.

6.18.12 TOTAL SIGN SURFACE AREA FOR WALL MOUNTED SIGNS

- 6.18.12.1** Unless otherwise provided in this section, the total sign surface area devoted to all signs on any lot shall not exceed the limitations set forth in this section, and all signs except temporary signs shall be included in this calculation. Signs, posters, banners and/or other advertising material placed in or on windows oriented toward the public outside the premises shall be counted in calculating the permitted wall sign area under this Ordinance.
- 6.18.12.2** For the purposes of managing wall mounted signs, the word “façade” shall include all planes facing the same direction regardless of structural offsets and the word “building” shall be determined by property boundaries unless information is provided about interior fire walls dividing a structure into multiple components.
- 6.18.12.3** Unless otherwise limited by the provisions of this section, the wall sign surface area permitted on any building façade, shall be determined as follows:
 - 6.18.12.3.a** 0.5 square feet of wall sign surface area per linear foot of building façade, or
 - 6.18.12.3.b** thirty-two (32) square feet of wall sign surface area per building façade, whichever is greater.
- 6.18.12.4** In the CC district, wall signs are only permitted on facades providing primary access to businesses for customers. The maximum aggregate wall sign surface area for each façade providing primary access to businesses for their customers shall be 32 square feet, regardless of the façade area or length. This limit shall apply to all wall mounted signs, including exterior, interior, awning, and hanging types.
- 6.18.12.5** When a building has wall area that is not parallel or perpendicular to the adjoining street,

the allowable sign area for that wall section shall be calculated by measuring the entire façade oriented along the same angle (consistent with Section 6.18.12.2) and apply the calculation in Section 6.18.12.3a. There is no minimum allowance for angled wall sections.

- 6.18.12.6** When a building has visibility and/or access from both a public right of way and a parking area, each business may have a wall mounted sign on both facades. The “front” façade shall be the one oriented toward the public right of way and the “rear” façade shall be the opposite façade. The sign area allowed on the “front” façade shall be calculated as detailed in Section 6.18.12.3. The sign area allowed on the “rear” façade shall be the lesser of the area allowed when calculated under Section 6.18.12.3 or 75% of the area of the sign on the front façade.
- 6.18.12.7** Hanging signs are permitted and considered wall signs under this ordinance for determining size, location, and illumination. The calculation for allowable sign area shall be for a single side of a hanging sign, not divided in half. A single side of a hanging sign shall be compared to the building façade area for determining compliance with the requirement in the CC district in Section 6.18.12.4.
- 6.18.12.8** When a building contains a sign band, such a building may only use a flush mounted wall sign and it must be located and centered within the sign band area. Hanging signs shall not be used on a façade with a sign band.

6.18.13 FREESTANDING SIGN SURFACE AREA

- 6.18.13.1** For purposes of this section, a side of a freestanding sign is any plane or flat surface included in the calculation of the total sign surface area as provided in Section 6.18.11, *Computation of Sign Area*. For example, wall signs typically have one side. Freestanding signs typically have two sides (back to back).
- 6.18.13.2** A single side of a freestanding sign may not exceed: twenty (20) square feet in surface area for lots zoned Central Commercial or for lots with fifty (50) feet or less of frontage on the street toward which the sign is primarily oriented; thirty- two (32) square feet on lots with more than fifty but less than 130 feet of frontage; fifty (50) square feet on lots with 130 feet or more of frontage. For the purpose of calculating the amount of freestanding sign surface area allowed by this section, the street frontage must be continuous.

6.18.14 NUMBER OF FREESTANDING SIGNS

- 6.18.14.1** No parcel may have more than one (1) freestanding sign oriented toward a street for each street along which the development has frontage. If a single use parcel has frontage along the same street in non-continuous sections separated by more than 500 linear feet of street frontage, one freestanding sign may be allowed on each section of frontage for which there is vehicular access based on the length of that continuous section, provided, however, that the sign surface area for the development may not exceed the area calculated pursuant to Section 6.18.13 for single tenant parcels and Section 6.18.18 for multi-tenant developments.
- 6.18.14.2** If a lot is located at the intersection of two (2) streets and a freestanding sign is placed on that lot so that it is oriented toward both streets, the allowable sign area shall be based on the frontage width of the street where the front door is located or, if the door faces the

intersection, the frontage width of the street used as the street address for the property.

6.18.15 LOCATION AND HEIGHT REQUIREMENTS

- 6.18.15.1** A freestanding sign shall observe a setback of 10 feet from any property line unless a lesser or greater standard is otherwise specified in this ordinance or allowed by the permit issuing authority.
- 6.18.15.2** In the case of an existing building being used for non-residential purposes in a corridor where the street right-of-way is 100 feet or greater and the right-of-way is only improved to a two lane section, the non-residential use may install any freestanding sign that otherwise meets this ordinance without a right-of-way setback. This provision is only available until there are funded right-of-way improvements that widen the street section to four or more lanes adjacent to the lot containing the non-residential use that will begin within 2 years of any requested sign permit.
- 6.18.15.3** No sign may extend above any parapet or be placed on any roof surface. This subsection shall not apply to displays, including lighting, erected in connection with the observance of holidays on the roofs of residential structures.
- 6.18.15.4** No part of a freestanding sign may exceed a height of seven (7) feet, measured from adjacent ground level.
- 6.18.15.5** Except within the Historic District and CC, freestanding signs shall be ground mounted or monument type signs with the support located under the sign.
- 6.18.15.6** Within the Historic District and CC, freestanding signs may be supported by two posts or poles, one on each end of the sign, or hang from a ground installed bracket. Such signs must be wholly located on the parcel and not encroach in or over the public right of way. Hanging signs attached to a building are treated as wall mounted signs.
- 6.18.15.7** No sign or supporting structure may be located within or over any public right-of-way except that, within the Historic District and CC, signs and supporting structures may be located within or over the public right of way so long as:
- 6.18.15.7.a** No portion of any sign or supporting structure is located within or over the traveled or paved portion of any street.
- 6.18.15.7.b** Any sign or supporting structure that is attached to the building façade and extends twelve inches or less over a public sidewalk must be mounted so the entire sign is no less than twenty-seven inches and no more than eight feet in height measured from the public sidewalk.
- 6.18.15.7.c** Any sign or supporting structure that is attached to the building façade and extends more than twelve (12) inches over a public sidewalk is mounted at a height providing at least eight (8) feet of clearance from the sidewalk.

6.18.16 NONCONFORMING SIGNS

- 6.18.16.1** Nonconforming signs, because of their location, design, height, and other features, detract from the quality of life and sense of place Hillsborough seeks to achieve and maintain. Therefore, it is the intent of this Ordinance that all nonconforming signs will eventually be

brought into conformity with its provisions, and that nonconforming signs will ultimately be phased out of existence. A freestanding sign in the Central Commercial district may observe a zero setback from the right of way edge along the parcel front, consistent with the zoning district front setback.

- 6.18.16.2** No person may engage in any activity that causes an increase in the extent of nonconformity of a nonconforming sign. Without limiting the generality of the foregoing, no nonconforming sign may be enlarged or altered, nor may any illumination be added to any nonconforming sign.
- 6.18.16.3** A nonconforming sign structure may not be moved, replaced, or otherwise changed except to bring the sign into complete conformity with this Ordinance. The message contained on the sign may be changed provided that no change is made to the sign structure, and the sign area and dimensions are not changed.
- 6.18.16.4** If a nonconforming sign is damaged to an extent equal to or greater than 50% of the sign replacement cost (new) or destroyed, it may not thereafter be repaired, reconstructed, or replaced except in conformity with all the provisions of this Ordinance, and the remnants of the former sign structure shall be cleared from the land.
- 6.18.16.5** If the owner or occupant of premises with of a nonconforming sign discontinues operations for a period of 90 consecutive days, then the owner shall remove the nonconforming sign and the sign structure shall be cleared from the land.

6.18.17 REMOVAL OF NONCONFORMING SIGNS

- 6.18.17.1** Any permanent sign that was in compliance with this section before amendments in 2008 or later made it nonconforming may continue to exist for a period not to exceed six (6) years from the date which the property owner is notified in writing by the Planning Director of the nonconformity.
- 6.18.17.2** Any permanent sign that was nonconforming with this section prior to amendments made in 2008 may continue to exist for a period not to exceed three (3) years from the date which the property owner is notified in writing by the Planning Director of the nonconformity.
- 6.18.17.3** Any non-exempt temporary sign on private property must be removed within thirty (30) days of the receipt by the property owner of the written notice from the Planning Director detailing the nonconformity.
- 6.18.17.4** Any temporary sign, either exempt or nonconforming, located within the public right-of-way may be removed by town staff if such sign is determined to be in violation of this Ordinance. Persons or businesses who repeat violations of this provision twice within any thirty (30) day period may be subject to escalating fines as described in Section 8, *Enforcement*.

6.18.18 SIGNAGE FOR MULTI-TENANT DEVELOPMENTS

- 6.18.18.1** Freestanding signs may be allowed at each entrance drive to a multi-tenant development provided the driveways are separated by 300 feet or more.
- 6.18.18.2** The size of the freestanding sign allowed at each driveway access shall be determined by the frontage the development has on the street toward which the sign is oriented. A sign of that size is allowed at each driveway. For example, a multi-tenant development has 400 feet of

frontage on a street and 2 driveway accesses. A freestanding sign may be installed at each driveway access that is 50 square feet in size.

- 6.18.18.3** If a multi-tenant development has more than 500 feet of access on any street, and the driveway accesses are separated by 300 feet or more, the freestanding sign at each driveway may be 100 square feet.
- 6.18.18.4** Upon application for a multi-tenant development signs, the owners shall submit a sign allocation plan that indicates how square footage will be shared among tenants. Different tenant may be advertised on each sign. No tenant listing can be in print smaller than 6 inches tall. The sign area may be increased by 10% if the sign includes only the development name and three individual tenants.
- 6.18.18.5** A multi-tenant development sign must observe a 10-foot setback from the public road and internal driveways. The tallest part of a freestanding multi-tenant development sign shall not exceed 7 feet when observing the 10-foot setback. Sign height may increase to 12 feet if one additional foot of setback from the public street is observed for each additional foot in height above seven feet.
- 6.18.18.6** Outparcels within a multi-tenant development (lots owned by entities other than the multi-tenant development) may install freestanding signs along the public road or private access drive to which they have driveway access. For the purposes of determining sign specifications, a private access drive shall be treated as a public road for determining setback, height, and size of sign. A freestanding sign may only be installed oriented toward a street or access drive that the outparcel has driveway access to.

6.18.19 INTERNAL WAYFINDING

Multi-tenant developments with 2 or more access points or 3 or more buildings shall develop and install an internal wayfinding sign program with components for both drivers and pedestrians. Such signage may also be developed and installed for non-residential developments with 2 or more access point or 3 or more buildings. A unified sign plan must be submitted and approved before the signs are installed, showing that the signs comply with location, lighting, construction, and height limitations of this section. Individual wayfinding signs do not count toward development or tenant signage and will be permitted on a single Zoning Compliance Permit. Internal wayfinding signage must be at least 50 feet from the right of way of the street providing site access and must be oriented toward on-site traffic flow.

6.19 Reserve for future codification

6.20 STORMWATER MANAGEMENT

6.20.1 PURPOSE AND INTENT

- 6.20.1.1** The Town of Hillsborough's planning jurisdiction is located wholly within the Upper Neuse River Basin and the Falls Lake watershed; both nutrient sensitive watersheds. The regulations contained in this subsection are adopted in order to:

6.20.1.1.a Protect the water quality of streams within the watershed.

6.20.1.1.b Comply with the NPDES System Phase II stormwater requirements; and

6.20.1.1.c Comply with the Town’s NPDES Phase II Discharge Permit.

6.20.1.2 The regulations are designed to accomplish these goals through the reduction and control of stormwater runoff and by addressing nutrient reductions for both new and existing development. The provisions of this Subsection became effective on October 1, 2007, and are intended to ensure the Town’s compliance with their NPDES Phase II Discharge Permit; Session Law 2006-246 and the Falls Nutrient Strategy (15A NCAC 02b.0275, .0277, .0278 and .0282).

6.20.2 APPLICABILITY

The following activities shall be subject to the requirement of this subsection:

6.20.2.1 New and re-development projects creating new impervious surface areas of 10,000 square feet or more in area.

6.20.2.2 New and re-development projects increasing existing impervious surface areas by 10,000 square feet or more in area.

6.20.2.3 Any activity disturbing 10,000 square feet or more of land in order to establish, expand, or modify a residential, commercial or industrial development (including the re- subdivision of land) involving the construction of streets and other impervious features.

6.20.2.4 Any activity disturbing 10,000 square feet or more of land in order to establish, expand, or modify a multi-family residential, commercial, industrial, or institutional development or facility.

6.20.2.5 Any development activity cumulatively disturbing 21,780 square feet (1/2 acre) or more of land in order to establish, expand, or modify a single- or two-family dwelling and their customary accessory structures on an individual lot and not proposed as part of a larger common plan of development or sale.

6.20.2.6 Any development activity cumulatively disturbing 21,780 square feet (1/2 acre) or more of land in order to establish, expand, or modify a recreational development on an individual lot and not proposed as part of a larger common plan of development or sale.

6.20.2.7 The requirements of this subsection do not apply to any work that does not add to, increase, or expand existing impervious surfaces. An example would be the paving of an existing gravel parking lot with asphalt provided the area of the parking lot is not expanded in any way.

6.20.3 DEVELOPMENT STANDARDS

6.20.3.1 Low-Density Projects

Low-density projects shall implement stormwater control measures that comply with all of the following standards:

6.20.3.1.a Stormwater runoff from the development site shall be transported from the development site by vegetated conveyances to the maximum extent practicable.

6.20.3.1.b Nutrient load contributions leaving the site must meet the most current loading rates adopted by NCDWQ requirements of *Section 6.20.4, Nutrient Load Calculation*.

6.20.3.1.c At a minimum, the development shall not result in a net increase in peak flow

leaving the site from pre-development conditions for the one-year, 24-hour storm event.

- 6.20.3.1.d** All impervious surface areas shall meet the riparian buffer requirements found in *Section 6.20.16, Riparian buffers*.
- 6.20.3.1.e** The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

6.20.3.2 High-Density Projects

High-density projects shall implement stormwater control measures that comply with each of the following standards:

- 6.20.3.2.a** Must control and treat runoff (generated from all surfaces) from the first inch of rain. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.
- 6.20.3.2.b** All structural treatment systems used shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids.
- 6.20.3.2.c** General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the Stormwater Design Manual.
- 6.20.3.2.d** Nutrient load contributions leaving the site must meet the requirements of *Section 6.20.4, Nutrient Load Calculation*.
- 6.20.3.2.e** At a minimum, the development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm event.
- 6.20.3.2.f** All impervious surface areas shall meet the riparian buffer requirements found in *Section 6.20.16, Riparian Buffers*.
- 6.20.3.2.g** The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

6.20.4 NUTRIENT LOAD CALCULATION

- 6.20.4.1** Nitrogen and phosphorous loads contributed by the proposed new development shall not exceed the following unit-area mass loading rates: 2.2 and 0.33 pounds per acre per year for nitrogen and phosphorous, respectively.
- 6.20.4.2** Development subject to this ordinance shall attain nitrogen and phosphorous loading rate reductions on-site that meet the following criteria prior to using an off-site offset measure:
 - 6.20.4.2.a** 30% or more reduction in both nitrogen and phosphorous loading from the untreated conditions for any single-family, detached and duplex residential development disturbing one-half acre but less than one acre.
 - 6.20.4.2.b** 50% or more reduction in both nitrogen and phosphorous loading from the untreated conditions for any single-family, detached and duplex residential development disturbing more than one acre.
 - 6.20.4.2.c** 30% or more reduction in both nitrogen and phosphorous loading from the untreated condition for other development, including multi-family residential,

commercial and industrial development disturbing 10,000 square feet but less than one acre.

6.20.4.2.d 50% or more reduction in both nitrogen and phosphorous loading from the untreated condition for other development, including multi-family residential, commercial and industrial development disturbing more than one acre.

6.20.4.2.e 30% or more reduction in both nitrogen and phosphorous loading from the untreated condition for proposed redevelopment activities in a designated downtown area that would replace or expand structures or improvements that existed as of December 2006.

6.20.4.3 Total nutrient removal rates of stormwater BMPs and BMPs in a series will be credited and calculated pursuant to the approved accounting tool.

6.20.5 OFFSET PAYMENTS

6.20.5.1 In accordance with subsection 6.20.4.2 above, offset fees may be permitted to meet the nutrient export levels set for new development activities.

6.20.5.2 Offset fees shall be paid to the NCEEP (North Carolina Ecosystem Enhancement Program) or another private mitigation bank approved by NCDWQ. Offset fees must be used within the Falls Lake Watershed.

6.20.5.3 A developer subject to this ordinance may achieve the additional reductions in nitrogen and phosphorus loading required by this ordinance by making offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the Town of Hillsborough. A developer may propose other offset measures to the Town of Hillsborough, including providing his or her own offsite offset or utilizing a private seller. All offset measures permitted by this ordinance shall meet the requirements of 15A NCAC 02B .0282 and 15A NCAC 02B. 0240.

6.20.5.4 Permanent Nutrient Export Reduction Best Management Practices

The following on-site BMPs may be used for reducing nutrients from new developments:

6.20.5.4.a bio-retention

6.20.5.4.b constructed wetlands

6.20.5.4.c open channel practices

6.20.5.4.d riparian buffers

6.20.5.4.e wet detention ponds

6.20.5.4.f other methods approved by NCDWQ.

The Town encourages applicants to pursue innovative options for treating stormwater on-site and discourages the use of wet detention ponds for most applications.

6.20.5.5 Total Nutrient Removal Rates

Total nutrient removal rates of stormwater BMPs and BMPs in a series will be credited and calculated pursuant to the approved accounting tool. To receive full nutrient reduction credit, design standards must follow those outlined in the Stormwater BMP Manual. Variances from the design standards may be allowed as approved on a case by case basis.

6.20.6 EVALUATION OF STANDARD FOR STORMWATER CONTROL MEASURES

6.20.6.1 Evaluation According to Contents of Stormwater Design Manual

All stormwater control measures, stormwater systems and stormwater treatment practices (also referred to as Best Management Practices, or BMPs) required under this ordinance shall be evaluated by the Stormwater Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the Stormwater Design Manual. The Stormwater Administrator shall determine whether proposed BMPs will be adequate to meet the requirements of this ordinance.

6.20.6.2 Determination of Adequacy; Presumption and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the Stormwater Design Manual and the approved accounting tool will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the Stormwater Design Manual, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The Stormwater Administrator may require the applicant to provide the documentation, calculations, and examples necessary for the Stormwater Administrator to determine whether such an affirmative showing is made.

6.20.7 STORMWATER MANAGEMENT PLAN

6.20.7.1 Required Approval

The permit-issuing authority shall not issue any permits for new development on any land within the Town's planning jurisdiction unless and until a Stormwater Management Plan has been reviewed and approved in accordance with standards found in the *Administrative Manual*.

6.20.7.2 Compliance With Requirements

Any person engaged in new development activities as defined by this subsection who fails to file a plan in accordance with this ordinance, or who conducts any new development except in accordance with the provisions of an approved Stormwater Management Plan, shall be deemed in violation of this ordinance.

6.20.7.3 As-Built Plans and Final Approval

6.20.7.3.a Upon completion of a project, and before a certificate of occupancy shall be granted, the applicant shall certify that the completed project is in accordance with the approved stormwater management plans and designs, and shall submit actual "as built" plans for all stormwater management facilities or practices after final construction is completed.

6.20.7.3.b The plans shall show the final design specifications for all stormwater management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. The designer of the stormwater management measures and plans shall certify, under seal, that the as-built stormwater measures, controls, and devices are in compliance with the approved stormwater management plans and designs and

with the requirements of this ordinance. A final inspection and approval by the Stormwater Administrator shall occur before the release of any performance securities.

6.20.8 GENERAL STANDARDS FOR MAINTENANCE

6.20.8.1 Function of BMPs as Intended

The owner of each engineered stormwater control or stormwater BMP installed pursuant to this ordinance or any previous zoning or subdivision ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the engineered stormwater control was designed.

6.20.8.2 Annual Maintenance Inspection and Report

- 6.20.8.2.a** The person responsible for maintenance of any engineered stormwater control installed pursuant to this ordinance or any previous zoning or subdivision ordinance shall submit to the Stormwater Administrator an inspection report from one of the following persons performing services only in their area of competence: a qualified registered North Carolina professional engineer, surveyor, landscape architect, soil scientist, aquatic biologist, or person certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance. The inspection report shall contain all of the following:
- (a) The name and address of the landowner.
 - (b) The recorded book and page number of the lot of each engineered stormwater control.
 - (c) A statement that an inspection was made of all engineered stormwater controls.
 - (d) The date the inspection was made.
 - (e) A statement that all inspected engineered stormwater controls are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by this ordinance; and
 - (f) The original signature and seal of the engineer, surveyor, or landscape architect.
- 6.20.8.2.b** For newly constructed engineered stormwater controls or stormwater BMPs, the Annual Maintenance Inspection and Report must be submitted to the Stormwater Administrator no later than September 1 of each year, beginning one year from the date of the as-built certification and each year thereafter.
- 6.20.8.2.c** Engineered stormwater controls or stormwater BMPs constructed prior to February 28, 2011 pursuant to previous zoning or subdivision ordinances must complete an annual maintenance inspection and submit a report as described in Section 6.20.8.2.a above. The Annual Maintenance Inspection and Report must be submitted to the Stormwater Administrator no later than September 1 of each year.

6.20.9 OPERATION AND MAINTENANCE AGREEMENT

6.20.9.1 In General

- 6.20.9.1.a** Prior to the conveyance or transfer of any lot or building site to be served by a engineered stormwater control pursuant to this ordinance, and prior to issuance of any permit for development requiring a engineered stormwater control pursuant to this ordinance, the applicant or owner of the site must execute an operation and maintenance agreement that shall be binding on all subsequent owners of the site, portions of the site, and lots or parcels served by the engineered stormwater control. Until the transference of all property, sites, or lots served by the engineered stormwater control, the original owner or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.
- 6.20.9.1.b** The operation and maintenance agreement shall require the owner or owners to maintain, repair and, if necessary, reconstruct the engineered stormwater control, and shall state the terms, conditions, and schedule of maintenance for the engineered stormwater control. In addition, it shall grant to Town a right of entry in the event that the Stormwater Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the engineered stormwater control; however, in no case shall the right of entry, of itself, confer an obligation on Town to assume responsibility for the engineered stormwater control.
- 6.20.9.1.c** The operation and maintenance agreement must be approved by the Stormwater Administrator prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. A copy of the recorded maintenance agreement shall be given to the Stormwater Administrator within 14 days following its recordation.

6.20.9.2 Special Requirement for Homeowners' and Other Associations

For all engineered stormwater controls required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

- 6.20.9.2.a** Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.
- 6.20.9.2.b** Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the engineered stormwater controls. If engineered stormwater controls are not performing adequately or as intended or are not properly maintained, the Town, in its sole discretion, may remedy the situation, and in such instances the Town shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair, and reconstruction of the engineered stormwater controls, provided that the Town shall first consent to the

expenditure.

- 6.20.9.2.c** Both developer contribution and annual sinking funds shall fund the escrow account. Prior to plat recordation or issuance of construction permits, whichever shall first occur, the developer shall pay into the escrow account an amount equal to 15% percent of the initial construction cost of the engineered stormwater controls. Two-thirds (2/3) of the total amount of sinking fund budget shall be deposited into the escrow account within the first 5 years and the full amount shall be deposited within 10 years following initial construction of the engineered stormwater controls. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.
- 6.20.9.2.d** The percent of developer contribution and lengths of time to fund the escrow account may be varied by the Town depending on the design and materials of the stormwater control and management facility.
- 6.20.9.2.e** Granting to the Town a right of entry to inspect, monitor, maintain, repair, and reconstruct engineered stormwater controls.
- 6.20.9.2.f** Allowing the Town to recover from the association and its members any and all costs the Town expends to maintain or repair the engineered stormwater controls or to correct any operational deficiencies. Failure to pay the Town all of its expended costs, after 45 days written notice, shall constitute a breach of the agreement. In case of a deficiency, the Town shall thereafter be entitled to bring an action against the association and its members to pay or foreclose upon the lien hereby authorized by the agreement against the property, or both. Interest, collection costs, and attorney fees shall be added to the recovery.
- 6.20.9.2.g** A statement that this agreement shall not obligate the Town to maintain or repair any engineered stormwater controls, and the Town shall not be liable to any person for the condition or operation of engineered stormwater controls.
- 6.20.9.2.h** A statement that this agreement shall not in any way diminish, limit, or restrict the right of the Town to enforce any of its ordinances as authorized by law.
- 6.20.9.2.i** A provision indemnifying and holding harmless the Town for any costs and injuries arising from or related to the engineered stormwater control, unless the Town has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

6.20.10 INSPECTION PROGRAM

- 6.20.10.1** Inspections and inspection programs by the Town may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.

6.20.10.2 If the owner or occupant of any property refuses to permit such inspection, the Stormwater Administrator shall proceed to obtain an administrative search warrant pursuant to G.S. 15-27.2 or its successor. No person shall obstruct, hamper or interfere with the Stormwater Administrator while carrying out his or her official duties.

6.20.11 PERFORMANCE SECURITY FOR INSTALLATION AND MAINTENANCE

6.20.11.1 May Be Required

The Town may, at its discretion, require the submittal of a performance security or bond with surety, cash escrow, letter of credit or other acceptable legal arrangement prior to issuance of a permit in order to ensure that the engineered stormwater controls are:

6.20.11.1.a installed by the permit holder as required by the approved stormwater management plan, and/or

6.20.11.1.b maintained by the owner as required by the operation and maintenance agreement.

6.20.11.2 Amount

6.20.11.2.a *Installation*

The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.

6.20.11.2.b *Maintenance*

The amount of a maintenance performance security shall be the present value of an annuity of perpetual duration based on a reasonable estimate of the annual cost of inspection, operation and maintenance of the BMPs approved under the permit, at a discount rate that reflects the jurisdiction's cost of borrowing minus a reasonable estimate of long-term inflation.

6.20.11.3 Uses of Performance Security

6.20.11.3.a *Forfeiture Provisions*

The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or owner in accordance with this ordinance, approvals issued pursuant to this ordinance, or an operation and maintenance agreement established pursuant to this ordinance.

6.20.11.3.b *Default*

Upon default of the owner to construct, maintain, repair and, if necessary, reconstruct any engineered stormwater control in accordance with the applicable permit or operation and maintenance agreement, the Stormwater Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the owner to comply with the permit or maintenance agreement. In the event of a default triggering the use of installation performance security, the Town shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.

6.20.11.3.c *Costs in Excess of Performance Security*

If Town takes action upon such failure by the applicant or owner, the Town may collect from the applicant or owner the difference between the amount of the reasonable cost of such action and the amount of the security held, in addition to

any other penalties or damages due.

6.20.11.3.d Refund

Within 60 days of the final approval, the installation performance security shall be refunded to the applicant or terminated, except any amount attributable to the cost (plus 25%) of landscaping installation and ongoing maintenance associated with the BMPs covered by the security. Any such landscaping shall be inspected one year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

6.20.12 NOTICE TO OWNERS

6.20.12.1 Deed Recordation and Indications on Plat

The applicable operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable)] pertaining to every engineered stormwater control shall be referenced on the final plat and shall be recorded with the County Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance, whichever is applicable] shall be recorded with the County Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

6.20.12.2 Signage

Where appropriate in the determination of the Stormwater Administrator to assure compliance with this ordinance, engineered stormwater controls shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible.

6.20.13 RECORDS OF INSTALLATION AND MAINTENANCE ACTIVITIES

The owner of each engineered stormwater control shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the Stormwater Administrator.

6.20.14 NUISANCE

The owner of each stormwater BMP, whether engineered stormwater control or non-engineered stormwater control, shall maintain it so as not to create or result in a nuisance condition.

6.20.15 MAINTENANCE EASEMENT

Every engineered stormwater control installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded, and its terms shall specify who may make use of the easement and for what purposes.

6.20.16 RIPARIAN BUFFERS

6.20.16.1 Purpose and Intent

In order to minimize sedimentation and pollution of surface waters within the planning jurisdiction, riparian buffers shall be provided along all surface waters identified in *Section 6.20.16.3, Applicability*. Undisturbed natural areas along surface waters act as a filter for sedimentation control and as a stabilizing agent for the banks of surface waters. In addition, these areas filter storm water run-off which may carry significant amounts of bacteria, excess nutrients and heavy metals into surface waters. The buffer areas, along with controls

on impervious surfaces, provide a good measure of water quality protection for the Eno River.

The Neuse River Basin Nutrient Sensitive Waters Management Strategy riparian buffer protection rules (Neuse Rules) of 15A NCAC 02B. 0714, apply to all lands within the Town of Hillsborough's planning jurisdiction. For the purpose of *Section 6.20.16 Riparian Buffers*, "development" includes any impact or use within the riparian buffer or outside the riparian buffer with hydrological impacts on the riparian buffer. Wherever standards of the Neuse Rules and the standards listed in this ordinance differ, the more restrictive provisions shall apply.

6.20.16.2 Delegated Authority

The North Carolina Division of Water Resources (NCDWR) has jurisdiction to the exclusion of the Planning Director or designee to implement the requirements of the State's program for the following types of activities:

- 6.20.16.2.a** Activities undertaken by the State.
- 6.20.16.2.b** Activities undertaken by the United States.
- 6.20.16.2.c** Activities undertaken by multiple jurisdictions.
- 6.20.16.2.d** Activities undertaken by local units of government; and
- 6.20.16.2.e** Forestry Operations

6.20.16.3 Applicability

A riparian buffer shall be established directly adjacent to surface waters (i.e. intermittent streams, perennial streams, lakes and ponds) identified by any of the following means:

- 6.20.16.3.a** Surface water shown as solid blue or purple lines or as broken blue or purple lines on the most recent version of USGS Quadrangle maps.
- 6.20.16.3.b** Surface water shown in the published version of the Orange County Soil Survey; or
- 6.20.16.3.c** A surface water identified in a field determination made by Hillsborough staff trained in surface water identification through the North Carolina Division of Water Resources (NCDWR). If a party disputes the presence of a subject feature, then a request should be made to Hillsborough staff to conduct a field evaluation.

6.20.16.4 Exemption Based upon an On-site Determination

When a landowner or other affected party including NCDWR believes that the maps inaccurately depict surface waters, they may request an On-site determination conducted by Hillsborough staff who has successfully completed the NCDWR's Surface Water Identification Training Certification course, its successor, or other equivalent training curriculum approved by NCDWR. Any disputes over on-site determinations shall be referred to the Director of NCDWR in writing. A determination of the Director of NCDWR as to the accuracy or application of the maps is subject to review as provided in articles 3 and 4 of G.S. 150B. Surface waters that appear on the maps shall not be subject to *Section 6.20.16, Riparian Buffers* if a site evaluation reveals any of the following cases:

- 6.20.16.4.a** Man-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with 15A NCAC 02B .101, including ponds and lakes created

for animal watering, irrigation, or other agricultural uses. A pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream.

6.20.16.4.b Ephemeral streams.

6.20.16.4.c The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.

6.20.16.4.d Ditches or other man-made water conveyances, other than modified natural streams.

6.20.16.5 Exemption when Existing Uses are Present and Ongoing

Section 6.20.16, Riparian Buffers does not apply to portions of the riparian buffer where a use is considered existing and ongoing according in accordance with 15A NCAC 02B .0714 (6) (a). A use is considered existing if it was present within the riparian buffer as of July 22, 1997. Existing uses shall include, but not be limited to, agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems. Only the portion of the riparian buffer that contains the footprint of the existing use is exempt from *Section 6.20.16, Riparian Buffers*.

6.20.16.6 Calculations for Width of Riparian Buffers

A buffer of fifty (50) feet in width as defined in *Section 6.20.16.7* is required on all sides of the surface water as identified in *Section 6.20.16.3, Applicability*. For streams within the PW and PWCA zoning districts (see *Section 4.5, Other Zoning Districts*), the width of the stream is calculated as outlined in *Section 4.5.3.8.d, Calculating Width of Riparian Buffer*.

6.20.16.7 Zones of the Riparian Buffer

6.20.16.7.a Zone 1 shall consist of a vegetated area that is undisturbed except for uses provided for in sections *6.20.16.8, Uses within Riparian Buffers* and *6.20.16.11, Stormwater Runoff Through the Riparian Buffer*. The location of Zone 1 shall be as follows:

- (i) For intermittent and perennial streams, Zone 1 shall begin at the most landward limit of the top of bank or the rooted herbaceous vegetation and extend landward a distance of 30 feet on all sides of the stream, measured horizontally on a line perpendicular to the stream (where an intermittent or perennial stream begins or ends, including when it goes underground, enters or exits a culvert, or enters or exits a wetland, the required distance shall be measured as a radius around the beginning or the end).
- (ii) For ponds, lakes and reservoirs, Zone 1 shall begin at the normal water level and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to the surface water.

6.20.16.7.b Zone 2 shall consist of a stable, vegetated area that is undisturbed except for activities and uses provided for in sections *6.20.16.8, Uses within Riparian Buffers* and *6.20.16.11, Stormwater Runoff Through the Riparian Buffer*. Grading and revegetating Zone 2 is allowed provided that the health of the vegetation in Zone 1 is not compromised. Zone 2 shall begin at the outer edge of Zone 1 and extend landward 20 feet as measured horizontally on a line perpendicular to the surface

water. The combined width of Zones 1 and 2 shall be 50 feet on all sides of the surface water.

6.20.16.8 Uses Within Riparian Buffers

Uses within the riparian buffer, or outside the riparian buffer with hydrological impacts on the riparian buffer, shall be designated as deemed allowable, allowable upon authorization, allowable with mitigation upon authorization, or prohibited. Potential new uses shall have the following requirements.

- 6.20.16.8.a Deemed Allowable.** Uses designated as deemed allowable in *Table 6.20.16.8 Uses within Riparian Buffers* and *6.20.16.11 Stormwater Runoff Through the Riparian Buffer* may occur within the riparian buffer. Deemed allowable uses shall be designed, constructed and maintained to minimize vegetation and soil disturbance and to provide the maximum water quality protection practicable, including construction, monitoring, and maintenance activities. In addition, deemed allowable uses shall meet all requirements listed in *Table 6.20.16.8 Permitted Uses within Riparian Buffers* for the specific use.
- 6.20.16.8.b Allowable Upon Authorization.** Uses designated as allowable upon authorization in *Table 6.20.16.8 Uses within Riparian Buffers* and *6.20.16.11 Stormwater Runoff Through the Riparian Buffer* require a written Authorization Certificate for impacts within the riparian buffer pursuant to *Section 6.20.16.9, Basis for “No Practical Alternatives”* and *Section 6.20.16.10, Written Authorization Required*.
- 6.20.16.8.c Allowable with Mitigation Upon Authorization.** Uses designated as allowable with mitigation upon authorization in *Table 6.20.16.8 Uses within Riparian Buffers* require a written Authorization Certificate for impacts within the riparian buffer pursuant to *Section 6.20.16.9, Basis for “No Practical Alternatives”* and *Section, 6.20.16.10 Written Authorization Required*. In addition, an appropriate mitigation strategy is required pursuant to *Section 6.20.16.12, Mitigation*.
- 6.20.16.8.d Prohibited.** Uses designated as prohibited in *Table 6.20.16.8, Uses within Riparian Buffers* may not proceed within the riparian buffer unless a variance is granted by the North Carolina Environmental Management Commission pursuant to 15A NCAC 02B .0226. Mitigation may be required as a condition of variance approval.

Table 6.20.16.8 Uses within Riparian Buffers

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
a) Airport Facilities				
i) Vegetation removal activities necessary to comply with Federal Aviation Administration requirements (<i>e.g.</i> , line of sight requirements) provided the disturbed areas are stabilized and revegetated	X			
ii) Airport facilities that impact equal to or less than one-third of an acre of riparian buffer		X		
iii) Airport facilities that impact greater than one third of an acre of riparian buffer			X	
b) Archaeological activities				
c) Bridges:				
i) Impact equal to or less than one-tenth of an acre of riparian buffer	X			
ii) Impact greater than one-tenth of an acre of riparian buffer		X		
d) Dam maintenance activities:				
i) Dam maintenance activities that do not cause additional riparian buffer disturbance beyond the footprint of the existing dam	X			
ii) Dam maintenance activities that do cause additional riparian buffer disturbance beyond the footprint of the existing dam		X		
e) Drainage of a pond subject to <i>Section 6.20.16.3, Applicability</i> provided that a new riparian buffer is established by natural regeneration or planting, within 50 feet of any stream which naturally forms or is constructed within the drained pond area. Drained ponds shall be allowed to naturalize for a minimum of six months from completion of the draining activity before a stream determination is conducted pursuant to <i>Section 6.20.16.3.c.</i>	X			
f) Fences:				
i) Fencing livestock out of surface waters	X			
ii) Installation does not result in removal of trees from Zone 1	X			
iii) Installation results in removal of trees from Zone 1		X		

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
g) Fertilizer application:				
i) One-time fertilizer application at agronomic rates in the riparian buffer to establish replanted vegetation. No runoff from this one-time application in the riparian buffer is allowed in the surface water	X			
ii) Ongoing fertilizer application				X
h) Forest harvesting – see 15A NCAC 02B .0612				
i) Grading only in Zone 2 provided that the health of existing vegetation in Zone 1 is not compromised, <i>Section 6.20.16.11, Stormwater Through the Riparian Buffer</i> is complied with, and disturbed areas are stabilized and revegetated		X		
j) Greenways, trails, sidewalks or linear pedestrian/bicycle transportation systems:				
i) In Zone 2 provided that no built-upon area is added within the riparian buffer	X			
ii) In Zone 1 provided that no built-upon area is added within the riparian buffer and the installation does not result in the removal of tree(s)	X			
iii) When built-upon area is added to the riparian buffer, equal to or less than 10 feet wide with two foot wide shoulders. Shall be located outside Zone 1 unless there is no practical alternative		X		
iv) When built-upon area is added to the riparian buffer, greater than 10 feet wide with two foot wide shoulders. Shall be located outside Zone 1 unless there is no practical alternative			X	
k) Historic preservation	X			
l) New Landfills as defined by NC G.S. 130A-290				X
m) Maintenance access on modified natural streams or canals: a grassed travelway on one side of the waterbody when less impacting alternatives are not practical. The width and specifications of the travelway shall be only that needed for equipment access and operation. The travelway shall be located to maximize stream shading.		X		

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
n) Mining activities:				
i) Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements in sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> are established adjacent to any relocated channels		X		
ii) Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements in sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> are not established			X	
iii) Wastewater or mining dewatering wells with approved NPDES permit	X			
o) On-site sanitary sewage systems - new ones that use ground absorption				
				X
p) Pedestrian access trails and associated steps leading to a surface water, dock, canoe or kayak access, fishing pier, boat ramp or other water dependent structure:				
i) Equal to or less than six feet wide that does not result in the removal of tree(s) within the riparian buffer and does not result in the addition of built-upon area to the riparian buffer	X			
ii) Equal to or less than six feet wide that results in the removal of tree(s) or the addition of built-upon area to the riparian buffer		X		
iii) Greater than six feet wide			X	
q) Playground equipment:				
i) Playground equipment on single-family lots provided that installation and use does not result in removal of vegetation	X			
ii) Playground equipment on single-family lots where installation or use results in the removal of vegetation		X		
iii) Playground equipment installed on lands other than single-family lots		X		
r) Ponds created or modified by impounding streams subject to riparian buffers pursuant to Section 6.20.16.3, <i>Applicability</i> and not used as stormwater control measures (SCMs):				
i) New ponds provided that a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is established adjacent to the pond		X		
ii) New ponds where a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is NOT established adjacent to the pond			X	

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
s) Protection of existing structures and facilities when this requires additional disturbance to the riparian buffer		X		
t) Public Safety - Publicly owned spaces where it has been determined by the head of the local law enforcement agency with jurisdiction over that area that the riparian buffers pose a risk to public safety. The head of the local law enforcement agency shall notify the local government with land use jurisdiction over the publicly owned space and the Division of Water Resources of any such determination in writing	X			
u) Removal of previous fill or debris provided that <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> is complied with and any vegetation removed is restored		X		
v) Residential Properties: Where application of this Rule would preclude construction or expansion of a single-family residence and necessary infrastructure, the single-family residence may encroach in the buffer if all of the following conditions are met: (1) the residence is set back the maximum feasible distance from the top of the bank, rooted herbaceous vegetation, normal high-water level, or normal water level, whichever is applicable, on the existing lot; (2) the residence is designed to minimize encroachment into the riparian buffer; (3) the residence complies with <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> ; and (4) if the residence will be served by an on-site wastewater system, no part of the septic tank or drainfield may encroach into the riparian buffer:				
i) The residence or necessary infrastructure only impact Zone 2		X		
ii) The residence or necessary infrastructure impact Zone 1			X	
iii) Impacts other than the residence or necessary infrastructure			X	
w) Restoration or enhancement (wetland, stream) as defined in 33 CFR Part 332 available free of charge on the internet at: http://water.epa.gov/lawsregs/guidance/wetlands/wetlandsmitigation_index.cfm :				
i) Wetland or stream restoration is part of a compensatory mitigation bank, nutrient offset bank, or the In Lieu Fee program	X			
ii) Wetland or stream restoration other than those listed above		X		

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
x) Road, driveway or railroad - impacts other than perpendicular crossings of streams and other surface waters subject to this Rule			X	
y) Road, driveway or railroad - perpendicular crossings of streams and other surface waters subject to this Rule				
i) Impact equal to or less than one-tenth of an acre of riparian buffer	X			
ii) Impact greater than one-tenth of an acre but equal to or less than one-third of an acre of riparian buffer		X		
iii) Impact greater than one-third of an acre of riparian buffer			X	
iv) Driveway crossings in a residential subdivision that cumulatively impact equal to or less than one-third of an acre of riparian buffer		X		
v) Driveway crossings in a residential subdivision that cumulatively impact greater than one-third of an acre of riparian buffer			X	
vi) Farm roads and forest roads that are exempt from permitting from the U.S. Army Corps of Engineers per Section 404(f) of the Federal Clean Water Act	X			
z) Road relocation of existing private access roads associated with public road projects where necessary for public safety:				
i) Less than or equal to 2,500 square feet of riparian buffer impact		X		
ii) Greater than 2,500 square feet of riparian buffer impact			X	
aa) Scientific studies and stream gauging	X			
bb) Slatted uncovered decks, including steps and support posts, which are associated with a dwelling, provided that it meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> and:				
i) Installation does not result in removal of vegetation in Zone 1		X		
ii) Installation results in removal of vegetation in Zone 1			X	
cc) Stormwater Control Measure (SCM) as defined in 15A NCAC 02H .1002:				
i) In Zone 2 if Section 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is complied with		X		
ii) Installation results in removal of vegetation in Zone 1			X	

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
dd) Streambank or shoreline stabilization		X		
ee) Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete. Tree planting may occur during the dormant season. At the end of five years, any restored wooded riparian buffer shall comply with the restoration criteria in 15A NCAC 02B .0295:				
i) Less than or equal to 2,500 square feet of riparian buffer disturbance	X			
ii) Greater than 2,500 square feet of riparian buffer disturbance		X		
iii) Associated with culvert installation or bridge construction or replacement		X		
ff) Temporary sediment and erosion control devices provided that the disturbed area is restored to preconstruction topographic and hydrologic conditions and replanted with comparable vegetation within two months of when construction is complete. Tree planting may occur during the dormant season. At the end of five years, any restored wooded riparian buffer shall comply with the restoration criteria in 15A NCAC 02B .0295:				
i) In Zone 2 provided that ground cover is established within the timeframes required by the Sedimentation and Erosion Control Act, vegetation in Zone 1 is not compromised, and that discharge is released in accordance with <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i>	X			
ii) In Zones 1 and 2 to control impacts associated with uses identified in this table or uses that have received an Authorization Certificate with Exception provided that sediment and erosion control for upland areas is addressed outside the riparian buffer		X		
iii) In-stream temporary erosion and sediment control measures for work within a stream channel that is authorized under Sections 401 and 404 of the Federal Clean Water Act	X			
gg) Utility Lines - Streambank stabilization for the protection of publicly owned utility lines (not including new line installation):				
i) Less than 150 feet of streambank disturbance	X			
ii) Greater than 150 feet of streambank disturbance		X		

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
hh) Utility – Sewer lines – Sanitary Sewer Overflows:				
i) Emergency sanitary sewer overflow response activities, provided that the disturbed area within the riparian buffer outside of the existing utility line maintenance corridor is the minimum necessary to respond to the emergency overflow, is restored to pre-construction topographic and hydrologic conditions, and is replanted with comparable vegetation (e.g. grass with grass, hardwoods with hardwoods) within two months of when disturbance is complete	X			
ii) Emergency sanitary sewer overflow response activities that do not meet the listing above. For any new proposed permanent impacts that are not a "Deemed Allowable" activity, an application for an Authorization Certificate shall be submitted to the Authority no later than 30 calendar days of conclusion of the emergency response activities		X		
ii) Utility - Sewer Lines – Vegetation maintenance activities that remove forest vegetation from existing sewer utility right of ways (not including new line installation) outside of the existing utility line maintenance corridor:				
i) Zone 2 impacts	X			
ii) Zone 1 impacts: For lines that have not been maintained, the vegetation can be mowed, cut or otherwise maintained without disturbance to the soil structure for a maintenance corridor that is equal to or less than 30 feet wide	X			
iii) Zone 1 impacts other than those listed above		X		
jj) Utility - Sewer Lines –Replacement/Rehabilitation of existing sewer lines within, or adjacent to, an existing right of way but outside of an existing utility line maintenance corridor provided that comparable vegetation (e.g. grass with grass, hardwoods with hardwoods) is allowed to regenerate in disturbed riparian buffers outside of the permanent maintenance corridor and riparian buffers outside of the permanent maintenance corridor are not maintained:				
i) Permanent maintenance corridor equal to or less than 30 feet wide provided there is no grading and/or grubbing within 10 feet of the top of bank when the sewer line is parallel to the stream	X			
ii) Grading and/or grubbing within 10 feet of the top of bank when the sewer line is parallel to the stream and permanent maintenance corridor equal to or less than 30 feet wide		X		

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
iii) Permanent maintenance corridor greater than 30 feet wide. For impacts other than perpendicular crossings, mitigation is only required for Zone 1 impacts. For perpendicular crossings that disturb equal to or less than 40 linear feet, no mitigation is required. For perpendicular crossings that disturb greater than 40 linear feet, mitigation is only required for Zone 1 impacts			X	
kk) Utility - Sewer Lines – New Line Construction/Installation Activities – Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i> , provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:				
i) Construction corridor of less than or equal to 40 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide	X			
ii) Construction corridor of greater than 40 linear feet wide and less than or equal to 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide		X		
iii) Construction corridor of greater than 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide			X	
iv) Permanent maintenance corridor greater than 30 feet wide. For impacts other than perpendicular crossings, mitigation is only required for Zone 1 impacts. For perpendicular crossings that disturb equal to or less than 40 linear feet, no mitigation is required. For perpendicular crossings that disturb greater than 40 linear feet, mitigation is only required for Zone 1 impacts			X	
ll) Utility - Sewer Lines – New Line Construction/Installation Activities – Impacts other than perpendicular crossings provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:				
i) Zone 2 impacts	X			
ii) Zone 1 impacts to less than 2,500 square feet when impacts are solely the result of tying into an existing utility line and when grubbing or grading within 10 feet immediately adjacent to the surface water is avoided		X		
iii) Zone 1 impacts other than those listed above			X	

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
mm) Utility - Non-sewer Underground Lines – Vegetation maintenance activities that remove forest vegetation from existing utility right of ways (not including new line installation) outside of the existing utility line maintenance corridor:				
i) Zone 2 impacts	X			
ii) Zone 1 impacts: For lines that have not been maintained, the vegetation can be mowed, cut or otherwise maintained without disturbance to the soil structure for a maintenance corridor that is equal to or less than 30 feet wide	X			
iii) Zone 1 impacts other than those listed above		X		
nn) Utility – Non-Sewer Underground Lines – Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i> , provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:				
i) Construction corridor of less than or equal to 50 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide	X			
ii) Construction corridor of greater than 50 linear feet wide and less than or equal to 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide		X		
iii) Construction corridor of greater than 150 linear feet wide and a permanent maintenance corridor that is equal to or less than 30 feet wide			X	
iv) Permanent maintenance corridor that is greater than 30 linear feet wide (mitigation is required only for Zone 1 impacts)			X	
oo) Utility – Non-Sewer Underground Lines – Impacts other than perpendicular crossings provided that vegetation is allowed to regenerate in disturbed areas outside of the permanent maintenance corridor:				
i) Zone 2 impacts	X			
ii) Zone 1 impacts to less than 2,500 square feet when impacts are solely the result of tying into an existing utility line and when grubbing or grading within 10 feet immediately adjacent to the surface water is avoided		X		
iii) Zone 1 impacts other than those listed above			X	

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
pp) Utilities – Non-sewer aerial lines - Perpendicular crossings of streams and other surface waters subject to <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to <i>Section 6.20.16</i> :				
i) Disturb equal to or less than 150 linear feet wide of riparian buffer provided that a minimum zone of 10 feet wide immediately adjacent to the waterbody is managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed, that no land grubbing or grading is conducted in Zone 1, and that poles or aerial infrastructure are not installed within 10 feet of a waterbody	X			
ii) Disturb greater than 150 linear feet wide of riparian buffer		X		
qq) Utilities – Non-sewer Aerial Lines - Impacts other than perpendicular crossings of streams and other surface waters subject to this <i>Section 6.20.16</i> , or perpendicular entry into the riparian buffer that does not cross a stream or other surface water subject to this <i>Section 6.20.16</i> :				
i) Impacts in Zone 2 only	X			
ii) Impacts in Zone 1 provided that a minimum zone of 10 feet wide immediately adjacent to the waterbody is managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed, that no land grubbing or grading is conducted in Zone 1, and that poles or aerial infrastructure are not installed within 10 feet of a waterbody		X		
rr) Vegetation management:				
i) Emergency fire control measures provided that topography is restored	X			
ii) Periodic mowing and harvesting of plant products only in Zone 2	X			
iii) Placement of mulch ring around restoration plantings for a period of five years from the date of planting	X			
iv) Planting non-invasive vegetation to enhance the riparian buffer	X			
v) Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised	X			
vi) Removal of individual trees, branches or limbs which are in danger of causing damage to dwellings, existing utility lines, other structures or human life, or are imminently endangering stability of the streambank provided that the stumps are left or ground in place without causing additional land disturbance	X			

Table 6.20.16.8 Uses within Riparian Buffers (continued)

Riparian Buffer Use/Activity	Deemed Allowable	Allowable Upon Authorization	Allowable with Mitigation Upon Authorization	Prohibited
vii) Removal of individual trees that are dead, diseased or damaged	X			
viii) Removal of poison ivy, oak or sumac. Removal can include application of pesticides within the riparian buffer if the pesticides are certified by EPA for use in or near aquatic sites and are applied in accordance with the manufacturer's instructions. If removal is significant, then the riparian buffer shall be replanted with non-invasive species		X		
ix) Removal of understory nuisance vegetation as defined in: Smith, Cheri L. 2008. Invasive Plants of North Carolina. Dept. of Transportation. Raleigh, NC. Removal can include application of pesticides within the riparian buffer if the pesticides are certified by EPA for use in or near aquatic sites and are applied in accordance with the manufacturer's instructions. If removal is significant then the riparian buffer shall be replanted with non-invasive species		X		
x) Removal of woody vegetation in Zone 1 provided that <i>Section 6.20.16.11, Stormwater Runoff Through the Riparian Buffer</i> is complied with			X	
ss) Vehicle access roads and boat ramps (excluding parking areas) leading to surface water, docks, fishing piers, and other water dependent activities:				
i) Single vehicular access road and boat ramp to the surface water but not crossing the surface water that are restricted to the minimum width practicable not to exceed 15 feet wide		X		
ii) Vehicular access roads and boat ramps to the surface water but not crossing the surface water that are restricted to the minimum width practicable and exceed 15 feet wide			X	
tt) Water dependent structures (except for boat ramps) as defined in 15A NCAC 02B .0202		X		
uu) Water supply reservoirs:				
i) New reservoirs provided that a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is established adjacent to the reservoir		X		
ii) New reservoirs where a riparian buffer that meets the requirements of sections 6.20.16.7, <i>Zones of the Riparian Buffer</i> and 6.20.16.11, <i>Stormwater Runoff Through the Riparian Buffer</i> is NOT established adjacent to the reservoir			X	
vv) Water wells	X			
ww) Wildlife passage structures		X		

6.20.16.9 Basis for “No Practical Alternatives”

Where written authorization is required in *Section 6.20.16.8, Uses Within Riparian Buffers*, the applicant must demonstrate “no practical alternatives.” The determination of “no practical alternatives” will be made by the Planning Director or designee based upon the following:

- 6.20.15.8.a** The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality.
- 6.20.15.8.b** The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality.
- 6.20.15.8.c** Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

6.20.16.10 Written Authorization Required

Where written authorization is required in *Section 6.20.16.8, Uses Within Riparian Buffers*, proposed impacts to the riparian buffer may not commence until written authorization is provided by the Planning Director or designee. Use authorization may include conditions specific to the proposed activity. Unauthorized impacts to riparian buffers are subject to enforcement penalties as outlined in *Section 8, Enforcement*.

Prior to any land disturbing activity within a designated riparian buffer, the property owner shall provide written notification of the location and nature of the proposed use to the Planning Director or designee for review. Written notification must include the following:

- 6.20.16.9.a** The name, address and phone number of the applicant.
- 6.20.16.9.b** The nature of the activity to be conducted by the applicant.
- 6.20.16.9.c** The location of the activity.
- 6.20.16.9.d** A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in the riparian buffers associated with the activity, and the extent of the riparian buffers on the land; and
- 6.20.16.9.e** An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality.
- 6.20.16.9.f** Plans for any best management practices proposed to be used to control the impacts associated with the activity.

6.20.16.11 Stormwater Runoff Through the Riparian Buffer

- 6.20.16.11.a** Stormwater runoff into the riparian buffer shall meet dispersed flow as defined in 15A NCAC 02H .1002 except as otherwise described in this section. Drainage conveyances include drainage ditches, roadside ditches, and stormwater conveyances.

The following stormwater conveyances through the riparian buffer are either deemed allowable or allowable upon authorization, as defined in *Section 6.20.16.8, Uses within Riparian Buffers*, provided that they do not erode through the riparian buffer and do not cause erosion to the receiving waterbody. Stormwater conveyances through the riparian buffer that are not listed below are not allowable.

6.20.16.11.b The following are deemed allowable as defined in *Section 6.20.16.8.a, Deemed Allowable*:

- i. New drainage conveyances from a Primary SCM, as defined in 15A NCAC 02H .1002, when the Primary SCM is designed to treat the drainage area to the conveyance and that comply with a stormwater management plan reviewed and approved under a state stormwater program or a state-approved local government stormwater program; and
- ii. New stormwater flow to existing drainage conveyances provided that the addition of new flow does not result in the need to alter the conveyance.

6.20.16.11.c The following are allowable upon authorization as defined in *Section 6.20.16.8.b, Allowable Upon Authorization*:

- i. New drainage conveyances from a Primary SCM as defined in 15A NCAC 02H .1002 when the Primary SCM is provided to treat the drainage area to the conveyance but are not required to be approved under a state stormwater program or a state-approved local government stormwater program;
- ii. New drainage conveyances when the drainage area to the conveyance is demonstrated via approved nutrient calculation methodologies to meet the nutrient loading goal of 2.2 pounds per acre per year of Nitrogen (N) and 0.33 pounds per acre per year of Phosphorus (P);
- iii. New drainage conveyances when the flow rate of the conveyance is less than 0.5 cubic feet per second during the peak flow from the 0.75 inch per hour storm;
- iv. New stormwater runoff that has been treated through a level spreader-filter strip that complies with 15A NCAC 02H .1059;
- v. Realignment of existing drainage conveyances applicable to publicly funded and maintained linear transportation facilities when retaining or improving the design dimensions provided that no additional travel lanes are added and the minimum required roadway typical section is used based on traffic and safety considerations;
- vi. Realignment of existing drainage conveyances retaining or improving the design dimensions provided that the size of the drainage area and the percent built-upon area within the drainage area remain the same;
- vii. New or altered drainage conveyances applicable to publicly funded and maintained linear transportation facilities provided that SCMs, or BMPs from the NCDOT Stormwater Best Management Practices Toolbox, are employed;
- viii. New drainage conveyances applicable to publicly funded and maintained linear transportation facilities that do not provide a stormwater management facility due to topography constraints provided other measures are employed to protect downstream water quality to the maximum extent practical; and

- ix. New drainage conveyances where the drainage area to the conveyance has no new built-upon area as defined in 15A NCAC 02H .1002 and the conveyance is necessary for bypass of existing drainage only.

6.20.16.12 Mitigation

Where mitigation is required pursuant to the permitted uses listed in Section 6.20.16.8, *Uses Within Riparian Buffers* and Table 6.20.16.8, *Uses within Riparian Buffers*, mitigation shall follow the standards set out in the state’s consolidated Riparian Buffer Mitigation Rule, 15A NCAC 02B .0295.

6.20.16.13 Riparian Buffer and Minimum Lot Requirements

The riparian buffer may be used in meeting the required minimum lot areas set forth in the Ordinance.

6.21 STREETS

6.21.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and general welfare by requiring the uniform construction of streets. Street rights-of-way are designed and developed to serve several functions: (i) to carry motor vehicle traffic, and in some cases, allow on-street parking; (ii) to provide a safe and convenient passageway for pedestrian traffic; and (iii) to serve as an important link in the town’s drainage system.

6.21.2 APPLICABILITY

New or improved streets will generally be dedicated to the town or NC Department of Transportation. New or improved streets within town limits must comply with the town’s standard specifications and its adopted street manual, including the submission of a Traffic Impact Analysis, if required. Private streets are generally permitted only in minor subdivisions and some developments where land ownership is not defined by the vehicle circulation system (*e.g.*, apartment complexes, shopping centers, or office parks). Allowable private streets are also regulated by this section.

6.21.3 DESIGN STANDARDS – PUBLIC STREETS

- 6.21.3.1** New public streets in the city limits must meet the Town of Hillsborough's *Standard Specifications for Street Construction* and Acceptance Procedures in the *Checklist and Approval Requirements for Utility Projects*.
- 6.21.3.2** Public streets in developments in the Town’s extraterritorial zoning jurisdiction must be approved and accepted by the NC Department of Transportation.
- 6.21.3.3** Minimum right-of-way widths for public streets are as follows:

Minimum Right-of-Way (ROW) Widths by Public Street Type		
Public Street Type	Minimum ROW Width (ft.)	ROW Reduction Allowed
Arterial Street	100' (standard) or 150' (multi-lane boulevard)	No
Collector Street	70' (standard) or 120' (multi-lane boulevard)	New commercial/industrial streets only
Local Street	60'	New commercial/industrial streets only
Cul-de-sac	50'	No

- 6.21.3.4** In some cases, minimum right-of-way widths for new commercial/industrial streets may be reduced. Proposed cross-sections and dimensional standards must be submitted to the town for review and approval. A right-of-way reduction shall be granted only under the following conditions:

 - 6.21.3.4.a** The proposed street is either a commercial/industrial local street or a commercial/industrial collector street as defined in the town’s Street Manual;
 - 6.21.3.4.b** On-street parking is omitted from the proposed street design;
 - 6.21.3.4.c** The right-of-way is reduced by no more than the width of the omitted on-street parking; and
 - 6.21.3.4.d** The right-of-way reduction does not impact any other design elements required in the Street Manual, including but not limited to minimum width requirements for travel lanes, planting strips, and/or sidewalks.
- 6.21.3.5** Additional street right-of-way may be required in cases where underground public utilities, sidewalks, and drainage facilities cannot all be located within the minimum stated above.
- 6.21.3.6** Streets shall be laid out so as to intersect as nearly as possible at right angles and no street shall intersect any other street at an angle less than sixty (60) degrees.
- 6.21.3.7** The proposed street layout shall be coordinated with the existing street system of the surrounding area and with the Hillsborough Thoroughfare Plan. Where possible proposed streets shall be the extension of existing streets. Modification of the existing grid pattern may be allowed to accommodate sitetopography.
- 6.21.3.8** To maximize connectivity for public safety and avoid the requirement for additional right of way width improvement and dedication, block lengths will generally not exceed 400 feet and there will be two points of access for any street containing 30 or more dwellings not equipped with individual sprinkler systems.
- 6.21.3.9** All permanent dead-end streets (as opposed to temporary dead-end streets or stub- outs) shall be developed as cul-de-sacs in accordance with the standards set forth in the North Carolina Fire Prevention Code. To avoid the requirement of additional right of way width improvement and dedication, dead-end streets may not exceed 400 feet in length.

- 6.21.3.10** Cul-de-sacs shall not be used to avoid connection with an existing street or to avoid the extension of an important street.
- 6.21.3.11** Whenever possible, proposed intersections along one side of a street shall coincide with existing or proposed intersection on the opposite side of such street. In any event, where a centerline offset (jog) occurs at an intersection, the distance between centerlines of the intersecting streets shall be not less than 150 feet.
- 6.21.3.12** Except when no other alternative is practicable or legally possible, no two streets may intersect with any other street on the same side at a distance of less than 400 feet measured from centerline to centerline of the intersecting street. When the intersected street is an arterial, the distance between intersecting streets shall be at least 1,000 feet.
- 6.21.3.13** The permit issuing authority may require the applicant to extend a right of way, build the street, and/or provide a temporary cul-de-sac in order to stub out streets that should be connected to existing or proposed streets outside the subdivision.

6.21.4 DESIGN STANDARDS - PRIVATE STREETS

- 6.21.4.1** Any private street within a non-residential or multi-family development must meet the design standards for town public streets.
- 6.21.4.2** Any private street within a minor residential subdivision must be designed in compliance with the North Carolina Fire Prevention Code, which generally requires a twenty-foot wide improved travel way. Associated drainage facilities must be located in the right of way. Underground utilities may be located within the street right of way or in a separate utility easement. Factors such as the length and alignment of the street and the use of sprinklers in individual buildings may impact the travel way or right of way required by the North Carolina Fire Prevention Code.
- 6.21.4.3** A private street within a minor residential subdivision may be required to provide a right of way of fifty (50) feet if the land and lots are arranged to allow the potential conversion of the street to a public street. If the lot arrangement, surrounding development pattern, zoning, and existing town plans indicate conversion is unlikely, the permit issuing authority may allow a private street to reduce the right of way width to no less than 18 feet.
- 6.21.4.4** Lots for single-family detached dwellings may be created with access to a private street provided that:
 - 6.21.4.4.a** No more than four (4) lots may have their sole access to the private street.
 - 6.21.4.4.b** A new private street shall not be an extension of any existing public or private street.
 - 6.21.4.4.c** A new private street shall not be aligned with an existing public street in such a way as may interfere with any planned extension of the public street.
- 6.21.4.5** The intent of this subsection is primarily to allow the creation of not more than four (4) lots with frontage on a private street for single-family development. Therefore, the Town may not approve any project served by a private street authorized by this subsection in which one (1) or more of the lots thereby created is intended for:
 - 6.21.4.5.a** Two-family or multi-family residential use, or

6.21.4.5.b Any other residential use or nonresidential use that would tend to generate more traffic than that customarily generated by four (4) single-family residences with one accessory dwelling unit each.

6.21.4.6 To ensure that the intent of this subsection is not subverted, the Town may, among other possible options, require that the approved plans show the types and locations of buildings on each lot or that the lots in a residential development served by a private street be smaller than the permissible size of lots on which two-family or multi-family developments could be located, or that restrictive covenants limiting the use of the subdivided property in accordance with this section be recorded before final plat approval.

6.21.4.7 No final plat that shows lots served by private streets may be recorded unless the final plat contains the following notation:

“Further subdivision of any lot shown on this plat as served by a private street maybe prohibited by the Town of Hillsborough *Unified Development Ordinance*.”

6.21.4.8 The recorded plat of any development that includes a private street shall clearly state that such street is a private street and must be accompanied by a private street maintenance agreement that is also recorded.

6.21.5 STREET NAMES AND SIGNS – PUBLIC AND PRIVATE STREETS

6.21.5.1 Names of streets which duplicate or can be confused with the names of existing streets within Orange County, shall not be approved. New street names shall be reviewed and approved by Orange County Information Technology so as to avoid duplication and/or unnecessary confusion caused by similar street names.

6.21.5.2 Extensions of existing and named streets shall bear the name of such existing streets.

6.21.5.3 House numbering will be assigned by the Planning Director in accordance with town policies.

6.21.5.4 Approved street name signs shall be erected by the applicant at the intersection of streets as specified in the *Manual of Uniform Traffic Devices*.

6.22 TREE PRESERVATION

6.22.1 PURPOSE AND INTENT

It is the intent of this section to protect and promote the public health, safety, and quality of life by requiring the preservation, maintenance, protection, and replanting of the tree coverage areas for new development and redevelopment.

6.22.2 APPLICABILITY

Every application for Site Plan, Special Use Permit, or grading plan for a site 10,000 sf or larger or any modification to any of the listed permit types shall provide a tree inventory and protection plan. This plan shall also be included in the grading plan of the construction drawings for any of the review types listed.

Applicants submitting a grading plan as part of a Zoning Compliance Permit application where no building or structure is proposed shall also submit a tree inventory and protection plan.

This section does not apply to forestry activities on land taxed on the basis of its present-use value as forestland in accordance with a forestry management plan prepared by a registered forester. Clear-cutting, grading, and/or foresting land in an effort to avoid tree preservation and the provisions of this section is prohibited. Land that is clear-cut, graded, or forested prior must wait a period of five (5) years before an application for Site Plan, Special Use Permit, or grading plan will be considered.

6.22.3 REQUIREMENTS

- 6.22.3.1** Grading and tree protection plans shall indicate the limits of the area to be disturbed which shall account for the extended tree drip lines and critical root zones of the trees. This limit shall be marked in the field with tree protection fencing and signs and shall be verified by Planning staff before any work begins onsite. No vehicles, equipment, or material storage shall encroach on the tree protection area or within the tree protection fencing during construction.
- 6.22.3.2** Tree inventories shall identify all stands of trees on site including the diameter (dbh) and species of canopy trees which are deciduous trees 12" dbh or greater and non-deciduous trees 24" or greater dbh. Plans shall clearly indicate the trees to be removed and those to remain.
- 6.22.3.3** For sites exceeding 20 acres, the applicant may provide 100' X 100' sample survey areas for each separate undisturbed portion of the site containing an acre or more.
- 6.22.3.4** When an application only approves the installation of infrastructure for a site and the creation of lots for single-family residential development, survey data is required within the disturbed areas of the site.
- 6.22.3.5** Tree protection plans shall have a table with the following information:
 - 6.22.3.5.a** the number of canopy trees to be removed
 - 6.22.3.5.b** the number of canopy trees being retained
 - 6.22.3.5.c** the number of canopy trees that are 24" or greater dbh to be removed
 - 6.22.3.5.d** the number of canopy trees that are 24" or greater dbh to be replaced
 - 6.22.3.5.e** the percentage of tree cover area before development
 - 6.22.3.5.f** the percentage of tree cover area after development.
- 6.22.3.6** A tree protection plan will show the tree coverage area before development and shall indicate which method was used to calculate the tree coverage area.

6.22.4 STANDARDS

- 6.22.4.1** Applications shall clearly state the number of canopy trees to be removed, along with an estimate of the number being retained on site.
- 6.22.4.2** Applications shall also include a calculation of percentage of the site covered by tree coverage area before and after development.
 - 6.22.4.2.a** For sites with existing, pre-development tree coverage area that covers 25% or less of the site, it is required that 12% tree coverage be retained.
 - 6.22.4.2.b** For sites with existing, pre-development tree coverage area that covers more than 25% but less than 50% of the site, it is required that 10% tree coverage be retained.
 - 6.22.4.2.c** For sites with existing pre-development tree coverage area that covers

more than 50% of the site, it is required that 8% tree coverage be retained.

- 6.22.4.2.d** For sites with existing pre-development tree coverage area that covers less than 5%, there is no required tree coverage to be retained.

6.22.5 PRIORITY RETENTION AREAS

Priority areas for retention of existing trees and vegetation shall include the following (listed in priority order from highest priority to lowest priority):

- 6.22.5.1** Areas containing canopy trees 24" DBH or greater and their critical root zones
- 6.22.5.2** Areas containing groups or stands of mature trees that provide important design, parcel perimeter buffering, forest preservation, or wildlife functions.
- 6.22.5.3** Riparian buffers, wetlands, or wetland protection areas
- 6.22.5.4** Areas with a natural grade of 15% or more
- 6.22.5.5** Areas needed for required landscaping
- 6.22.5.6** Wildlife habitat or other sensitive natural areas.

6.22.6 REVEGETATION

- 6.22.6.1** If canopy trees are damaged or removed from the tree protection area shown on the approved grading plan, the applicant shall replant trees on an inch per inch basis based on caliper or trunk diameter the size of the removed canopy tree(s) elsewhere on the site, OR preserve an additional area on the site with comparable tree composition that is the same size as the area damaged. For example, if 6 canopy trees are improperly removed from a site, each with a 10" diameter trunk, 60" of new trees must be planted on site OR 60" worth of new canopy trees must be preserved on site.
- 6.22.6.2** Planted trees will be of a similar species, if available, and shall be a minimum of 2" caliper at time of planting.
- 6.22.6.3** If a site does not contain sufficient space to create healthy habitat for the needed replanting, the applicant may make a payment to the Town (to be used for planting by the Tree Board) in an amount equal to the cost of acquiring and planting the required trees OR may make the plantings elsewhere but within the development in which the site is located, if applicable.

6.22.7 REPLACEMENT OF CANOPY TREES

- 6.22.7.1** Canopy trees 24" dbh or greater that need to be removed due to site limitations and/or design constraints shall be replaced with two (2) 3" caliper trees onsite. Replacement trees shall be captured in the tree protection plan table outlined in 6.22.3.5 above and should be identified on the Landscape Plan sheet for the site.

6.22.8 MAINTENANCE

- 6.22.8.1** When new trees planted in accordance with this section die, are damaged, or are removed for any reason, they must be replaced during the next suitable planting season in a manner, quantity, and size consistent with the approved Landscape Plan.

6.23 WASTE MANAGEMENT AND RECYCLING

Plans for site and development waste management and recycling must comply with the Orange County Solid Waste Management Ordinance, provisions of the Town Code relative to solid waste service, and screening provisions in *Section 6.16, Screening*.

6.24 WASTEWATER DISPOSAL

Plans for a proposed public or community sewage system shall be approved by the Utilities Director, Health Department, or Director of the Division of Environmental Management, whichever is appropriate.

On-site septic tanks shall comply with *Section 4.5, Other Zoning Districts*, where applicable, and be approved by the Orange County Health Department and/or other agency with jurisdiction.

6.25 WATER SUPPLY

Plans for a proposed public or community sewage system shall be approved by the Utilities Director, Health Department, or Director of the Division of Environmental Management, whichever is appropriate.