

PLANNING & ZONING COMMISSION AGENDA November 17, 2022, 6:00 pm Abita Springs Town Hall

- Welcome / Introduction
- Pledge of Allegiance
- Roll Call
- Acceptance of Minutes from October 27, 2022, Meeting

PLANNING:

ZONING:

 Development Clearing Permit – Brighthouse Learning 21464 Clear Creek Drive

PUBLIC HEARING:

- Variance: 101 Abita Oaks Blvd
- Resubdivision: 71103 Hwy 59

DISCUSSION:

- Review Draft Amendments to Abita Springs Code of Ordinances:
 - Traffic Impact Analysis Chapter
- Announcements
- Adjournment

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November 15, 2022

To: Planning and Zoning Commission

From: Kristin Tortorich, and Mark Fancey

Subject: Development Clearing Permit – Brighthouse Learning 21464 Clear Creek Drive

Request: The applicants are requesting issuance of a Development Clearing Permit in conjunction with removal of 19 trees to develop a circular drive and parking area for a private school.

Background: Brighthouse Learning is a private school that would be established in an existing residence at 21464 Clear Creek Drive. The property is approximately 2.99 acres in size and is zoned Residential District. The property has frontage on both Clear Creek Drive and Hwy 59. The property is developed with a residence and several accessory buildings. Driveway access is available on Clear Creek Drive. The property is shown below.



Public or private schools are a permitted use in the Residential District under Town Code Sec. 9-213(a)(3). The existing residence is being enlarged to create an additional classroom. The Historic Commission reviewed the proposed expansion and approved a Certificate of Appropriateness for the proposed expansion on September 13, 2022.

The current driveway on Clear Creek Drive will be expanded with a second access point to serve as a oneway circular drive. (Note: The Louisiana Department of Transportation and Development confirmed that with access available on Clear Creek Drive, an additional access on Hwy 59 would not be permitted.) The driveway width would be 12 feet, which meets the standard for one-way drives from Town Code Sec. 3-408(a).

Town Code Section 9-211(d) provides the following off-street parking requirements for schools:

(d) Parking will be as follows for schools, public and private:

Elementary—Two spaces per classroom, laboratory or training shop; Junior high—Two spaces per classroom, laboratory or training shop; Senior high—Ten spaces per classroom, laboratory or manual training shop; Colleges, universities, trade, industrial, and business schools—Ten spaces per classroom, laboratory or other teaching room;

The proposed school would have three (3) classrooms – one each for elementary, junior high, and senior high students. The applicants' site plan shows 14 parking spaces, including one ADA-accessible parking space. The number of parking spaces shown on the site plan meets the parking requirements of Section 9-211(d).

To develop the circular drive and parking area 19 trees need to be cleared. Town Code Sec. 9-703(b) requires issuance of a Development Clearing Permit for any nonresidential development that requires removal of five (5) or more trees.

Applicable requirements:

Sec. 9-703. Permits required to remove, clear or harvest trees.

Prior to any tree removal, residential clearing, development clearing, or timber harvesting, as defined herein, within the Town of Abita Springs, a tree removal, residential clearing, development clearing or timber harvesting permit shall be obtained for these respective activities.

(b) Residential clearing or development clearing permit. A residential clearing or development clearing permit shall be required when removing in excess of five trees in conjunction with the issuance of a single-family residential building permit or a development permit for multifamily or nonresidential development. The removal of less than five trees shall not require a separate clearing permit, however, the species, size and location of the trees to be removed shall be depicted on the site plan for the residential building or development permit.

Sec. 9-707. Requirements for issuance of residential clearing or development clearing permits.

The following shall be the requirements for the issuance of a residential clearing or development clearing permit:

(b) Development clearing permit requirements.

- (1) A development permit or preliminary subdivision approval by the planning commission and notice to proceed shall be required to be issued in conjunction with the issuance of a development clearing permit for the same site, prior to the commencement of any tree clearing or removal.
- (2) There shall be no development clearing in conjunction with the development of new subdivisions or roadways, except as necessary for the installation of new roadways or other infrastructure improvements approved by the planning commission, subsequent to the recommendation of the landscape commission as provided by the urban forestry Ordinance No. 184, Section 7.C.3.
- (3) A landscape plan shall be required to be submitted and approved by the planning commission for all multifamily and nonresidential developments, prior to the issuance of a development clearing permit.
- (4) Buffer requirements in conjunction with the issuance of a development clearing permit: The following requirements are mandatory. All buffers required shall be exclusive of all easements, servitudes and/or rights-of-way within the property.
 - Roadway buffer. A managed buffer of at least 25 feet in width along improved roadways and dedicated street rights-of-way shall be preserved in accordance with an approved landscape plan. Access through the buffer shall be limited to one two-way or two one-way drives per 200 feet of street frontage, in accordance with section 8.A. of urban forestry Ordinance No. 184.
 - b. Waterway buffer. A minimum uncut vegetation buffer of at least 50 feet in depth from the centerline of the stream channel along both banks of all established natural stream beds, riverbanks and improved drainage canals shall be preserved uncut.
 - c. Adjacent-use buffer. A managed buffer shall be required when a development site is adjacent to a more restrictive zoning district. A minimum managed buffer of 25 feet or ten percent of the site width or depth, measured from the adjacent more restrictive zoning district, whichever is greatest, shall be required to be preserved. A minimum of one tree per ten linear feet and understory screening vegetation or hedges (70 percent opaque and six feet in height) shall be required to be planted in adjacent-use buffers not already meeting this minimum standard for vegetation.

Staff response: The Town Arborist will issue a Development Clearing Permit once the Planning and Zoning Commission approves the development and issues a notice to proceed under criterion (1).

The applicants have submitted the landscape plan required under criterion (3). The landscape plan shows buffer areas, flower boxes, and shrubs to be planted. The plan also shows that three (3) swamp maples would be planted in the rear yard of the property. Section 9-707 does not specify any requirements or review standards for landscape plans. Dr. Malcolm Guidry, Town Arborist, reviewed the landscape plan at the request of staff and found that the plan was acceptable.

The 25-foot roadway buffer shown in the landscape plan meets the buffer requirement of criterion (4)a.

Town Code Sec. 9-708 (d) outlines the development clearing permit application requirements.

Sec. 9-708. Procedure for tree removal, residential clearing and development clearing permits.

Prior to the issuance of a tree removal, residential clearing or development clearing permit, an application shall be required to be submitted for review by the tree inspector. A complete application for a tree removal, residential clearing or development clearing permit shall include the following items:

- (d) *Development clearing permit application requirements.* In addition to all the items listed in (a)(1) through (3) above, a plot plan, drawn to scale, which clearly identifies the following shall be required for consideration of an application for a development clearing permit:
 - (1) Existing stands of trees on the parcel;
 - (2) The specific location, size and species of specifically protected trees;
 - (3) The location of trees or stands of trees proposed for preservation on the site and the intended method for marking preserved trees prior to land clearing should be identified on the application.
 - (4) Location of critical root zones of specifically protected trees and all other trees required or proposed to be preserved.
 - (5) Location of tree barriers to protect trees required or proposed to be protected during construction.
 - (6) Erosion and Sediment Control Plan to control the runoff of sediment when soil will be disturbed.
 - (7) Dimensions and locations of all existing and proposed improvements, such as buildings or structures, driveways, and paved walkways.
 - (8) Location and dimensions of all required buffers.

Sec. 9-708 (g) provides an additional tree planting requirement.

(g) *Related materials.* Any new residential or commercial construction is required to plant three Class A trees as defined in subsection 9-218.2(i)(6)(a) of the Abita Springs Code of Ordinances of at least six feet tall before final inspection of improvements and guarantee that they live one year. The tree shall have at least a one and one-half inch dbh.

Staff response: The applicants have submitted a tree removal plan that meets the requirements of Sec. 9-708 (d). Dr. Malcolm Guidry has reviewed the tree removal plan and has approved the plan subject to Planning and Zoning Commission approval to issue a development permit and notice to proceed.

The erosion and sediment control plan included as part of the tree removal plan and the drainage plan have been reviewed by the Town's drainage consultant. The drainage consultant has approved the drainage plan and specified areas where silt fence barriers are required.

As shown in the applicants' landscape plan, three (3) swamp maples would be planted in the rear yard of the property. This planting meets the requirement of Sec. 9-708 (g).

Summary:

The applicants have submitted the necessary information as required by Town Code Sections 9-707 and 9-708. The request meets all the requirements for the Development Clearing Permit.

Under Sec. 9-707, the Planning Commission is responsible for review and approval of the required landscape plan. The Town Arborist will be issue the Development Clearing Permit once the Planning Commission approves the landscape plan and the development and issues a notice to proceed.

Attachments:

Development Clearing Permit Application	Page 6
Driveway and Parking Diagram	Page 9
Tree Removal Plan	Page 11
Erosion and Sediment Control Plan	Page 33
Landscape Plan	Page 34
Drainage Plan	Page 37



Planning and Zoning Department DEVELOPMENT CLEARING PERMIT

Name: <u>Harold & Michele Tinker</u> Phone: <u>985-705-8722</u>		
Email: brighthouselearning 18@gmail.com		
Company: Brighthouse Learning Center, LLC		
Mailing Address: 21489 Koop Dr., SteC, Mandeville LA 70471		
Property Address: 21464 Clear Creek Dr., Abita Springs LA 70420		
Property Description: Corner of LA-59 and Clear Creek Dr.		
Signature: Harold R. Tich		
Estimated starting date: $\frac{12}{5}/22$ Estimated completion date: $\frac{12}{16}/22$		
PLEASE INCLUDE THE FOLLOWING DOCUMENTS:		

Copy of the deed to the property

Required processing and inspection fees

A plot plan, drawn to scale, which clearly identifies the following shall be required for consideration of an application for a development clearing permit:

- Existing stands of trees on the parcel;
- The specific location, size and species of specifically protected trees;

The location of trees or stands of trees proposed for preservation on the site and the intended

method for marking preserved trees prior to land clearing should be identified on the application.

Location of critical root zones of specifically protected trees and all other trees required or proposed to be preserved.

Location of tree barriers to protect trees required or proposed to be protected during construction.

, Erosion and Sediment Control Plan to control the runoff of sediment when soil will be disturbed.

Dimensions & locations of all existing & proposed improvements, such as buildings or structures, V driveways, & paved walkways.

/ Location and dimensions of all required buffers.

Landscape plan

ACKNOWLEDGEMENT STATEMENT

Sec. 9-707. - Requirements for issuance of residential clearing or development clearing permits.

(b) Development clearing permit requirements.

- (1)A development permit or preliminary subdivision approval by the planning commission and notice to proceed shall be required to be issued in conjunction with the issuance of a development clearing permit for the same site, prior to the commencement of any tree clearing or removal.
- (2)There shall be no development clearing in conjunction with the development of new subdivisions or roadways, except as necessary for the installation of new roadways or other infrastructure improvements approved by the planning commission, subsequent to the recommendation of the landscape commission as provided by the urban forestry Ordinance No. 184, Section 7.C.3.

TOWN OF ABITA SPRINGS PLANNING AND ZONING DEPARTMENT DEVELOPMENT CLEARING PERMIT

- (3) **A landscape plan** shall be required to be submitted and approved by the planning commission for all multifamily and nonresidential developments, prior to the issuance of a development clearing permit.
- (4) **Buffer requirements** in conjunction with the issuance of a development clearing permit: The following requirements are mandatory. All buffers required shall be exclusive of all easements, servitudes and/or rights-of-way within the property.
 - a. **Roadway buffer**. A managed buffer of at least 25 feet in width along improved roadways and dedicated street rights-of-way shall be preserved in accordance with an approved landscape plan. Access through the buffer shall be limited to one two-way or two one-way drives per 200 feet of street frontage, in accordance with section 8.A. of urban forestry Ordinance No. 184.
 - b. **Waterway buffer**. A minimum uncut vegetation buffer of at least 50 feet in depth from the centerline of the stream channel along both banks of all established natural stream beds, riverbanks and improved drainage canals shall be preserved uncut.
 - c. **Adjacent-use buffer**. A managed buffer shall be required when a development site is adjacent to a more restrictive zoning district. A minimum managed buffer of 25' or 10% of the site width or depth, measured from the adjacent more restrictive zoning district, whichever is greatest, shall be required to be preserved. A minimum of one tree per ten linear feet and understory screening vegetation or hedges (70 percent opaque and six feet in height) shall be required to be planted in adjacent-use buffers not already meeting this minimum standard for vegetation.

Sec. 9-708. - Procedure for tree removal, residential clearing and development clearing permits.

(3) Development clearing permit inspections for multifamily residential, nonresidential, infrastructure improvements or other development applications.

First inspection. After marking all trees to be removed and preserved and erecting tree protection barriers around trees to be preserved and the erosion control methods proposed, the applicant shall request an inspection and the tree inspector shall inspect the site to determine that the proposed work is in accordance with the development clearing permit application and the provisions of this chapter, prior to the issuance of the development clearing permit.

Second inspection. After pavement forms are in place but prior to the pouring of concrete for roadways, driveways, sidewalks, parking or loading areas, the applicant shall request a second inspection and an inspection shall be made by the tree inspector to determine that forms have been placed in accordance with the development clearing permit plans.

Final inspection. Upon completion of all work and cleanup of the site, the applicant shall request a final inspection of the site by the tree inspector. The tree inspector shall perform the final inspection and determine that the conditions of the development clearing permit have been adhered to prior to issuing a certificate of occupancy or authorizing permanent utility hookups for the site.

I have reviewed the above excerpts from the Town of Abita Springs' Ordinance and understand my responsibility.

Name:

Date: _____/

FEES: Applicant will pay actual cost of professional review services.

TOWN OF ABITA SPRINGS PLANNING AND ZONING DEPARTMENT DEVELOPMENT CLEARING PERMIT

Describe the request, if necessary, include any maps or plot plans: Please include a written description of the businesses to be located on the property. Also including a site plan for the property showing any existing or proposed buildings, driveway access, and the size and location of parking and storage areas.

Bright	thouse Learning Center driveway installation requires l of some trees as shown on tree removal plan. Buffer zone etain existing landscaping. New shrub landscaping to be planted septic system and front of structure as shown.	
Vemara	l of some trees as shown on tree remaral plan. Buffer zone	
will re	etein existing landscoping. New shrub landscoping to be planted	
around s	septic system and front of structure as shown,	
	Planning & Zoning Meeting Date & Time: 11/17/22 6:00 PM Town of Abita Springs Town Hall	
-		
	Office Use Only	
Notes from	DEVELOPMENT CLEARING PERMIT Planning & Zoning:	
Decision:		
Motion:	Second:Second:	
Vote:	Signature:	
	Planning & Zoning Chairman	
LANDSCAPE PLAN Notes from Planning & Zoning:		
Decision:		
Wotion:	Second:	
Vote:	Signature:Planning & Zoning Chairman	

21464 Clear Creek Driveway 12' Width Revision

10/28/22



21464 Clear Creek Tree Removal

Oct. 15, 2022













































Tree Removal Plan Details

- Tree Protection Zones will be marked around preserved trees with 4' tall orange construction barrier fence.
- Trees and bushes marked for removal will be spray painted with pink marking paint.

ISTOLEU

Erosion and Sediment Control Plan

 Silt fences (shown red below) will be installed on east and west sides of both east and west driveway entrances.





• Note that east driveway entrance will have new culvert installed.

21464 Clear Creek Landscape Plan

11/9/22


Swamp Red Maple

 \star



3 Class A, Swamp Red Maple trees which will be planted in the back yard to meet the requirements of subsection 9-218.2(i)(6)(a)



21464 Clear Creek Drainage Plan







ORIG GRD ELEV. 28.7' GRD ELEV. AFTER BACKFILL 28.2' T.O.S. ELEV. 29.0' <u>1:3</u>



TEOF LOUISIA	General Notes	
SCOTT A DENNEAU License No. 34699	NOTES:	
SCOTT A DENNEAU License No. 34699 PROFESSIONAL ENGINEER IN <i>CVL ENGINEER</i> 1 1 / 8 / 2022	1. BFE = NA	
11/8/2022	2. REQUIRED FINISHED FLOOR ELEVATION IS 29'	
ACTOR TO INSTALL 8″X16′ PVCCP	3. ELEVATIONS NAVD 88 (PROVIDED BY SURVEY DATED 5/15/22	
EXISTING DITCH	4. THERE IS NO APPARENT NEED FOR IMPROVEMENT TO EXISTING DITCHES AND SWALES	
	No. Revision/Issue Date	
	Firm Name and Address Denneau Professional Engineering Services, LLC 13223 State St. Hammond, LA 70403 (985) 218-8037 scott@dpesbusiness.com	
	Project Name and Address Brighthouse Learning Center 21464 Clear Creek Dr. Abita Springs, LA 70420	
P/L	Project Addition Date	





Public Hearing November 17, 2022, 6:00PM Abita Springs Town Hall

Notice is hereby given that a public hearing will be held by the Town of Abita Springs Planning & Zoning Department at 6:00 pm on November 17, 2022, at 22161 Level Street, Abita Springs.

- A public hearing will be held for the purpose of receiving public comments regarding the resub division of a parcel property at the corner of Hwy. 59 and Harrison Ave 71103 Hwy 59.
- A public hearing will be held for the purpose of receiving public comments regarding a variance on a rear yard setback at 101 Abita Oaks Blvd.

A map of the property will be available at <u>www.townofabitasprings.com/planningzoning</u>. All interested parties shall have the right and opportunity to appear and be heard on the subject.



November 15, 2022

To: Planning and Zoning Commission

From: Kristin Tortorich, and Mark Fancey

Subject: Variance 101 Abita Oaks Blvd

The subject property is zoned Residential District and is within the Residential-Commercial Overlay District. The property is approximately 11,815 square feet in size and has recently been developed with a single-family residence. The variance request is to construct a patio cover for the rear yard that extends nine (9) feet into the required 25-foot rear yard setback.

As specified in Town Code Sec. 9-223 (a)(2). the rear yard setback must be 20 percent of the lot depth or 25 feet, whichever is greater. The depth of the subject property varies from 112 feet on the north property line to 145 feet along the south property line. Consequently, the rear yard for the property varies from 25 feet in the area where the variance is proposed to 29 feet in the southernmost portion of the property.

Under Town Code Sec. 9-226 (3) the Planning and Zoning Commission can grant variance requests to the required yard size.

Sec. 9-226. Appeals to the zoning commission; powers on appeal; actions.

- (3) The zoning commission shall have authority to grant the following variances:
 - a. Permit a variance in the **yard requirements (emphasis added)**, the size of squares or the requirements of such in the development of land, height restrictions, or lot areas per family requirements of any district, but only where there are unusual and practical difficulties or unnecessary hardships but only when the zoning commission is satisfied that the granting of such variance will not merely serve as a convenience to the applicant, but will not merely serve as a convenience to the applicant, but will alleviate some demonstrable and unusual hardship or difficulty so great as to warrant a deviation from the comprehensive plan surrounding property will be property protected;
 - b. Waive or reduce the parking and loading requirements in any district whenever the use of a building or land is so extraordinary as to make unnecessary the full provision of parking or loading facilities, or whenever it can be shown that provision of required off-street parking space within 300 feet of the main building is not feasible and would impose and unreasonable hardship as contrasted with merely granting and advantage or a convenience.
- (4) In consideration of all appeals and all proposed exceptions or variances under the terms of this chapter the zoning commission shall, before making any exceptions or variance from the chapter in a specific case, first determine that it will not impair an adequate supply of air or light to adjacent property, or unreasonably increase the congestion in public streets, or endanger the public safety, or unreasonably diminish or impair established property values within the surrounding area, or in any other respect impair the public heath, safety, morals, comfort or welfare of the inhabitants of the community;







REFERENCE SURVEYS:

THERE IS NO REPRESENTATION THAT ALL APPLICABLE SERVITUDES AND/OR RESTRICTIONS HAVE BEEN SHOWN HEREON. ANY SERVITUDES AND/OR RESTRICTIONS SHOWN ON THIS PLAT ARE LIMITED TO THOSE SET FORTH IN THE DESCRIPTION AND/OR INFORMATION FURNISHED THE UNDERSIGNED. A TITLE OR PUBLIC RECORD SEARCH FOR SUCH INFORMATION WAS NOT MADE BY THE UNDERSIGNED IN COMPILING DATA FOR THIS SURVEY.	dated December 2, 2015. 2. Survey for Rozas Ward Architects by dated January 6, 2022, revised Februar Clerk of Court Map File No. 6110.	ry 8, 2022, filed St. Tammany
	GS & ASSOCIATES	PHONE (985) 892–1549
COVINGTON, LA 70433 PROFESSIONAL LA	AND SURVEYORS	FAX (985) 892-9250
PLAT PREPARED FOR: April P. Williamson SHOWING A SURVEY OF: A MINOR SUBDIVISION OF 29.57 ACRES INTO PARCELS 1-A & 1-B, LOCATED IN SECTION 1, TOWNSHIP 7 SOUTH, RANGE 11 EAST, TOWN OF ABITA SPRINGS, ST. TAMMANY PARISH, LOUISIANA. THIS PLAT REPRESENTS A PHYSICAL SURVEY MADE ON THE GROUND BY ME, OR THOSE UNDER MY DIRECTION, AND IS IN ACCORDANCE WITH THE APPLICABLE STANDARDS OF PRACTICE AND BEARS A CLASS C SURVEY. PROFESSIONAL LAND SURVEYOR		
SCALE: 1" = 200' JOB NO. 07047-RSB2	DATE: 11–14–2022 F	REVISED:



November 2, 2022

To: Planning and Zoning Commission

From: Kristin Tortorich, and Mark Fancey

Subject: Draft Zoning Ordinance Amendments – Traffic Impact Analysis

Attached is a draft Traffic Impact Analysis Zoning Ordinance chapter. The draft will be reviewed by the Planning and Zoning Commission at the November 17, 2022 meeting. The chapter provides procedures and standards for Traffic Impact Analysis (TIA) reports.

Here's some additional information on several of the terms included in the draft chapter.

Volume to capacity (v/c) measures the amount of traffic on a given roadway relative to the amount of traffic the roadway was designed to accommodate. Volume-to-capacity (v/c) ratio is a decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases, and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

From Wikipedia:

Level of service (LOS) is a qualitative measure used to relate the quality of motor vehicle traffic service. LOS is used to analyze roadways and intersections by categorizing <u>traffic flow</u> and assigning quality levels of traffic based on performance measure like vehicle speed, density, congestion, etc.

A: free flow. Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes. The average spacing between vehicles is about 550 ft(167m) or 27 car lengths. Motorists have a high level of physical and psychological comfort. The effects of incidents or point breakdowns are easily absorbed. LOS A generally occurs late at night in urban areas and frequently in rural areas.

B: reasonably free flow. LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted. The lowest average vehicle spacing is about 330 ft(100 m) or 16 car lengths. Motorists still have a high level of physical and psychological comfort.

C: stable flow, at or near free flow. The ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness. Minimum vehicle spacing is about 220 ft(67 m) or 11 car lengths. Most experienced drivers are comfortable, roads remain safely below but efficiently close to capacity, and posted speed is maintained. Minor incidents may still have no effect, but localized service will have noticeable effects and traffic delays will form behind the incident. This is the target LOS for some urban and most rural highways.

D: approaching unstable flow. Speeds slightly decrease as traffic volume slightly increases. Freedom to maneuver within the traffic stream is much more limited and driver comfort levels decrease. Vehicles are spaced about 160 ft(50m) or 8 car lengths. Minor incidents are expected to create delays. Examples are a busy shopping corridor in the middle of a weekday, or a functional urban highway during commuting hours. It is a common goal for urban streets during peak hours, as attaining LOS C would require prohibitive cost and societal impact in bypass roads and lane additions.

E: unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit. Vehicle spacing is about 6 car lengths, but speeds are still at or above 50 mi/h(80 km/h). Any disruption to traffic flow, such as merging ramp traffic or lane changes, will create a shock wave affecting traffic upstream. Any incident will create serious delays. Drivers' level of comfort becomes poor.^[1] This is a common standard in larger urban areas, where some roadway congestion is inevitable.

F: forced or breakdown flow. Every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing required. Travel time cannot be predicted, with generally more demand than capacity. A road in a constant <u>traffic</u> jam is at this LOS, because LOS is an average or typical service rather than a constant state. For example, a highway might be at LOS D for the AM peak hour, but have traffic consistent with LOS C some days, LOS E or F others, and come to a halt once every few weeks.

FIGURE 1. LEVEL OF SERVICE (LOS) DEFINITIONS



Level of Service A: Free-flow traffic with individual users virtually unaffected by the presence of others in the traffic stream.



Level of Service D: High-density flow in which speed and freedom to maneuver are severely restricted and comfort and convenience have declined even though flow remains stable.



Level of Service B; Stable traffic flow with a high degree of freedom to select speed and operating conditions but with some influence from other users.



Level of Service E: Unstable flow at or near capacity levels with poor levels of comfort and convenience.



Level of Service C: Restricted flow that remains stable but with significant interactions with others in the traffic stream. The general level of comfort and convenience declines noticeably at this level.



Level of Service F: Forced traffic flow in which the amount of traffic approaching a point exceeds the amount that can be served. LOS F is characterized by stop-and-go waves, poor travel times, low comfort and convenience, and increased accident exposure

Source: Virginia DOT

Chapter X - Traffic Impact Analysis

Sec. 9-XXX. Purpose.

A Traffic Impact Analysis (TIA) is a study that provides information on the projected traffic likely to be generated by a proposed development and assesses its impact on the roadways in the immediate proximity of a proposed development. The TIA shall be designed to identify any potential traffic operational problems or concerns and recommend appropriate actions to address such problems or concerns.

Sec. 9-XXX. Definitions.

The following definitions relate to the traffic impact standards in this section.

Peak hour. The period of a single hour in the morning and the period of a single hour in the afternoon or evening during which the road system servicing the proposed use is most heavily utilized by motor vehicles other than those traveling to or from the proposed use. A TIA assesses the impacts of peak hour trips created by a development.

Volume to capacity (v/c) is a ratio that measures the amount of traffic on a given roadway relative to the amount of traffic the roadway was designed to accommodate.

Level of service (LOS) is a qualitative measure used to relate the quality of motor vehicle traffic service. LOS is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measure like vehicle speed, density, congestion, etc.. LOS uses six letter grade levels with "A" describing the highest quality and "F" describing the lowest quality.

Sec. 9-XXX. Procedures.

If a Traffic Impact Analysis (TIA) is required for a project, the performance of the required TIA shall be the responsibility of the applicant. The TIA must be performed under the supervision of a qualified Professional Registered Civil Engineer or other qualified individual such as a transportation planner or traffic engineer. No traffic impact analysis shall be accepted unless a proposal of the traffic impact analysis, an outline of the proposed traffic impact analysis, and the required professional qualifications are first presented to the Town for review and approval.

A TIA report must be prepared documenting the study, the data used, the findings and the recommendations of the study consistent with Section X.XXX TIA Contents and Format. The TIA Report shall be signed by the Registered Professional Engineer or other qualified individual responsible for the supervision of the study and the preparation of the TIA report.

The Town will review the TIA through the Town Engineer or other duly authorized representative. The applicant shall defray the Town's cost for the use of the Town Engineer or other traffic professional, who will participate in any required meetings and who will provide an independent assessment of the study.

Sec. 9-XXX. When Required.

A TIA shall be required for all subdivisions or developments when the following project threshold levels are met or exceeded.

Subdivision/Development Type	Threshold
Single-family residential	50 units
Multifamily residential	5 acres or 50 units
Office	3 acres or 50,000 square feet
Commercial/institutional	2 acres or 75,000 square feet
Industrial	8 acres or 100,000 square feet
Commercial outlets with drive-through service	No threshold (applies to all)

- (b) In the case that a development does not meet or exceed the threshold level defined above, a TIA may still be deemed necessary by the Town under one or more of the following conditions:
 - (1) There are currently high traffic volumes on surrounding roads that may affect movement to and from the proposed development;
 - (2) The development is in an area that is currently undergoing substantial growth; or
 - (3) The development is in an area that is currently experiencing extreme problems with traffic congestion.
- (c) Expansion of an existing project may also be subject to a traffic study. When determining whether the project meets the threshold, trips from the existing land use shall be included in the trips that are considered "produced" by the expansion project.
- (d) The Town has the right in the administrative review process to require mitigation efforts by the applicant. However, a formal TIA may not be required. The applicant shall meet all applicable requirements found in this Code. Additionally, the Town has the right to request additional improvements or ingress/egress points beyond the current adopted standards.
- (e) All other uses shall be exempt from the requirements of this section.

Sec. 9-XXX. TIA Contents and Format.

The TIA report shall be prepared in the following format:

- (a) Description of TIA study area, specifying boundary of study area and count and analysis sites. A site location map shall be provided. The map shall include roadways that allow access to the site and are included in the study area. Prior to initiation of the study, the Town Engineer or authorized representative, shall approve the study area radius for the TIA.
- (b) Description of the project. This description shall include the size of the parcel, general terrain features, access to the site, anticipated completion date, and the existing and proposed uses of the site (including phasing). In addition, the square footage of each use or number and size of units proposed shall be specified. A figure (Site Plan) that shows the site development as proposed shall also be included in the report.

- (c) Existing conditions. The existing conditions in the vicinity of the project shall be discussed, including a description of the area to be affected by the development. A field inventory of the site and study area shall be conducted. Existing traffic volumes, traffic controls, and geometrics (number of lanes, intersection configurations, etc.) shall be described in detail. This data shall be depicted graphically.
- (d) Existing traffic volumes within TIA study area. Average daily traffic counts shall be current (less than one year old). If current data is not available, the applicant will be required to perform the counts. Peak hour counts shall be conducted at study area intersections during peak hours to be determined by the Town engineer. These counts shall show all turning movements. The counts shall be conducted during the school year (September through May) and during weeks that have no major school holidays. (These holidays shall include, but not be exclusive to, Thanksgiving, Christmas Break, Spring Break, Mardi Gras, Labor Day, and exam weeks.)
- (e) Trip generation estimates and design hour traffic volumes. Traffic volumes expected to be generated by the proposed development shall be estimated using the latest edition of the Institute of Transportation Engineers' (ITE) Trip Generation Manual. The calculation of traffic volumes used to determine impacts of the development shall be based on the maximum land use intensity allowed under the existing (or proposed) zoning ordinance.
- (f) Trip distribution and traffic assignments. Traffic generated by the site must be distributed and assigned to the roadway network to determine the project's impacts. The direction a vehicle will take to access or leave the project site is known as trip distribution. Traffic assignment refers to the actual routes taken by project traffic to and from the site. The methodology and assumptions which are used in the determination of trip distribution and traffic assignments shall be described. In the case of projects with several phases to take place over several years, the trip distribution and traffic assignment shall be estimated for the completion of each phase.
- (g) Projected traffic volumes within the TIA study area. Project generated and distributed traffic shall be estimated for all intersections in the study area, including any proposed site access driveways. The projected counts will represent the same peak hours that were used for the existing traffic volume counts and will show all turning movements. The trip generations from all other proposed developments in the study area shall also be included.
- (h) Capacity analysis.
 - (i) Capacity analyses provide an indication of how well the study area intersections serve existing and future traffic demands. A description of the methodology and level of service (LOS) definitions shall be included within the TIA. For existing and future conditions, LOS at all study intersections, inclusive of the project driveway, shall be calculated for signalized and unsignalized intersections. Other proposed developments in the study area shall also be included. An overall LOS "D" shall be considered acceptable for signalized intersections. For unsignalized intersections, the LOS for the critical movement shall be at LOS "D" or above. In the case where the existing level of service (LOS) is below "D", the mitigation efforts shall improve the LOS to "D" or above.
 - (ii) Additionally, volume to capacity (V/C) and average stopped delay must also be presented for both signalized and unsignalized intersections. To assess quality of flow, roadway capacity

analyses are required under the following conditions: existing, no build (per project phase), build (per project phase), and build (total build out).

- (i) Traffic accidents. Three years of the most current accident data shall be obtained for intersections within the study area. This data shall be depicted in tabular form along with a brief description at each critical location.
- (j) Traffic improvements. Unsignalized intersections experiencing significant deficiencies (delays) shall be evaluated for potential signalization. Results of these analyses shall be discussed, and recommendations presented. Any planned roadway improvements to be completed within the study area shall be identified and discussed.
- (k) Conclusions. This section of the traffic study shall summarize the required improvements and the proposed mitigation measures. This shall include, but not be excluded to, the following: existing and future LOS results, recommended roadway improvements, and resultant LOS with proposed improvements in place.
- (I) Summary and findings and recommendations. Mitigation measures shall be discussed in this section. This includes identifying the improvement measures necessary to minimize the impact of the project/development on the transportation system. The study area intersections shall be mitigated at a minimum to operate better than or equal to the "No Build" case, based on the calculated V/C and average stopped delay. In the case where the existing level of service (LOS) is below "D," the mitigation efforts shall improve the LOS to "D" or above. Mitigation measures shall be in place prior to the initial phase of construction.

Sec. 9-XXX. Final Approval.

The approval of the Planning Director and the Town Engineer of the Traffic Impact Analysis report shall be required prior to final approval of the development and prior to the issuance of building permits.

Sec. 9-XXX. Actions Based on Traffic Impact Analysis.

When a proposed development which is subject to the traffic impact analysis requirements of this section demonstrates that the proposed development shall overburden the roadway system or cause a reduction in service of affected roadway below the adopted level of service, an applicant may be required by to modify the development proposal to minimize the identified traffic related impacts. Modifications to applications for a development may include, but shall not be limited to:

- (a) Reduce the size, scale, scope, or density of the development to reduce traffic generation;
- (b) Divide the project into phases and authorize only one phase at a time until traffic capacity is adequate for the next phase of development;
- (c) Dedicate right-of-way for needed street improvements;
- (d) Construct new streets;
- (e) Expand the capacity of existing streets;
- (f) Redesign project ingress and/or egress points to reduce traffic conflicts;

- (g) Alter the use and type of development to reduce peak hour traffic;
- (h) Eliminate the potential for additional traffic generation from undeveloped properties in the vicinity of the proposed development; and
- (i) Integrate non-vehicular design components (e.g., pedestrian and bicycle paths or transit improvements) to reduce trip generation.