

# SUBDIVISION REPORT - CONCEPT/USE ON REVIEW

► FILE #: 10-SB-20-C AGENDA ITEM #: 31

10-C-20-UR AGENDA DATE: 10/8/2020

► SUBDIVISION: RIVER POINTE

► APPLICANT/DEVELOPER: FULTON PROPERTIES, LLC

OWNER(S): Roger & Cynthia Britton

TAX IDENTIFICATION: 52 01802 (PART OF) View map on KGIS

JURISDICTION: County Commission District 8

STREET ADDRESS: 1740 Number Two Dr.

► LOCATION: Southwest end of Number Two Dr., south of Mascot Rd.

SECTOR PLAN: Northeast County

GROWTH POLICY PLAN: Planned Growth Area

WATERSHED: Holston and French Broad

► APPROXIMATE ACREAGE: 20.21 acres

ZONING: PR (Planned Residential)

EXISTING LAND USE: Vacant land

▶ PROPOSED USE: Detached residential subdivision

SURROUNDING LAND

North: Public-quasi public land, single family residential, and rural residential

USE AND ZONING: / RA (Low Density Residential)

South: Public-quasi public land / I (Industrial)
East: Single family residential and agricultural/forestry/vacant / PR (Planned

Residential)

West: Agricultural/forestry/vacant and single family residential / A

(Agricultural) and RA (Low Density Residential)

► NUMBER OF LOTS: 71

SURVEYOR/ENGINEER: Garrett Tucker / Robert G. Campbell & Associates, LP

ACCESSIBILITY: Number Two Drive is a local road with a pavement width of 14.6 feet inside a

right-of-way of 50 feet.

► SUBDIVISION VARIANCES

REQUIRED:

**VARIANCES:** 

1) REDUCTION OF TANGENT LENGTH BETWEEN BROKENBACK

**CURVES ON ROAD 'A' FROM 150' TO 75.31'** 

2) REDUCTION OF INTERSECTION SPACING BETWEEN ROAD 'A' AND

NUMBER FOUR DRIVE TO 37 FEET.

ALTERNATE DESIGN STANDARDS REQUIRING PLANNING

**COMMISSION APPROVAL:** 

1) REDUCTION OF MINIMUM CURVE RADIUS ON ROAD 'A' AT

STATION 21+02 FROM 250' TO 125'
2) REDUCTION OF MINIMUM CURVE RADIUS ON ROAD 'A' AT STATION 24+59 FROM 250' TO 125'

ALTERNATE DESIGN STANDARDS APPROVED BY KNOX COUNTY ENGINEERING AND PUBLIC WORKS:

- 1) INCREASE MINIMUM INTERSECTION GRADE AT ROAD 'A' AND NUMBER TWO DRIVE FROM 1% TO 3%
- 2) INCREASE MINIMUM INTERSECTION GRADE AT ROAD 'A' WITH ROAD 'A' FROM 1% TO 3%

#### STAFF RECOMMENDATION:

► APPROVE variances 1-2 and alternate design standard 1-2 based on the recommendations of the Knox County Department of Engineering and Public Works and because the site conditions restrict compliance with the Subdivision Regulations and the proposed variance will not create a traffic hazard.

#### APPROVE the Concept Plan subject to 10 conditions.

- 1. Connection to sanitary sewer and meeting any other relevant requirements of the utility provider.
- 2. Provision of street names which are consistent with the Uniform Street Naming and Addressing System within Knox County (Ord 91-1-102).
- 3. Installation of all sidewalks required by the Knox County sidewalk ordinance (Ord 19-12-101) or as otherwise required by Knox County Engineering and Public Works.
- 4. Providing access to Old Mascot Cemetery from a public right-of-way either through the subject site or through the remainder of the Roger & Cynthia L Britton property (parcel 052-018.02), to be approved by Planning Commission staff and Knox County Engineering and Public Works before a final plat can be recorded to create lots for the River Pointe subdivision.
- 5. Implementation of the road improvement recommendations outlined in the Transportation Impact Study (TIS) prepared by Ajax Engineering (September 18, 2020), as revised, and reviewed and approved by Planning Commission staff and Knox County Engineering and Public Works. The design details and timing of the installation of the improvements shall be worked out with the Knox County Department of Engineering and Public Works during the design plan stage for the subdivision and the required road improvements shall be completed prior to approval of the final plat for the subdivision.
- 6. Providing a sight distance easement of 200 ft (centerline-to-centerline) across the common area lot adjacent to lots 58 & 59.
- 7. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
- 8. All closed contours/sinkholes and the 50' setback around the feature shall be shown on the final plat. Building construction within the 50' setback may be permitted if a geotechnical study prepared by a registered engineer states that building within the 50' sinkhole buffer is acceptable and the study is approved by the Knox County Department of Engineering and Public Works. The geotechnical study must be completed and submitted to Knox County Department of Engineering and Public Works prior to submission of the final plat for any lots that do not have a building area outside of the 50' setback area. A 5' drainage easement extending outside of the uppermost closed contour is required. Building construction is not permitted within the hatchered contour area of the sinkhole or the drainage easement. Engineered footings may be required for any structures within the 50' sinkhole buffer.
- 9. Prior to certification of the final plat for the subdivision, establishing a property owners association that will be responsible for the maintenance of the common areas, sidewalks and stormwater/drainage facilities.

  10. Submitting the certification of design plan approval form to Planning Commission staff prior to final plat review by the Planning Commission or Planning staff, as required by the Knoxville-Knox County Subdivision Regulations (Section 2.08, Design Plan -- Major Subdivisions).
- ► APPROVE the request for up to 71 detached dwellings on individual lots and a reduction of the 35' peripheral setback to 25' for all property lines except common area in the northeast corner of the development, subject to 1 condition.
  - 1) Meeting all applicable requirements of the Knox County Zoning Ordinance.

With the conditions noted, this plan meets the requirements for approval in the PR zone and the other criteria for approval of a concept plan and use-on-review.

#### COMMENTS:

The applicant is proposing to subdivide this 20.21-acre tract into 71 detached residential lots and common area at a density of 3.51 du/ac. This property was rezoned to PR at a density of up to 5 du/ac in September 2020 and is located on Number Two Drive in Mascot, just south of Mascot Baptist Church. The proposed subdivision will be served by a public street.

The Transportation Impact Study (TIS) for River Pointe Subdivision (Ajax Engineering) recommends several improvements to Number Two Drive, Library Drive, and the intersections at Mascot Road. Knox County Engineering and Public Works (EPW) will determine which of these improvements the applicant will be required to complete during the design plan phase.

There is an open, usable common area located on the inside of the Road 'A' curve, adjacent to lots 58 & 59. There is no specified use for this common area. The common area in the northeast portion of the property with access shown between lots 41 & 42, is proposed as a "community garden and open space recreation area."

The "Old Mascot Cemetery" is located adjacent to the southwest corner of this development currently has a platted right-of-way that is located partially through the subject property near its access to Number Two Drive. The rest of this platted right-of-way is on the remainder of the Britton property, which the subject property is being subdivided out of. The Concept Plan proposes a 25' easement that terminates to the rear of a property that is not currenlty owned by the applicant needs to extend to a public right-of-way. The access to the cemetery is to be further refined during design plan review.

# EFFECT OF THE PROPOSAL ON THE SUBJECT PROPERTY, SURROUNDING PROPERTY AND THE COMMUNITY AS A WHOLE

- 1. The proposed residential subdivision will have minimal impact on local services since utilities are available to serve this site.
- 2. With the implementation of the road improvements outlined in the TIS, as required by Knox County Engineering and Public Works, the road system leading up to the proposed subdivision will be able to handle the projected additional traffic.
- 2. The proposed residential subdivision at a density of 3.51 du/ac, is consistent in use and density with the approved rezoning for the property (PR up to 5 du/ac).

# CONFORMITY OF THE PROPOSAL TO CRITERIA ESTABLISHED BY THE KNOX COUNTY ZONING ORDINANCE

- 1. With the recommended conditions, the proposed subdivision is consistent with all relevant requirements of the PR zoning, as well as other criteria for approval of a use on review.
- 2. The development is consistent with the following general standards for uses permitted on review: The proposal is consistent with the adopted plans and policies of the General Plan and Sector Plan. The use in is harmony with the general purpose and intent of the Zoning Ordinance. The use will not significantly injure the value of adjacent property. The use will not draw additional traffic through residential areas.

#### CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The Northeast County Sector Plan designates this property for low density residential uses with a maximum density of 5 du/ac. The proposed subdivision at a density of 3.51 du/ac is consistent with the sector plan.

2. This site is located within the Planned Growth Area on the Knoxville-Knox County-Farragut Growth Policy Plan map.

ESTIMATED TRAFFIC IMPACT: A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

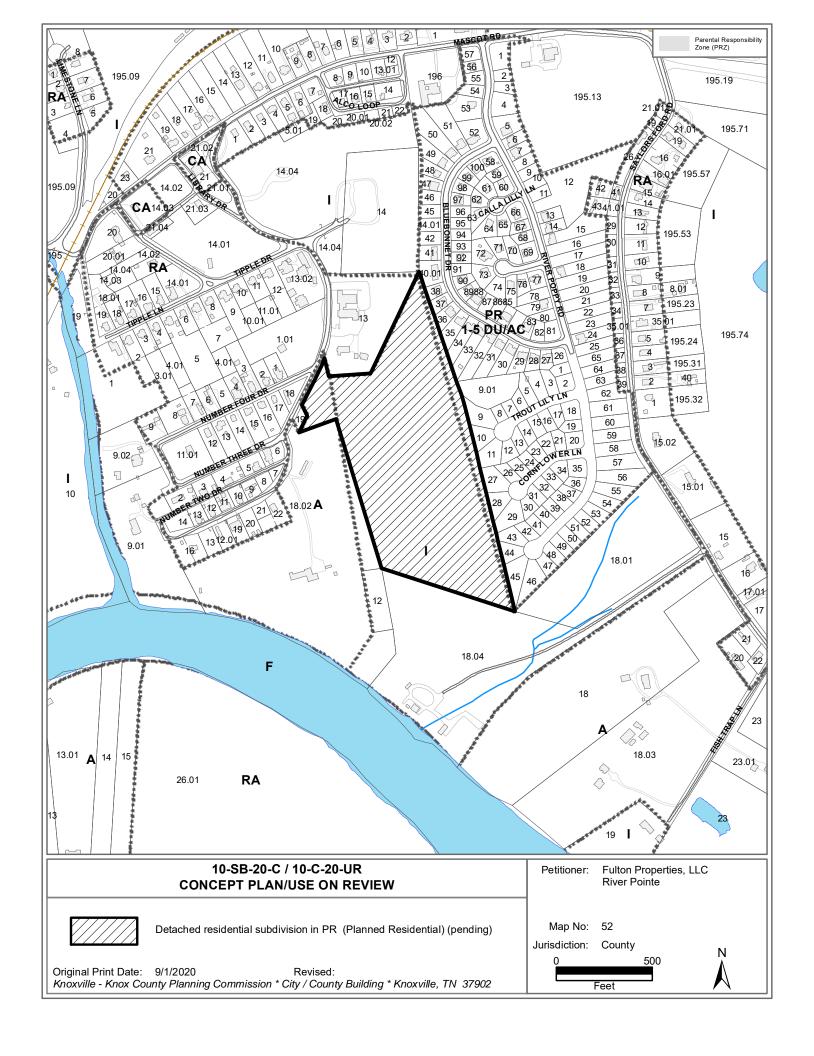
ESTIMATED STUDENT YIELD: 24 (public school children, grades K-12)

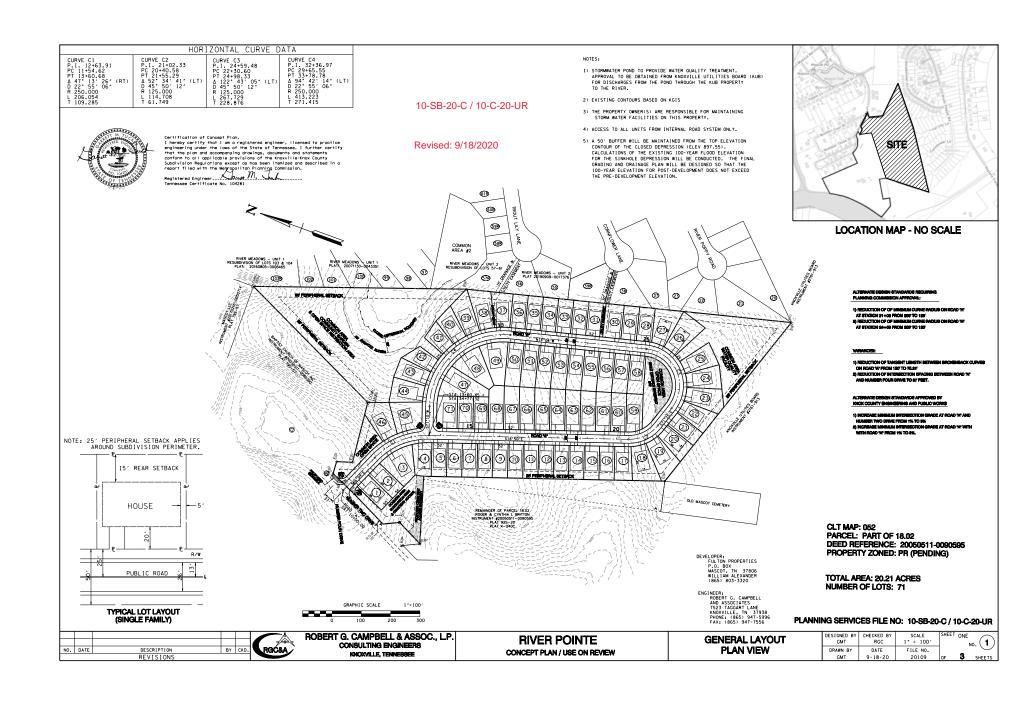
Schools affected by this proposal: East Knox County Elementary, Carter Middle, and Carter High.

- Potential new school population is estimated using locally-derived data on public school student yield generated by new housing.
- Students are assigned to schools based on current attendance zones as determined by Knox County Schools. Students may request transfers to different zones, and zone boundaries are subject to change.
- Estimates presume full build-out of the proposed development. Build-out is subject to market forces, and timing varies widely from proposal to proposal.
- Student yields from new development do not reflect a net addition of children in schools. Additions occur incrementally over the build-out period. New students may replace current population that ages through the system or moves from the attendance zone.

Knoxville-Knox County Planning Commission's approval or denial of this concept plan request is final, unless the action is appealed to Knox County Chancery Court. The date of the Knox County Chancery Court hearing will depend on when the appeal application is filed.

Knoxville-Knox County Planning Commission's approval or denial of this use on review request is final, unless the action is appealed to the Knox County Board of Zoning Appeals. The date of the Knox County Board of Zoning Appeals hearing will depend on when the appeal application is filed.

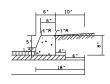




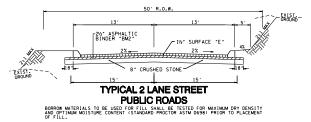


10-SB-20-C / 10-C-20-UR

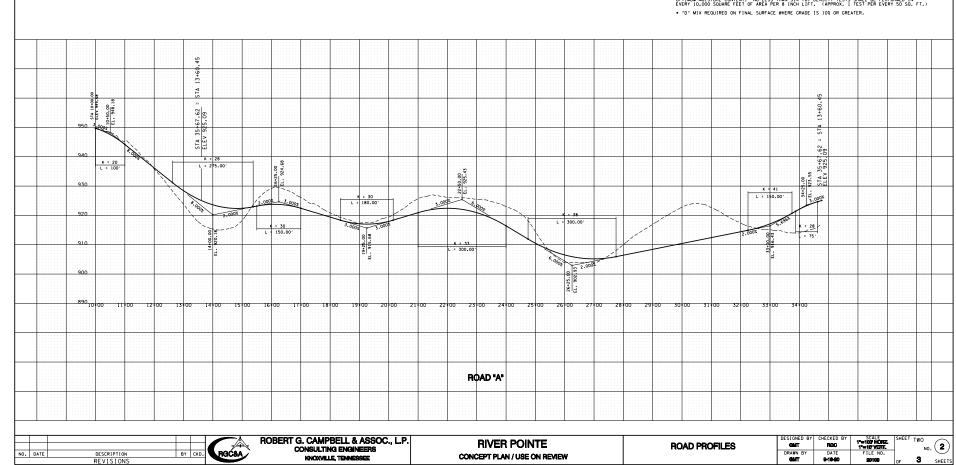
Revised: 9/18/2020

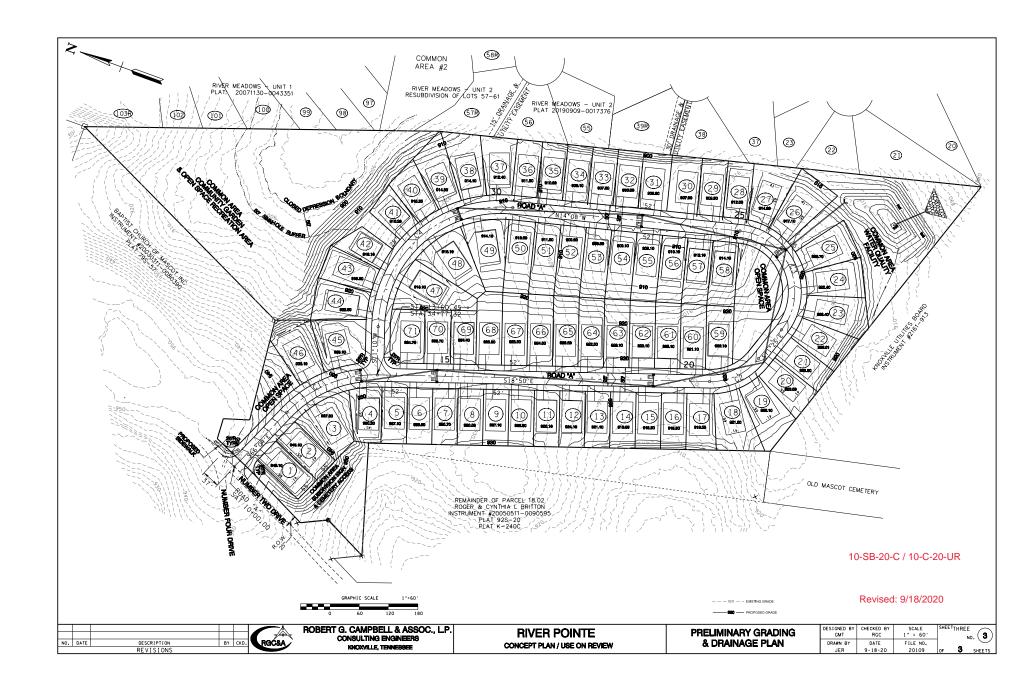


STANDARD DETAIL 6" EXTRUDED CURB



FILE SOILS SHALL BE COMPACTED IN LAYERS 8 INCHES OR LESS IN THICKNESS TO A MINIMAN OF 98 PERCENT STANDARD PROCTOR MAXIMAN DIVENSITY AND WITHIN PULS OR MININS 3 PERCENT OPTIMAN MOISTURE CONTENT. NO LESS THAN SIX (6) DENSITY TESTS SHALL BE PERFORMED IN EVERY 10,000 SOLARE FEET OF AREA PER 8 MINCH LIFT. CAPPROX. I TEST PER EVERY SOS. F.T.)





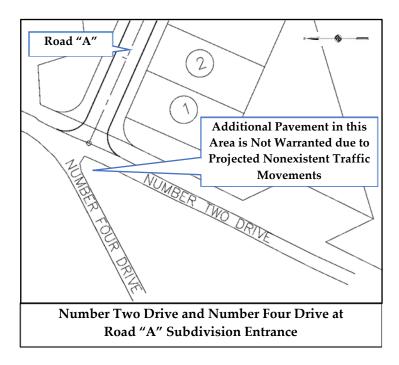
### **CONCLUSIONS & RECOMMENDATIONS**

The following is an overview of recommendations to minimize the transportation impacts of the proposed development on the adjacent road system while attempting to achieve an acceptable level of traffic flow and safety. A summary of the recommendations is provided at the end of this section in Figure 9. The recommendations marked with an asterisk indicate an existing need and are not associated with the projected transportation impacts of the proposed subdivision.



#### Number Two Drive & Number Four Drive at Road "A":

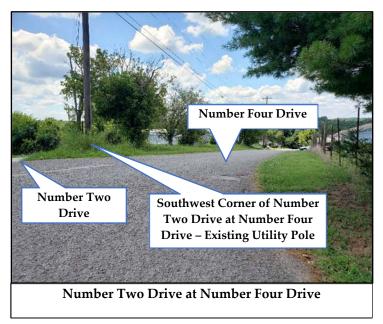
- 1a) The capacity calculation results shown in Table 6 indicated that the intersection of Number Two Drive and Number Four Drive at Road "A" should operate very well during the AM and PM peak periods once the development becomes fully occupied. The level of service for exiting vehicles at Road "A" with a single lane will also operate at a particularly good level.
- 1b) Exclusive entering turn lanes are not recommended due to the low traffic volumes. The concept plan shows Road "A" tying into Number Two Drive roughly opposite of Number Four Drive and will create a skewed 4-way intersection.



As seen in the above exhibit, the proposed subdivision entrance road, Road "A" will



intersect Number Two Drive slightly to the south of the centerline of Number Four Drive, which would make thru movements from Number Four Drive to Road "A" difficult. However, it is expected that not any motorists will make this Τt is maneuver. not recommended or warranted additional provide pavement at the southwest

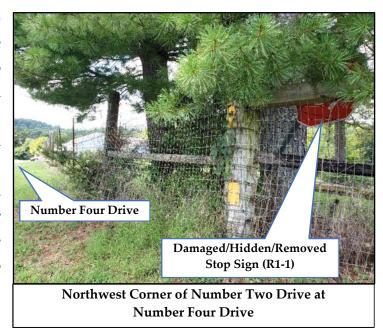


corner of Number Four Drive and Number Two Drive. A utility pole would need to be moved if pavement were added in this intersection corner.

\* 1c) The existing Stop Sign (R1-1) for the Number Four Drive approach at Number Two Drive has been damaged/removed/hidden.

It is currently lying behind a fence in the northwest corner.

It should be reinstalled back to the southwest corner for the Number Four Drive approach at Number Two Drive.



1d) Sight distance at the new proposed Road "A" at Number Two Drive intersection must not be impacted by new signage, future landscaping, or existing vegetation. The existing site has a utility pole and an arborvitae tree to the north of the proposed subdivision entrance location. The utility pole may need to be removed for the

construction of the entrance, and the tree will need regular maintenance in the future to not interfere with sight distance to the north. Based on a speed limit of 25-mph on Number Two Drive, the required Intersection Sight Distance (ISD) is 250 feet. On the southbound approach of Number Two Drive at the proposed Road "A" intersection, the SSD is calculated to be 155 feet. On the northbound approach of Number Two Drive at the proposed Road "A" intersection, the SSD is calculated to be 140 feet. These distances should be verified in the design plans and must be verified by a licensed land surveyor in the field. These distances must be met to ensure safe operations.

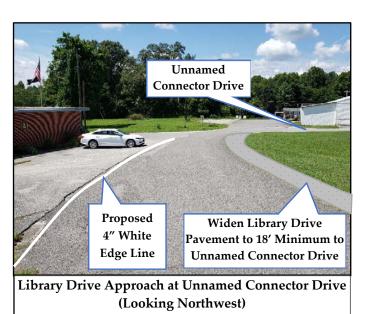
1e) It is recommended that the Road "A" entrance approach at Number Two Drive be designed and constructed with a 24" white stop bar and a Stop Sign (R1-1). The stop bar should be applied at a minimum of 4 feet away from the edge of Number Two Drive and should be placed at the desired stopping point that provides the maximum sight distance.





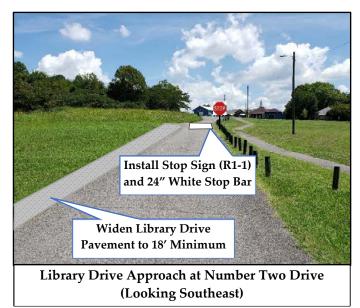
Number Two Drive & Library Drive: Number Two Drive and Library Drive will be the primary access roads between the proposed residential development and outside destinations. The road widths in between Mascot Road and the proposed subdivision are adequate along Number Two Drive, but Library Drive currently has substandard road widths in between the post office and Number Two Drive.

\* 2a) It is recommended that a minimum width of 18 feet be provided on Library Drive in between the post office and Number Two Drive to provide adequate road width. The current road width of this road in this section is between 13 feet to 15 feet. It is expected that River Pointe Subdivision residents traveling to and from the west on Mascot Road will utilize Library Drive due to the physical layout of Library Drive and Number Two Drive. It is expected that the road widening should occur on the east side of Library Drive to avoid encroaching on Mascot Park and the parking lot of the USPS Mascot Post Office. The length of the recommended road widening is approximately 275 feet.

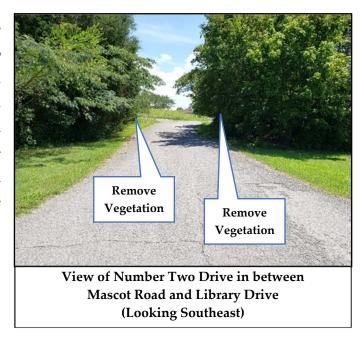


The widening of Library Drive is recommended to occur from the Y-intersection with Number Two Drive to the north up to the intersection with the unnamed connector drives that run to the north of the post office and to the south of God's Way Baptist Church. It is also recommended that a 4" white edge line be installed to delineate the roadway from the post office parking lot.

It is recommended that the southbound Library Drive approach at the existing Yintersection at Number Two Drive operate as stop condition. A Stop Sign (R1-1) and 24" white stop bar should be installed on the Library Drive approach. Both approaches at this intersection currently operate under uncontrolled conditions.



\* 2c) It is recommended that the vegetation along Number Two Drive in between Mascot Road and Library Drive be removed and maintained. The vegetation is currently encroaching on the roadway and interferes with sight distance along the roadway.

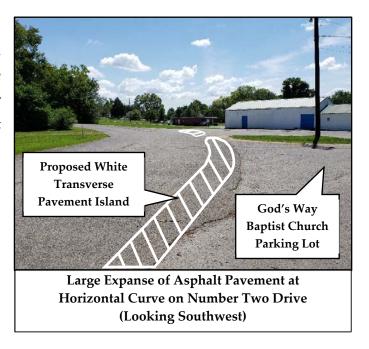


\* 2d) It is recommended that 25-mph Speed Limit Signs (R2-1) be installed on Number Two Drive and Library Drive. These signs should be installed for southbound travel towards the new residential development. A speed limit sign should be installed on Number Two Drive just past God's Way Baptist Church. A speed limit sign should be installed on Library Drive just past the post office.

It is recommended that the large expanse of pavement at the horizontal curve adjacent to God's Way Baptist Church on Two Number Drive delineated with pavement The markings. roadway delineation is recommended to be a white edge line or transverse white pavement islands or as deemed appropriate or directed by Knox County Engineering. Delineating the roadway edge will be beneficial to roadway safety.



The pavement markings should be laid out to separate the parking lot and should consider the parking lot entrance and exit aisleways.



It is recommended that the vegetation on the south side of Mascot Road and to the west of the intersections with Library Drive and Number Two Drive be removed to ensure proper sight distances are provided. Sight distance is hindered by existing vegetation, and in the case of Number Two Drive, sight distance is complicated due to the acute angle of the intersecting roads. The sight distance was estimated with a Nikon Laser Rangefinder at these intersections, and the distances were found to be marginal to

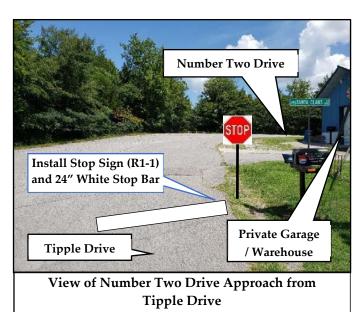
substandard. The sight distances at these intersections need to be verified by a licensed land surveyor to ensure safe vehicle operations. A land surveyor should be able to mark or delineate the amount of vegetation that will need to be removed on the south side of Mascot Road to provide the appropriate sight distance.

The intersection of Number Two Drive at Tipple Drive currently operates quasi-4-way intersection. The 4<sup>th</sup> leg of this intersection, the east approach, has an abrupt end and continues as a driveway to an undeveloped private property to the east. Currently, this approach has a set of cinder blocks and wood posts for a road barrier. actuality, this intersection operates as a 3-way intersection



View of Number Two Drive Approach at Tipple Drive (Looking Southeast)

with the southbound Number Two Drive approach operating under stop conditions with a Stop Sign (R1-1). However, during the field review, very few motorists were observed coming to a stop. Most of the observed motorists completed rolling stops.

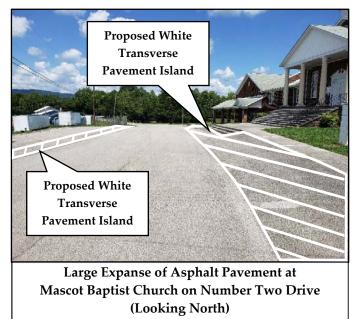


(Looking East)

Due to the low compliance rate, the County should consider removing this Stop Sign for this approach as it contributes to the disregard of Stop Signs. Since a more significant number of vehicles will be traveling northbound and southbound on Number Two Drive once the subdivision is developed, it is recommended that the stop condition be assigned to the Tipple Drive approach and allow Number Two Drive to operate freely. It is assumed that very few vehicles use the Tipple Drive approach at Number Two Drive. With the increase northbound

and southbound travel combined with the reduced sight distance from Tipple Drive looking to the south, it is recommended that a Stop Sign (R1-1) and a 24" white stop bar be installed on the Tipple Drive approach. Sight distance to the south is reduced from Tipple Drive due to the placement of the private garage/warehouse on the southwest corner of the intersection.

\* 2h) Similar to the existing pavement expanse on Number Two Drive at God's Way Baptist Church, Mascot Baptist Church also has extraneous pavement adjacent to Number Two Drive. It is recommended that this section of Number Two Drive also be delineated with a white edge line or transverse white pavement islands or as deemed appropriate by Knox County Engineering.



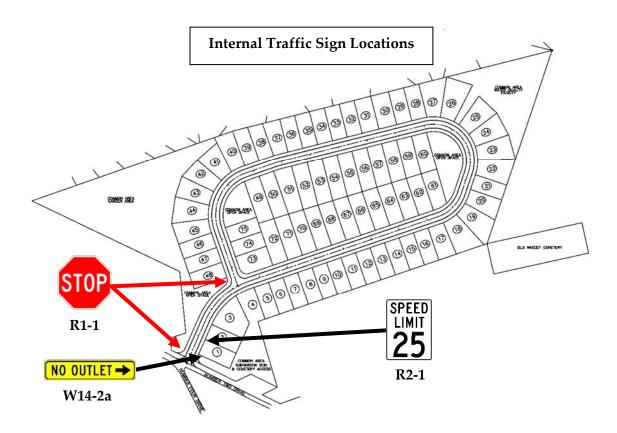
\* 2i) It is recommended that Church Zone Signs be installed on each approach of Number Two Drive in advance of Mascot Baptist Church. It is recommended that this signage be installed on the southbound approach of Number Two Drive just to the south of the intersection of Number Two Drive at Tipple Drive. The signage for the northbound approach of Number Two Drive should be installed just to the north of the proposed subdivision entrance, Road "A".





<u>River Pointe Subdivision Internal Roads</u>: The current concept plan shows one new looped street being constructed within the development, as shown in Figure 3.

- 3a) It is recommended that a "No Outlet" Sign (W14-2a) be posted at the front of the subdivision on Road "A". This sign can be posted below the street name sign. A 25-mph Speed Limit Sign (R2-1) should also be posted at the beginning of Road "A".
- 3b) Stop Signs (R1-1) with 24" white stop bars and the other traffic signage should be installed at the locations as shown below:



- 3c) Sight distance at the new internal intersections in the subdivision must not be impacted by new signage or future landscaping. For a posted speed limit of 25-mph in the subdivision, the intersection sight distance requirement is 250 feet. The stopping sight distance required is 155 feet for a level road grade. The road layout designer should ensure that these sight distance lengths are met, and they should be labeled on the plans.
- 3d) All drainage grates and covers for the residential development need to be pedestrian and bicycle-safe.



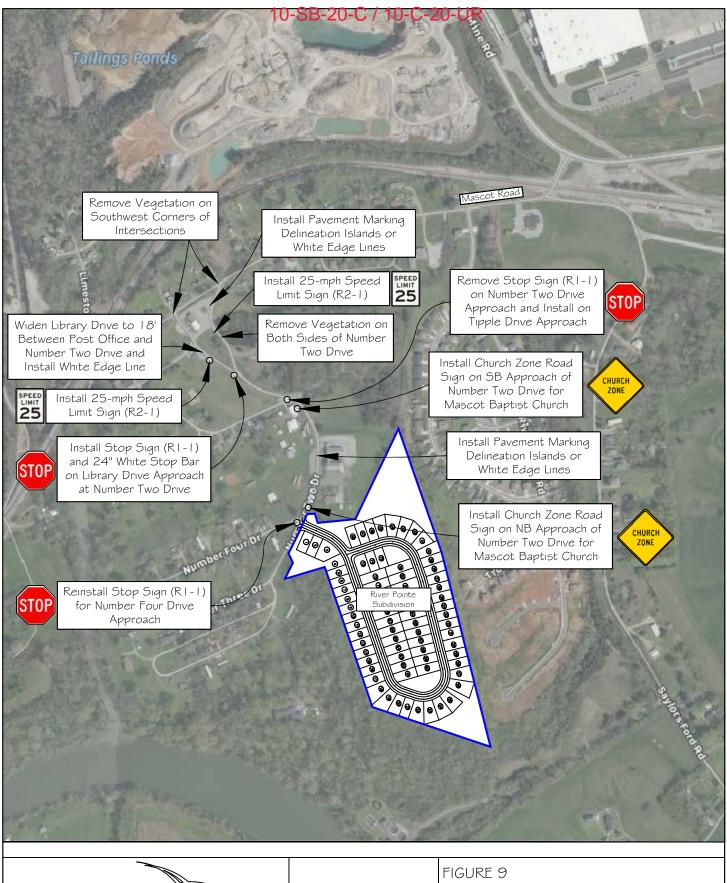
3e) The United States Postal Service (USPS) has recently implemented changes to its guidelines for delivery in new residential subdivisions. If directed by the local post office, the designer should include an area within the development with a parking area for a centralized mail delivery center.



3f) All road grade and intersection elements, internally and externally, should be designed to AASHTO, TDOT, and Knox County specifications and guidelines to ensure proper operation.



#### EXHIBIT A





I 1812 Black Road Knoxville, TN 37932 Phone: (865) 556-0042 Email: ajaxengineering@gmail.com NOT TO SCALE



River Pointe Subdivision

Summary of External Recommendations



## DEVELOPMENT REQUEST

	DEVELOPMENT		BDIVISION	ZONING	
Planning KNOXVIELE I KNOX COURTY	☐ Development Plan ☐ Use on Review / Spe		Concept Plan Final Plat	<ul><li>☐ Plan Amendment</li><li>☐ Rezoning</li></ul>	
Fulton Properties, LLC					
Applicant			(10	D-C-20-0R)	
8/24/2020	September 10, 2020		10.	(10-C-20-UR) 10-58-20-C	
Date Filed	Meeting Date (if appli	Meeting Date (If applicable) File Numbers(s)			
CORRESPONDENCE All correspondence related to this a	application should be directed to	o the approved con	tact listed below.		
☐ Applicant ☐ Owner ☐ Op		•		dscape Architect	
Garrett Tucker, PE		Robert G.	Campbell and	Associates, LP	
Name		Company			
7523 Taggart Lane		Knoxville	TN	37938	
Address		City	State	73p	
865-947-5996	gtucker@rgc-a.	com			
Phone	[mail				
CURRENT PROPERTY	INFO				
Cynthia & Roger Britton	P.O. Box	201		(865) 803-3320	
Owner Name (if different)	Owner Addr	ess		Owner Phone	
Mascot, TN 37806		CL	T 52 Part of Pa	arcel 18.02	
Property Address SWend	Cofnunbergi	vo Dr. Parc	el ID		
1740 Number Two Drive	,		20.2	1 Ac	
General Location			Tract S	Tract Size	
Elghth		PR	PR (Pending)		
Jurisdiction (specify district above)	City County	Zoni	ng District		
Northeast County	LDR		Plan	ned Growth	
Planning Sector	Sector Plan Land Use Classification		Growt	Growth Policy Plan Designation	
AgForVac	N	KUB		NEKUD	
Existing Land Use	Septic (Y/N)	Sewer Pro	vider	 Water Provider	

## REQUEST

NT	Development Plan 🔳 Use on Review / Special Use					
PME	Residential 🔲 Non-Residential					
ELO	☐ Home Occupation (specify):					
DEVELOPMENT	1) Other (specify): Detached residential subdicision					
NOISIAIGENS	River Pointe   Proposed Subdivision Name					
	☐ Zoning Change:					
	Proposed Zoning					
SONING	] Plan Amendment Change: Proposed Plan Designation(s)					
	☐ Proposed Property Use (specify) Proposed Density (units/acre) Previous Rezoning Requests					
	☐ Other (specify):					
Ŀ	4					
7 .	PLAT TYPE	FEE 1:	TOTAL:			
7	☐ Administrative ☐ Meeting	0400	1 4.			
FF USE ONLY	ATTACHMENTS	FEE 2:	#3,321			
JSE	☐ Property Owners / Option Holders ☐ Variance Request		14 1			
H	ADDITIONAL REQUIREMENTS					
K	Design Plan Certification (Final Plat only)  But Use on Review / Special Use (Concept Plan only)	FEE 3:				
	Traffic Impact Study					
	AUTHORIZATION  Staff Signature  William Alexand  Applicant Signature  Please Print	ins US	8/24/2020 Date les 7/17/20			

