

SUBDIVISION REPORT -CONCEPT/USE ON REVIEW

FILE #: 10-SC-21-C	AGENDA ITEM #: 29
10-E-21-UR	AGENDA DATE: 10/14/2021
SUBDIVISION:	ISABEL ESTATES
APPLICANT/DEVELOPER:	MESANA INVESTMENTS
OWNER(S):	Robert Falkner
TAX IDENTIFICATION:	20 132 View map on KGIS
JURISDICTION:	County Commission District 8
STREET ADDRESS:	6517 Brackett Rd.
LOCATION:	Northeast side of Brackett Road, north of E. Emory Road
SECTOR PLAN:	Northeast County
GROWTH POLICY PLAN:	Planned Growth Area
WATERSHED:	Beaver Creek
APPROXIMATE ACREAGE:	30.03 acres
ZONING:	PR (Planned Residential)
EXISTING LAND USE:	Agriculture
PROPOSED USE:	Detached residential subdivision
SURROUNDING LAND USE AND ZONING:	North: Agricultural and rural residential A (Agricultural) and PR (Planned Residential) South: Agricultural A (Agricultural) East: Agricultural - A (Agricultural) West: Brackett Road, agricultural A (Agricultural)
NUMBER OF LOTS:	90
SURVEYOR/ENGINEER:	Robert G. Campbell, PE / Robert G. Campbell & Associates, LP
ACCESSIBILITY:	Access is via Brackett Road, a local street with 18 to 20-ft of pavement width within 40-ft of right-of-way.
 SUBDIVISION VARIANCES REQUIRED: 	None

STAFF RECOMMENDATION:

Approve the Concept Plan subject to 11 conditions.

 Connection to sanitary sewer and meeting any other relevant requirements of the utility provider.
 Implementation of the recommended street and intersection improvements outlined in the Isabel Estates Transportation Impact Study (Fulghum MacIndoe, revised September 23, 2021), as revised and approved by the Knox County Department of Engineering and Public Works, Tennessee Department of Transportation (TDOT), and Planning staff. The design details of the eastbound left turn lane on E. Emory Road shall be worked out with the Knox County Department of Engineering and Public Works and TDOT during the design

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plan stage for the subdivision.

3. As recommended by the Transportation Impact Study and Knox County Engineering and Public Works, a maximum of 66 lots may be platted before the left turn lane on E. Emory Road has been installed by the applicant or future improvements to E. Emory Road that includes an eastbound left turn lane at the Brackett Road intersection are complete.

4. If Knox County Engineering and Public Works determine that the width of Brackett Road is less than 18-ft wide between the Road 'A' and E. Emory Road intersections, the applicant must widen the deficient sections of Brackett Road between these intersections to a minimum width of 18-ft. Design plans for the road widening shall be submitted to the Knox County Department of Engineering and Public Works at the design plan stage of the subdivision with the improvements being made in conjunction with the road improvements for the subdivision.

5. Verifying during the design plan phase that the minimum sight distance can be obtained at the Road 'A' intersection with Brackett Road.

6. Installing notification of future street connection at the east end of Road "D" as required by Section 3.04.C.2.d. of the Knoxville-Knox County Subdivision Regulations.

7. Meeting the requirements of Knox County Engineering and Public Works.

8. Meeting the requirements of the Tennessee Department of Transportation.

9. Provision of street names that are consistent with the Uniform Street Naming and Addressing System within Knox County (Ord 91-1-102).

Submitting to Planning Commission staff prior to final plat review by the Planning Commission, the certification of design plan approval form as required by the Knoxville-Knox County Subdivision Regulations.
 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, amenities, and drainage system.

Approve the development plan for up to 90 detached dwelling units on individual lots and a reduction of the peripheral setback from 35-ft to 30-ft along the northwest boundary of the development where adjacent to PR (Planned Residential) zoning only, subject to 2 conditions.

1) Meeting all applicable requirements of the Knox County Zoning Ordinance.

2) Providing the boundary of the adjacent PR (Planned Residential) zoning to the north when the final plat is submitted and adjusting the 30-ft peripheral setback to only be located along the shared boundary line with the PR zoning to the north. The peripheral setback is required to be 35-ft around the remainder of the development boundary.

With the conditions noted, this plan meets the requirements for approval in the PR (Planned Residential) district and the criteria for approval of a use on review.

COMMENTS:

This proposal is for a 90-lot subdivision on this 30.03-acre parcel at a density of 2.99 du/ac. The property was recently rezoned from A (Agricultural) to PR (Planned Residential) up to 3 du/ac (8-K-21-RZ). There are two large common areas that are each approximately 4.4 acres, or 29 percent of the total land area. A 25-ft access easement is provided over lots 72 and 73 to allow a pedestrian connection to the common area in the northeast corner of the property. The typical lot size proposed is 55-ft wide by 120-ft deep (6,600 sqft). A right-of-way stub-out is provided at the eastern terminus of Road 'D' to provide future connection to the large property to the east, which has frontage on Majors Road. This is an opportunity to improve connectivity in the road network.

TRANSPORTATION IMPROVEMENTS

The Isabel Estates Transportation Impact Study (TIS) is based on a 122 lot single-family subdivision, as submitted on the original concept plan, however, the number of lots was reduced to 90 on the revised concept plan because Knox County Commission approved the PR (Planned Residential) zoning up to 3 du/ac instead of 4.06 du/ac requested by the applicant. However, the road improvements recommended by the TIS are the same whether the development has 90 or 122 lots.

The TIS analyzed the portion of Brackett Road from the subdivision entrance to E. Emory Road, the proposed intersection of Brackett Road at Road 'A', and the intersection of E. Emory Road at Brackett Road. Following is a summary of the TIS conclusions and recommendations (see Exhibit A for the full excerpt from the TIS): 1) E. Emory Road at Brackett Road: The TIS determined that an eastbound left turn lane is warranted. The number of houses that can be constructed before the turn lane must be installed is either 44 or 66, depending on the background growth rate assumption. At a conservative growth rate of 2 percent, no more than 44 houses can be built before the turn lane is warranted. A growth rate of less than 2 percent will allow 66 houses to be built before the turn lane is warranted. The turn lane must meet the design standards of the Tennessee

Department of Transportation (TDOT). Staff is recommending that a maximum of 66 lots be platted before the turn lane is installed or TDOT completes the E. Emory Road improvements.

TDOT plans to widen this section of E. Emory Road, from Maynardville Pike to Tazewell Pike, from 2-lanes to 4-lanes with a median and/or center turn lane. The TIS states that this widening project is proposed to start in late-2025, however, a TDOT representative stated it will likely be closer to 2030 before this project starts.

The TIS also states that the required sight distance at this intersection is 450-ft and the existing sight distance eastbound is only 400-ft because of the existing roadway profile.

2) Brackett Road at Road 'A': The sight distance at Road 'A' is partially blocked due to existing trees and vegetation in the Brackett Road right-of-way. The sight distance needs to be re-evaluated after the completion of the development to verify the minimum sight distance can be obtained.

3) Brackett Road: The minimum width for a low volume road (less than 2,000 vehicles per day) with a 25-MPH speed limit is 18-ft wide. The existing width of Brackett Road varies between 18-ft and 20-ft between E. Emory Road and Road 'A'. If during the design plan phase it is determined that the pavement width is less than 18-ft, the applicant may be required to widen the deficient portions of the road.

PERIPHERAL SETBACKS

The applicant is requesting a 30-ft peripheral setback on the northwestern boundary of lots 74-76. Staff's recommendation is to approve the 30-ft peripheral setback only along the shared boundary line with the PR zoned property to the north. The Concept Plan does not provide the parcel lines for the surrounding lots so it is unknown if the lots 74-76 are adjacent to the PR zoning to the north or the A (Agricultural) zoned property.

DEVELOPMENT STANDARDS FOR USES PERMITTED ON REVIEW (ARTICLE 4.10 - SECTION 2)

The planning commission, in the exercise of its administrative judgment, shall be guided by adopted plans and policies, including the general plan and the following general standards:

1) THE PROPOSED USE IS CONSISTENT WITH THE ADOPTED PLANS AND POLICIES, INCLUDING THE GENERAL PLAN AND SECTOR PLAN.

A. The Northeast County Sector Plan recommends LDR (Low Density Residential) uses for this site with a maximum of 5 du/ac.

B. The property is in the Planned Growth area of the Growth Policy Plan which allows a maximum of 5 du/ac.

C. The proposed density of 2.99 du/ac is compliant with the recommendations of the Northeast County Sector Plan and the Growth Policy Plan.

2) THE USE IS IN HARMONY WITH THE GENERAL PURPOSE AND INTENT OF THE ZONING ORDINANCE.

A. The PR (Planned Residential) zone is intended to provide optional methods of land development which encourage more imaginative solutions to environmental design problems. Residential areas thus established would be characterized by a unified building and site development program, open space for recreation and provision for commercial, religious, educational, and cultural facilities which are integrated with the total project by unified architectural and open space treatment. Each planned unit development shall be compatible with the surrounding or adjacent zones. Such compatibility shall be determined by the planning commission by review of the development plans.

B. The proposed residential subdivision with detached houses is compatible with the surrounding detached houses.

3) THE USE IS COMPATIBLE WITH THE CHARACTER OF THE NEIGHBORHOOD WHERE IT IS PROPOSED, AND WITH THE SIZE AND LOCATION OF BUILDINGS IN THE VICINITY.

A. The surrounding land use is primarily agriculture and vacant land, and a few houses on large properties. The proposed single family development will be the first of this type with access to Brackett Road. There are other similar residential developments in the general area but they have access to E. Emory Road or other side streets.

4) THE USE WILL NOT SIGNIFICANTLY INJURE THE VALUE OF ADJACENT PROPERTY.

A. The use of the property for a detached residential subdivision will not significantly injure the value of adjacent properties since they are currently used for agricultural purposes or residences.

B. The large lot residential property to the north of the property will be buffered from the houses in this subdivision by a 4+ acre common area.

C. The residences on the properties to the south are approximately 400-ft or more from the subject property.

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5) THE USE WILL NOT DRAW ADDITIONAL TRAFFIC THROUGH RESIDENTIAL AREAS.

A. The proposed development will have access to Brackett Road with residential uses along it, however, this type of road would not traditionally be considered a residential street because of the amount of frontage dedicated to non-residential uses, which in this case is agriculture. In addition, the proposed development is for residential purposes, not non-residential.

6) THE NATURE OF DEVELOPMENT IN THE SURROUNDING AREA IS NOT SUCH AS TO POSE A POTENTIAL HAZARD TO THE PROPOSED USE OR TO CREATE AN UNDESIRABLE ENVIRONMENT FOR THE PROPOSED USE.

A. There are no known uses in the area that could be a potential hazard or create an undesirable environment for the proposed residential use.

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: 30 (public school children, grades K-12)

Schools affected by this proposal: Gibbs Elementary, Gibbs Middle, and Gibbs High.

• Potential new school population is estimated using locally-derived data on public school student yield generated by new housing.

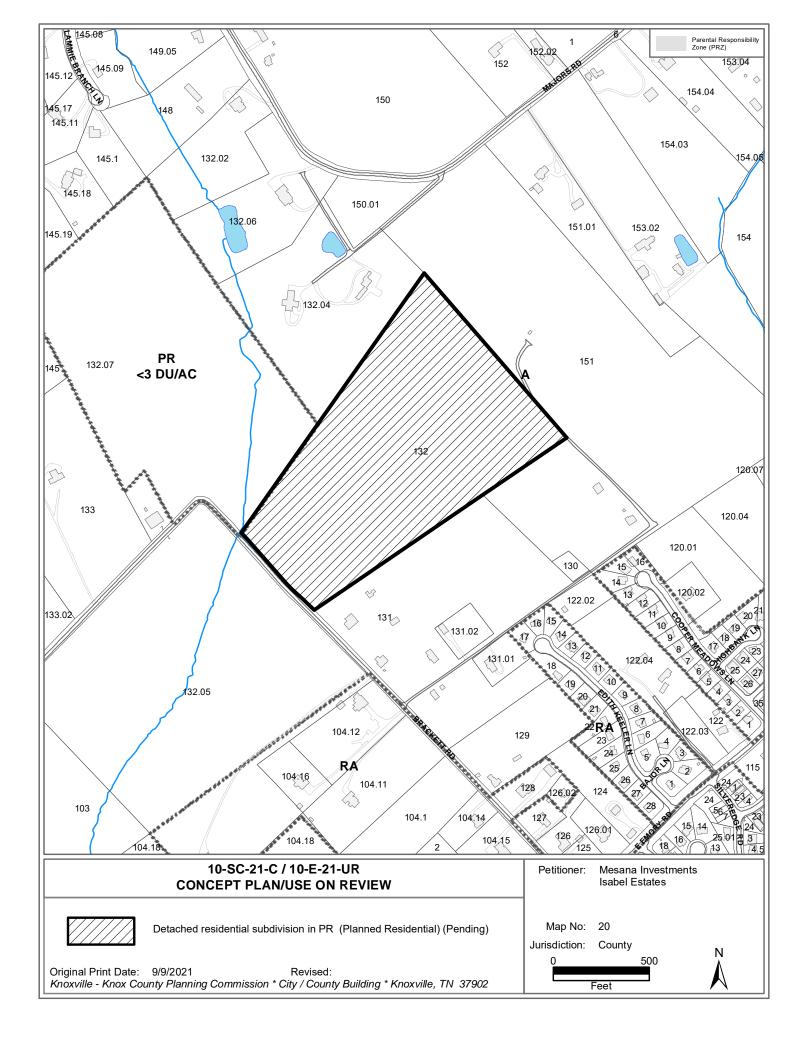
• Students are assigned to schools based on current attendance zones as determined by Knox County Schools. Students may request transfers to different zones, and zone boundaries are subject to change.

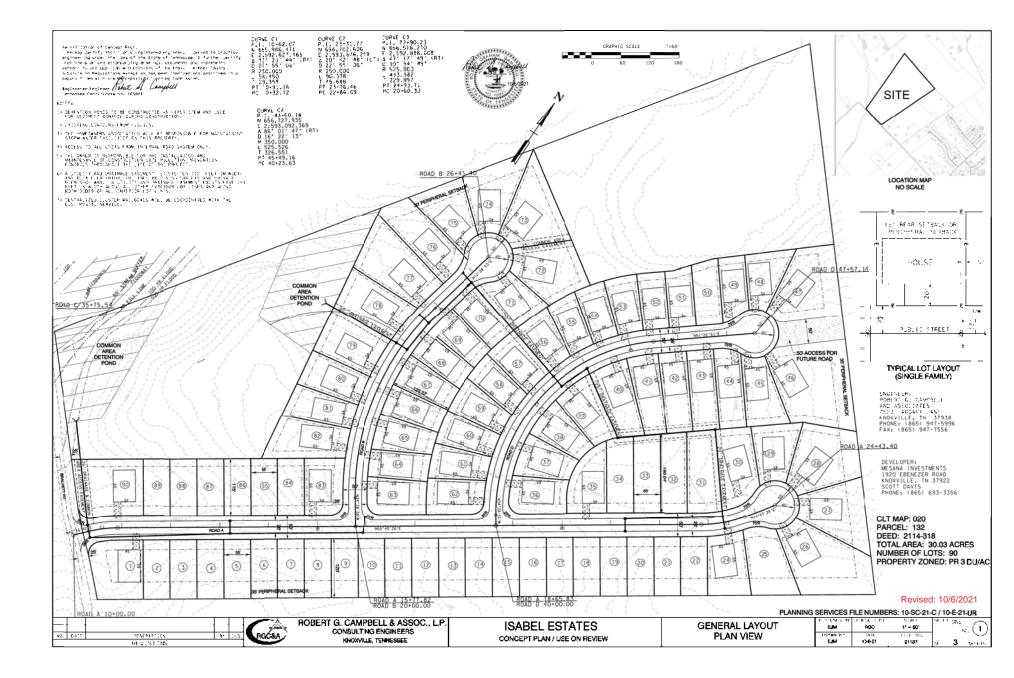
• Estimates presume full build-out of the proposed development. Build-out is subject to market forces, and timing varies widely from proposal to proposal.

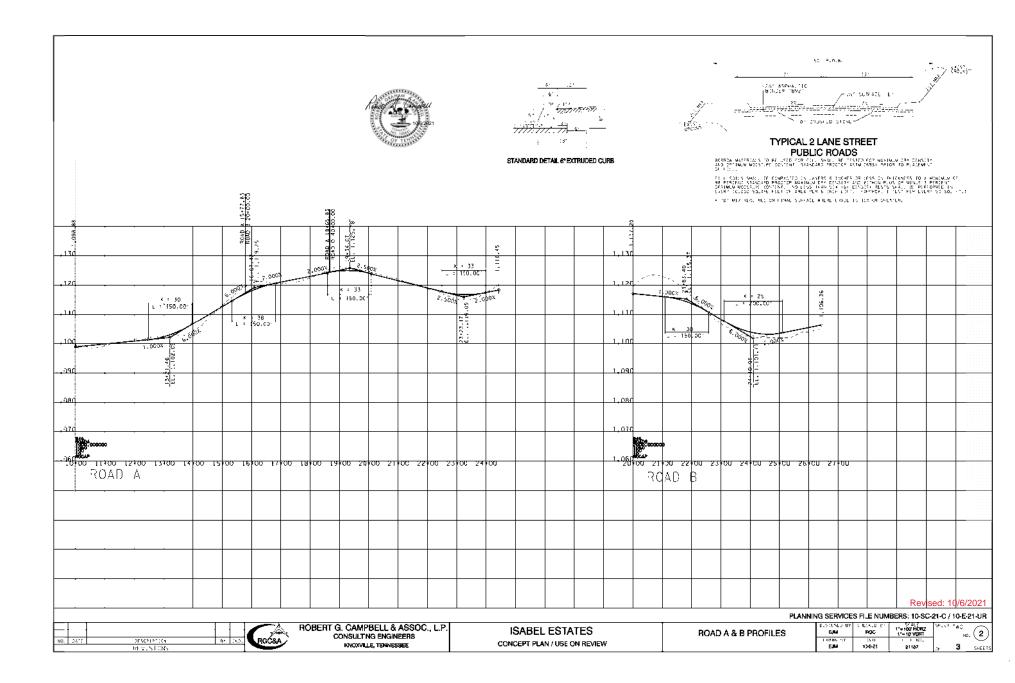
• Student yields from new development do not reflect a net addition of children in schools. Additions occur incrementally over the build-out period. New students may replace current population that ages through the system or moves from the attendance zone.

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.







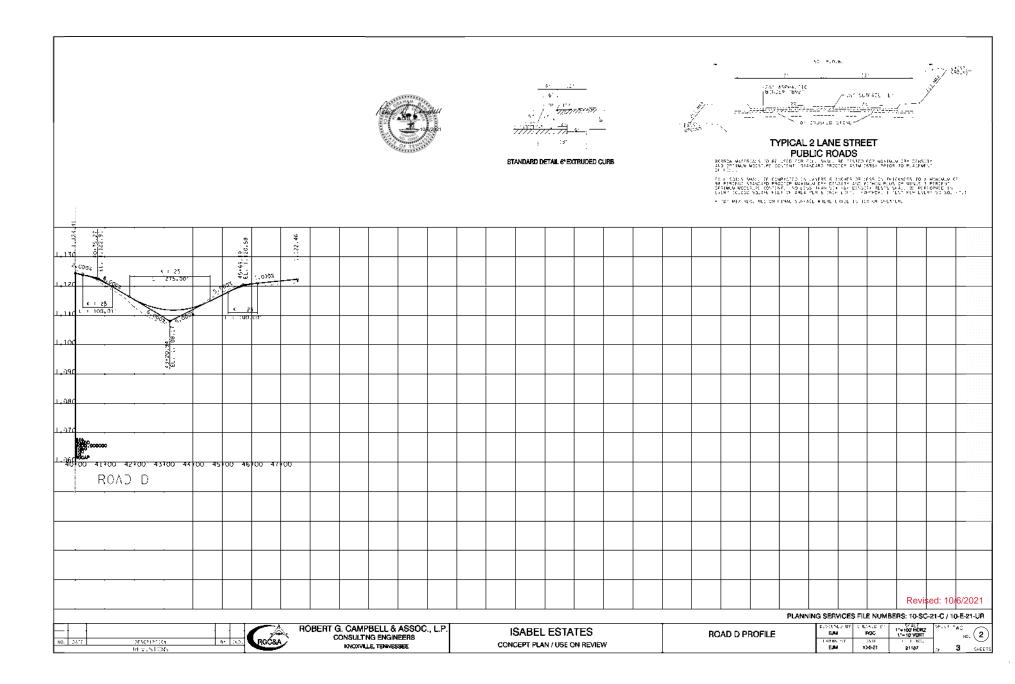


EXHIBIT A

ISABEL ESTATES Transportation Impact Analysis E Emory Road (SR 131) Knoxville, TN

A Transportation Impact Analysis for the Isabel Estates Subdivision

Submitted to

Knoxville - Knox County Planning

Revised September 23, 2021 August 27, 2021 FMA Project No. 588.012



10-SC-21-C 10-E-21-UR TIS Revision 1 9/24/2021

Submitted By:



EXHIBIT A

Isabel Estates Transportation Impact Analysis September 23, 2021

6 Turn Lane Warrant Analysis

The intersection of E Emory Road (SR 131) at Brackett Road was evaluated to determine if a westbound right turn lane or an eastbound left turn lane are warranted. The Knox County Department of Engineering and Public Works handbook, "Access Control and Driveway Design Policy," was used to analyze the information.

A westbound right turn lane is not warranted during either the AM or PM peak hour after the full buildout of the Isabel Estates.

An eastbound left turn lane is warranted during the PM peak hour due to the high volume of existing traffic on E Emory Road (SR 131). During the PM peak hour the through volume on E Emory Road (SR 131) is 600 vehicles per hour which puts the maximum allowed left turns before a warrant is met to between 15 left turns and 20 left turns depending on the assumption for the background growth rate. FMA assumed a conservative 2% growth rate but anything less than 2% would result in an estimated through volume on E Emory Road (SR 131) to be less than 600.

FMA calculated that 44 single family lots will increase the left turns to 15 and 66 single family lots will increase the left turns to 20; therefore, no more than 66 single family homes can be built before a left turn lane will be required at the intersection of E Emory Road (SR 131) at Brackett Road.

The turn lane warrant worksheets and analysis are included in Attachment 8.

7 Conclusions and Recommendations

7.1 E Emory Road (SR 131) @ Brackett Road

The existing, background and full buildout conditions at the unsignalized intersection of E Emory Road (SR 131) at Brackett Road were analyzed using the Highway Capacity Software (HCS7).

The existing and background traffic conditions for the eastbound left turn movement (E Emory Road (SR 131)) operate at a LOS A during both the AM and PM peak hours and the southbound approach (Brackett Road) operates at a LOS C during both the AM and PM peak hours.

After the completion of the Isabel Estates residential development the full buildout traffic conditions for the intersection of E Emory Road (SR 131) at Brackett Road will operate as follows. The eastbound left turn movement (E Emory Road (SR 131)) will

EXHIBIT A

Isabel Estates Transportation Impact Analysis September 23, 2021

operate at a LOS A during both the AM and PM peak hours. The southbound approach (Brackett Road) will operate at a LOS C during the AM peak hour and a LOS D during the PM peak hour.

The 95% queue length is defined as the queue length that has only a 5-percent probability of being exceeded during the analysis time period. The 95% queue length is typically used to determine the length of turning lanes in order to minimize the risk of blockage.

The unsignalized intersection capacity analysis shows the full buildout 95% queue length for the southbound approach (Brackett Road) of 1.1 car lengths during both the AM and PM peak hours. The distance between E Emory Road (SR 131) and the first driveway connection on Brackett Road is approximately 70 feet, which will allow up to three cars to queue before blocking the driveway connection. Based on the HCS7 queue analysis the existing storage at the intersection of E Emory Road (SR 131) at Brackett Road is adequate and no improvements to the intersection are necessary in order to accommodate the Isabel Estates residential development.

A westbound right turn lane on E Emory Road (SR 131) is not warranted and an eastbound left turn lane is warranted during the PM peak hour per the Knox County Department of Engineering and Public Works handbook, "Access Control and Driveway Design Policy."

FMA recommends that no more than 66 single family lots be built before re-evaluating the warrant for a left turn lane. The need for a left turn lane will be mitigated as long as the TDOT road widening project on E Emory Road (SR 131) remains active and on schedule.

The minimum required sight distance for a road with a posted speed limit of 45 mph is 450 feet in each direction in accordance with the "Knoxville-Knox County Subdivision Regulations" amended through February 13, 2020. FMA measured the sight distance at the existing intersection of E Emory Road (SR 131) at Brackett Road in September 2021. At 15 feet from the edge of pavement the existing sight distance is 400 feet eastbound and 450 feet westbound. The inadequate sight distance eastbound is caused by the existing roadway profile.

7.2 Brackett Road @ Driveway Connection Road "A"

Brackett Road is not classified by the Major Road Plan; therefore, it is considered a local street. The minimum intersection spacing required on a local street is 125 feet per the "Knoxville-Knox County Subdivision Regulations" amended through February 13, 2020. The Driveway Connection Road "A" is located approximately 2,210 feet

north of the intersection with E Emory Road (SR 131) and exceeds the typical minimum separation on a local street; therefore, no change is necessary.

The minimum required sight distance for a road with a posted speed limit of 25 mph is 250 feet in each direction in accordance with the "Knoxville-Knox County Subdivision Regulations" amended through February 13, 2020. FMA measured the sight distance at the proposed intersection of Brackett Road at Driveway Connection Road "A" in August 2021. At 15 feet from the edge of pavement the sight distance at the proposed intersection is greater than 250 feet northbound and southbound; however, the southbound sight distance is partially blocked due to the existing trees and vegetation located within the right-of-way.

FMA recommends that the sight distance be re-evaluated in the field after the completion of the proposed Isabel Estates residential development to ensure that the sight distance complies with the requirements for Knox County Engineering and Public Works.

Road "A", Road "B", Road "C" and Road "D" will have a width of 26 feet in accordance with the "Knoxville-Knox County Subdivision Regulations" amended through February 13, 2020.

Any required sight distance easements for the internal subdivision intersections of Road "A", Road "B", Road "C" and Road "D" should be coordinated with Knox County Engineering and Public Works and included on the final design drawings prior to construction of the subdivision.

7.3 Brackett Road

Per AASHTO "Guidelines for Geometric Design of Low-Volume Roads" Brackett Road is classified as a Rural Minor Access Road with its sole function to provide access to adjacent property. The minimum required roadway width for a minor access road with a 25 mph design speed is 18 feet. All low-volume roads have a maximum average daily traffic volume of 2,000 vehicles per day or less.

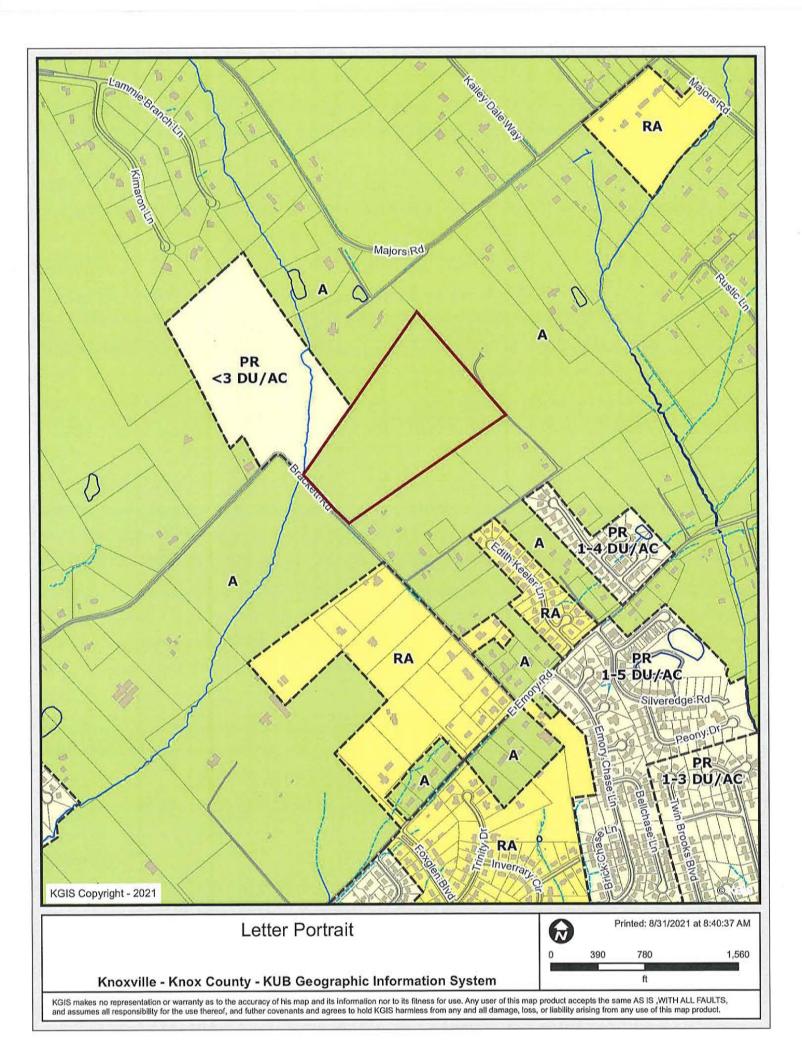
The existing width of Brackett Road between E Emory Road and the driveway connection (Road "A") varies between 18 feet and 20 feet and the length of Brackett Road between Bell Road and E Emory Road (SR 131) is 6,540 LF.

Planning KNOXVILLE I KNOX COUNTY	Development Development Plan Planned Development Use on Review / Special I Hillside Protection COA 	SUBDIV © Conc □ Final	r isiōn cept Plan	St ZONING Plan Amendment SP OYP Rezoning
Mesana Investments				
Applicant Name		(0)	Affiliat	tion
August 27, 2021	October 14, 2021-			File Number(s)
Date Filed	Meeting Date (if applicabl	e)	10-SC-21-(C / 10-E-21-UR
CORRESPONDENCE	All correspondence related to this app	lication should be dir	ected to the a	pproved contact listed below.
Applicant Owner D	Option Holder 🛛 Project Surveyor	🔳 Engineer 🛛	Architect/Lan	dscape Architect
Robert G. Campbell, PE		Robert G. Camp	obell and As	sociates, LP
Name		Company		
7523 Taggart Lane		Knoxville	TN	37938
Address		City	State	ZIP .
865-947-5996	rcampbell@rgc-a.co	m		
Phone	Email			
CURRENT PROPERTY INF	0			
Robert Falkner	2910 Aburn F	alls Lane Housto	on, TX 11084	4
Owner Name (if different)	Owner Address			Owner Phone
6517 Brackett Road		CLT 020	Parcel 132	2
Property Address	and a second	Parcel ID		
HPUD ,	HPUD			N
Sewer Provider	Water F	Provider	al la Minerale d'Angla	Septic (Y/N)
STAFF USE ONLY				
and a state of the	rackett Rd., north of E. J	Emory Rd.		0.03 acres
General Location			Tract	Size
City County	PR (pending)	and the second se	AgForVa	c
District	Zoning District	Existin	g Land Use	
Northeast County	LDR & SP		and the second se	Planned Growth
Planning Sector	Sector Plan Land Use Cla	sslfication	Grow	th Policy Plan Designation

December 2020

1.61

DEVELOPMENT REQUEST					0.17 (1995, 1996, 1996, 1996)	
 Development Plan Use on Review / Special I Residential Non-Residential Home Occupation (specify) 					Related Clty	Permit Number(s)
Other (specify) Detached residential lo	ots					
SUBDIVISION REQUEST		(Present Courses from 1997, 199	1949 - 1942 No. 1940 - 1940 - 194			
Isabel Estates						oning File Number
Proposed Subdivision Name			100		8-6	(-21-RZ
Unit / Phase Number	Divide Parcel	Total Numb	122 er of Lots Cre	ated		1090)f7
Other (specify)						
Attachments / Additional Requirements						
ZONING REQUEST						
					Pending	Plat File Number
Zoning Change Proposed Zoning						
Plan Amendment Change Proposed Plan Desig	nation(s)					
Proposed Density (units/acre) Previ	ous Rezoning Re	equests			-)(-	
Other (specify)						
STAFF USE ONLY						
			Fee 1			Total
PLAT TYPE Staff Review Planning Commission						(ota)
Staff Review I Planning Commission ATTACHMENTS			0406	4	303.00	
Property Owners / Option Holders Variance Variance	e Request		ftbase fee \$100/a	e \$130	0 +	
ADDITIONAL REQUIREMENTS			\$100/a	cre x 3	0.03 acr	es
Design Plan Certification (Final Plat)						
Use on Review / Special Use (Concept Plan)			Fee 3			
Traffic Impact Study				r		
COA Checklist (Hillside-Protection)						\$4303.00
AWITHOF ZATILY IN By signing below, I cer	tify I am the pro	operty owner,	applicant or	the own	ers authorize	d representative.
Sulfarm	Mesana II	nvestment	S		7/26	/2021
Applicant Signature	Please Print				Date	
865-693-3356	swd444@	gmail.com	í			
Phone Number	Emall					
Sherry Michienji	Sherry	Michienz	zi	SW	m / 8-30	-21
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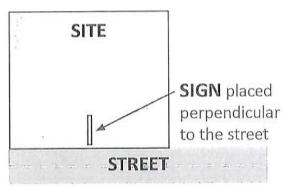




Sign Posting & Removal Requirement

Revised April 2021

The Administrative Rules and Procedures of the Knoxville-Knox County Planning Commission require a sign to be posted on the property for each application subject to consideration by the Planning Commission, including the following applications: rezoning, plan amendment, concept plan, use on review/special use, planned development, right-ofway closure, and name change.



The required public notice sign(s) will be provided by Planning to the applicant when an application is submitted. If an application is submitted electronically, Planning staff will post the required sign. If a replacement sign(s) is needed, the applicant is responsible for picking up the new sign(s) from Planning and will be charged \$10 for each replacement.

LOCATION AND VISIBILITY

The sign must be posted on the nearest adjacent/frontage street and in a location clearly visible to vehicles traveling in either direction. If the property has more than one street frontage, the sign should be placed along the street that carries more traffic. Planning staff may recommend a preferred location for the sign to be posted at the time of application.

TIMING

The sign(s) must be posted **not less than 12 days prior to the scheduled Planning Commission public hearing** and must remain in place until the day after the meeting. In the case of a postponement, the sign can either remain in place or be removed and reposted not less than 12 days prior to the next Planning Commission meeting. The applicant is responsible for removing the sign after the application has been acted upon by the Planning Commission.

The individual below is responsible for posting and removing the sign(s) provided consistent with the above guidelines and between the dates of:

Sept 30	and	Oct 15	-
(applicant or staff to post sign	1)	(applicant to remove sign)	
Applicant Name: mesana	Investment		
Date: 83021	1	Sign posted by Staff	
File Number: 10-5C-21-C	10-E-21-UR	Sign posted by Applicant	

Knoxville-Knox County Planning | KnoxPlanning.org 400 Main Street, Suite 403 | Knoxville, TN 37902 | 865.215.2500