



SUBDIVISION REPORT - CONCEPT/USE ON REVIEW

▶ **FILE #:** 9-SC-20-C
9-F-20-UR

AGENDA ITEM #: 21
AGENDA DATE: 9/10/2020

▶ **SUBDIVISION:** WESTLAND OAKS

▶ **APPLICANT/DEVELOPER:** MESANA INVESTMENTS, LLC

OWNER(S): Mesana Investments, LLC

TAX IDENTIFICATION: 154 002 & 00201 PART OF [View map on KGIS](#)

JURISDICTION: County Commission District 5

STREET ADDRESS: 9900 & 9942 Westland Dr.

▶ **LOCATION:** South side of Westland Drive, west side of Ridge Climber Rd.

SECTOR PLAN: Southwest County

GROWTH POLICY PLAN: Planned Growth Area

WATERSHED: Sinking Creek

▶ **APPROXIMATE ACREAGE:** 22 acres

▶ **ZONING:** PR (Planned Residential)

▶ **EXISTING LAND USE:** Vacant

▶ **PROPOSED USE:** Attached residential subdivision

SURROUNDING LAND USE AND ZONING: North: Residences and vacant land / A (Agricultural)
South: Residences / RA (Low Density Residential)
East: Residences and vacant lots / PR (Planned Residential) (k)
West: Residences and vacant land / A (Agricultural) & RA (Low Density Residential)

▶ **NUMBER OF LOTS:** 68

SURVEYOR/ENGINEER: William C., Jr. Fulghum

ACCESSIBILITY: Access is via Ridge Climber Road, a local street with a 22' pavement width within a 40' right-of-way.

▶ **SUBDIVISION VARIANCES REQUIRED:** ALTERNATIVE DESIGN STANDARDS REQUIRING PLANNING COMMISSION APPROVAL:

1. Reduce minimum horizontal curve radius from 250 ft to 220 ft on Road "B" from STA 0+00.00 to STA 2+68.34.

STAFF RECOMMENDATION:

▶ **APPROVE** alternative design standard 1 based on the recommendations of the Knox County Department of Engineering and Public Works because the proposed alternative design standard will not create a traffic hazard.

APPROVE the Concept Plan subject to 7 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 sidewalks as identified on the concept plan. Sidewalks shall meet all applicable requirements of the Americans with Disabilities Act (ADA) and the Knox County Department of Engineering and Public Works. A bond shall be provided to the Knox County Department of Engineering and Public Works by the developer in an amount sufficient to guarantee the installation of the sidewalks.
4. Implementation of the street and intersection improvements and recommendations outlined in the Traffic Impact Study prepared by Fulghum MacIndoe & Associates, Inc. as revised on August 24, 2020, and as approved and required by the Knox County Department of Engineering and Public Works. The design details and timing of the installation of the improvements shall be determined by the Knox County Department of Engineering and Public Works during the design plan stage for the subdivision. (See Exhibit A)
5. During the design plan stage of the subdivision review, the applicant shall work with the Knox County Department of Engineering and Public Works and Planning staff to minimize the clearing and grading of the common areas identified on the concept plan. When the grading and stormwater plans are finalized, a plan shall be prepared that identifies the areas within the common area that are to remain as undisturbed areas. The boundary for the undisturbed areas shall be clearly marked in the field prior to any site grading in order to identify the limits of disturbance and protect those areas of mature vegetation. The area to remain undisturbed shall be identified on the final plat for the subdivision. Minor clearing may be allowed in this area for a passive trail system or approved amenity area. Selective removal of trees is permitted that are dead or dying, an invasive species, or must be removed for safety reasons, such as a falling hazard.
6. Meeting all applicable requirements of the Knox County Department of Engineering and Public Works.
7. Submitting to Planning staff prior to final plat review by the Planning Commission or Planning staff, the certification of design plan approval form as required by the Knoxville-Knox County Subdivision Regulations (Section 2.08, Design Plan -- Major Subdivisions).

► **APPROVE the Development Plan for up to 68 attached dwelling units on individual lots, 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 Use on Review.

COMMENTS:

The applicant is proposing to develop this 22 acre tract with 68 attached residential lots as the third and final phase of Westland Oaks Subdivision. The Planning Commission approved 59 attached units on 19.2 acres for this same phase of the development in February 2020 (2-SB-20-C/2-D-20-UR). The applicant subsequently purchased 2.8 acres adjacent to this phase and rezoned it to PR (Planned Residential) in June 2020 (5-5-20-RZ). This proposal incorporates this new area which is located at the western end of Road 'B'. The subdivision has access out to Westland Drive at two locations, which includes Ridge Climber Road on the west and Heritage Lake Boulevard on the east.

As proposed, there will be a total of 252 lots for the entire subdivision. This is an increase of 9 lots from previous approval due to the inclusion of the 2.8 additional acres. While Unit 3 of the subdivision has a site specific density of 3.09 du/ac, which is greater than the maximum density of 3 du/ac, the overall density for the subdivision will be 2.90 du/ac.

The applicant has submitted a concept plan that has clustered the lots on the site in order to avoid the steeper portions of the site that are within the Hillside Protection Area. As with the previous units of the subdivision this site is being considered under the Hillside and Ridgetop Protection Area Development Standards of Section 4.01 of the Subdivision Regulations. The proposed plan will continue with the street design with a 22' pavement width within a 40' right-of-way.

A Traffic Impact Study prepared by Fulghum MacIndoe & Associates, Inc. was submitted for the proposed subdivision (last revised date of August 24, 2020). In order to maintain an acceptable level of service, the study recommended that a westbound left turn lane be provided at the intersection of Westland Drive at Ridge Climber Road, as described in section 8.2 of the Traffic Impact Study (see Exhibit A). 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.

One of the general provisions for the PR zoning district is that it encourages open space for recreational use.

Historically the Planning Commission has required amenity areas for any development with 150 or more lots. The previous approval for phase 3 included a condition that an amenity be provided since there wasn't one provided in the Unit 1 or Unit 2, however, since that time Unit 2 has incorporated an area for an amenity (see Exhibit B).

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

1. The proposed attached residential subdivision will have minimal impact on local services since utilities are available to serve this site.
2. The proposed low density residential development at a density of 2.90 du/ac is compatible with the scale and intensity of recent development that has occurred in this area.
3. The applicant has laid out the development to stay off of some of the steeper portions of the site. The concept plan has included these steeper area within common area, and with the recommended conditions, those areas will be protected from development.

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

1. With the recommended conditions, the proposed residential development 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 is in 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 since the development has access out to a minor arterial street.

CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS

1. The Southwest County Sector Plan proposes low density residential development for this site. The proposed development at a density of 2.90 du/ac is consistent with the Sector Plan.
2. This site is located in 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.

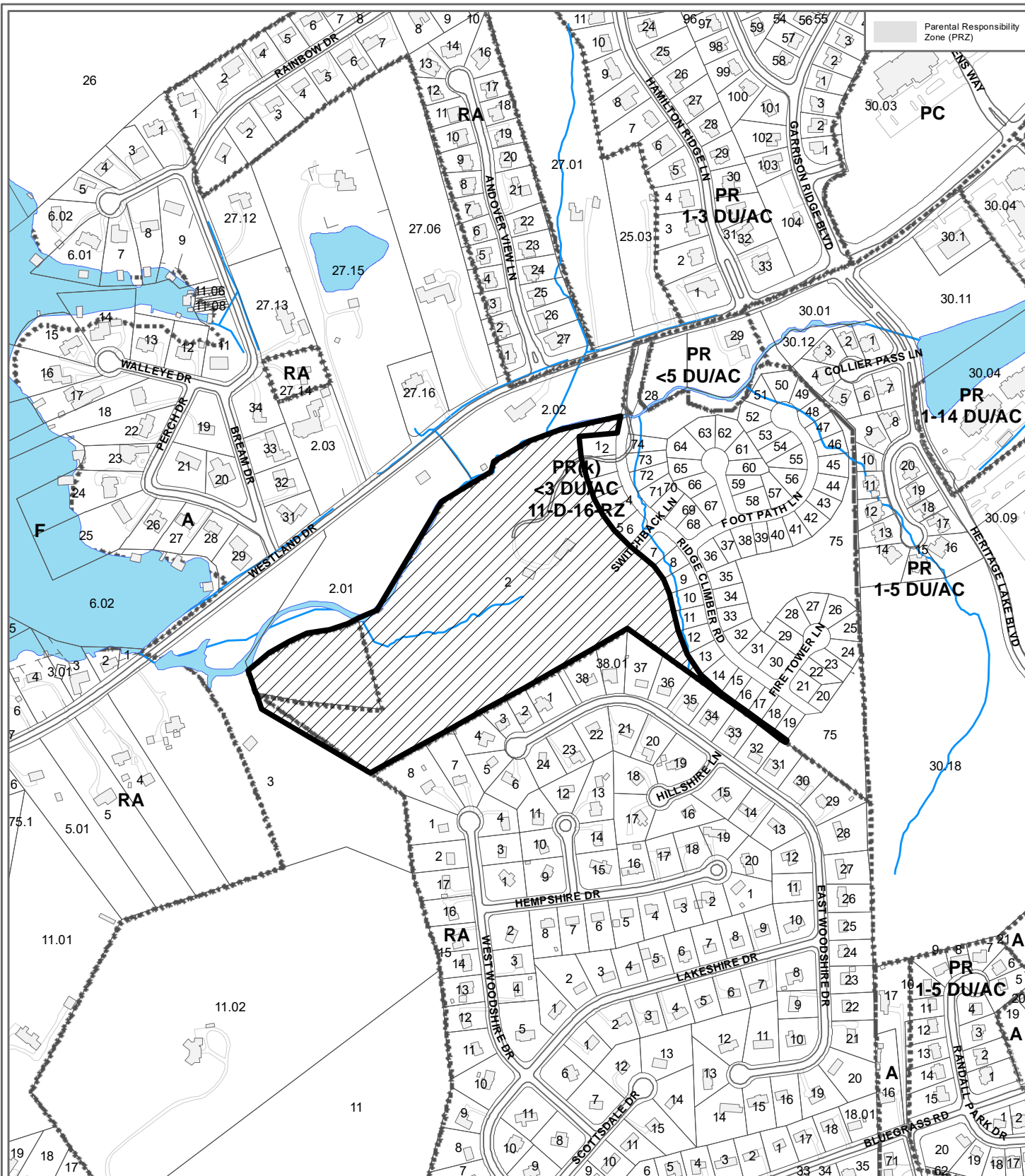
ESTIMATED STUDENT YIELD: 5 (public school children, grades K-12)

Schools affected by this proposal: Northshore Elementary, West Valley Middle, and Bearden 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.



**9-SC-20-C / 9-F-20-UR
CONCEPT PLAN/USE ON REVIEW**



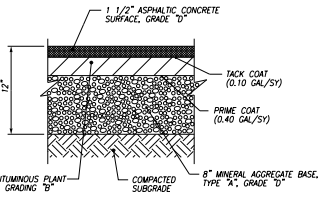
Attached residential subdivision in PR (Planned Residential)

Original Print Date: 8/13/2020 Revised:
Knoxville - Knox County Planning Commission * City / County Building * Knoxville, TN 37902

Petitioner: Mesana Investments, LLC
Westland Oaks

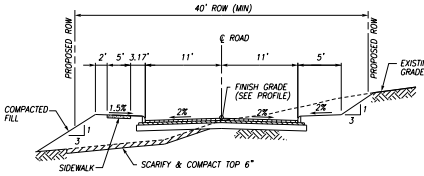
Map No: 154
Jurisdiction: County



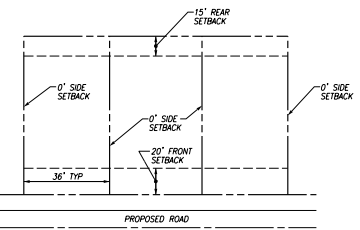


NOTES:
 1. PAVEMENT HAS NOT BEEN DESIGNED FOR CONSTRUCTION TRAFFIC/ACTIVITIES. USE OF THESE SURFACES FOR CONSTRUCTION ACTIVITIES SHALL BE DONE AT THE CONTRACTOR'S CONVENIENCE AND RISK. DAMAGE TO PAVEMENT RESULTING FROM THESE ACTIVITIES SHALL BE REPAIRED IN CONFORMANCE WITH THE INITIAL PAVEMENT SPECIFICATIONS.

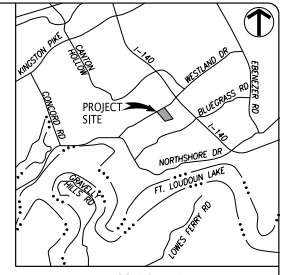
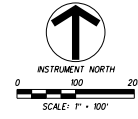
1 ASPHALT PAVEMENT SECTION
 C1 NTS



2 TYPICAL 22' ROAD SECTION
 C1 NTS



3 TYPICAL INTERIOR LOT
 C1 NTS



LOCATION MAP
 (NOT TO SCALE)

GENERAL NOTES:

- THE TOPOGRAPHIC & BOUNDARY DATA WAS TAKEN FROM HIGH EXISTING CONTOURS ARE AT 2-FT INTERVALS.
- PROPERTY CONCERNED REFLECTS PARCEL 154 002 & A PORTION OF PARCEL 154 002.01 AS SHOWN IN KNOX COUNTY CLS MAP 154 ZONING FOR THE PROPERTY IS PR. PLANNED RESIDENTIAL DISTRICT. TOTAL AREA = 22.0+ AC.
 OWNERS: MESANA INVESTMENTS, LLC
 P.O. BOX 11315
 KNOXVILLE, TN 37939
 VICTOR A & JULIE A POTEET
 179 COUNTY ROAD 704
 ATHENS, TN 37303
- ACCESS TO LOTS IS RESTRICTED TO INTERNAL STREETS.
- PROPOSED IMPROVEMENTS INCLUDE 22' WIDE PUBLIC ROAD, EXTRUDED CURB, STORM SEWER, SANITARY SEWER, WATER, GAS, ELECTRIC, TELEPHONE, AND CABLE TV.
- THE PROPOSED DENSITY IS 68 DU/22.0 AC = 3.09 DU/AC.

UTILITY OWNERS:

- WATER & SEWER
 FIRST UTILITY DISTRICT (FUD)
 122 DURWOOD ROAD
 KNOXVILLE, TN 37922
 CONTACT: MR. TROY WEDEKIND
 OFFICE PHONE: 865.772.2504
- ELECTRIC
 LENOR CITY UTILITY BOARD (LCUB)
 P.O. BOX 449
 LENOR CITY, TN 37771
 CONTACT: MR. JAY HINES
 OFFICE PHONE: 865.986.6591
- GAS
 KNOXVILLE UTILITIES BOARD (KUB)
 P.O. BOX 59017
 KNOXVILLE, TN 37950-9017
 CONTACT: MR. CHRIS MACCORMACK
 OFFICE PHONE: 865.558.2123
- TELEPHONE
 AT&T
 9733 PARKSIDE DRIVE
 KNOXVILLE, TN 37922
 CONTACT: MS. WENDY DUDLEY
 OFFICE PHONE: 865.539.8571

ALTERNATIVE DESIGN STANDARDS REQUIRING PLANNING COMMISSION APPROVAL:

- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 250'-11 TO 220'-FT ALONG ROAD 9' FROM STA 0+00.00 TO STA 2+68.34.

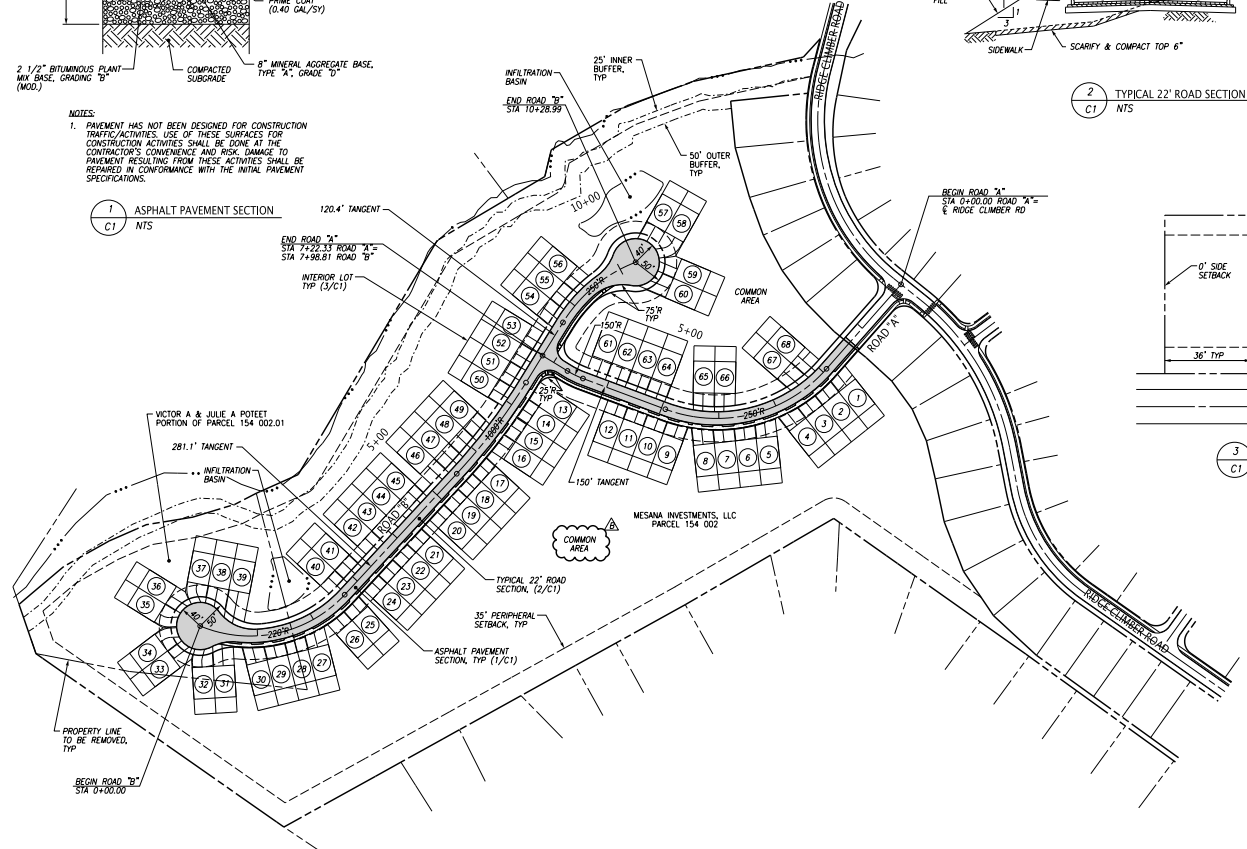
ENGINEERING CERTIFICATION:

I HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER, LICENSED TO PRACTICE ENGINEERING UNDER THE LAWS OF THE STATE OF TENNESSEE. I FURTHER CERTIFY THAT THIS PLAN AND ACCOMPANYING DRAWINGS, DOCUMENTS, AND STATEMENTS CONFORM TO ALL APPLICABLE PROVISIONS OF THE KNOXVILLE-KNOX COUNTY SUBDIVISION REGULATIONS EXCEPT AS HAS BEEN ITEMIZED AND DESCRIBED IN A REPORT FILED WITH THE METROPOLITAN PLANNING COMMISSION.

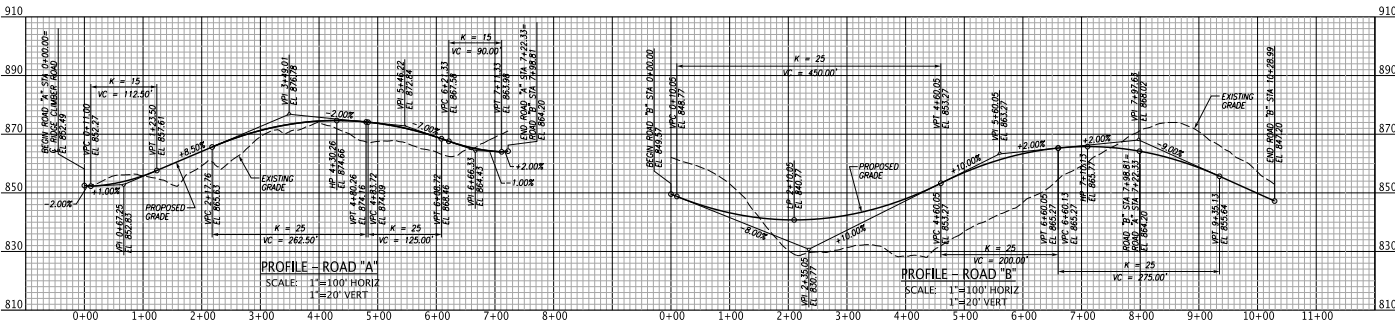
REGISTERED ENGINEER: J. CARTER MCCALL, P.E.
 TENNESSEE CERTIFICATE NO. 120322

LEGEND:

- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LOT NUMBER
- PROPOSED PROPERTY/ROW LINE
- EXISTING PROPERTY LINE
- PROPOSED ROAD CENTER LINE
- SETBACK



9-SC-20-C
 9-F-20-UR
 Revised: 8/21/2020



PRELIMINARY
 NOT FOR
 CONSTRUCTION

WESTLAND OAKS UNIT 3
 9900 WESTLAND DRIVE
 KNOXVILLE, TENNESSEE 37922

MESANA INVESTMENTS, LLC
 P.O. BOX 11315
 KNOXVILLE, TN 37939
 CONTACT: MR. SCOTT DAVIS
 TELEPHONE NO.: 865.693.3356
 EMAIL: swd444@gmail.com

CONCEPT PLAN

NO.	REVISION/ISSUE	DATE	BY	CHECKED BY	DESIGNED BY	DRAWN BY
1	ISSUED CONCEPT PLAN	07/27/20	JCM	JCM	JCM	JCM
2	REVISED PER PLANNING STAFF COMMENTS	08/27/20	JCM	JCM	JCM	JCM

Project: 525.004.2
 Date: 07/27/20
 Scale: 1" = 100'

File Path: I:\2020\9-SC-20-C\9-SC-20-C\9-SC-20-C.dwg
 Plot Date: 8/21/2020
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**WESTLAND OAKS SUBDIVISION
UNITS 1-3
Traffic Impact Study
Westland Drive
Knoxville, TN**

A Traffic Impact Study for the Westland Oaks Subdivision

Submitted to

**Knoxville – Knox County
Planning Commission**

Revised August 24, 2020
FMA Project No. 525.004

Submitted By:



9-SC-20-C
9-F-20-UR
8/26/2020

Executive Summary

Mesana Invesments, LLC is proposing a residential development with single family housing located in Knox County. The project is located on Westland Drive west of Pellissippi Parkway (I-140). The new addition to the development will consist of 68 attached condominium lots in Unit 3. Construction is proposed to take place this year and this study assumes full build out for the development will occur in 2021.

Traffic from the Westland Oaks Subdivision – Unit 3 will enter/exit Westland Drive at Ridge Climber Road.

The proposed roadway connection for the Heritage Woods Subdivision – Unit 2 will tie into both Heritage Lake Boulevard and to Ridge Climber Road. Westland Oaks Subdivision – Unit 1 and Heritage Woods Subdivision – Unit 2 have an approved concept plan for a total of 207 single family lots. Traffic from both Unit 1 and Unit 2 will be able to enter/exit from either Westland Drive at Heritage Lake Boulevard or Westland Drive at Ridge Climber Road.

In order to maintain or provide an acceptable level-of-service for each of the intersections studied, some recommendations are presented.

Westland Drive at Heritage Lake Boulevard

The full buildout traffic conditions at the usignalized intersection of Westland Drive at Heritage Lake Boulevard were analyzed using the Highway Capacity Software (HCS7). The eastbound and westbound approaches operate at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS C during both the AM and PM peak hours. The southbound left turn lane operates at a LOS F during both the AM and PM peak hours and the southbound thru/right lane operates at a LOS B during both the AM and PM peak hours.

After the completion of both the Westland Oaks Subdivision Units 1-3 an eastbound right turn lane is not warranted at the intersection of Westland Drive at Heritage Lake Boulevard.

Westland Drive at Ridge Climber Road

The full buildout traffic conditions at the usignalized intersection of Westland Drive at Ridge Climber Road were analyzed using the Highway Capactiy Software (HCS7). The westbound approach operates at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS C during the AM peak hour and a LOS B during the PM peak hour.

**Westland Oaks Subdivision Units 1-3
Traffic Impact Study
August 24, 2020**

After the completion of the Westland Oaks Subdivision Units 1-3 an eastbound right turn lane is not warranted and a westbound left turn lane is warranted during the PM peak hour due to the high volume of thru traffic on Westland Drive.

Per the “TDOT – Roadway Design Guidelines” an approach taper of 293 feet, a bay taper of 147 feet and a storage length of 100 feet for an 11 foot turn lane on a 40 mph road is recommended. FMA recommends the turn lane be built prior to the start of Westland Oaks Subdivision – Unit 3 and that the detailed design be coordinated with Knox County Engineering and Public Works.

Westland Drive

Knox County provided crash data from the year 2015 to 2017 on Westland Drive within the vicinity of Andover View Lane to Heritage Lake Boulevard. There were 10 crashes reported for this stretch of Westland Drive during the time frame stated. There are not any recommended improvements for Westland Drive at this time due to the relatively low number of crashes reported.

1 Introduction

1.1 Project Description

This report provides a summary of a traffic impact study that was performed for the proposed Westland Oaks Subdivision Units 1-3. The project is located on Westland Drive west of Pellissippi Parkway (I-140). The location of the site is shown in Figure 1.

The full buildout of the development will consist of 74 single family housing lots in Unit 1, 133 single family housing lots in Unit 2 and an additional 68 attached condominium lots in Unit 3. Unit 1 is already under construction and construction for Unit 2 and Unit 3 is proposed to take place this year. This study assumes full build out for the development will occur in 2021.

Traffic from the Westland Oaks Subdivision – Unit 3 will enter/exit Westland Drive at Ridge Climber Road.

The proposed roadway connection for the Heritage Woods Subdivision – Unit 2 will tie into both Heritage Lake Boulevard and to Ridge Climber Road. Westland Oaks Subdivision – Unit 1 and Heritage Woods Subdivision – Unit 2 have an approved concept plan for a total of 207 single family lots. Traffic from both Unit 1 and Unit 2 will be able to enter/exit from either Westland Drive at Heritage Lake Boulevard or Westland Drive at Ridge Climber Road. The proposed site layout is shown in Figure 2.

The purpose of this study is to evaluate the impacts to the traffic conditions caused by the proposed subdivision and to review the “Heritage Lake Traffic Impact Study” prepared by Wilbur Smith Associates dated February 1999.

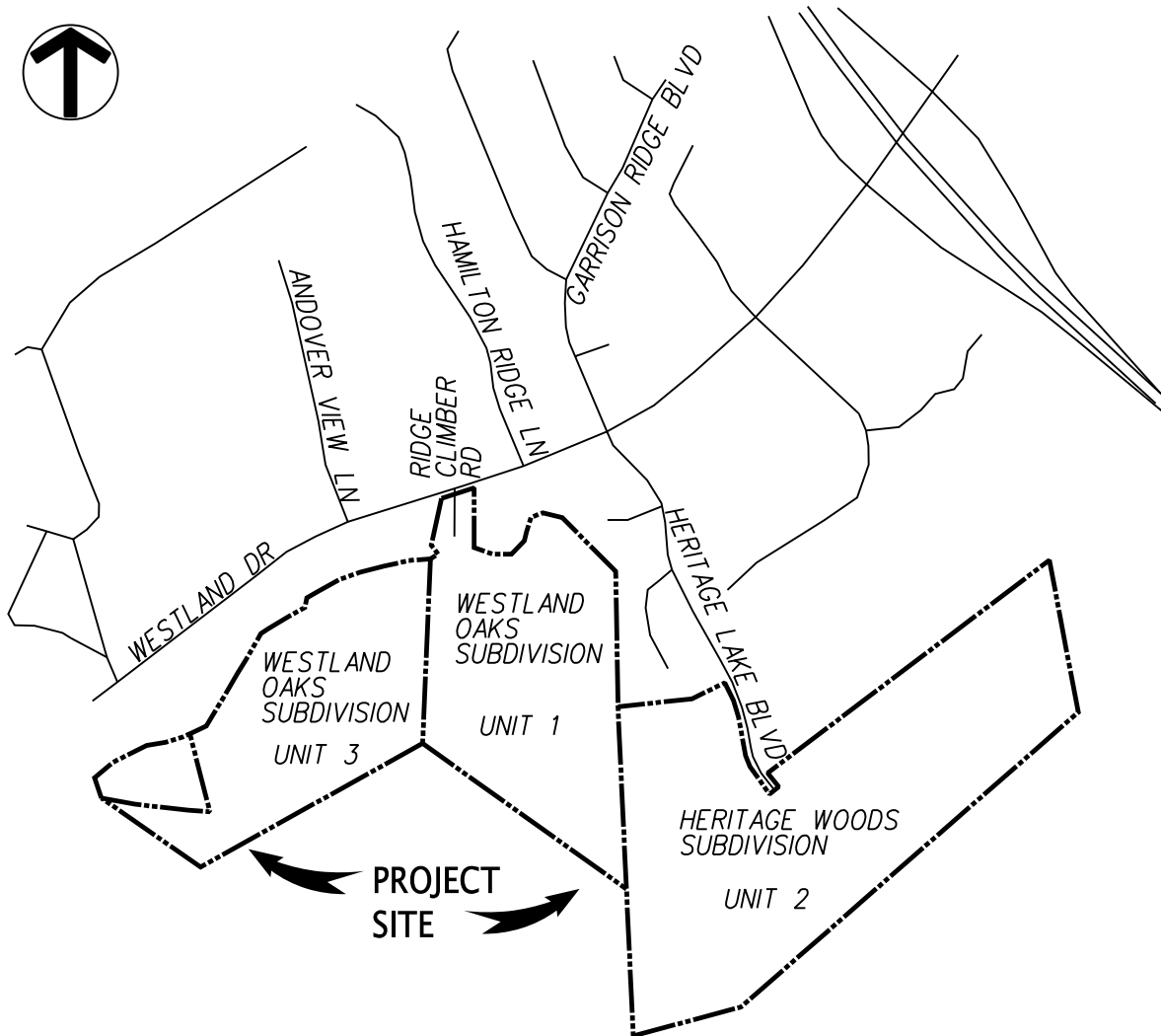


Figure 1: Location Map

EXHIBIT A

**Westland Oaks Subdivision Units 1-3
Traffic Impact Study
August 24, 2020**

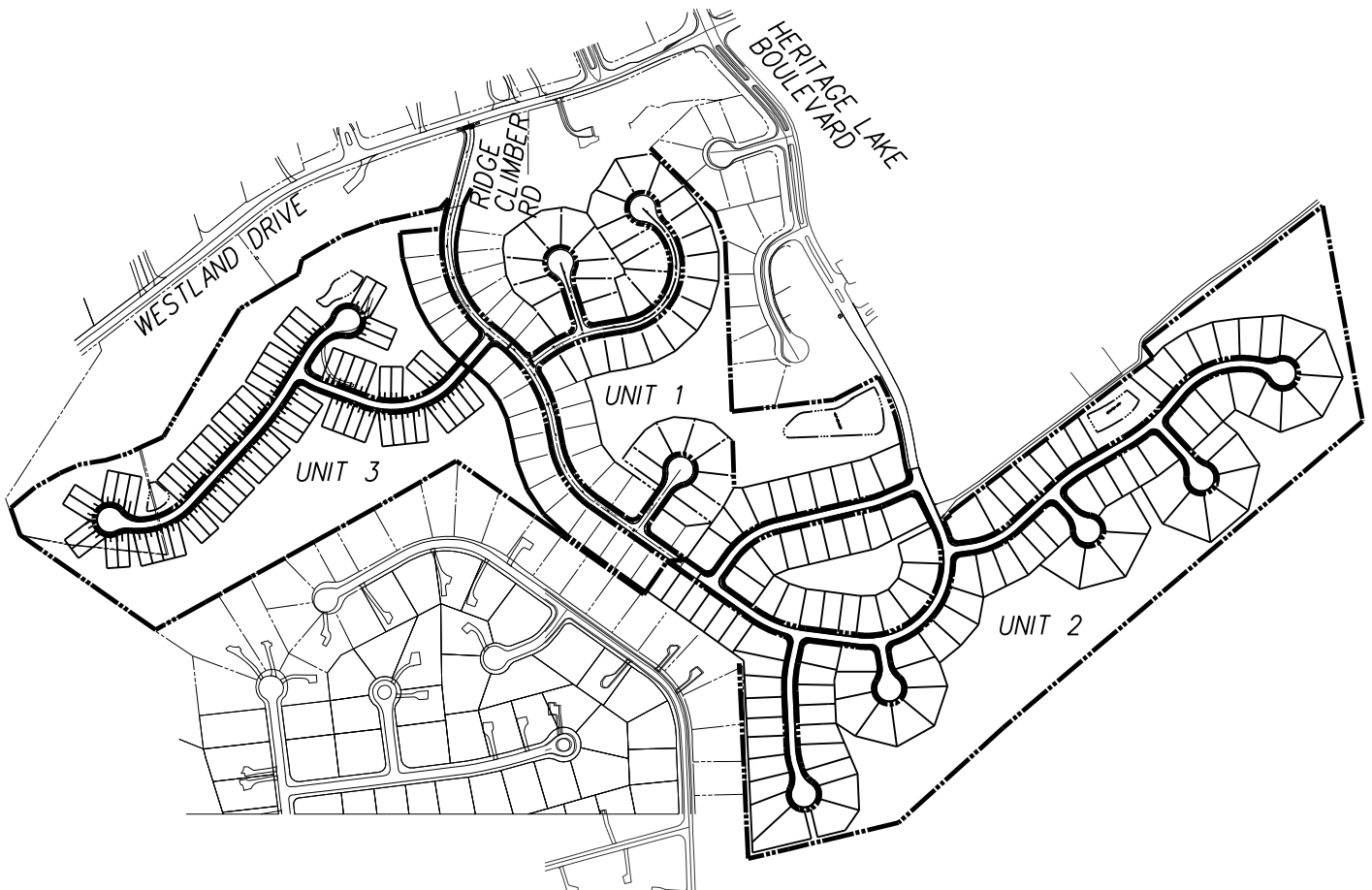


Figure 2: Site Plan

1.2 Existing Site Conditions

Westland Drive at the intersection with Heritage Lake Boulevard is a two-lane road with a left turn lane of 225 feet storage length and a 135 feet taper. The Knoxville-Knox County Planning Commission classifies Westland Drive as a minor arterial with an 88 foot right-of-way per the Major Road Plan. The posted speed limit on Westland Drive is 40 mph.

Heritage Lake Boulevard is a two-lane road with a 10-foot wide boulevard at the intersection with Westland Drive. The Knoxville-Knox County Planning Commission does not classify Heritage Lake Boulevard per the Major Road Plan therefore; it is considered a local street. The posted speed limit on Heritage Lake Boulevard is 25 mph. The measured sight distance at the intersection with Westland Drive is 425 feet eastbound and greater than 500 feet westbound.

Garrison Ridge Boulevard is a two-lane road with a left turn lane with a 100-foot storage length and a 25-foot taper. Westland Drive at the intersection with Garrison Ridge Boulevard also has an existing right turn lane with an 80-foot storage length and a 65-foot taper length. The Knoxville-Knox County Planning Commission does not classify Garrison Ridge Boulevard per the Major Road Plan therefore; it is considered a local street. The posted speed limit on Garrison Ridge Boulevard is 25 mph.

Ridge Climber Road is a two-lane road at the intersection with Westland Drive. The Knoxville-Knox County Planning Commission does not classify Ridge Climber Road per the Major Road Plan therefore; it is considered a local street. The sight distance at this intersection was measured in April 2017 prior to the approval of the concept plan. The required sight distance on a road with a speed limit of 40 mph is 400 feet. The measured sight distance at this intersection was 450 feet westbound and greater than 450 feet eastbound.

Aerial photos of the existing intersections are included in Attachment 1.

1.3 Heritage Lake Development

A Level II traffic impact study was done for the mixed use Heritage Lake Development located on Westland Drive within Knox County. The “Heritage Lake Traffic Impact Study” was prepared by Wilbur Smith Associates dated February 1999. The scope of this traffic impact study included the intersections of Westland Drive at the I-140 northbound and southbound ramps, Westland Drive at the shared office/commercial access, Westland Drive at the shared apartment/commercial access and Westland Drive at Garrison Ridge Boulevard.

Heritage Lake is a mixed use project containing both residential and commercial development. The residential development was expected to include 77 single family units, 262 multi-family units and a 126 unit assisted living facility. The commercial development includes a 1.84 acre site with a nonspecified use at the time that the traffic impact study was conducted. The anticipated completion date was the year 2005.

As of November 2018, the following has been built within the Heritage Lake Development: 262 apartment units, 20 single family housing units, 51,000 SF Cornerstone Church and a 11,900 SF Law Office.

The parcel at the southeast corner of the intersection of Westland Drive at Heritage Lake Boulevard is the location for the 126 unit assisted living facility. As of November 2018 that parcel is still unused and there are no plans to build on that parcel at this time.

The recommendations for the 2005 project traffic conditions at the intersection of Westland Drive at Garrison Ridge Boulevard were to “provide a 50 foot westbound left-turn lane on Westland Drive”.

A copy of the recommendations for the Wilbur Smith Associates “Heritage Lake Traffic Impact Study” dated February 1999 is included in Attachment 2.

8 Conclusions and Recommendations

8.1 Westland Drive @ Heritage Lake Boulevard

The existing traffic conditions at the unsignalized intersection of Westland Drive at Heritage Lake Boulevard were analyzed using the Highway Capacity Software (HCS7). The eastbound and westbound approaches operate at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS B during both the AM and PM peak hours. The southbound left turn lane operates at a LOS D during both the AM and PM peak hours and the southbound thru/right lane operates at a LOS B during both the AM and PM peak hours.

The background traffic conditions at the unsignalized intersection of Westland Drive at Heritage Lake Boulevard were analyzed using the Highway Capacity Software (HCS7). The eastbound and westbound approaches operate at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS B during both the AM and PM peak hours. The southbound left turn lane operates at a LOS E during the AM peak hour and LOS D during the PM peak hour and the southbound thru/right lane operates at a LOS B during both the AM and PM peak hours.

The full buildout traffic conditions at the unsignalized intersection of Westland Drive at Heritage Lake Boulevard were analyzed using the Highway Capacity Software (HCS7). The eastbound and westbound approaches operate at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS C during both the AM and PM peak hours. The southbound left turn lane operates at a LOS F during both the AM and PM peak hours and the southbound thru/right lane operates at a LOS B during both the AM and PM peak hours.

After the completion of both the Westland Oaks Subdivision Units 1-3 an eastbound right turn lane is not warranted at the intersection of Westland Drive at Heritage Lake Boulevard.

The existing left turn lane on Westland Drive at the intersection with Heritage Lake Boulevard has a storage length of 225 feet and a taper length of 135 feet. The unsignalized intersection capacity analyses shows a 95% queue length at the full buildout for the westbound approach of Westland Drive of less than one car length during both the AM and PM peak hours; therefore the existing storage at the intersection is adequate and no change is necessary.

The existing left turn lane on Garrison Ridge Boulevard at the intersection with Heritage Lake Boulevard has a storage length of 100 feet and a taper length of 35 feet. The unsignalized intersection capacity analyses shows a 95% queue length at the full buildout for the southbound left turn lane of three car lengths during the AM

peak hour and two car lengths during the PM peak hour; therefore the existing storage at the intersection is adequate and no change is necessary.

The intersection of Westland Drive at Heritage Lake Boulevard was evaluated to determine if a traffic signal is warranted for the existing, background and full buildout conditions. Based on the “Manual of Uniform Traffic Control Devices” (MUTCD) published by the Federal Highway Administration in 2009 there are no signal warrants met for either the existing, background and full buildout conditions and therefore a signal is not warranted at this intersection at this time.

The intersection of Westland Drive at Heritage Lake Boulevard does not meet any of the conditions for Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Volume or Warrant 3, Peak Hour and therefore does not warrant a traffic signal for any of the existing, background or full buildout conditions.

8.2 Westland Drive @ Ridge Climber Road

The full buildout traffic conditions at the signalized intersection of Westland Drive at Ridge Climber Road were analyzed using the Highway Capacity Software (HCS7). The westbound approach operates at a LOS A during both the AM and PM peak hours. The northbound approach operates at a LOS C during the AM peak hour and a LOS B during the PM peak hour.

After the completion of the Westland Oaks Subdivision Units 1-3 an eastbound right turn lane is not warranted and a westbound left turn lane is warranted during the PM peak hour due to the high volume of westbound thru traffic on Westland Drive.

Per the “TDOT – Roadway Design Guidelines” an approach taper of 293 feet, a bay taper of 147 feet and a storage length of 100 feet for an 11 foot turn lane on a 40 mph road is recommended. Figure 2-9 Turning Lane Terminology from the “TDOT – Roadway Design Guidelines” is included in Attachment 10 and shows the recommended storage and taper lengths for the westbound turn lane. FMA recommends the turn lane be built prior to the start of Westland Oaks Subdivision – Unit 3 and that the detailed design be coordinated with Knox County Engineering and Public Works.

8.3 Westland Drive

Knox County provided crash data from the year 2015 to 2017 on Westland Drive within the vicinity of Andover View Lane to Heritage Lake Boulevard. There were 10 crashes reported for this stretch of Westland Drive during the time frame stated.

There are not any recommended improvements for Westland Drive at this time due to the relatively low number of crashes reported.

8.4 Heritage Woods Road “C”

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 “Subdivision Regulations” for Knoxville and Knox County. FMA measured the sight distance at the proposed intersection of Heritage Lake Boulevard at Heritage Woods Road “C”. 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 northbound sight distance is partially blocked due to the existing overgrowth conditions.

FMA recommends that the sight distance be re-evaluated in the field after the completion of the proposed Heritage Woods Subdivision to ensure that the sight distance complies with the requirements for Knox County Engineering and Public Works. FMA also recommends any landscaping be installed so as to maintain the sight distance and continue to comply with Knox County Engineering and Public Works.

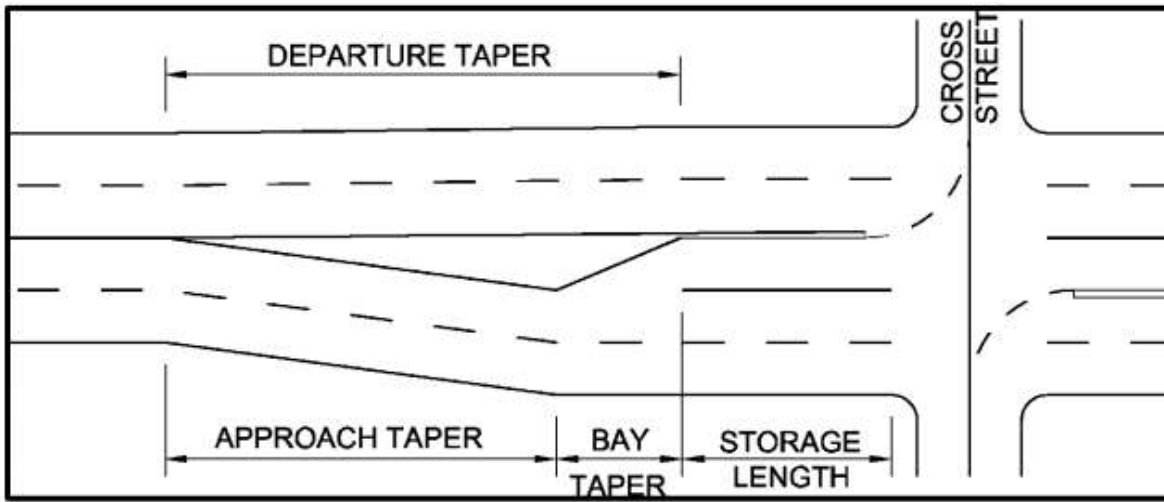
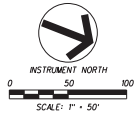
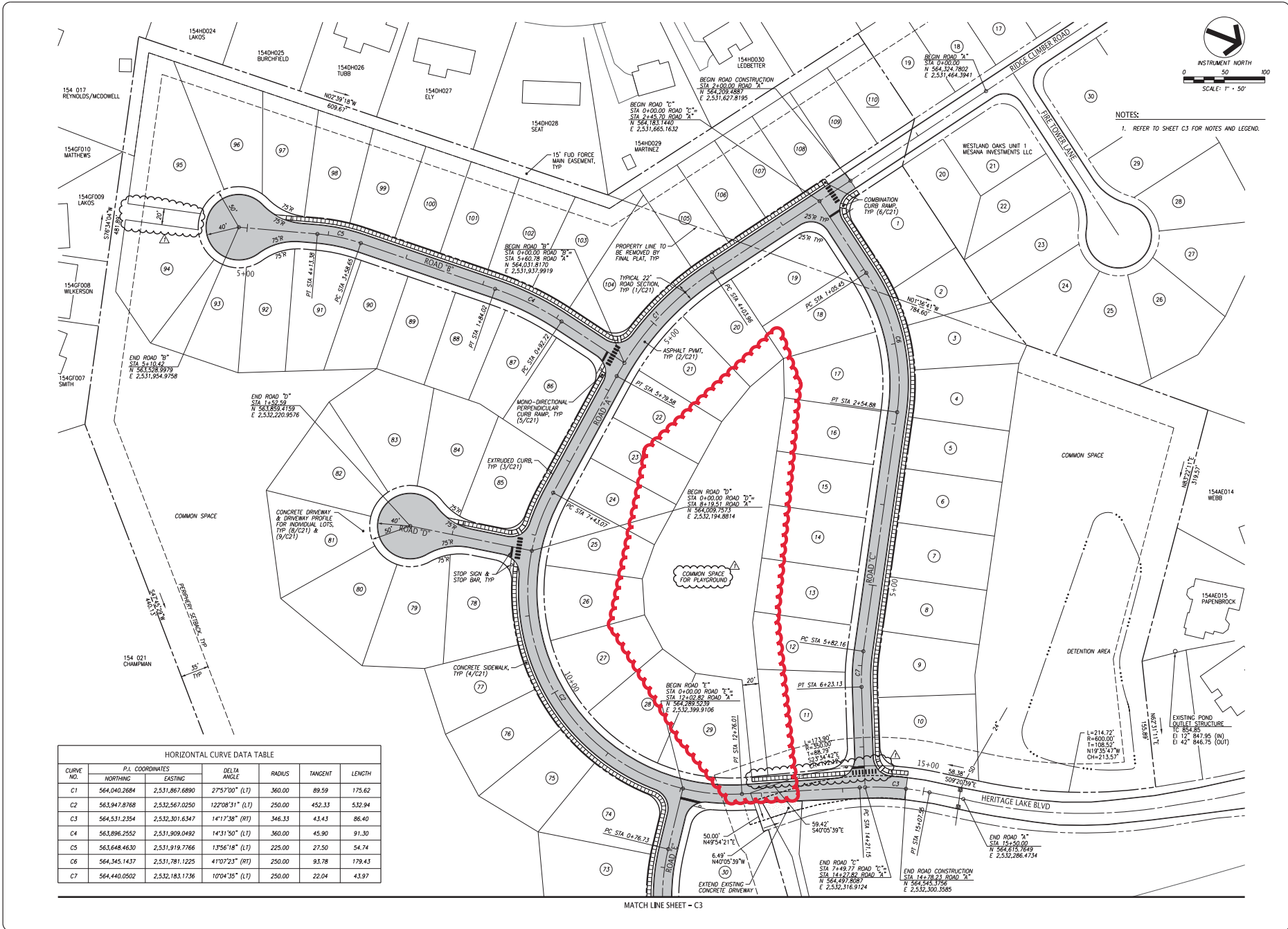


Figure 2-9
Turning Lane Terminology

Exhibit B



NOTES:
1. REFER TO SHEET C3 FOR NOTES AND LEGEND.

HORIZONTAL CURVE DATA TABLE						
CURVE NO.	P.L. COORDINATES		DELTA ANGLE	RADIUS	TANGENT	LENGTH
	NORTHING	EASTING				
C1	564,040.2684	2,531,867.6890	275°00' (L1)	360.00	89.59	175.62
C2	563,947.8768	2,532,567.0250	122°08'31" (L1)	250.00	452.33	532.94
C3	564,531.2354	2,532,301.6347	141°17'38" (R1)	346.33	43.43	86.40
C4	563,896.2552	2,531,909.0492	143°1'50" (L1)	360.00	45.90	91.30
C5	563,648.4630	2,531,919.7766	135°56'18" (L1)	225.00	27.50	54.74
C6	564,345.1437	2,531,781.1225	41°07'23" (R1)	250.00	93.78	179.43
C7	564,440.0502	2,532,183.1736	10°04'35" (L1)	250.00	22.04	43.97

FULGHUM
FM
MACINDOE
ASSOCIATES, INC.

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SUITE 201
KNOXVILLE, TN 37932
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www.fulghummacindoe.com

8/21/20

WESTLAND OAKS UNIT 2
1296 HERITAGE LAKE BOULEVARD
KNOXVILLE, TENNESSEE 37922

MESANA INVESTMENTS, LLC
P.O. BOX 11115
KNOXVILLE, TN 37939
CONTACT: MR. SCOTT DAVIS
TELEPHONE NO.: 865.693.3356
EMAIL: svd444@gmail.com

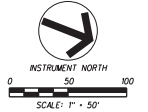
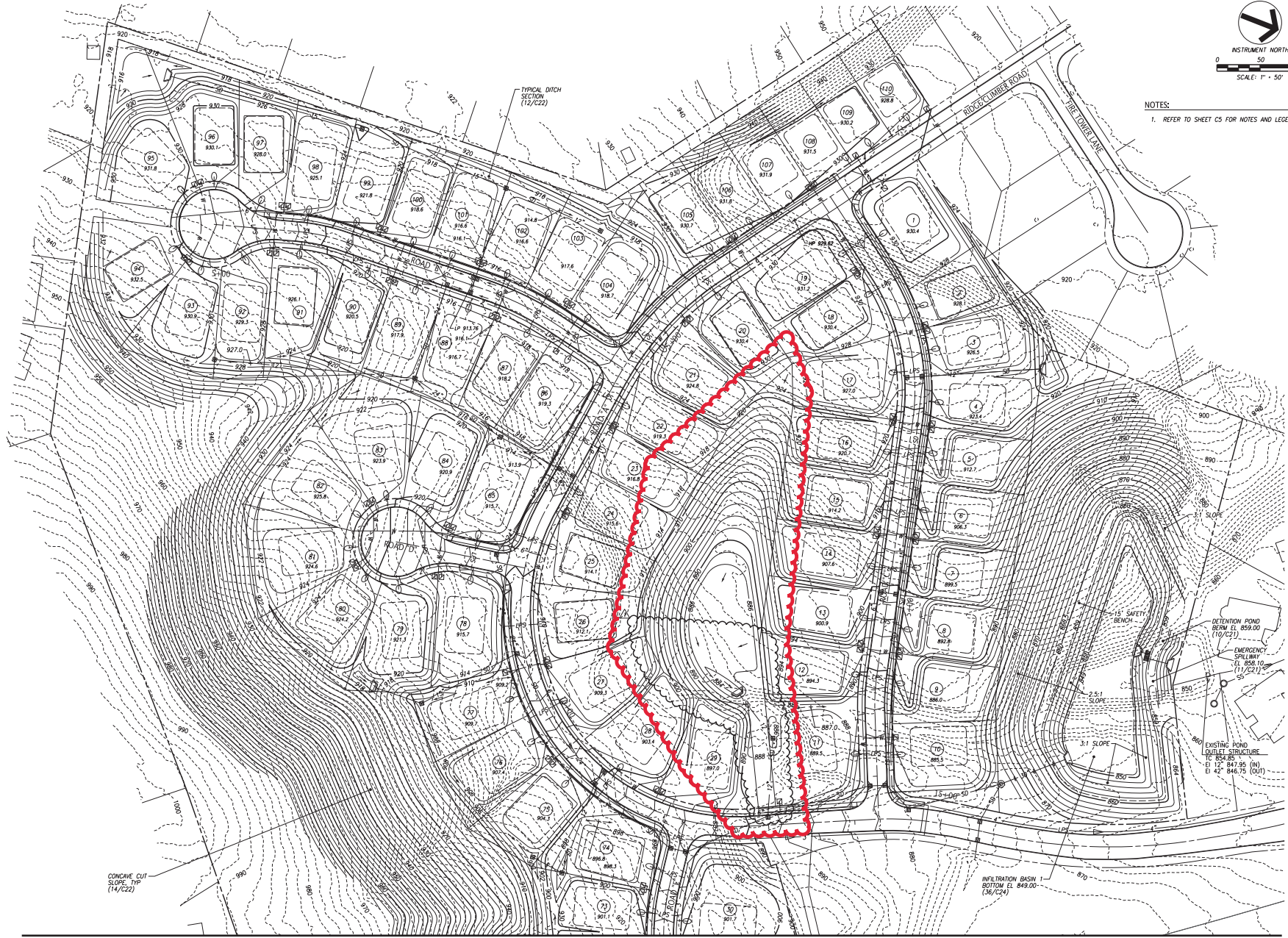
LAYOUT AND
PAVING PLAN

DESIGNED BY	JCA	DATE	
DRAWN BY	WCF	ISSUED FOR CONSTRUCTION	08/21/20
CHECKED BY	WCF	REVISION/ISSUE	01/10/20
PROJECT NO.	525.004.1	SHEET	C2
DATE	01/10/20	SCALE	1"=50'

P:\2020\1545\1545_001\1545\15450001\1545.dwg
Plot Date: 8/21/2020

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Exhibit B



NOTES
1. REFER TO SHEET C5 FOR NOTES AND LEGEND.



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WESTLAND OAKS UNIT 2
1296 HERITAGE LAKE BOULEVARD
KNOXVILLE, TENNESSEE 37922

MESANA INVESTMENTS, LLC
200 SOUTH 1115 E.
KNOXVILLE, TN 37939
CONTACT: MR. SCOTT DAVIS
TELEPHONE NO.: 865.693.3356
EMAIL: svd444@gmail.com

GRADING PLAN

DESIGNED BY	MEF	DRAWN BY	JCA
PROJECT NO.	525.004.1	DATE	01/10/20
ISSUED FOR	REVISED GRADING FOR AMENITY ACCESS	DATE	08/21/20
ISSUED FOR	ISSUED FOR CONSTRUCTION	DATE	07/10/20
NO.		REVISION/ISSUE	
Project	525.004.1	Sheet	C4
Date	01/10/20	Scale	1"=50'

File Name: I:\2020\525.004.1\UNIT2\5250041.rvt
Plot Date: 6/27/2020

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DEVELOPMENT REQUEST

DEVELOPMENT

- Development Plan
- Planned Development
- Use on Review / Special Use

SUBDIVISION

- Concept Plan
- Final Plat

ZONING

- Plan Amendment
- Rezoning

Mesana Investments, LLC

Property Owner

Applicant Name

Affiliation

7/27/2020

9/10/2020

9-5C-20-C 9-F-20-UR

Date Filed

Meeting Date (if applicable)

File Numbers(s)

CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

- Applicant
- Owner
- Option Holder
- Project Surveyor
- Engineer
- Architect/Landscape Architect

Scott Davis

Mesana Investments, LLC

Name

Company

P.O. Box 11315

Knoxville

TN

37939

Address

City

State

Zip

865.693.3356

swd444@gmail.com

Phone

Email

CURRENT PROPERTY INFO

Mesana Investments, LLC

P.O. Box 11315

865.693.3356

Owner Name (if different)

Owner Address

Owner Phone

9900 & 9942 Westland Drive

154 002 & 154 002.01 (part of)

Property Address

Parcel ID

Intersection of Westland Drive and Ridge Climber Road

19.6 ac & 2.4 ac (22.0 ac total)

General Location

Tract Size

SW 5th

PR (<3 du/ac)

Jurisdiction (specify district above)

- City
- County

Zoning District

Southwest County

LDR

Planned Growth

Planning Sector

Sector Plan Land Use Classification

Growth Policy Plan Designation

AgForVac

N

FUD

FUD

Existing Land Use

Septic (Y/N)

Sewer Provider

Water Provider

REQUEST

DEVELOPMENT	<input type="checkbox"/> Development Plan <input checked="" type="checkbox"/> Use on Review / Special Use <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Non-Residential
	<input type="checkbox"/> Home Occupation (specify): _____ <input type="checkbox"/> Other (specify): <u>Attached residential subdivision</u>
SUBDIVISION	Westland Oaks 3 <input checked="" type="checkbox"/> Proposed Subdivision Name Unit / Phase Number <input checked="" type="checkbox"/> Parcel Change <input type="checkbox"/> Combine Parcels <input checked="" type="checkbox"/> Divide Parcel Total Number of Lots Created: <u>68</u> <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Attachments / Additional Requirements
	<input type="checkbox"/> Zoning Change: _____ Proposed Zoning
	<input type="checkbox"/> Plan Amendment Change: _____ Proposed Plan Designation(s)
ZONING	Proposed Density (units/acre) _____ Previous Rezoning Requests _____ <input type="checkbox"/> Other (specify): _____

STAFF USE ONLY	PLAT TYPE <input type="checkbox"/> Staff Review <input type="checkbox"/> Planning Commission	FEE 1:	TOTAL: <u>\$3,500</u>	
	ATTACHMENTS <input type="checkbox"/> Property Owners / Option Holders <input type="checkbox"/> Variance Request	<u>0406</u> <u>VOR fee</u>		FEE 2:
	ADDITIONAL REQUIREMENTS <input type="checkbox"/> Design Plan Certification (Final Plat only) <input checked="" type="checkbox"/> Use on Review / Special Use (Concept Plan only) <input type="checkbox"/> Traffic Impact Study	FEE 3:		FEE 3:

AUTHORIZATION By signing below, I certify I am the property owner, applicant or the owners authorized representative.


Scott Davis
7/20/2020
 Applicant Signature Please Print Date

(865) 806-8008
swd444@gmail.com
 Phone Number Email


Michael Reynolds
7/27/2020
 Staff Signature Please Print Date

VARIANCES REQUESTED



1. REDUCE MIN HORIZONTAL CURVE RADIUS FROM 250-FT TO 220-FT ALONG ROAD B FROM STA 0+00.00 TO STA 2+68.34

Justify variance by indicating hardship: SITE TOPOGRAPHY

2. _____

Justify variance by indicating hardship: _____

3. _____

Justify variance by indicating hardship: _____

4. _____

Justify variance by indicating hardship: _____

5. _____

Justify variance by indicating hardship: _____

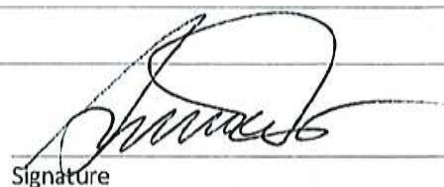
6. _____

Justify variance by indicating hardship: _____

7. _____

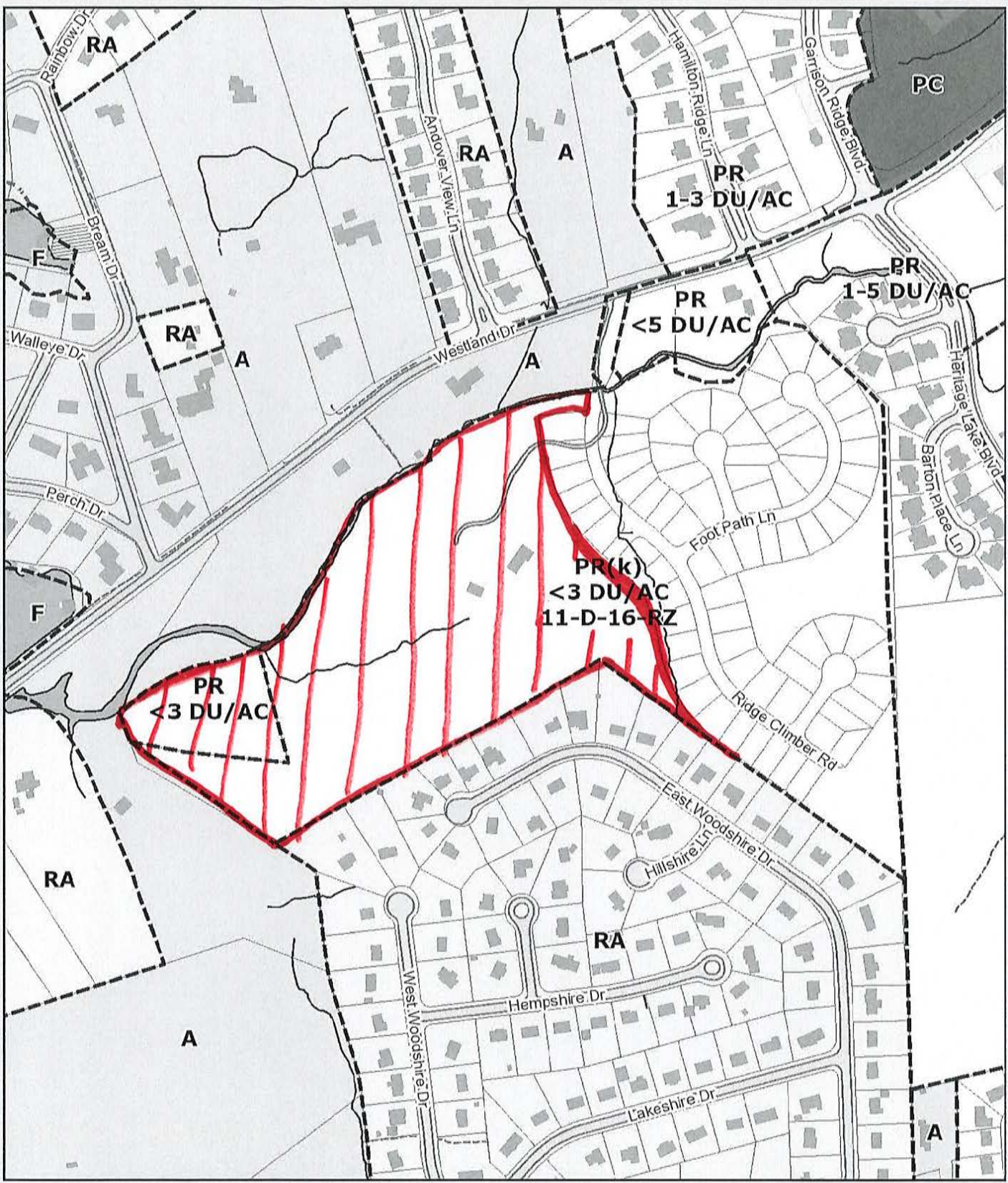
Justify variance by indicating hardship: _____

I certify that any and all variances needed to meet regulations are requested above, or are attached. I understand and agree that no additional variances can be acted upon by the legislative body upon appeal and none will be requested. I hereby waive the requirement for approval or disapproval of the plat within sixty (60) days after its submission, in accordance with the provisions of Tennessee Code Annotated 13-3-404.



Signature

7/20/2020
Date



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