



SUBDIVISION REPORT - CONCEPT/USE ON REVIEW

▶ **FILE #:** 4-SD-21-C **AGENDA ITEM #:** 28
4-D-21-UR **AGENDA DATE:** 4/8/2021

▶ **SUBDIVISION:** EMORY GREEN
▶ **APPLICANT/DEVELOPER:** FULGHUM MACINDOE & ACCOCIATES, INC.
OWNER(S): Ball Homes, LLC

TAX IDENTIFICATION: 77 083 (PART OF) [View map on KGIS](#)

JURISDICTION: County Commission District 6

STREET ADDRESS: 0 W. Emory Rd.

▶ **LOCATION:** South and west sides of W. Emory Road, east of Old Cobbs Ferry Road

SECTOR PLAN: Northwest County

GROWTH POLICY PLAN: Planned Growth Area

WATERSHED: Beaver Creek

▶ **APPROXIMATE ACREAGE:** 28.06 acres

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

▶ **EXISTING LAND USE:** Agricultural & Vacant land

▶ **PROPOSED USE:** Detached and attached residential subdivision

SURROUNDING LAND USE AND ZONING: North: Rural residential - RA (Low Density Residential)
South: Single family & multi family residential - PR (Planned Residential)
East: Single family residential - A (Agricultural) & RA (Low Density Residential)
West: Single family residential, Agricultural, Vacant land - A (Agricultural)

▶ **NUMBER OF LOTS:** 120

SURVEYOR/ENGINEER: Fulghum MacIndoe & Associates, Inc.

ACCESSIBILITY: Access is via W. Emory Road, a minor collector street with 21 feet of pavement width within 50 - 64 feet of right-of-way.

▶ **SUBDIVISION VARIANCES REQUIRED:** None

STAFF RECOMMENDATION:

▶ **APPROVE** the Concept Plan subject to 11 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 (County Ord. 91-1-102).
3. Implementing the recommendations of the Hatmaker (Emory Green) Subdivision Transportation Impact Study (Fulghum MacIndoe, 10/26/2020), as revised and approved by Planning Commission staff and Knox County Engineering and Public Works (see Exhibit A).

4. Providing a 25' common area strip between the W. Emory Road and lots 35-37, in accordance with section 3.02.A.4 (Double Frontage Lots) of the Knoxville-Knox County Subdivision Regulations, and as shown on the Concept Plan.
5. Providing a minimum 10' landscape buffer between the private driveway and parking spaces and W. Emory Road for the condominiums along the eastern boundary of the site.
6. Certifying that the required sight distance is available at all access points with documentation provided to Knox County Engineering and Public Works for review and approval during the design plan phase.
7. Reforesting the disturbed areas as proposed on sheet C2.
8. Meeting all applicable requirements of Knox County Engineering and Public Works.
9. Meeting all applicable requirements of the Knox County Zoning Ordinance.
10. 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.
11. 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, drainage system, and any recreational amenities.

► **APPROVE the development plan for up to 62 detached residential lots and 58 attached residential condominiums, and a reduction of the peripheral setback from 35 feet to 20 feet for Old Cobb Ferry Road frontage, 15 feet for the W. Emory Road frontage west of the Road 'A' intersection, and 25 feet for lots 35-37, as shown, 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 district and the criteria for approval of a use on review.

COMMENTS:

In December 2020, the Planning Commission approved a subdivision on this property for a total of 113 dwelling units, which included 55 detached lots and 58 attached condominium units (12-SD-20-C / 12-F-20-UR). This proposal is to increase the number of detached residential lots to 60 for a total of 120 dwelling units in the development at a density of 4.28 du/ac. The 58 attached condominium units, road system, common open spaces, and amenities that were previously approved are not being changed. There are approximately 11.3 acres of common area which includes the area where the condominiums are located but exclude the buildings and pavement. The amenity field proposed on the western portion of the property is located in the TVA powerline easement and is shown as a graded area that can be used for various activities.

The Hatmaker (Emory Green) Subdivision Transportation Impact Study (Fulghum MacIndoe, 10/26/2020) was prepared to address the impact of the proposed development on W. Emory Road (see Exhibit A). There are no recommended improvements to the external street system.

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 Northwest County Sector Plan recommends LDR (Low Density Residential) uses for this site with a maximum of 5 du/ac. The property was rezoned to PR up to 5 du/ac and the proposed subdivision has a density of 4.28 du/ac.

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 PR (Planned Residential) zoning for this site allows up to 5 du/ac and the proposed subdivision has a density of 4.28 du/ac.

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 proposed single-family detached subdivision has a similar character as other residential subdivisions in this area.

B. The proposed low density residential development is compatible with the scale and intensity of recent development that has occurred in this area.

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

A. The proposed residential development is compatible with the surrounding residential uses and will not significantly impact the value of adjacent properties.

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

A. The development will have direct access to W. Emory Road which is a minor collector street.

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. The property has a blueline stream through it and the required buffers are being provided.

B. There are no other 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.

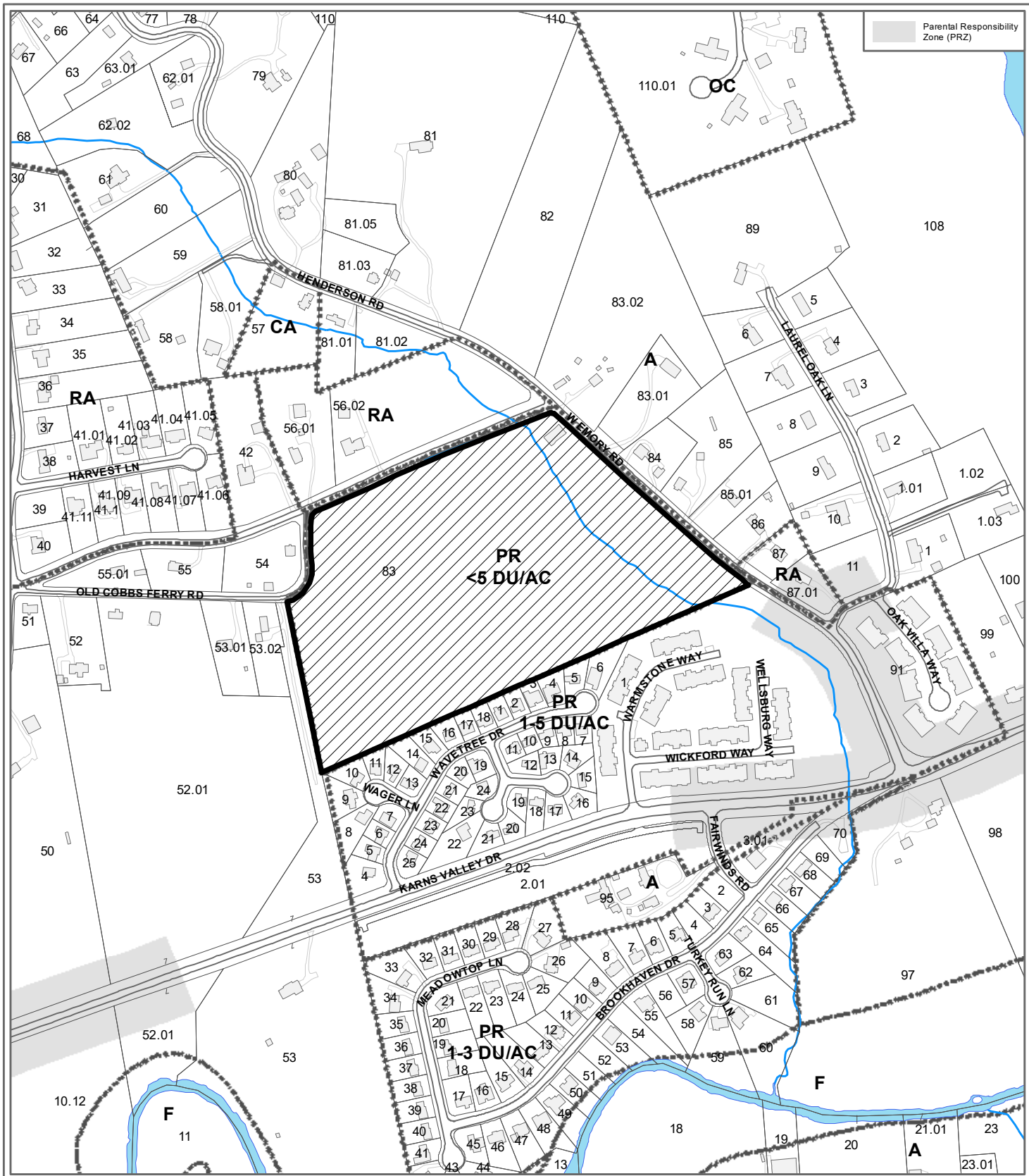
ESTIMATED STUDENT YIELD: 30 (public school children, grades K-12)

Schools affected by this proposal: Karns Elementary, Karns Middle, and Karns 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.



**4-SD-21-C / 4-D-21-UR
CONCEPT PLAN/USE ON REVIEW**



Detached residential subdivision in PR (Planned Residential)

Original Print Date: 3/10/2021

Revised:

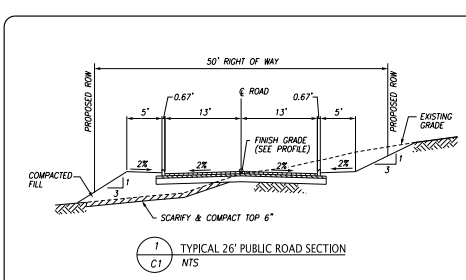
Knoxville - Knoxville Planning Commission * City / County Building * Knoxville, TN 37902

Petitioner: Fulghum MacIndoe & Associates, Inc.
Emory Green

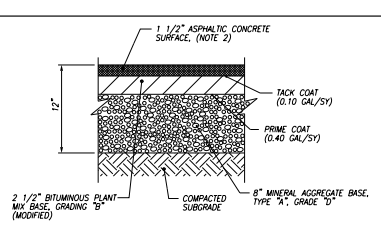
Map No: 77

Jurisdiction: County

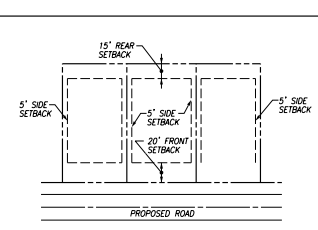




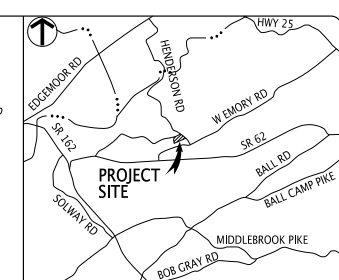
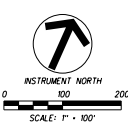
1 TYPICAL 26' PUBLIC ROAD SECTION
C1 NTS



2 ASPHALT PAVEMENT SECTION
C1 NTS



3 TYPICAL INTERIOR LOT
C1 NTS



LOCATION MAP
(NOT TO SCALE)

FULGHUM
MACINDOE
ASSOCIATES, INC.

10330 HARDEN VALLEY ROAD
SUITE 200
KNOXVILLE, TN 37932
OFFICE: 865.690.6419
FAX: 865.690.6418
www.fulghummacindoe.com

PRELIMINARY
NOT FOR
CONSTRUCTION

EMORY GREEN SUBDIVISION
8935 W EMORY ROAD
KNOXVILLE, TENNESSEE 37931

BALL HOMES, LLC
6305 WALKER DRIVE
LENSING, KY 40347
CONTACT: MR. D. RAY BALL, JR.
TELEPHONE NO.: 855.688.1191

CONCEPT PLAN

- GENERAL NOTES:**
- THE BOUNDARY DATA WAS TAKEN FROM LYNCH SURVEYS LLC DATED AUGUST 27, 2020.
 - PROPERTY CONCERNED REFLECTS PARCELS 077 ONLY AS SHOWN IN KNOX COUNTY C1 MAP 77. ZONING FOR THE PROPERTY IS PKL PLANNED RESIDENTIAL. TOTAL PARCEL AREA = 36.41± AC. TOTAL AREA ZONED PKL = 3298.06 AC.
 - OWNER: BALL HOMES, LLC
6305 WALKEN DRIVE
LEAKINGTON, KY 40317
 - BUILDING SETBACKS ARE 20'-FT. IN FRONT, 5'-FT. ON SIDE, AND 15'-FT. IN REAR. THE PERIPHERAL SETBACK IS 35'-FT. 25'-FT. PERIPHERAL SETBACK REQUESTED FOR LOTS 35-37.
 - 15'-FT PERIPHERAL SETBACK WAS PREVIOUSLY APPROVED FOR ±180 FT CORN ALONG THE W. EMORY ROAD BOUNDARY. 20'-FT PERIPHERAL SETBACK WAS PREVIOUSLY APPROVED FOR THE FRONTAGE ALONG OLD COBBS FERRY ROAD.
 - ACCESS TO LOTS IS RESTRICTED TO INTERNAL STREETS.
 - 10' UTILITY & DRAINAGE EASEMENT INSIDE ROAD FRONTAGE AND S/D PERMETER LOT LINES. 5' EACH SIDE OF ALL INTERIOR LOT LINES.
 - PROPOSED IMPROVEMENTS INCLUDE: 26" WIDE PUBLIC ROAD, EXTRUDED CURB, STORM SEWER, SANITARY SEWER, WATER, ELECTRIC, TELEPHONE, AND CABLE TV.
 - PLANNING COMMISSION CASE NUMBERS: 4-SD-21-C / 4-D-21-UR.
 - TOWNHOMES WERE APPROVED IN PREVIOUS PLANNING COMMISSION MEETING CASE NUMBER: 12-SD-20-1/12-17-20-UR.

PROPOSED DENSITY

PARCEL ZONED PER ALLOWED DENSITY	5 DU/AC
PROPERTY ZONED PER AREA	286.06 AC
SINGLE FAMILY DWELLING UNITS	62 UNITS
CONDOS/ROW DWELLING UNITS	58 UNITS
TOTAL DWELLING UNITS	120 UNITS
PROPOSED DENSITY	4.28 DU/AC

PARKING SUMMARY - WEST

REQUIRED PARKING FOR RESIDENTIAL
30 DWELLINGS @ 2 PARKING SPACES PER DWELLING UNIT 60

TOTAL PARKING PROVIDED
GARAGE SPACES 30
STANDARD SPACES (9'x17.5') 30
TOTAL 60 SPACES

PARKING SUMMARY - EAST

REQUIRED PARKING FOR RESIDENTIAL
28 DWELLINGS @ 2 PARKING SPACES PER DWELLING UNIT 56

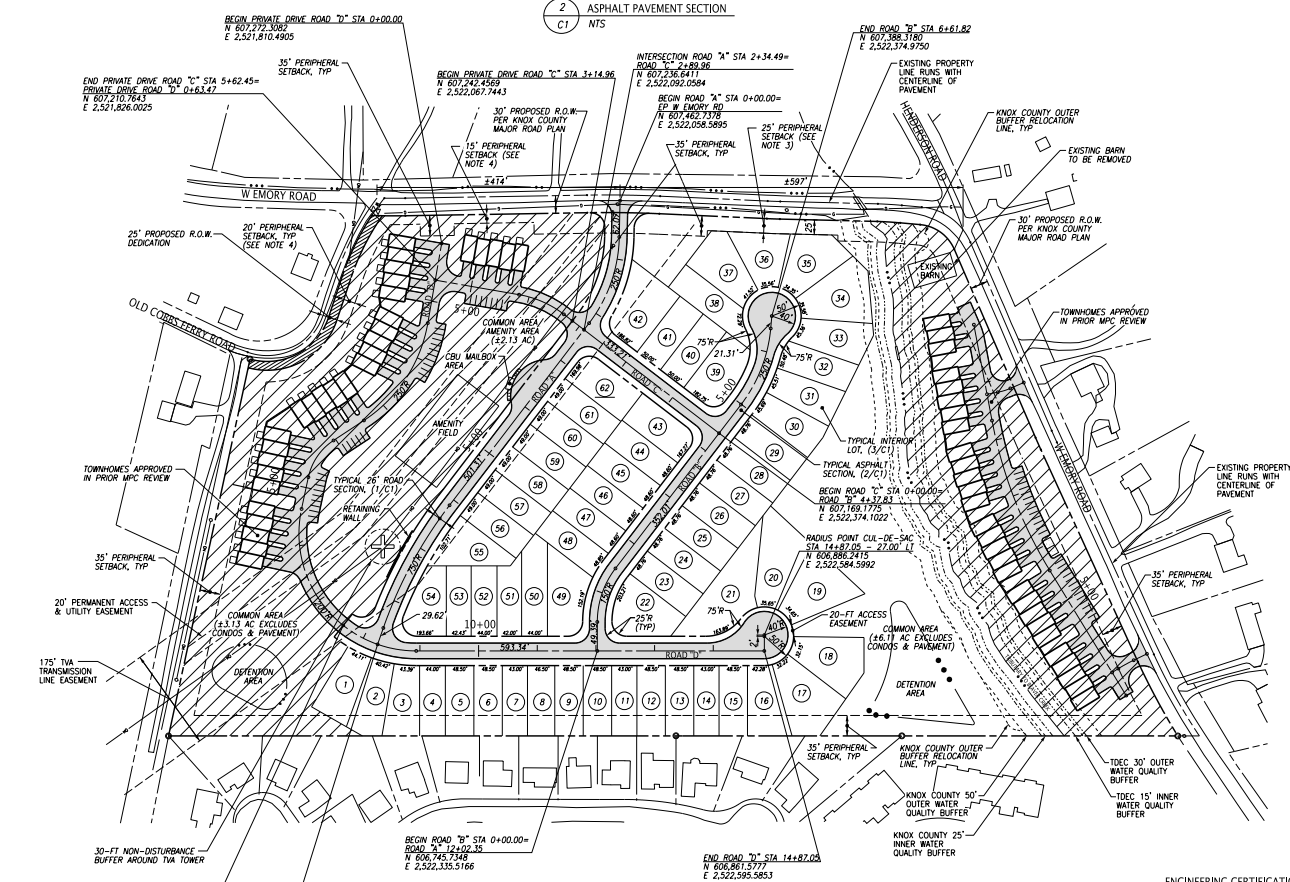
TOTAL PARKING PROVIDED
GARAGE SPACES 28
STANDARD SPACES (9'x17.5') 28
TOTAL 56 SPACES

UTILITY OWNERS:

WATER & SEWER	GAS
WEST KNOX UTILITY DISTRICT (WKUD) P.O. BOX 51370 KNOXVILLE, TN 37950-1370 CONTACT: MR. WAYNE HASTINGS OFFICE PHONE: 865.690.2521	KNOXVILLE UTILITIES BOARD (KUB) P.O. BOX 90177 KNOXVILLE, TN 37950-9017 CONTACT: MR. CHRIS MCCORMACK OFFICE PHONE: 865.558.2123
ELECTRIC	TELEPHONE
LENOIR CITY UTILITY BOARD (LCUB) P.O. BOX 449 LENOIR CITY, TN 37771 CONTACT: MR. MITCH LEDBETTER OFFICE PHONE: 865.988.0707	AT&T 9733 PARKSIDE DRIVE KNOXVILLE, TN 37923 CONTACT: MS. VICKIE DALEY OFFICE PHONE: 865.539.8571

LEGEND:

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



4-SD-21-C / 4-D-21-UR
3/22/2021

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 THE 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 WILLIAM C. FULGHUM, JR., P.E.
TENNESSEE CERTIFICATE NO. 0100940

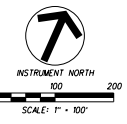
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Plot Date: 03/22/2021

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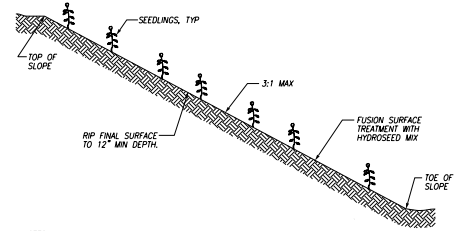
PROJ. NO.	ISSUED BY	DATE	REVISION/ISSUE
592.009	HWJ	03/22/21	
	HWJ	02/18/21	
	HWJ	11/23/20	
	HWJ	10/26/20	
Project	Sheet	Date	Scale
592.009	C1	10/26/20	1" = 100'

PROJ. NO.	ISSUED BY	DATE	REVISION/ISSUE
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	WCF	02/18/21	
	WCF	11/23/20	
	WCF	10/26/20	

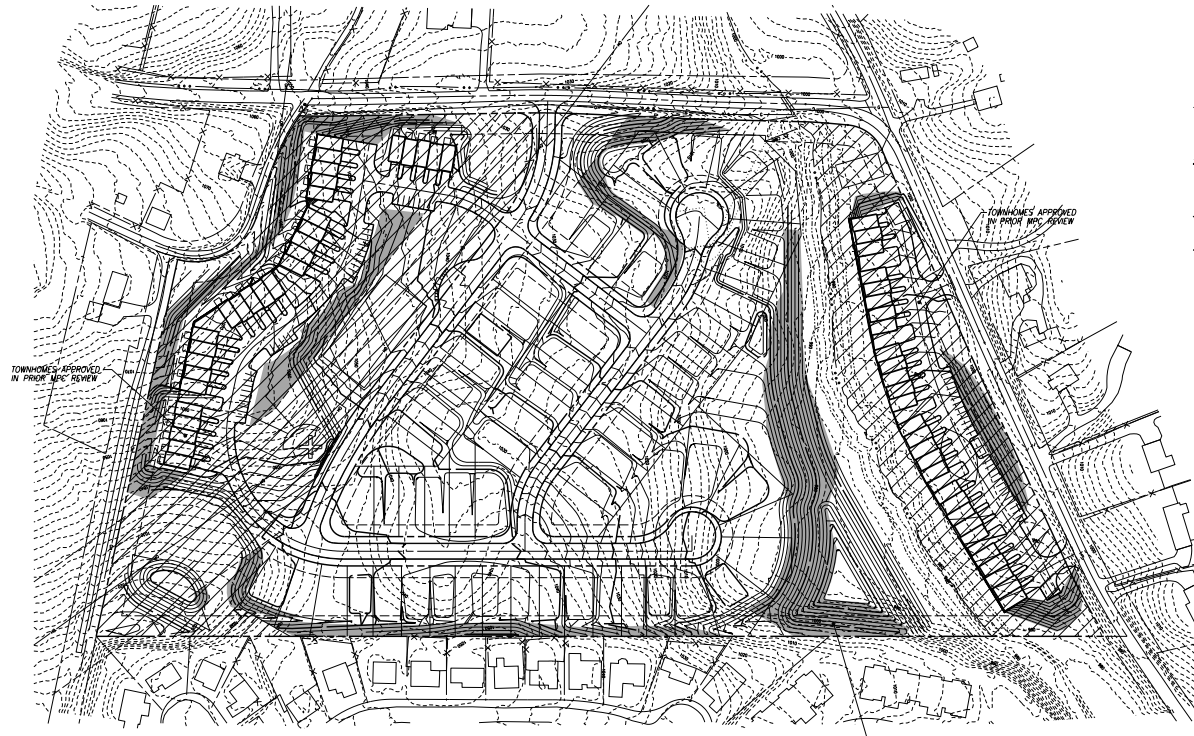
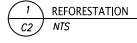
Project: 592.009
 Sheet: C2
 Date: 10/26/20
 Scale: 1" = 100'



- GENERAL NOTES:**
1. TOPOGRAPHIC DATA WAS TAKEN FROM KGIS.
 2. PLANNING COMMISSION CASE NUMBER: 12-SD-20-C/12-F-20-UR.



- NOTES:**
1. SEEDLINGS SHALL BE A MIX OF AT LEAST 6 OF THE FOLLOWING SPECIES: AMERICAN PLUM, BLACKGUM, NORTHERN RED OAK, TULIP POPLAR, RED MAPLE, REDBUD, SCARLET OAK, SWEETGUM, SYCAMORE AND WHITE OAK. INSTALL ON 12" X 12" GRID OR 300 PER ACRE. PLANTING DATES RANGE FROM DECEMBER TO MID-APRIL.
 2. HYDROSEED SLOPE WITH ERNST NC MOUNTAIN UR1 MEADOW MIX (ERNA1 303). APPLY 20 LBS./AC. ADD FERTILIZER TO THE HYDROSEED MIX. USE 19-19-19 AND APPLIED AT A RATE OF 400 LBS./AC. ADD ANNUAL COVER CROP TO THE HYDROSEED MIX AS FOLLOWS: OATS (JANUARY TO FEBRUARY) APPLIED AT 20 LBS./AC. BROWNSH MILLET (MARCH TO AUGUST) APPLIED AT 10 LBS./AC. WINTER RYE GRASS (SEPTEMBER TO DECEMBER) APPLIED AT 30 LBS./AC.
 3. APPLY FUSION SURFACE TREATMENT (EEN-HILL CONSTRUCTION MATERIALS) AT A RATE OF 4,500 LBS./AC ALONG WITH THE HYDROSEED MIX. OBTAIN A SOIL SAMPLE TO CONFIRM THE APPLICATION RATE. INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS.
 4. PROTECT FINISHED SLOPE FROM BEING DISTURBED.



4-SD-21-C / 4-D-21-UR
 3/22/2021

LEGEND:

	PROPOSED REFORESTATION
	PROPOSED PROPERTY/ROW LINE
	890 PROPOSED CONTOUR
	920 EXISTING CONTOUR



10330 HARDEN VALLEY ROAD
SUITE 200
KNOXVILLE, TN 37932
OFFICE: 865.690.6419
FAX: 865.690.6448
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PRELIMINARY
NOT FOR
CONSTRUCTION

EMORY GREEN SUBDIVISION
8935 W EMORY ROAD
KNOXVILLE, TENNESSEE 37931

BALL HOMES, LLC
6000 WOODBURN DRIVE
LESLINGTON, VA 20187
CONTACT: MR. D. RAY BALL, JR.
TELEPHONE NO.: 855.268.1191

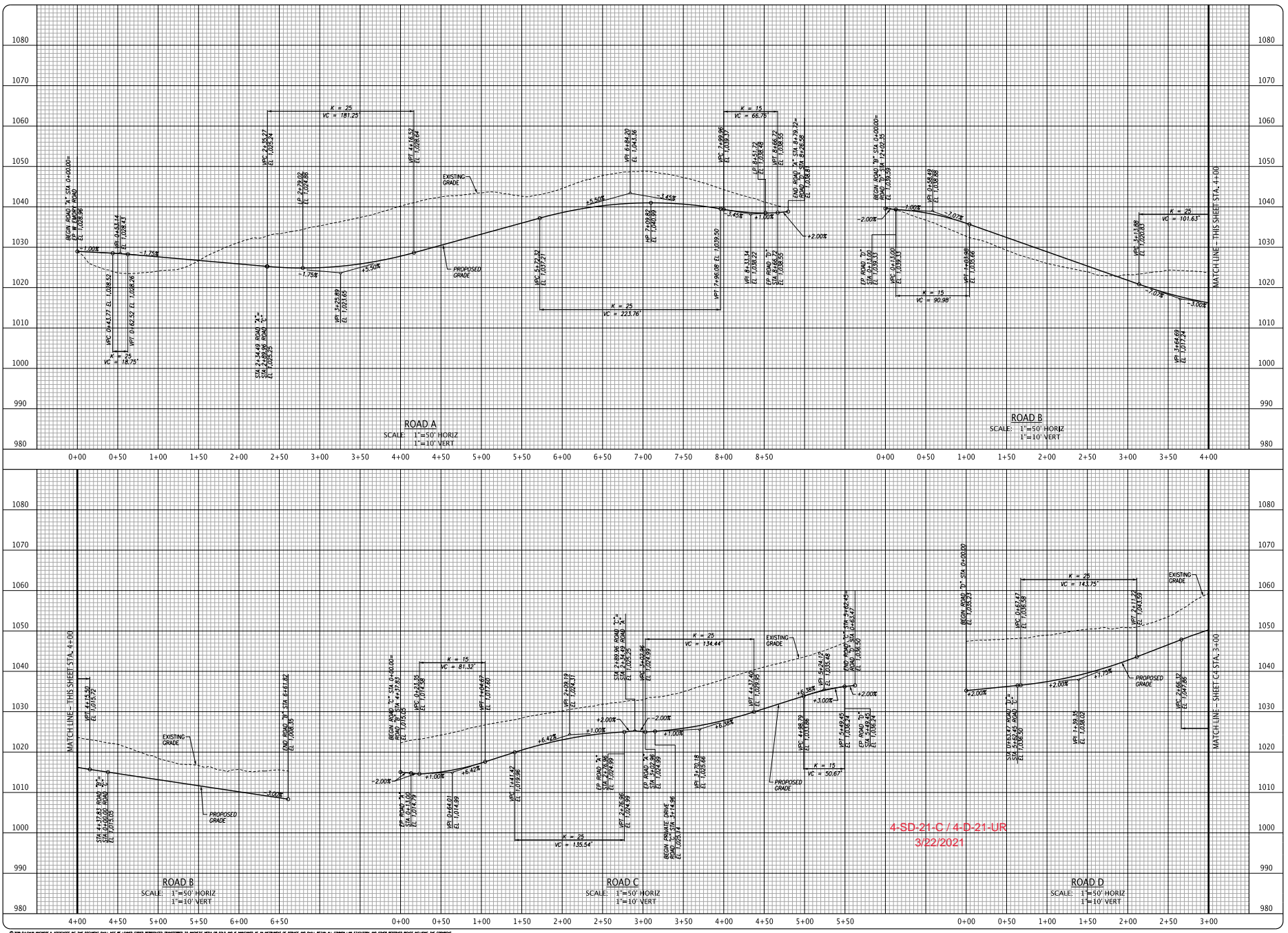
ROAD PROFILES

PROJ. NO.	DATE	BY	REVISION/ISSUE
592.009	02/22/21	HNU	REVISED PER WPC COMMENTS
	02/18/21		REVISED SINGLE FAMILY LOTS
	1/22/20		REVISED PER WPC COMMENTS
	10/26/20		ISSUED FOR REVIEW

NO.	DATE	BY	REVISION/ISSUE
1	10/26/20	HNU	ISSUED FOR REVIEW

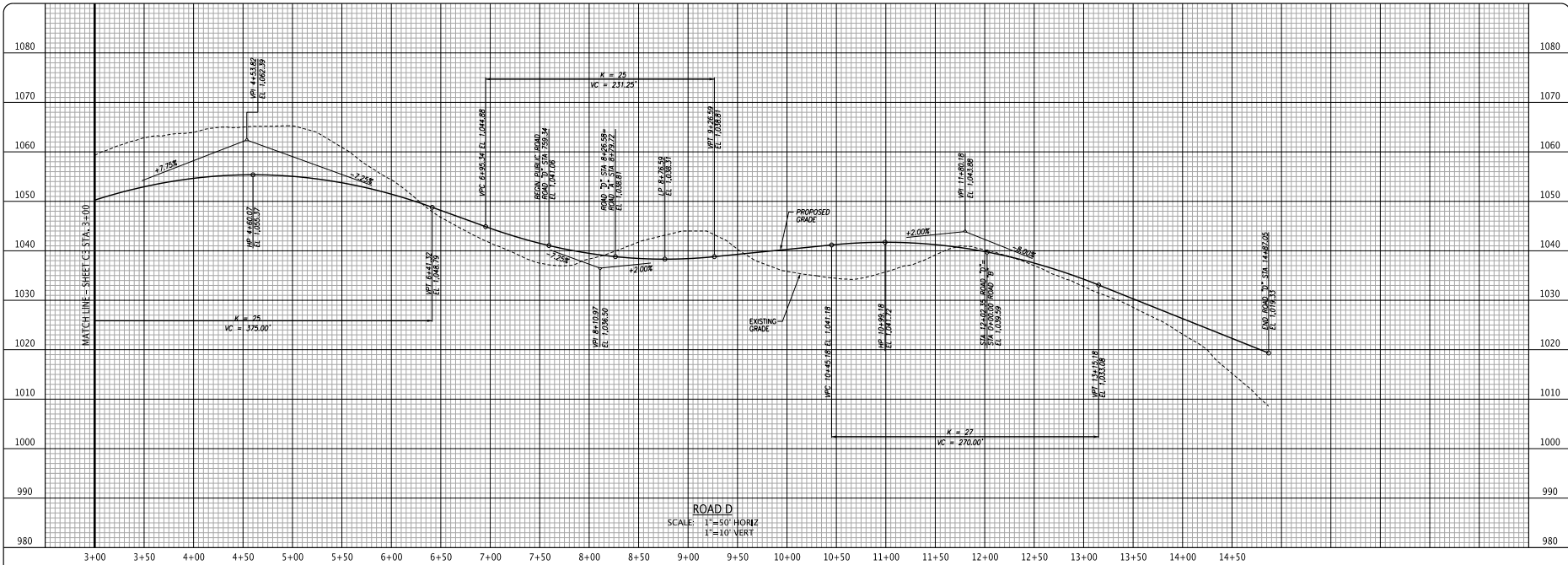
Project: 592.009
Date: 10/26/20
Scale: AS NOTED

C3



File Name: 4-SD-21-C/4-D-21-UR/MS1/20200805.dwg
Plot Date: 3/22/2021

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4-SD-21-C / 4-D-21-UR
 3/22/2021

10330 HARDEN VALLEY ROAD SUITE 201 KNOXVILLE, TN 37932 OFFICE: 865.690.6419 FAX: 865.690.6418 www.fulghummacindoe.com			
PRELIMINARY NOT FOR CONSTRUCTION			
EMORY GREEN SUBDIVISION 8935 W EMORY ROAD KNOXVILLE, TENNESSEE 37931			
BALL HOMES, LLC 6305 WALKER FORDLE LENOIR COUNTY, NC 27561 CONTACT: MR. D. RAY BALL, JR. TELEPHONE NO.: 855.268.1191			
ROAD PROFILES			
PROJ. NO. 592.009	DESIGNED BY MCF	DRAWN BY HNU	DATE 03/22/21
PROJECT 592.009	SHEET C4	DATE 10/26/20	SCALE AS NOTED
REVISION 1 REVISED PER WPC COMMENTS	REVISION 2 REVISED SINGLE FAMILY LOTS	REVISION 3 REVISED PER WPC COMMENTS	REVISION 4 ISSUED FOR REVIEW
No.	Revision/Issue	Date	Date

EXHIBIT A

HATMAKER SUBDIVISION
Transportation Impact Analysis
W Emory Road
Knoxville, TN

A Transportation Impact Analysis for the Hatmaker Subdivision

Submitted to

Knoxville – Knox County Planning Commission

October 26, 2020
FMA Project No. 592.009

Submitted By:



4-SD-20-C
4-D-20-UR
10/26/2020

EXHIBIT A

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EXHIBIT A

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ATTACHMENTS

1	AERIAL PHOTO
2	TRAFFIC COUNTS
3	ADT TRENDS
4	TRIP GENERATION
5	INTERSECTION WORKSHEETS – EXISTING AM/PM PEAKS
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7	INTERSECTION WORKSHEETS – FULL BUILDOUT AM/PM PEAKS
8	TURN LANE WARRANT ANALYSIS

Executive Summary

Ball Homes, LLC is proposing a residential development (i.e. Hatmaker Subdivision) with single-family housing located in Knox County. The project is located at the intersection of W Emory Road at Henderson Road. The full build out of the development will consist of 54 single family lots and 58 townhomes for a total of 112 units. Construction is proposed to take place this year and this study assumes full build out for the development will occur in 2023.

There are three proposed driveway connections to W Emory Road. The main driveway connection will be located west of the intersection of W Emory Road at Henderson Road. The townhomes located south of the intersection of W Emory Road at Henderson Road will have two driveway connections to W Emory Road.

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

W Emory Road at Henderson Road

The full buildout traffic conditions for the eastbound left turn movement (W Emory Road) operates at a LOS A during both the AM and PM peak hours and the southbound approach (Henderson Road) operates at a LOS B during both the AM and PM peak hours.

W Emory Road at Driveway Connections

At the intersection of W Emory Road at the main driveway connection the westbound left turn movement (W Emory Road) operates at a LOS A during both the AM and PM peak hour and the northbound approach (driveway) operates at a LOS A during both the AM and PM peak hours after the completion of the Hatmaker Subdivision.

Neither an eastbound right turn lane nor a westbound left turn lane are warranted at the intersection of W Emory Road at the main driveway connection.

1 Introduction

1.1 Project Description

This report provides a summary of a traffic impact study that was performed for the Hatmaker Subdivision. The project is located at the intersection of W Emory Road at Henderson Road north of Oak Ridge Highway (SR 62) in Knox County, Tennessee. The location of the site is shown in Figure 1.

The full build out of the development will consist of 54 single family lots and 58 townhomes for a total of 112 units. Construction is proposed to take place this year, and this study assumes full build out for the development will occur in 2023.

There are three proposed driveway connections to W Emory Road. The main driveway connection will be located 555 feet west of the intersection of W Emory Road at Henderson Road and approximately 425 feet east of the intersection of Old Cobbs Ferry Road. The townhomes located along W Emory Road will have two driveway connections to W Emory Road. The first driveway connection will be located 315 feet south of the intersection of W Emory Road and the second driveway connection will be located 510 feet south of the first driveway connection. 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 development.

EXHIBIT A

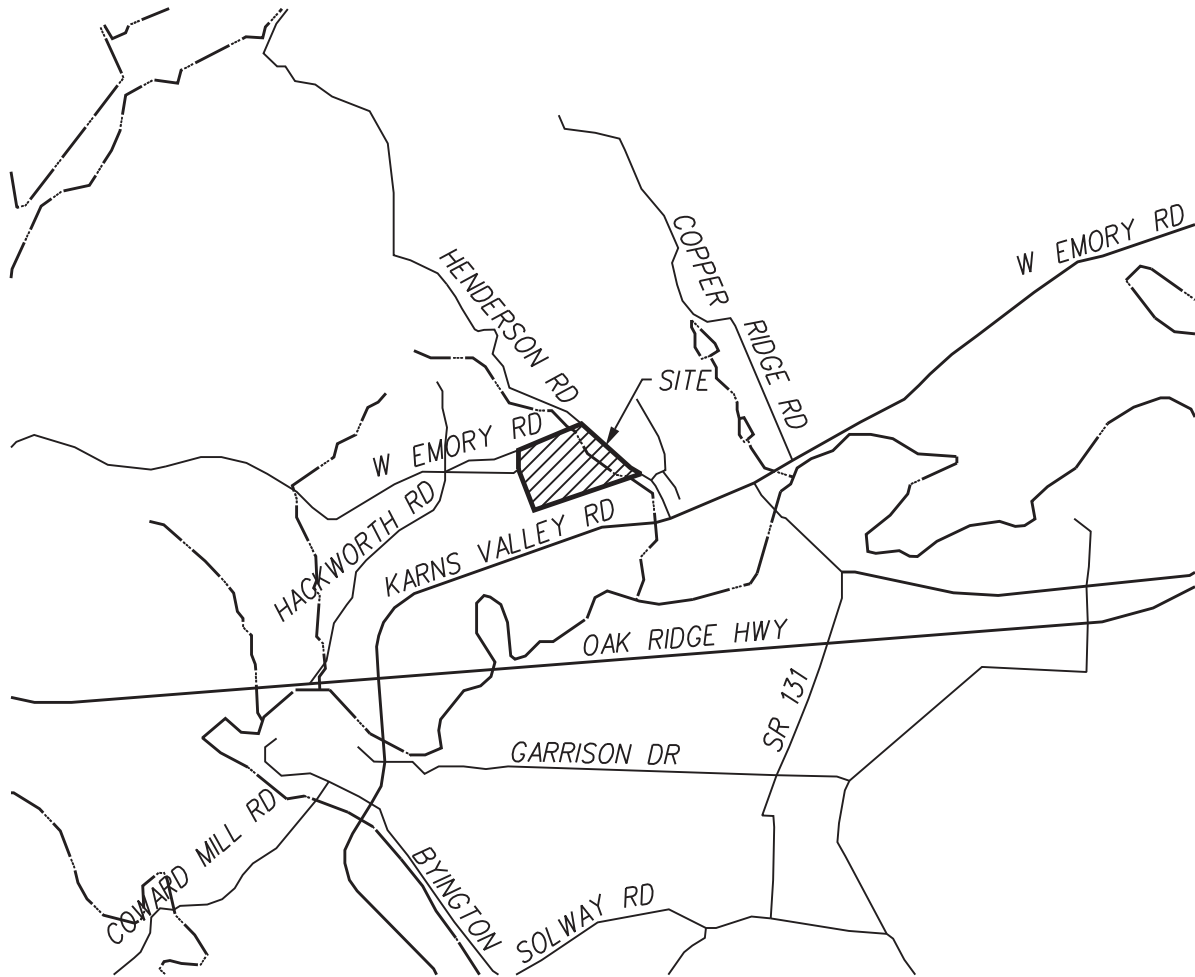


Figure 1: Location Map

EXHIBIT A

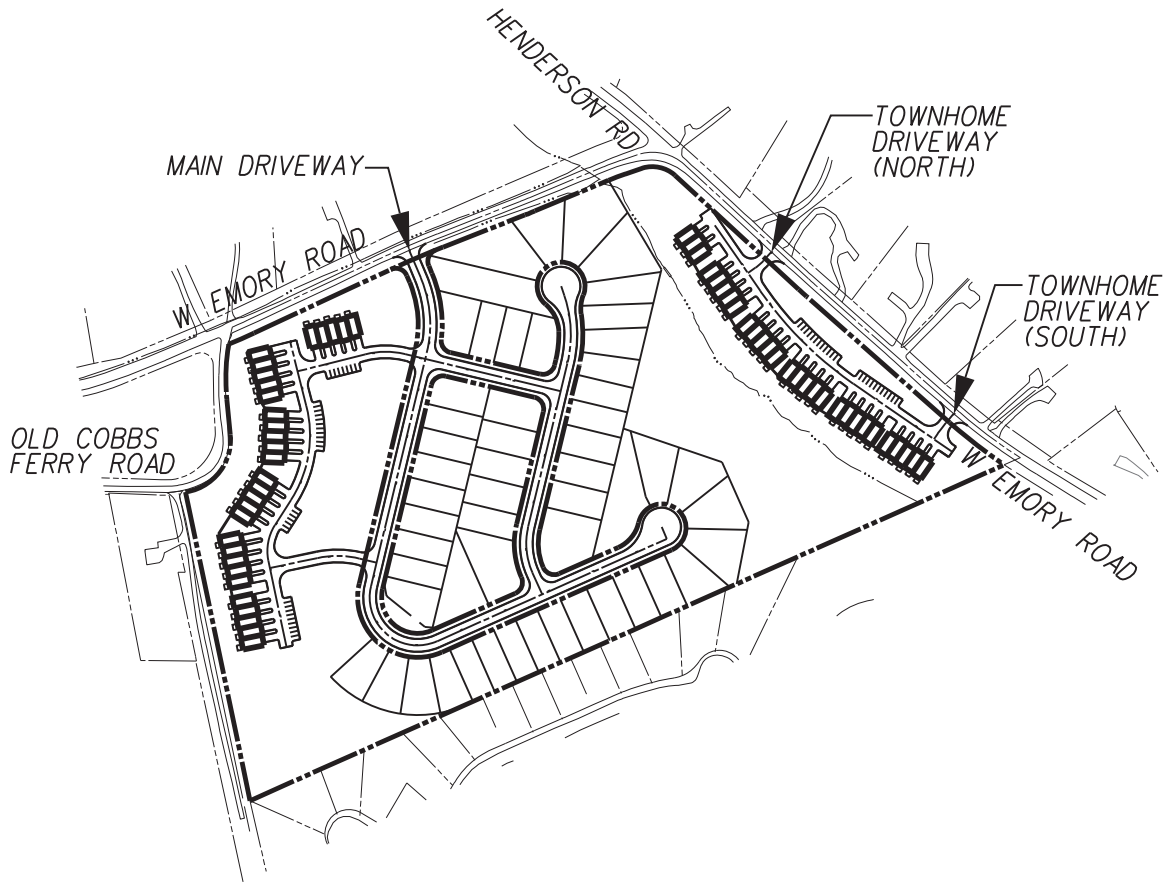


Figure 2: Site Plan

EXHIBIT A

1.2 Existing Site Conditions

W Emory Road is a two-lane road at the intersection with Henderson Road. Knoxville-Knox County Planning classifies W Emory Road between Oak Ridge Highway (SR 62) and Karns Valley Road as a Minor Collector with a 60 foot right-of-way. The posted speed limit on W Emory Road is 30 mph.

Henderson Road is a two-lane road at the intersection with W Emory Road. Knoxville-Knox County Planning classifies Henderson Road between W Emory Road and the Anderson County line as a Minor Collector with a 60 foot right-of-way. The posted speed limit on Henderson Road is 30 mph.

There are no existing sidewalks or designated bike lanes along W Emory Road or Henderson Road in the vicinity of the proposed development.

An aerial photo of the existing intersection is included in Attachment 1.

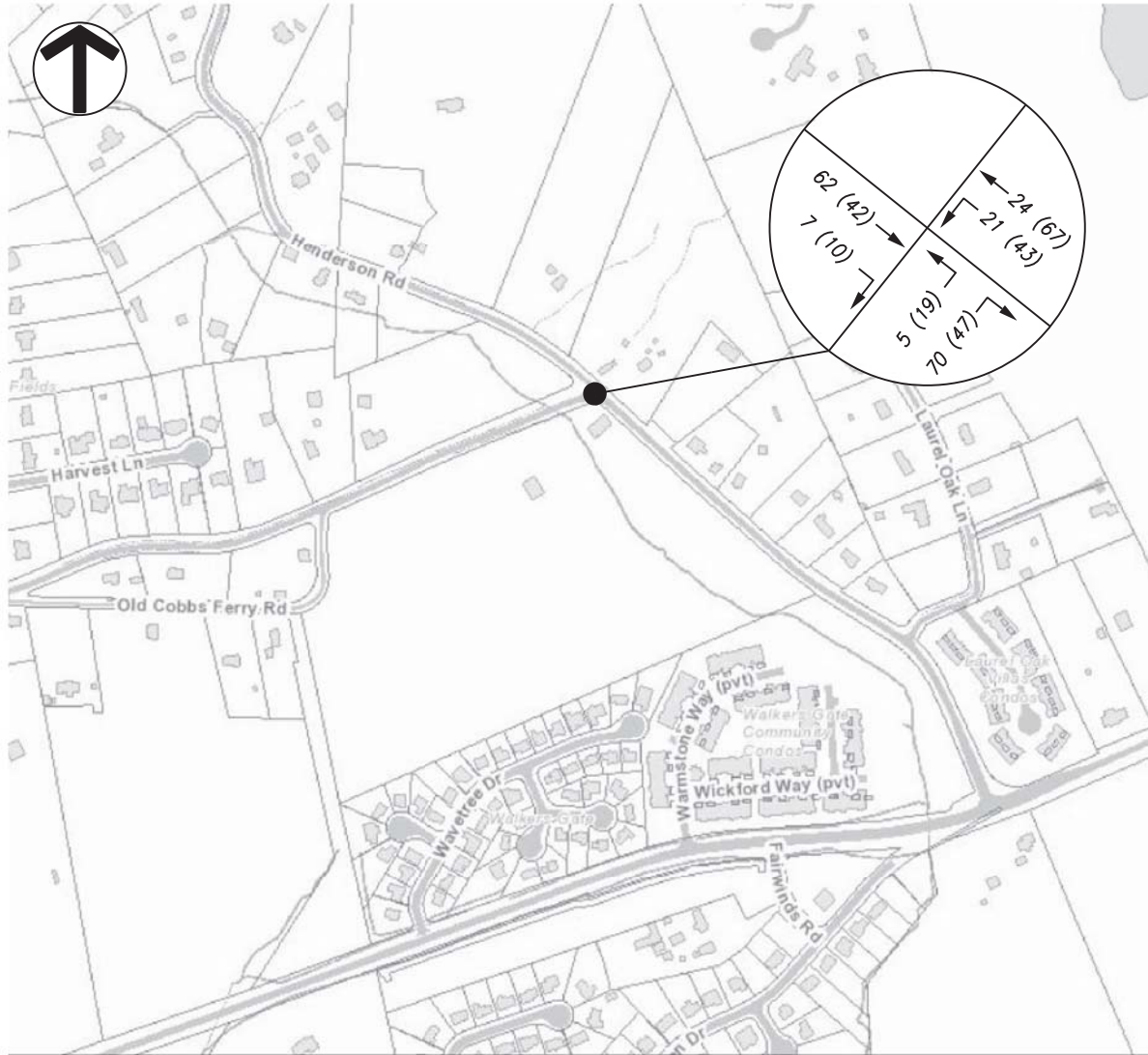
2 Existing Traffic Volumes

FMA conducted a turning movement count at the intersection of W Emory Road at Henderson Road on Thursday September 10, 2020.

The current AM peak hour and PM peak hour were determined using the turning movement count that FMA conducted. At the intersection of W Emory Road at Henderson Road the AM peak hour occurred between 7:15 a.m. and 8:15 a.m., and the PM peak hour occurred between 5:15 p.m. and 6:15 p.m.

The existing volumes including the AM and PM peak hour traffic volumes at the count locations are shown in Figure 3, and the count data collected is included in Attachment 2.

EXHIBIT A



LEGEND:

← 5 (16) TURNING MOVEMENT VOLUME AM (PM)

Figure 3: 2020 Existing Peak Hour Traffic

3 Background Growth

The Tennessee Department of Transportation (TDOT) maintains count stations in the vicinity of the proposed development.

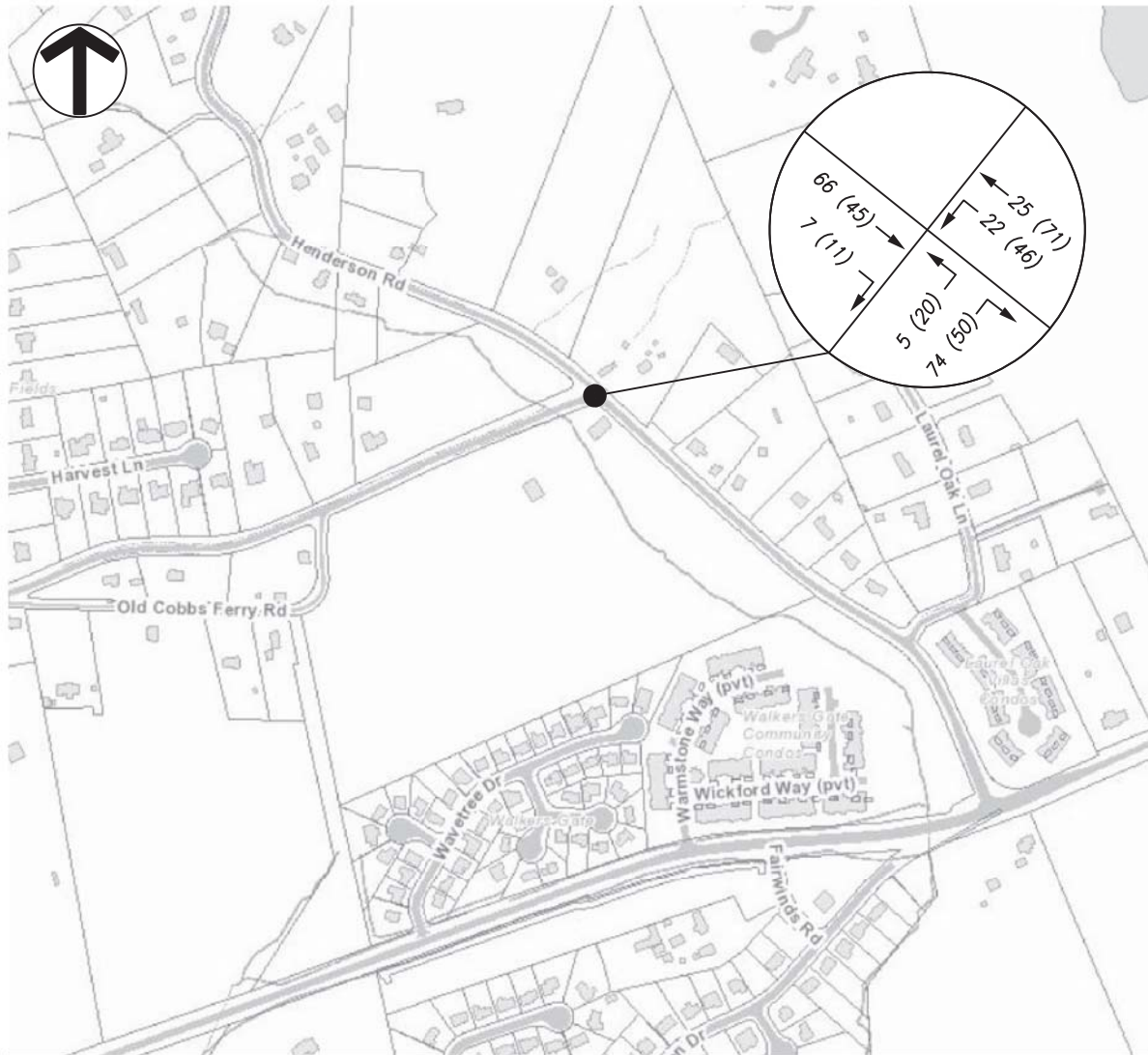
TDOT count station ID: 000178 is located on Henderson Road at the Anderson County line. The annual growth rate for this station over the last ten years is approximately 0.87% and the 2019 ADT was 1,129 vehicles per day.

TDOT count station ID: 000468 is located on Karns Valley Drive west of the intersection of W Emory Road and north of Oak Ridge Highway (SR 62). The annual growth rate for this station over the last eight years is approximately 4.82% and the 2018 ADT was 4,894 vehicles per day.

For the purpose of this study, an annual growth rate of 2.0% was assumed for the traffic at the intersection of W Emory Road at Henderson Road until full occupancy is reached in 2023. Attachment 3 shows the trend line growth charts for the TDOT count stations.

Figure 4 demonstrates the projected background peak hour volumes at the intersection of W Emory Road at Henderson Road after applying the background growth rate to the existing conditions.

EXHIBIT A



LEGEND:

← 5 (16) TURNING MOVEMENT VOLUME AM (PM)

Figure 4: 2023 Background Peak Hour Traffic

4 Trip Generation and Trip Distribution

The Hatmaker Subdivision proposes 54 single family lots and 58 townhomes for a total of 112 units. Single-Family Detached Housing or Land Use 210 was used to calculate site trips for the subdivision using the fitted curve equations from the *Trip Generation, 10th Edition*, published by the Institute of Transportation Engineers.

The Knoxville-Knox County Planning Commission published a memorandum (“Local Trip Generation Rates for Multi-Family Residential Uses”, August 14, 2000) for the purpose of providing locally collected data for all multi-family residential developments. The fitted curve equations from the local study were used to calculate site trips for the 58 townhomes. The land use worksheets are included in Attachment 4.

The total trips generated by the full buildout of the Hatmaker Subdivision was estimated to be 1,175 daily trips. The estimated trips are 75 trips during the AM peak hour and 105 trips during the PM peak hour. A trip generation summary is shown in Table 4-1.

**Table 4-1
Hatmaker Subdivision
Trip Generation Summary**

Land Use	Density	Daily Trips	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Single-Family Detached Housing (Land Use 210)	54 lots	590	11	32	35	21
Apartments (Local Trip Gen Study)	30 units	304	4	13	14	11
Total – Main Driveway	87 units	894	15	45	49	32
Apartments (Local Trip Gen Study) Townhome Driveways	28 units	281	3	12	13	11
Total – Overall	115 units	1,175	18	57	62	43

EXHIBIT A

**Hatmaker Subdivision
Transportation Impact Analysis
October 26, 2020**

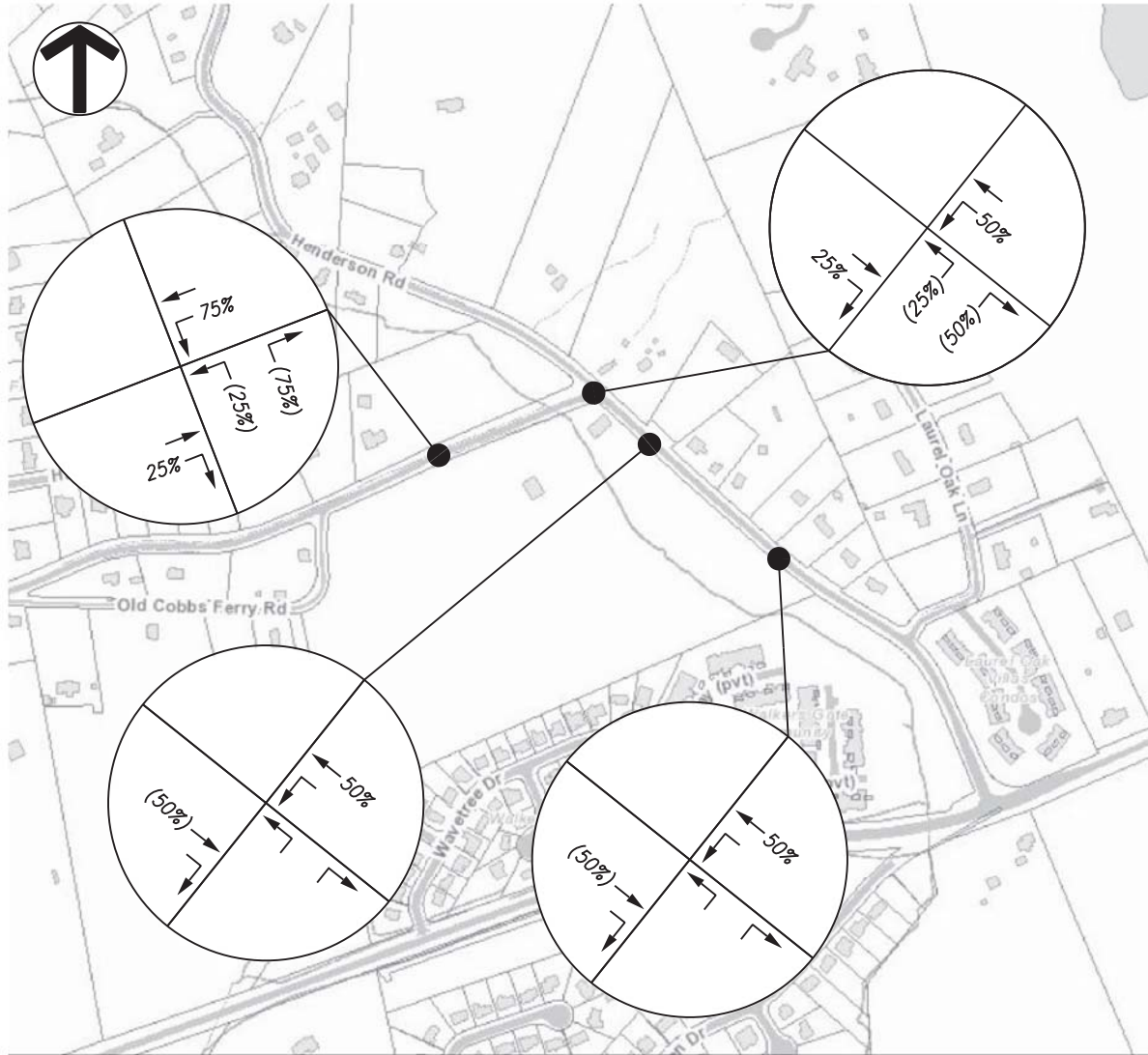
The existing distribution of traffic at the intersection of W Emory Road at Henderson Road is approximately 50% W Emory Road to/from Karns Valley Drive, 25% Henderson Road and 25% W Emory Road to/from Hackworth Road during both the AM and PM peak hours.

The directional distribution of the traffic generated by the Hatmaker Subdivision was determined using the existing traffic volumes at the intersection of W Emory Road at Henderson Road in combination with the concept plan layout. FMA assumed that 76% of traffic would enter/exit from the main entrance on W Emory Road and 12% of traffic would enter/exit from each of the townhomes driveways on W Emory Road.

Figure 5 shows the peak hour trip distribution for the main driveway and Figure 6 shows the peak hour trip distribution for the townhomes driveways.

Figure 7 shows the peak hour site trips generated by the Hatmaker Subdivision and Figure 8 shows the projected full buildout peak hour traffic after the completion of the Hatmaker Subdivision.

EXHIBIT A

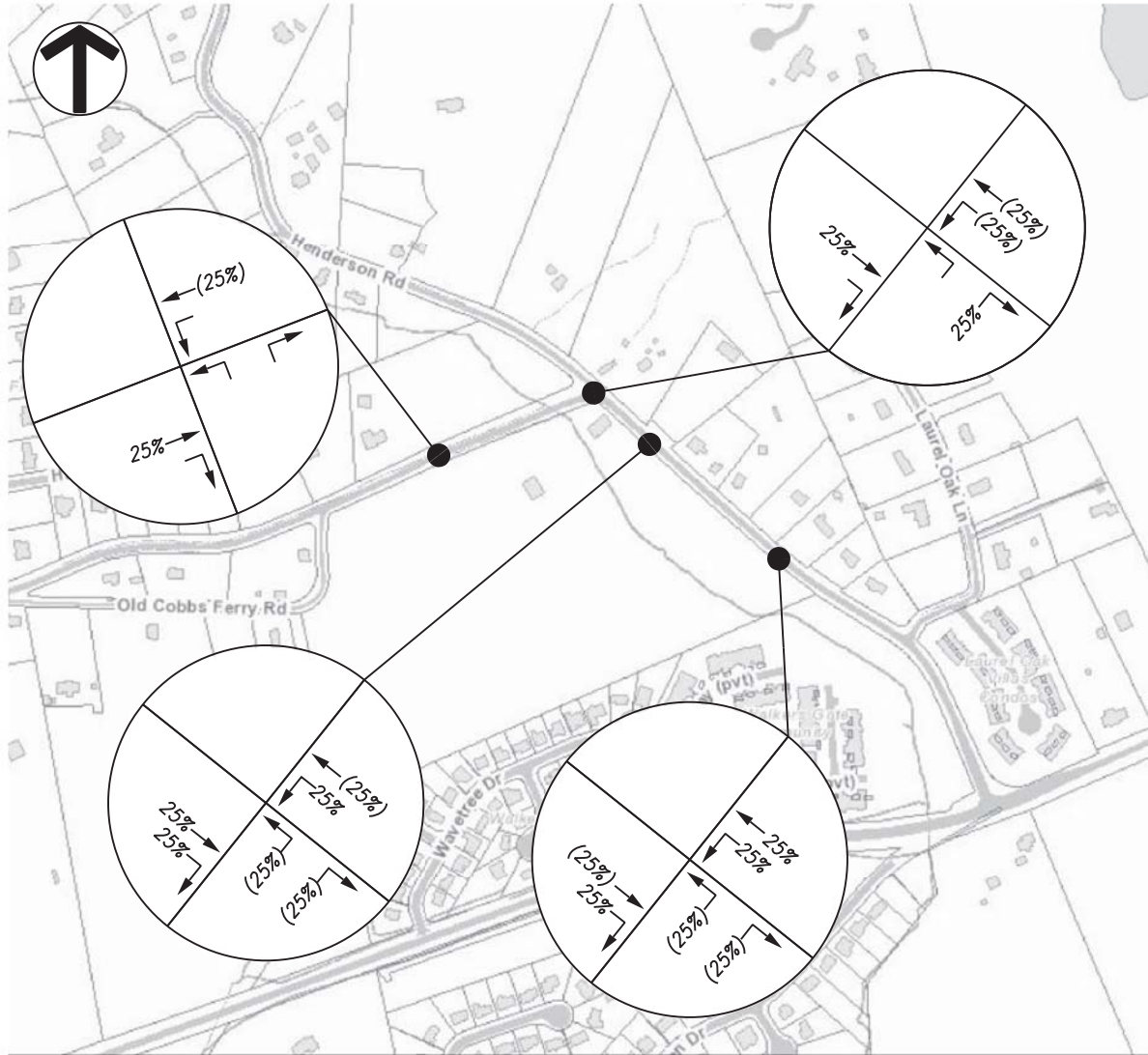


LEGEND:

← 50% (50%) TRIP DISTRIBUTION ENTERING (EXITING)

Figure 5: Peak Hour Trip Distribution - Main Driveway

EXHIBIT A

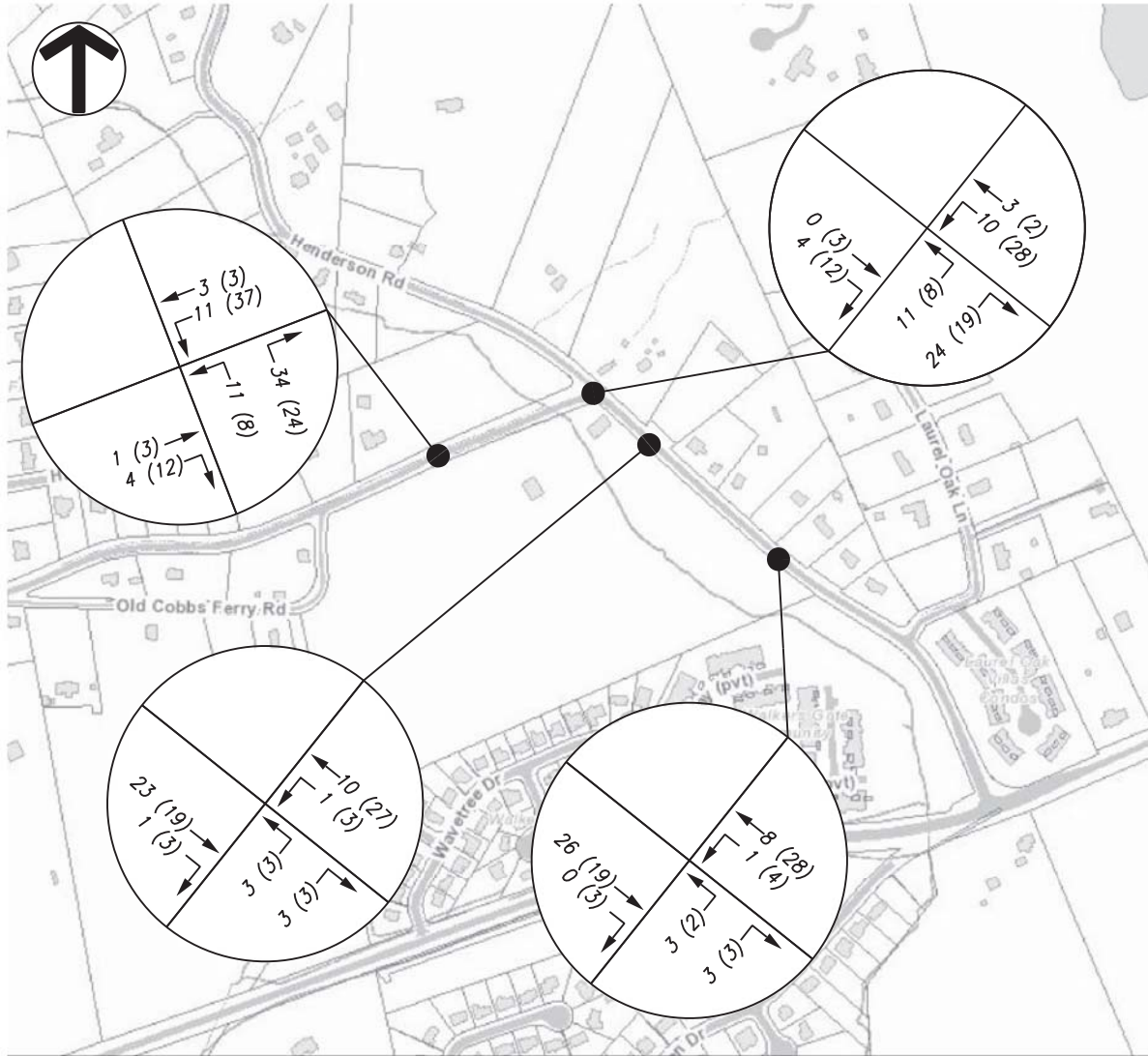


LEGEND:

← 50% (50%) TRIP DISTRIBUTION ENTERING (EXITING)

Figure 6: Peak Hour Trip Distribution - Townhome Driveways

EXHIBIT A

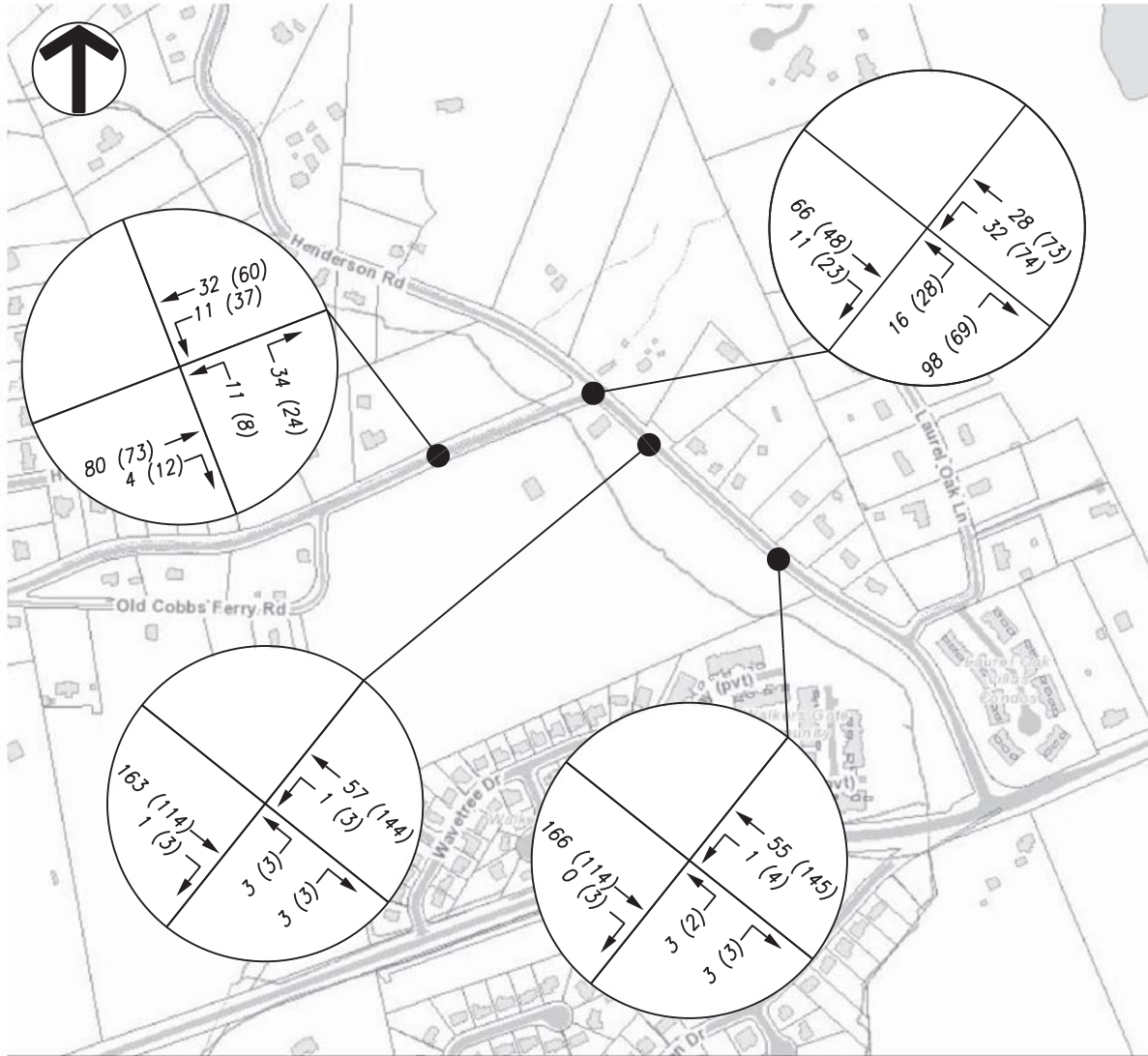


LEGEND:

← 5 (16) TURNING MOVEMENT VOLUME AM (PM)

Figure 7: Hatmaker Subdivision Peak Hour Site Trips

EXHIBIT A



LEGEND:

← 5 (16) TURNING MOVEMENT VOLUME AM (PM)

Figure 8: 2023 Full Buildout Peak Hour Traffic

5 Projected Capacity and Level of Service

The existing intersection of W Emory Road at Henderson Road is a three-legged intersection with a stop sign for southbound traffic on Henderson Road.

Unsignalized intersection capacity analyses were performed using the Highway Capacity Software (HCS7) for the AM and PM peak hours to evaluate the existing, background and full buildout conditions at the intersection of W Emory Road at Henderson Road and the full buildout conditions at the intersection of W Emory Road at the three driveway connections.

The results from the analyses are expressed with a term “level of service” (LOS), which is based on the amount of delay experienced at the intersection. The LOS index ranges from LOS A, indicating excellent traffic conditions with minimal delay, to LOS F indicating very congested conditions with excessive delay. LOS D generally is considered the minimum acceptable condition in urban areas. The HCS7 worksheets are included in Attachments 5, 6 and 7.

Table 5-1 shows the results of the capacity analyses.

**Table 5-1
Intersection Analysis
Level of Service (LOS) Summary**

Delay (sec)/LOS		
W Emory Road @ Henderson Road (Existing 2020)		
AM Peak	EB Left Turn	7.3 / A
	SB Approach	9.7 / A
PM Peak	EB Left Turn	7.5 / A
	SB Approach	9.7 / A
W Emory Road @ Henderson Road (Background 2023)		
AM Peak	EB Left Turn	7.3 / A
	SB Approach	9.8 / A
PM Peak	EB Left Turn	7.5 / A
	SB Approach	9.8 / A

EXHIBIT A

W Emory Road @ Henderson Road (Full Buildout 2023)

AM Peak	EB Left Turn	7.4 / A
	SB Approach	10.4 / B

PM Peak	EB Left Turn	7.6 / A
	SB Approach	10.2 / B

W Emory Road @ Main Driveway (Full Buildout 2023)

AM Peak	WB Left Turn	7.4 / A
	NB Approach	9.1 / A

PM Peak	WB Left Turn	7.5 / A
	NB Approach	9.2 / A

W Emory Road @ Townhome Driveway (North) (Full Buildout 2023)

AM Peak	EB Approach	9.5 / A
	NB Left Turn	7.6 / A

PM Peak	EB Approach	9.6 / A
	NB Left Turn	7.5 / A

W Emory Road @ Townhome Driveway (South) (Full Buildout 2023)

AM Peak	EB Approach	9.5 / A
	NB Left Turn	7.6 / A

PM Peak	EB Approach	9.4 / A
	NB Left Turn	7.5 / A

6 Turn Lane Warrant Analysis

The intersection of W Emory Road at the main driveway connection was evaluated to determine if a right turn lane or a 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. Neither an eastbound right turn lane nor a westbound left turn lane on W Emory Road is warranted. The turn lane warrant worksheets and analysis are included in Attachment 8.

7 Conclusions and Recommendations

7.1 W Emory Road @ Henderson Road

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

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

The full buildout traffic conditions for the eastbound left turn movement (W Emory Road) operate at a LOS A during both the AM and PM peak hours and the southbound approach (Henderson Road) operates at a LOS B during both the AM and PM peak hours.

7.2 W Emory Road @ Driveway Connections

The full buildout conditions at the unsignalized intersections of W Emory Road at the main driveway connection, townhome driveway (north) and townhome driveway (south) were analyzed using the Highway Capacity Software (HCS7).

At the intersection of W Emory Road at the main driveway connection the westbound left turn movement (W Emory Road) operates at a LOS A during both the AM and PM peak hour and the northbound approach (driveway) operates at a LOS A during both the AM and PM peak hours after the completion of the Hatmaker Subdivision.

Neither an eastbound right turn lane nor a westbound left turn lane are warranted at the intersection of W Emory Road at the main driveway connection.

EXHIBIT A

At the intersection of W Emory Road at the townhome driveway (north) the eastbound approach (driveway) operates at a LOS A during both the AM and PM peak hour and the northbound left turn movement (W Emory Road) operates at a LOS A during both the AM and PM peak hours after the completion of the Hatmaker Subdivision.

At the intersection of W Emory Road at the townhome driveway (south) the eastbound approach (driveway) operates at a LOS A during both the AM and PM peak hour and the northbound left turn movement (W Emory Road) operates at a LOS A during both the AM and PM peak hours after the completion of the Hatmaker Subdivision.

W Emory Road is classified as a Minor Collector per the Major Road Plan. The minimum intersection spacing required on a collector is 300 feet per the “Knoxville-Knox County Subdivision Regulations” amended through February 13, 2020. The proposed main driveway connection is located approximately 425 feet east of the intersection with Old Cobbs Ferry Road. The townhome driveway (north) is located 315 feet south of the intersection of W Emory Road and the townhome driveway (south) is located 510 feet south of the townhome driveway (north). All three driveway connections exceed the typical minimum separation on a collector; therefore, no change is necessary.

The minimum required sight distance for a road with a posted speed limit of 30 mph is 300 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 driveway intersections at W Emory Road in September 2020. For the intersection of W Emory Road at the main driveway connection at 15 feet from the edge of pavement the sight distance is greater than 450 feet eastbound and westbound. For the intersection of W Emory Road at the townhome driveway (north) at 15 feet from the edge of pavement the sight distance is greater than 450 feet eastbound and westbound. For the intersection of W Emory Road at the townhome driveway (south) at 15 feet from the edge of pavement the sight distance is greater than 450 feet eastbound and westbound.

7.3 Subdivision Roads

Road “A”, Road “B”, Road “C”, Road “D”, Road “E” and Road “F” 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”, Road “D”, Road “E” and Road “F” should be coordinated with Knox County Engineering and Public Works and included on the final design drawings prior to construction of the subdivision.

EXHIBIT A

**Attachment 1
Aerial Photo**

EXHIBIT A

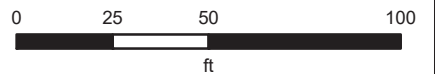


W Emory Rd at Henderson Rd

Knoxville - Knox County - KUB Geographic Information System



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Development Request

DEVELOPMENT

- Development Plan
- Planned Development
- Use on Review / Special Use
- Hillside Protection COA

SUBDIVISION

- Concept Plan
- Final Plat

ZONING

- Plan Amendment
 - SP
 - OYP
- Rezoning

Fulghum MacIndoe & Associates, Inc. (For Ball Homes, LLC)

Developer

Applicant Name

Affiliation

2-18-21

April 8, 2021

Date Filed

Meeting Date (if applicable)

File Number(s)

4-SD-21-C

4-D-21-UR

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

Mr. Brian Stephens

Ball Homes, LLC

Name

Company

3609 Walden Drive

Lexington

KY

40517

Address

City

State

ZIP

859.268.1191

bstephens@ballhomes.com

Phone

Email

CURRENT PROPERTY INFO

Ball Homes LLC

3609 Walden Drive

859.268.1191

Owner Name (if different)

Owner Address

Owner Phone

0 W. Emory Road

077 083

Property Address

Parcel ID

WKUD

WKUD

N

Sewer Provider

Water Provider

Septic (Y/N)

STAFF USE ONLY

North of Karns Valley Dr between W. Emory Rd. & Old Cobbs Ferry Rd.

36.41 acres

General Location

Tract Size

City County

6th

PR

District

Zoning District

Existing Land Use

Vacant

Northwest County

LDR

Planned

Planning Sector

Sector Plan Land Use Classification

Growth Policy Plan Designation

DEVELOPMENT REQUEST

Development Plan Use on Review / Special Use Hillside Protection COA

Residential Non-Residential

Home Occupation (specify) Single Family/Townhomes

Related City Permit Number(s)

Other (specify) _____

SUBDIVISION REQUEST

Emory Green Subdivision

Proposed Subdivision Name

1

Combine Parcels

Divide Parcel

64

Unit / Phase Number

Total Number of Lots Created

Related Rezoning File Number

8-A-20-RZ

Other (specify) _____

Attachments / Additional Requirements

ZONING REQUEST

Zoning Change

Proposed Zoning _____

Plan Amendment Change

Proposed Plan Designation(s) _____

Pending Plat File Number

Proposed Density (units/acre) _____

Previous Rezoning Requests _____

Other (specify) _____

STAFF USE ONLY

PLAT TYPE

Staff Review Planning Commission

ATTACHMENTS

Property Owners / Option Holders Variance Request

ADDITIONAL REQUIREMENTS

Design Plan Certification (*Final Plat*)

Use on Review / Special Use (*Concept Plan*)

Traffic Impact Study

COA Checklist (*Hillside Protection*)

Fee 1

0108

2360.00

Total

Fee 2

Fee 3

\$2360.00

AUTHORIZATION

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

Chris Gollither

Digitally signed by Chris Gollither
Date: 2021.02.18 11:06:57 -05'00'

Fulghum MacIndoe & Associates, Inc. (For) 02/18/21

Applicant Signature

Please Print

Date

865.690.6419

gollither@fulghummacindoe.com

Phone Number

Email

Sherry Michienzi

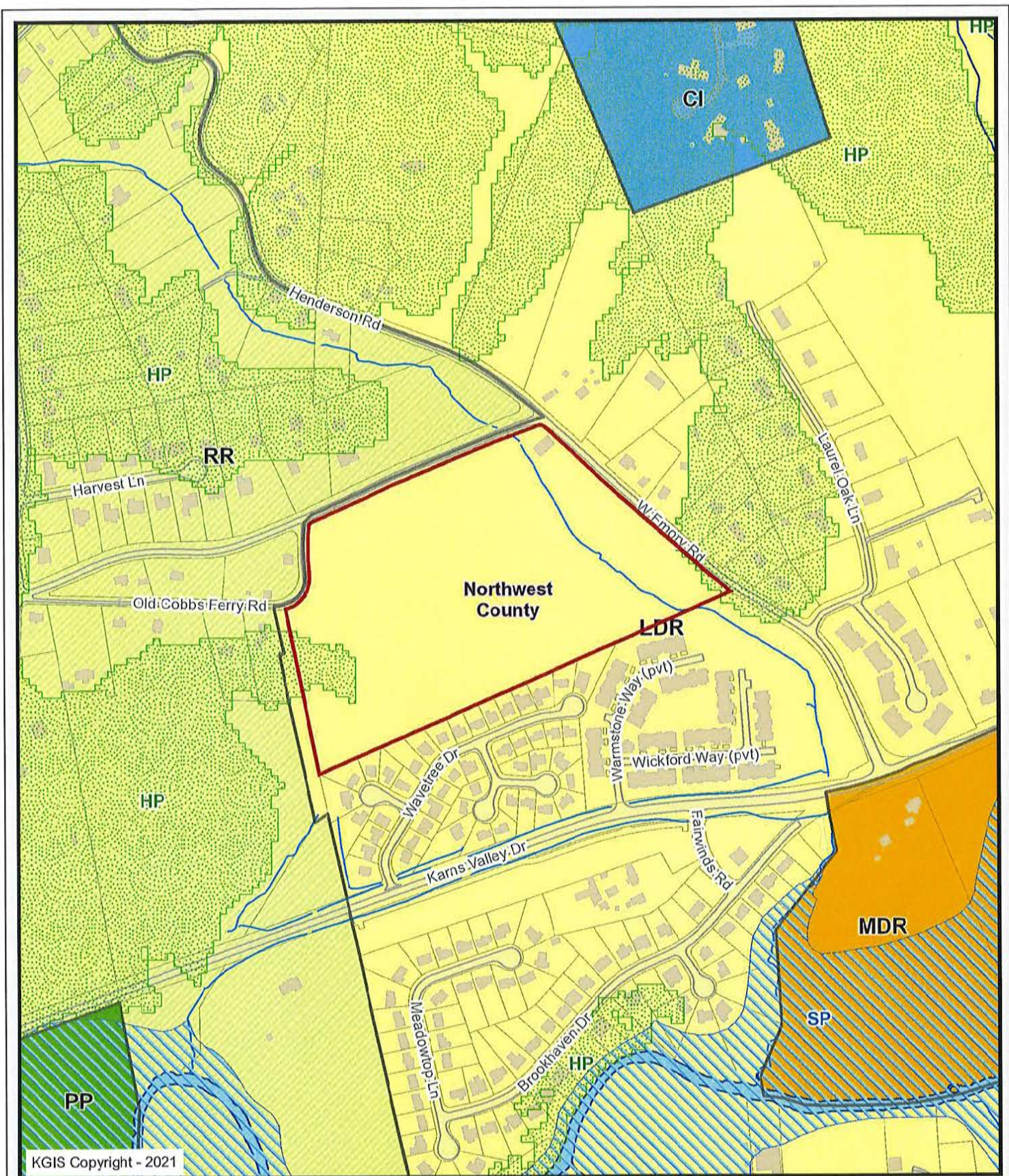
Sherry Michienzi

2/22/2021

Staff Signature

Please Print

Date



Letter Portrait

Knoxville - Knox County - KUB Geographic Information System



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