

**Marion County Subdivision Plat Review**

**Plat Title:** River Gorge Ranch Phase 2 Final Plat

**Surveyor:** Jeff Elliott

Date of Review	Reviewed by	Planning Staff
August 24, 2023	Ashley Gates	Renea Wilson

SUMMARY			
<b>Property Owner(s)</b>	Thunder Air Inc		
<b>Property Address</b>	100 Aetna Mountain Rd	<b>Located in Floodplain?</b>	No
<b>Parcel ID Number(s)</b>	146 001.00	<b>Water Source</b>	Individual Well
<b>No. of Subdivision Lots</b>	42	<b>Sewage Disposal Method</b>	Individual Septic
<b>Subdivided Acreage</b>	85.83	<b>Access over Easement?</b>	No
<b>Date of Previous S/D</b>	N/A	<b>Requires Utility Ext.?</b>	Yes
<b>Structures on Property?</b>	No	<b>Requires Road Const.?</b>	Yes

**ANALYSIS**

**Lot Dimensions and Size**

- Minimum Width: 75 feet at the setback line. All lots appear to meet this requirement.
- Minimum Depth: All lots appear to meet this requirement.
- Depth to width ratio: Depth must not exceed 5 times the width. Lot 2237 does not appear to meet this requirement. The Planning Commission may approve these lots if they find there are “unusual circumstances that make these limitations impractical.” Approval of this plat constitutes approval of Lot 2237 as submitted. A separate motion is not required.
- Lot sizes: All lots appear to meet the minimum of 25,000 square feet. Staff defers to TDEC and/or Marion County regarding size requirements for septic systems. Bedroom restrictions not listed on the plat. All approval should be contingent on obtaining the required signature and approval and listing of all bedroom restrictions.
- Road Frontage: All lots appear to meet the requirement for fifty (50) feet of road frontage.
- There does not appear to be any flag lots in this portion of the development.

**Rights-of-Way and Road Construction**

- Street Names: Appear to be High Ground Road, Moonlight Lane, Constellation Court, Firefly Street, and Stardust Court. Moonlight Lane is already in use within Jasper Highlands. Firefly Court is also in use in Jasper Highlands, which is similar to Firefly Street but not the same. Though they are different ZIP codes, staff recommends against repeating road names. Many who call 911 do not know which ZIP code they are currently in. The Planning Commission approves street names through plat approval, and may require changes.
- Right-of-Way width: Measurements were not provided, but based on spot checking by staff ROW appears to meet 50’ minimum width for local streets and 50’ radius requirement for cul-de-sacs.

- Pavement width: Road cross sections not provided to planning staff. Staff defers to Marion County Highway Superintendent.
- Cul-de-Sacs: All cul-de-sacs appear to be under the maximum of 3,000 feet.
- Temporary cul-de-sacs: No temporary cul-de-sacs are shown. Temporary cul-de-sacs are required at the end of any dead end streets.
- Horizontal Curves: Horizontal Curves must have a minimum centerline radius of 100 feet. No measurements are provided for centerline curves as required for final plats. Staff measurements indicate that all horizontal curves in this portion of Phase 2 exceed the minimum centerline radius.
- Tangents: Between reverse curves, a 100-foot tangent is required. The tangent between reverse curves on Moonlight Lane is not adequate.
- Vertical Curves: Vertical curves must provide a sight distance of 200 feet. Additional information for the vertical curve near Station 59 on High Ground Road is needed to ensure this requirement is met. All other vertical curves appear to meet this requirement based on the vertical profiles provided to staff.
- Road Construction process and requirements:  
Staff defers to the Marion County Highway Superintendent for all matters in Sections 518 through 527 of the Subdivision Regulations as they relate to a preliminary plat. No road cross sections were provided to planning staff for review.

- Mountain Roads (Section 533):

Whenever the grade exceeds 9%, a road is classified as a "Mountain Road" per the Marion County Subdivision Regulations. Within this portion of Phase 2, High Ground Road has a finished road grade exceeding 9%. Other roads within this portion of the subdivision may be considered a Mountain Road at the discretion of the Highway Superintendent.

The following is required by the Subdivision Regulations for mountain roads:

Stamped design drawings detailing the road layout, elevations, grades, materials, drainage systems, and other pertinent information shall be submitted during the preconstruction process in accordance with Section 519. Upon recommendation by the highway superintendent, the proposed designs shall be presented to the planning commission for approval. No road construction shall commence, and **no final plat shall be approved, until the final, engineered designs for the mountain road have been approved by the planning commission.** The approved road specifications (i.e. thickness of base and surface course), if different from the general standards for a public road, shall be included on the final plat.

Planning staff has not received the above required documents for review and defers to the Highway Superintendent regarding the review of these plans. Staff cannot recommend approval until these plans are presented to the Planning Commission.

- Street Signs and Traffic Control Signs (Section 534): Street signs and traffic control signs are required at all intersections. Information not provided to planning staff. Staff defers to the highway superintendent regarding this requirement.

**Drainage, Utilities and Other Improvements**

- Drainage (Section 601)  
 “An adequate drainage system including necessary open ditches, pipes, culverts, intersectional drains, drop inlets, bridges, etc., shall be provided for the proper drainage of all surface water. All storm drainage contained in pipes or culverts under roadway shall have endwalls, headwalls or rip-rap with concrete apron wall where necessary to prevent erosion. Where open trench or swales are used, the grades exceeding eight percent (8%) up and two percent (2%) down shall be paved with 3,000 PSI cement concrete. Additional information may be required by the planning commission such as engineering and design documents.”

Stormwater basins are shown on the final plat. No additional information regarding the drainage system is provided. Staff cannot assess compliance with this section of the Subdivision Regulations. Several roads exceed the grade limits listed requiring 3,000 PSI cement concrete.

Design drawings are required to be submitted to the Marion County Highway Superintendent prior to construction. The Planning Commission may request engineering and design documents to ensure an adequate drainage system is provided before final plat approval.

- Water Supply System: Lots are said to be served by individual well, though road plans indicate that water is to be installed at some point in the future. Six inch mains are required.
- Fire Hydrants: Fire hydrants are to be spaced a maximum of 1,000 feet apart whenever water lines are extended to the subdivision. No hydrant locations are shown on plat.
- Sewage Disposal: Lots are to be served by individual septic systems, requiring review by TDEC or Marion County. TDEC is said to have reviewed these lots, but bedroom restrictions are not yet listed on the plat.

**Performance Guarantee**

Staff defers to the County Attorney and Highway Superintendent for all matters related to performance guarantees.

**Final Plat Requirements**

Requirement	Y/N	Notes
Name of subdivision.	Y	
Name and address of the owner of record, subdivider, and surveyor.	Y	

Tax map and parcel number of property to be subdivided.	Y	
North point, graphic or bar scale, and the date that the plat was drawn.	Y	
Location map with north point showing site in relation to surrounding area.	N	Location map shows entirety of Phase 2, does not show this portion.
Names of all adjoining streets, property owners, and subdivisions.	Y	
Exact boundary lines by bearings and distances.	Y	
Lines of all streets, roads, and alleys.	N	Edge of ROW shown, but centerlines and edge of pavement are not shown.
Sufficient data to determine readily and reproduce on the ground the location, bearing and length of every street line, lot line, boundary line, block line, and building line, whether curved or straight. This shall include the <b>radius, central angle, and tangent distance for the centerline of curved streets</b> and curved property lines that are not the boundary of a curved street.	N	Centerlines not shown, and centerline measurements are not provided.
All dimensions to the nearest one-hundredth (100th) of a foot, and angles to the nearest minute.	N	Not provided for road centerlines
Location, dimensions, and purposes of any easements and any areas to be reserved or dedicated for public use.	N	There are no drainage easements shown or listed in the notes.
Lot numbers, which shall be in consecutive numerical order.	Y	
Building setback lines	Y	
Present zoning classification	N/A	
Contours shown at vertical intervals of not more than five (5) feet, if required by the planning commission.	N/A	Not needed unless requested by Planning Commission.
Flood Insurance Rate Map (FIRM) panel numbers reflecting the land being subdivided. If any portion of the property being subdivided is subject to flood, the limits of	Y	

any floodway or 100-year (1.0% annual chance) floodplain.		
Deed book reference by volume and page number	Y	
A statement, either directly on the plat or in an identified attached document, of any private covenants or deed restrictions.	N	If subdivision has covenants and restrictions, add book and page number where recorded.
For mountain road: Approved road specification	N	Thickness of base and surface course should be provided if different from the general standards for a public road
For variances: All variances should be noted on final plat	N	Variances are not listed

**RECOMMENDED CHANGES**

- Differentiate between the lots that are intended to be platted and those that are not. Having them listed in the title is not adequate. Several lots are shown that are not listed in the plat title. Staff has not reviewed lots other than those listed in the title.
- List book and page number for any restrictive covenants that have been recorded.
- List all requested variances
- Select a different street name for Moonlight Lane
- Show temporary cul-de-sacs at dead end of High Ground Road
- Adjust Moonlight Lane to meet the required minimum tangent between reverse curves
- Show road centerline with all required measurements
- Drainage easements should be listed or shown on plat
- Provide planning staff or Marion County Highway Superintendent with drainage plans so that compliance with Section 601 of the Subdivision Regulations can be reviewed.
- Provide road specifications on plat for High Ground Road (mountain road) and any other roads identified as “mountain roads” by the Marion County Highway Superintendent if it will differ from general standards for a public road.
- Stamped engineered plans for High Ground Road and any other roads identified as “mountain roads” by the Marion County Highway Superintendent should be submitted to the Marion County Highway Superintendent. Printed copies should be presented to the Planning Commission for their review. These plans must be voted on and approved prior to voting on the final plat.

REQUIRED CERTIFICATES <i>Based on Section 904 of the Subdivision Regulations</i>				
X	A. Certificate of Ownership & Dedication	X	J. Certification of Private Road Status	Lot Line Abandonment plats only require Certificates A, B, and C. Add Certificate F if combining only 2 lots.
X	B. Certificate of Registered Surveyor		K. Certification of Access Easement	
X	C. Planning Comm. Approval for Recording		L. Certification of Natural Gas Service	
X	D. Certificate of Approval by E-911		M. Certification of Water Service	
	E. Certification of Electrical Service		N. Certification of Water System Extension	
	F. Planning Staff Approval of Minor Plat		O. Certification of Public Sewer Service	
	G. Certification of Access		P. Certification of Existing Septic System	
X	H. Street & Drainage System Construction	X	Q. Certification of SSD (Septic) System	
	I. Street & Drainage System Maintenance			

**VARIANCES** *Granted in accordance with Section 111 of the Subdivision Regulations*  
 No variances have been requested by the developer or surveyor. No variances are listed on the plat.

STAFF RECOMMENDATION		
	Approve as staff-approved plat.	All recommendations are "subject to" making any required changes and receiving all signatures.
	Recommendation for approval by planning commission.	
X	Recommendation for approval by planning commission with conditions (listed below).	
	Staff is unable to recommend approval of plat as currently submitted (explanation below).	

**Notes or Conditions:**

Conditions for recommendation of approval:

- All signatures are obtained
- All corrections are made
- Review and approval of the road and drainage design by Marion County Highway Superintendent
- Review and approval of stamped engineered plans for all mountain roads by the Planning Commission prior to voting on the final plat

*This recommendation is subject to change if information contrary to this analysis is presented between now and the time of final plat approval.*

It is the surveyor or owner's responsibility to obtain all necessary signatures except for those of the Planning Commission Secretary and Planning Commission Staff. The plat is not a legal document until all signatures are obtained and the plat is recorded at the Marion County Register of Deeds Office. For more information on Planning Commission procedures, see <https://marioncountyttn.net/planning-building>



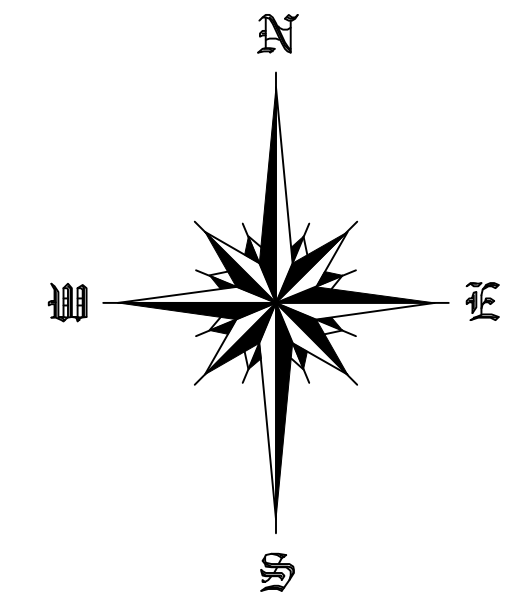
Notes:

1. Area Subdivided 85.83 Acres.
2. This Plat Re subdivides The Property Found In Deed Book 549, Page 331, R.O.M.C.
3. Tax Map 146 Parcel 01.00 And Parcel 01.01.
4. Sanitary Sewer Provided Private Sub sewage Disposal System.
5. Iron Pins Set At All Corners Unless Otherwise Noted.
6. Water By Individual Wells.
7. Zoned: None.
8. This Subdivision Has Been Developed In Accordance With The Design Standards Of The Subdivision Regulation Of Marion County, Tennessee.
9. All Lots Have A 15' Power And Communication Easement Along Public R.O.W.
10. Building Setbacks: Front 40'  
Side 15'  
Rear 15'
11. Subject Property Does Not Appear To Be In The Flood Hazard Zone As Per FEMA Map Panel 47115C0250D & 47115C0275C.
12. Owners: Thunder Air Inc.  
210 Battle Creek Road  
Kimball, TN 37347  
Phone: 423-424-1085

Elliott Surveying  
4610 Main Street  
Jasper, TN 37347  
Phone: (423) 403-7860  
Mobile: (423) 637-1009  
Email: Jelliott@Elliottlandsurveying.com

# River Gorge Ranch Subdivision Phase Two Lots 2001~ 2034,2229~2238 A Mountain Top Community

River Gorge Ranch Subdivision  
Phase Two  
A Mountain Top Community  
Cover Sheet



Plat North: Tennessee State Plane (1983)

**Certificate of Approval of Subsurface Sewage Disposal System**

"Approval is hereby granted for Lot \_\_\_\_\_ Defined as River Gorge Ranch Subdivision Phase 2 Marion County, Tennessee as being suitable for Subsurface Sewage Disposal (SSD) With The Listed Or Attached Restrictions. Prior To Any Construction Of A Structure, Mobile Or Permanent, The Plans For The Exact House/Structure Location Must Be Approved And An SSD System Permit Issued By The Division Of Water Resources. Water Taps, Water Lines, Underground Utilities And Driveways Should Be Located At Side Property Lines Unless Otherwise Noted. Any Cutting, Filling Or Alterations Of The Soil Conditions May Void This Approval."

Environmental Specialist \_\_\_\_\_ Date  
Division Of Groundwater Protection

SSD Restrictions:  
Lot \_\_\_\_\_ Are Approved For A Standard Individual Subsurface Sewage Disposal System Serving A Maximum Of \_\_\_\_\_ Bedrooms.

**CERTIFICATION BY PLANNING COMMISSION OF APPROVAL FOR RECORDING**

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF MARION COUNTY, TENNESSEE, WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY, AS MAY BE NOTED ON THIS PLAT; THAT ALL REQUIRED IMPROVEMENTS HAVE EITHER BEEN COMPLETED OR ARE COVERED BY AN APPROVED PERFORMANCE GUARANTEE LARGE ENOUGH TO COMPLETE THE REQUIRED IMPROVEMENTS IN THE EVENT OF DEFAULT BY THE DEVELOPER; AND THAT THIS PLAT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE COUNTY REGISTER.

Vesting Period Reference No. 2023-01

PLANNING COMMISSION SECRETARY \_\_\_\_\_ DATE

**CERTIFICATE OF OWNERSHIP AND DEDICATION**

I (WE) HEREBY CERTIFY THAT I AM (WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) FREE CONSENT. ESTABLISH THE MINIMUM BUILDING SETBACK LINES, AND HEREBY FOREVER DEDICATE TO THE PUBLIC USE ALL THE STREETS AS SHOWN ON THIS PLAT.

OWNER \_\_\_\_\_ DATE

**CERTIFICATE OF E-911 APPROVAL**

I HEREBY CERTIFY THAT I HAVE REVIEWED THIS PLAT AND FIND THAT IT CONFORMS TO THE COUNTY'S E-911 REQUIREMENTS, INCLUDING APPROPRIATE ROAD NAMES/NUMBERS.

MARION COUNTY E-911 REPRESENTATIVE \_\_\_\_\_ DATE

**CERTIFICATE FOR ELECTRICITY**

THIS PLAT SHOWS ADEQUATE EASEMENTS FOR POWER LINES. ELECTRIC POWER IS AVAILABLE TO ALL LOTS SHOWN ON THIS PLAT BASED ON EPP'S LINE EXTENSION POLICIES.

ELECTRIC POWER OFFICE \_\_\_\_\_ DATE

**CERTIFICATION OF PRIVATE ROAD STATUS**

I CERTIFY THAT THE LOT(S) SHOWN ON THIS PLAT ARE ACCESSED BY A PRIVATE ROAD THAT HAS NOT BEEN DEDICATED TO THE GOVERNMENT OF MARION COUNTY. ALL MAINTENANCE AND SERVICE IS THE RESPONSIBILITY OF THE PRIVATE ROAD OWNER.

OWNER \_\_\_\_\_ DATE

**Certification of Street and Drainage System Construction**

I HEREBY CERTIFY THAT THE STREETS AND DRAINAGE FACILITIES SHOWN ON THIS PLAT HAVE BEEN DESIGNED AND WILL BE CONSTRUCTED IN AN ACCEPTABLE MANNER IN ACCORDANCE WITH THE REQUIRED SPECIFICATIONS OF MARION COUNTY, AND THAT AN ADEQUATE PERFORMANCE GUARANTEE IN THE AMOUNT OF \$ \_\_\_\_\_ (150% OF THE TOTAL VALUE OF ALL ROAD AND DRAINAGE IMPROVEMENTS INSTALLED) HAS BEEN POSTED TO ENSURE ROAD COMPLETION IN THE EVENT OF DEFAULT BY THE DEVELOPER.

Marion County Highway Superintendent \_\_\_\_\_ Date

"STORMWATER POND LOCATIONS AND GEOMETRY ARE SUBJECT TO CHANGE."

**LEGEND**

These standard symbols will be found in the drawing.

- IR (N) 1/2" Rebar & Cap New
- IR (O) 1/2" Rebar Old
- Abandon Lot Line
- Adjacent Property Lines

**Survey Notes**

1. This survey was performed without the benefit of a title report and is subject to any state of facts that an up to date title report might reveal.
2. This survey is not transferable to additional institutions or owners and is invalid without an original seal and signature.
3. No interior improvements were located other than those shown above.
4. This survey was done by or under the direct supervision of the surveyor signing and sealing thereon.
5. This survey was based upon his analysis of the deeds of record with evidence found existing on the ground and located, render the professional opinion of the surveyor as to the location of the boundaries and conditions being represented.
6. Monuments either found or placed as depicted existed as described on the date of the survey shown thereon.
7. Subject to any easements that may exist on the underground electric lines.

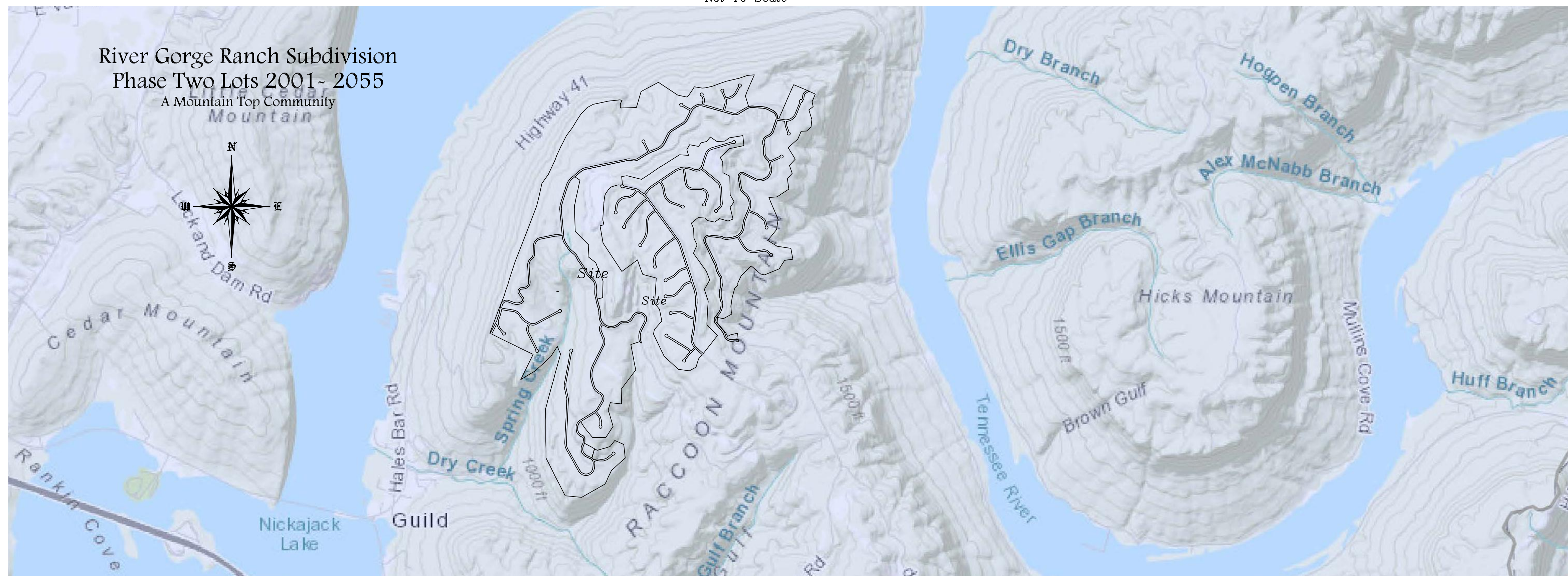
**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THIS IS A CATEGORY 1 SURVEY AND THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS GREATER THAN 1:10,000 AS SHOWN HEREON. THIS SURVEY COMPLIES WITH THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE. ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST OR ARE, WHEN AS, "FUTURE," AND THEIR LOCATION, SIZE, TYPE, AND MATERIAL ARE CORRECTLY SHOWN.

(SIGNATURE OF SURVEYOR)



Not To Scale

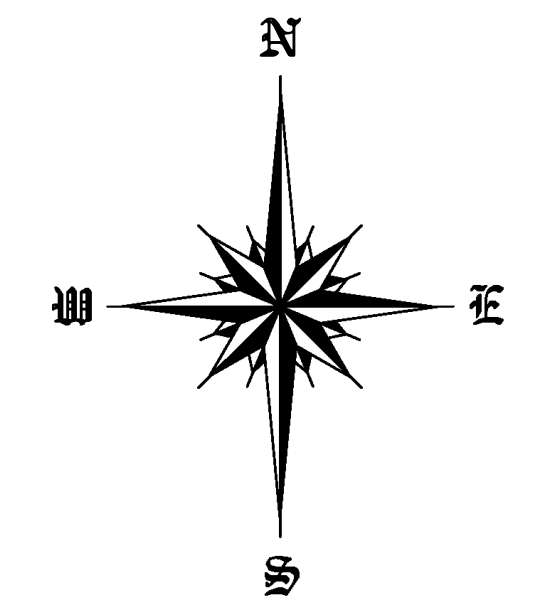


<b>River Gorge Ranch Phase 2 Final Plat Lots 2001-2034,2229-2238</b>	
Deed Book 549, Page 331 (R.O.M.C.) Tax Map 146 Parcel 1.00	
Scale: 1" = 100'	Drawn By: JDE
Date: 07/31/2023	Approved By: JDE
Fourth Civil District	
Marion County, Tennessee	Drawing No: 23-0018

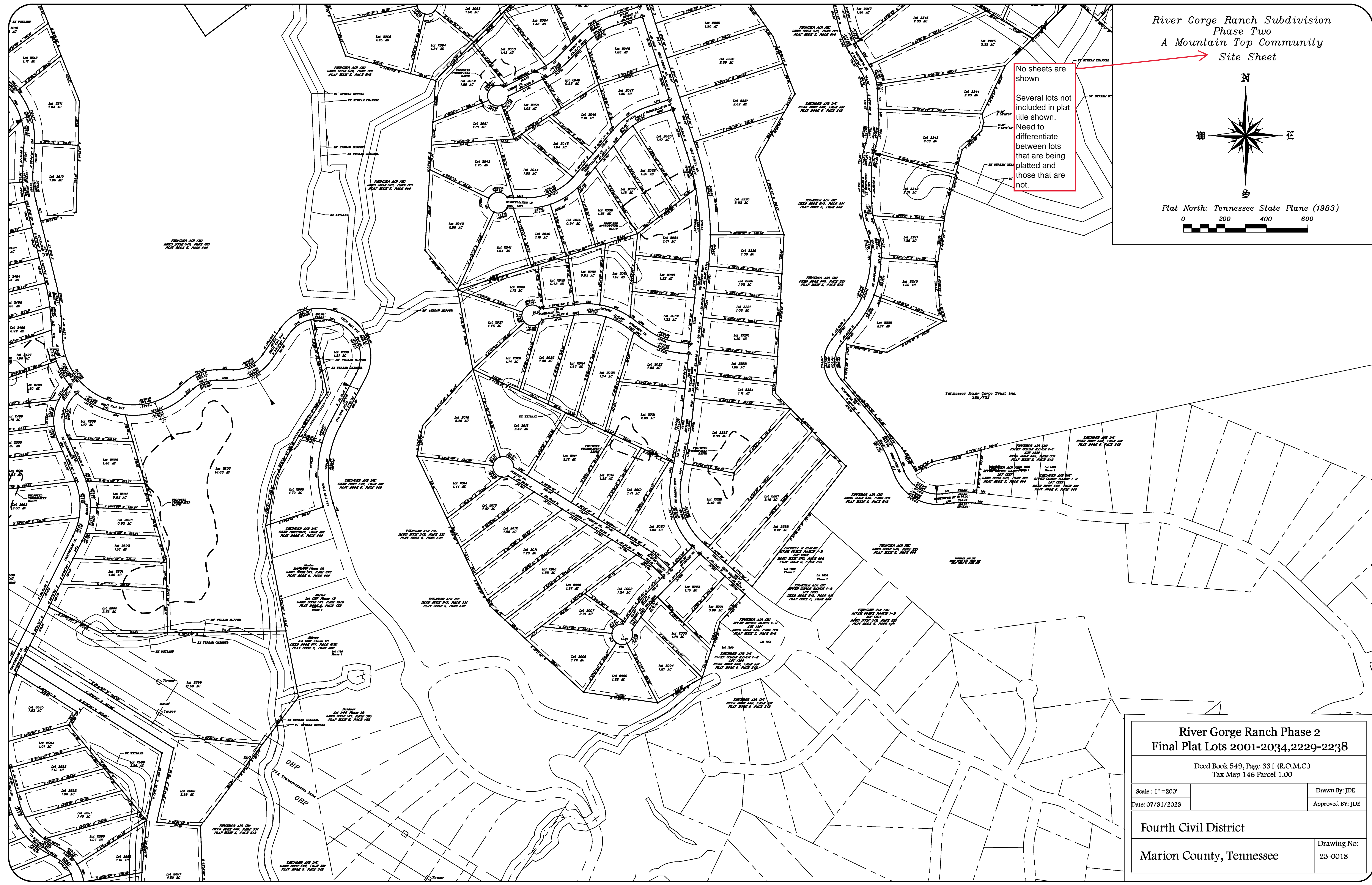


River Gorge Ranch Subdivision  
Phase Two  
A Mountain Top Community  
Site Sheet

No sheets are shown  
Several lots not included in plat title shown.  
Need to differentiate between lots that are being platted and those that are not.



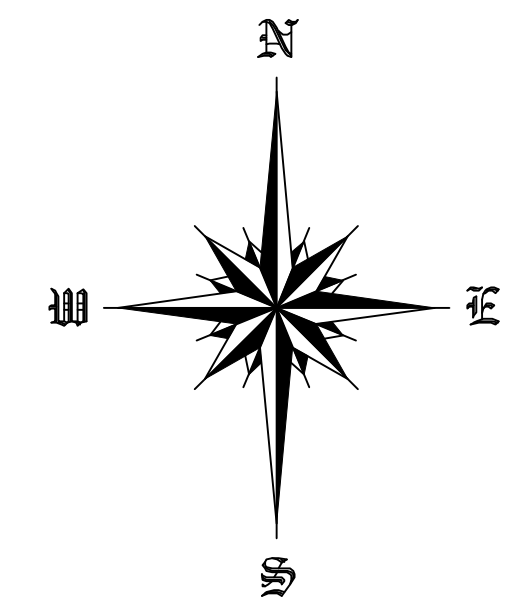
Plat North: Tennessee State Plane (1983)  
0 200 400 600



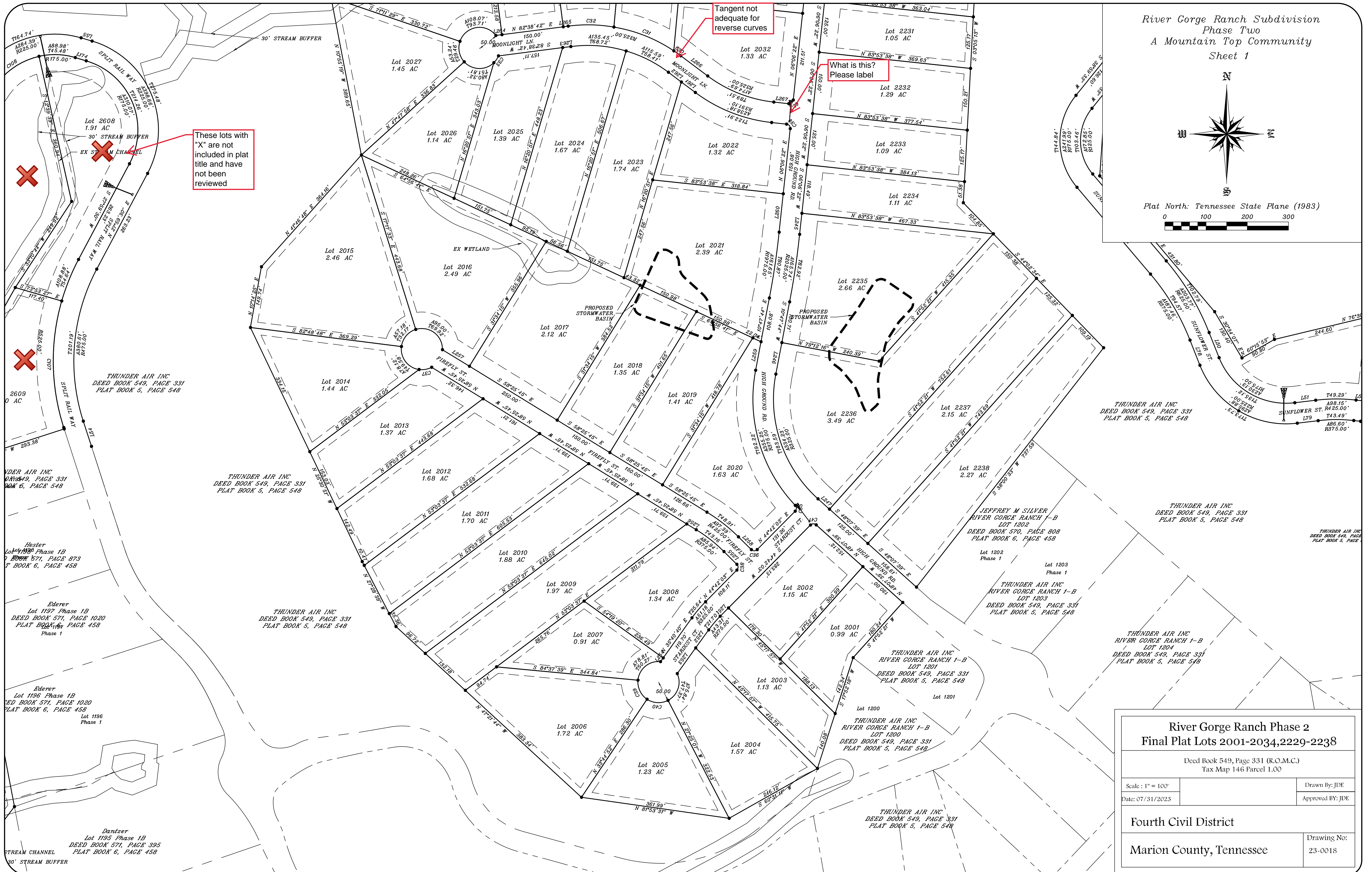
<b>River Gorge Ranch Phase 2</b>	
<b>Final Plat Lots 2001-2034,2229-2238</b>	
Deed Book 549, Page 331 (R.O.M.C.) Tax Map 146 Parcel 1.00	
Scale: 1" = 200'	Drawn By: JDE
Date: 07/31/2023	Approved By: JDE
Fourth Civil District	
Marion County, Tennessee	Drawing No: 23-0018



River Gorge Ranch Subdivision  
Phase Two  
A Mountain Top Community  
Sheet 1



Plat North: Tennessee State Plane (1983)



These lots with "X" are not included in plat title and have not been reviewed

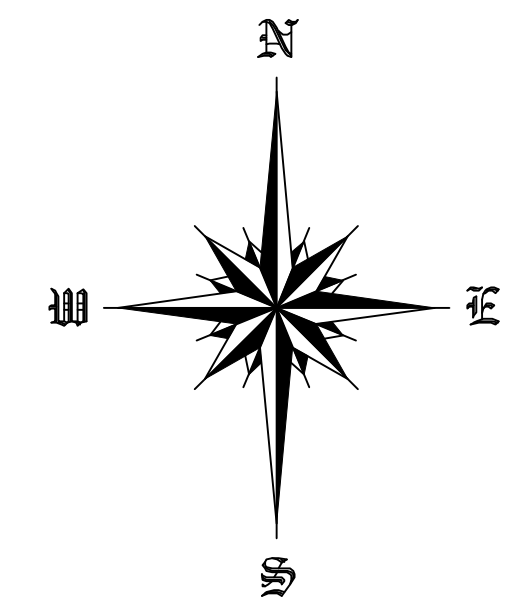
Tangent not adequate for reverse curves

What is this? Please label

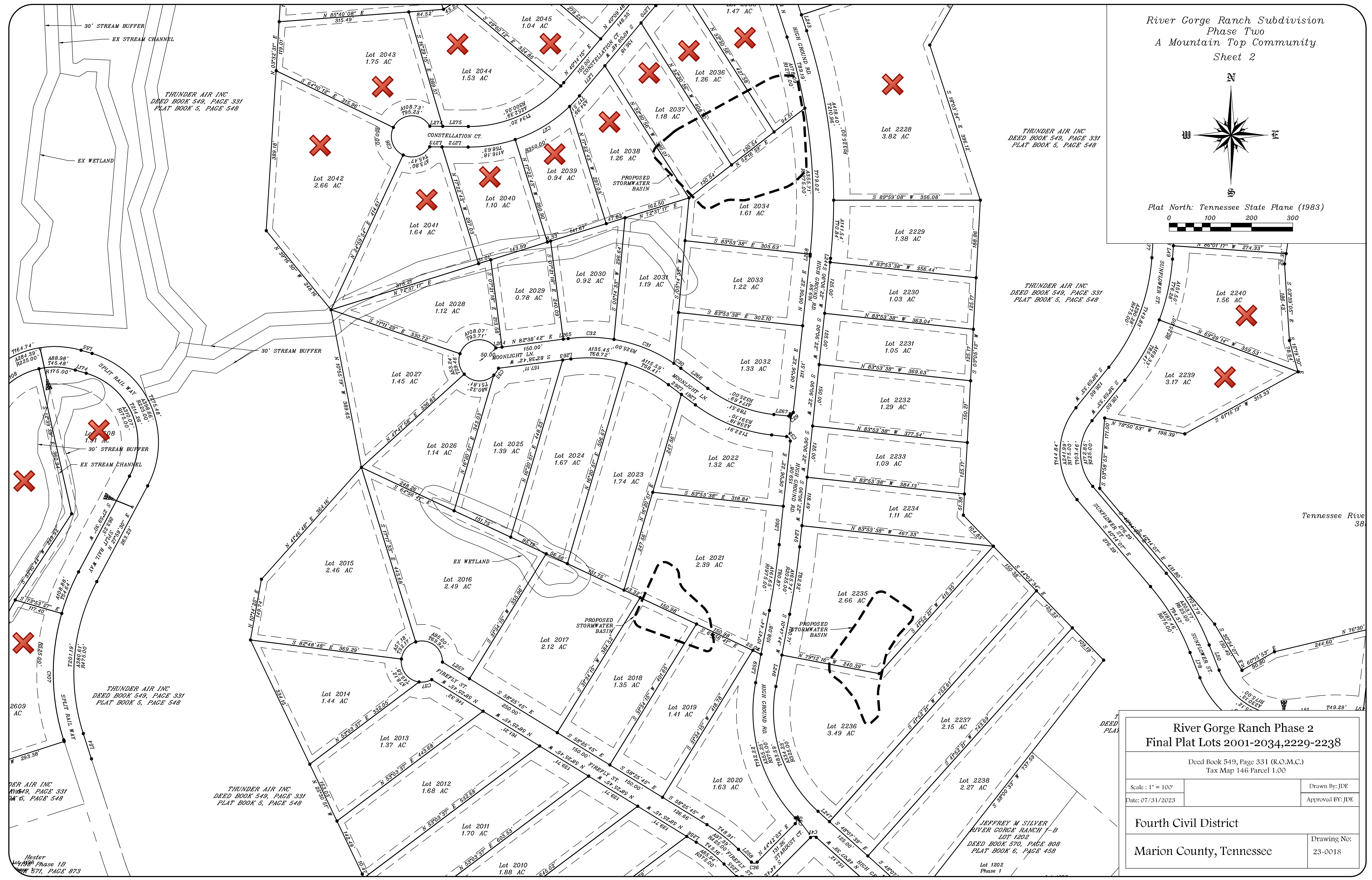
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<b>Final Plat Lots 2001-2034, 2229-2238</b>	
Deed Book 549, Page 331 (R.O.M.C.) Tax Map 146 Parcel 1.00	
Scale: 1" = 100'	Drawn By: JDE
Date: 07/31/2023	Approved By: JDE
<b>Fourth Civil District</b>	
<b>Marion County, Tennessee</b>	
Drawing No:	23-0018



River Gorge Ranch Subdivision  
Phase Two  
A Mountain Top Community  
Sheet 2



Plat North: Tennessee State Plane (1983)



River Gorge Ranch Phase 2  
Final Plat Lots 2001-2034,2229-2238

Deed Book 549, Page 331 (R.O.M.C.)  
Tax Map 146 Parcel 1.00

Scale: 1" = 100'  
Date: 07/31/2023  
Drawn By: JDE  
Approved By: JDE

Fourth Civil District

Marion County, Tennessee  
Drawing No: 23-0018

Hester  
Phase 1B  
571, PAGE 873

THUNDER AIR INC  
DEED BOOK 549, PAGE 331  
PLAT BOOK 5, PAGE 548

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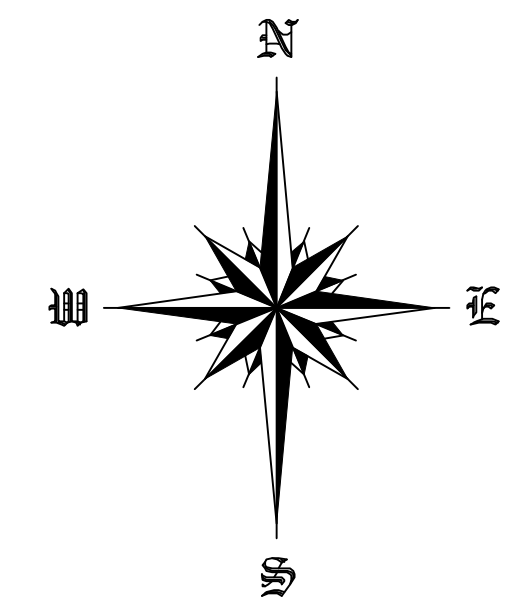
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PLAT BOOK 5, PAGE 548

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PLAT BOOK 5, PAGE 548

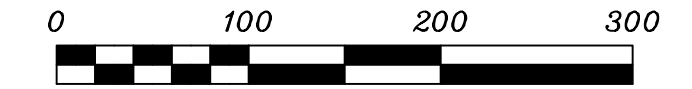
JEFFREY M SILVER  
RIVER GORGE RANCH -B  
LOT 1202  
DEED BOOK 570, PAGE 808  
PLAT BOOK 6, PAGE 458



River Gorge Ranch Subdivision  
Phase Two  
A Mountain Top Community  
Tables



Plat North: Tennessee State Plane (1983)



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C01	50.00	54.85	51.97	N 49°39'19" W	C66	525.00	85.33	85.33	N 51°27'04" E	C133	375.00	127.44	126.83	S 31°48'05" E	C201	275.00	24.77	24.76	N 60°28'41" W
C02	10.00	18.24	16.81	N 17°10'17" W	C67	10.00	18.24	16.81	N 82°32'17" E	C134	375.00	107.96	107.66	S 07°54'40" W	C202	125.00	120.53	120.53	N 10°19'52" W
C03	300.00	235.65	229.64	N 57°34'15" E	C68	375.00	123.35	122.71	S 64°18'49" E	C135	10.13	16.13	14.48	S 07°50'08" W	C203	175.00	39.46	39.37	N 17°52'27" E
C04	350.00	109.49	109.05	N 47°08'44" E	C69	175.00	100.45	99.08	N 89°25'41" E	C136	375.00	116.26	116.19	S 10°18'51" E	C204	175.00	46.72	46.58	N 03°46'03" E
C05	10.00	18.24	16.81	S 72°23'55" W	C70	10.00	18.24	16.81	S 20°07'42" E	C137	325.00	180.68	178.35	S 34°14'58" E	C205	225.00	44.80	44.72	N 07°42'25" E
C06	375.00	21.55	21.55	N 58°36'05" W	C71	10.00	14.80	13.48	S 32°17'06" W	C138	325.00	82.18	81.96	S 37°52'40" E	C206	325.00	56.27	56.20	N 06°33'47" E
C07	10.00	18.24	16.81	N 08°49'50" E	C72	375.00	186.50	184.58	S 50°06'11" W	C139	325.00	30.88	30.87	S 47°50'37" E	C207	325.00	48.05	48.00	N 15°45'30" E
C08	325.00	90.87	90.79	N 49°35'55" E	C73	50.00	9.68	9.68	S 74°43'34" W	C140	375.00	37.32	37.31	S 47°42'53" E	C208	125.00	30.08	30.01	N 42°03'48" W
C09	50.00	71.74	65.74	S 00°40'10" W	C74	50.00	55.86	52.83	N 88°41'08" E	C141	10.00	18.24	16.81	S 53°33'01" E	C209	75.00	33.88	33.81	N 47°55'12" W
C10	10.00	18.24	16.81	N 89°10'10" W	C75	10.00	14.80	13.48	S 62°55'22" E	C142	975.00	46.57	46.36	N 83°04'53" E	C210	175.00	41.77	41.08	S 87°18'00" W
C11	10.00	18.24	16.81	N 08°49'50" E	C76	375.00	12.16	12.16	S 29°28'01" E	C143	325.00	276.65	269.38	N 29°59'19" E	C211	325.00	68.16	68.04	N 56°59'15" W
C12	575.00	131.89	131.60	N 27°30'53" E	C77	50.00	57.08	54.03	N 88°09'15" E	C144	75.00	28.69	28.51	N 23°58'29" W	C212	225.00	50.73	50.62	N 17°52'27" E
C13	50.00	56.04	53.15	N 74°38'50" W	C78	10.00	18.24	16.81	S 69°52'18" E	C145	325.00	173.00	170.96	N 76°52'02" E	C213	125.00	60.73	60.66	N 03°46'03" E
C14	10.00	18.24	16.81	N 89°10'10" W	C79	10.00	14.81	13.57	S 39°24'41" E	C146	10.00	18.24	16.81	N 38°53'23" W	C214	175.00	34.84	34.79	N 07°42'25" E
C15	10.00	18.24	16.81	N 08°49'50" E	C80	275.00	93.41	92.96	S 07°34'29" W	C147	50.00	82.63	73.54	S 49°29'44" W	C215	325.00	55.64	55.61	N 47°55'12" W
C16	350.00	95.95	95.85	N 17°13'44" E	C81	50.00	85.14	75.24	N 76°58'23" E	C148	50.00	82.71	73.19	N 30°39'21" E	C216	325.00	55.64	55.61	N 47°55'12" W
C17	50.00	56.03	53.14	S 74°02'52" W	C82	10.00	14.80	13.48	N 53°41'50" E	C149	10.00	14.80	13.48	N 74°46'35" E	C217	125.00	150.43	141.51	N 14°28'56" W
C18	300.00	25.89	25.88	S 42°33'56" W	C83	375.00	155.21	154.10	N 70°04'18" E	C150	225.00	18.84	18.84	N 24°03'52" W	C218	75.00	18.05	18.01	N 42°03'48" W
C19	10.00	18.24	16.81	N 59°01'02" W	C84	10.00	14.80	13.48	N 70°04'18" E	C151	50.00	62.95	58.88	S 59°17'52" E	C219	125.00	55.64	55.61	N 47°55'12" W
C20	10.00	18.24	16.81	N 25°33'35" E	C85	50.00	44.06	42.65	S 84°51'27" W	C152	275.00	99.63	99.05	S 03°58'23" W	C220	225.00	32.94	32.81	S 87°18'00" W
C21	325.00	88.14	87.87	N 52°13'54" E	C86	10.00	18.24	16.81	N 16°27'12" W	C153	10.00	18.24	16.81	S 14°28'28" E					

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C201	275.00	24.77	24.76	N 60°28'41" W
C202	125.00	120.53	120.53	N 10°19'52" W
C203	175.00	39.46	39.37	N 17°52'27" E
C204	175.00	46.72	46.58	N 03°46'03" E
C205	225.00	44.80	44.72	N 07°42'25" E
C206	325.00	56.27	56.20	N 06°33'47" E
C207	325.00	48.05	48.00	N 15°45'30" E
C208	125.00	30.08	30.01	N 42°03'48" W
C209	75.00	33.88	33.81	N 47°55'12" W
C210	175.00	41.77	41.08	S 87°18'00" W
C211	325.00	68.16	68.04	N 56°59'15" W
C212	225.00	50.73	50.62	N 17°52'27" E
C213	125.00	60.73	60.66	N 03°46'03" E
C214	175.00	34.84	34.79	N 07°42'25" E
C215	325.00	55.64	55.61	N 47°55'12" W
C216	325.00	55.64	55.61	N 47°55'12" W
C217	125.00	150.43	141.51	N 14°28'56" W
C218	75.00	18.05	18.01	N 42°03'48" W
C219	125.00	55.64	55.61	N 47°55'12" W
C220	225.00	32.94	32.81	S 87°18'00" W

LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L01	S 03°10'54" W	12.89	L101	N 83°00'56" E	51.63	L101	N 80°30'35" E	64.77	L151	N 85°27'17" W	30.25	L201	S 25°45'53" E	32.28	L301	S 35°40'40" W	28.43
L02	S 21°54'42" W	19.19	L102	S 83°40'11" E	60.71	L102	N 50°13'55" E	4.82	L152	N 50°13'55" E	58.68	L202	S 17°18'19" W	77.73	L302	S 35°40'40" W	76.68
L03	S 03°10'54" W	12.89	L103	N 08°40'11" E	16.81	L103	N 08°40'11" E	16.81	L153	N 02°48'14" E	78.05	L203	S 17°18'19" W	47.71	L303	S 35°40'40" W	11.08
L04	S 21°54'42" W	19.19	L104	N 73°39'07" E	27.73	L104	N 02°30'50" E	73.85	L154	N 64°01'40" E	63.35	L204	S 22°23'48" E	62.80	L304	S 35°40'40" W	44.02
L05	S 03°10'54" W	12.89	L105	N 69°59'44" W	76.76	L105	N 02°30'50" E	73.85	L155	N 03°44'59" W	76.81	L205	S 22°23'48" E	16.16	L305	S 35°40'40" W	26.89
L06	S 21°54'42" W	19.19	L106	N 59°59'44" W	76.76	L106	N 02°30'50" E	73.85	L156	N 03°44'59" W	76.81	L206	S 22°23'48" E	16.16	L306	S 35°40'40" W	26.89
L07	S 03°10'54" W	12.89	L107	N 49°59'44" W	76.76	L107	N 02°30'50" E	73.85	L157	N 03°44'59" W	76.81	L207	S 22°23'48" E	16.16	L307	S 35°40'40" W	26.89
L08	S 21°54'42" W	19.19	L108	N 39°59'44" W	76.76	L108	N 02°30'50" E	73.85	L158	N 03°44'59" W	76.81	L208	S 22°23'48" E	16.16	L308	S 35°40'40" W	26.89
L09	S 03°10'54" W	12.89	L109	N 29°59'44" W	76.76	L109	N 02°30'50" E	73.85	L159	N 03°44'59" W	76.81	L209	S 22°23'48" E	16.16	L309	S 35°40'40" W	26.89
L10	S 21°54'42" W	19.19	L110	N 19°59'44" W	76.76	L110	N 02°30'50" E	73.85	L160	N 03°44'59" W	76.81	L210	S 22°23'48" E	16.16	L310	S 35°40'40" W	26.89
L11	S 03°10'54" W	12.89	L111	N 9°59'44" W	76.76	L111	N 02°30'50" E	73.85	L161	N 03°44'59" W	76.81	L211	S 22°23'48" E	16.16	L311	S 35°40'40" W	26.89
L12	S 21°54'42" W	19.19	L112	N 0°59'44" W	76.76	L112	N 02°30'50" E	73.85	L162	N 03°44'59" W	76.81	L212	S 22°23'48" E	16.16	L312	S 35°40'40" W	26.89
L13	S 03°10'54" W	12.89	L113	N 31°59'44" W	76.76	L113	N 02°30'50" E	73.85	L163	N 03°44'59" W	76.81	L213	S 22°23'48" E	16.16	L313	S 35°40'40" W	26.89
L14	S 21°54'42" W	19.19	L114	N 21°59'44" W	76.76	L114	N 02°30'50" E	73.85	L164	N 03°44'59" W	76.81	L214	S 22°23'48" E	16.16	L314	S 35°40'40" W	26.89
L15	S 03°10'54" W	12.89	L115	N 11°59'44" W	76.76	L115	N 02°30'50" E	73.85	L165	N 03°44'59" W	76.81	L215	S 22°23'48" E	16.16	L315	S 35°40'40" W	26.89
L16	S 21°54'42" W	19.19	L116	N 1°59'44" W	76.76	L116	N 02°30'50" E	73.85	L166	N 03°44'59" W	76.81	L216	S 22°23'48" E	16.16	L316	S 35°40'40" W	26.89
L17	S 03°10'54" W	12.89	L117	N 33°59'44" W	76.76	L117	N 02°30'50" E	73.85	L167	N 03°44'59" W	76.81	L217	S 22°23'48" E	16.16	L317	S 35°40'40" W	26.89
L18	S 21°54'42" W	19.19	L118	N 23°59'44" W	76.76	L118	N 02°30'50" E	73.85	L168	N 03°44'59" W	76.81	L218	S 22°23'48" E	16.16	L318	S 35°40'40" W	26.89
L19	S 03°10'54" W	12.89	L119	N 13°59'44" W	76.76	L119	N 02°30'50" E	73.85	L169	N 03°44'59" W	76.81	L219	S 22°23'48" E	16.16	L319	S 35°40'40" W	26.89
L20	S 21°54'42" W	19.19	L120	N 3°59'44" W	76.76	L120	N 02°30'50" E	73.85	L170	N 03°44'59" W	76.81	L220	S 22°23'48" E	16.16	L320	S 35°40'40" W	26.89
L21	S 03°10'54" W	12.89	L121	N 33°59'44" W	76.76	L121	N 02°30'50" E	73.85	L171	N 03°44'59" W	76.81	L221	S 22°23'48" E	16.16	L321	S 35°40'40" W	26.89
L22	S 21°54'42" W	19.19	L122	N 23°59'44" W	76.76	L122	N 02°30'50" E	73.85	L172	N 03°44'59" W	76.81	L222	S 22°23'48" E	16.16	L322	S 35°40'40" W	26.89
L23	S 03°10'54" W	12.89	L123	N 13°59'44" W	76.76	L123	N 02°30'50" E	73.85	L173	N 03°44'59" W	76.81	L223	S 22°23'48" E	16.16	L323	S 35°40'40" W	26.89
L24	S 21°54'42" W	19.19	L124	N 3°59'44" W	76.76	L124	N 02°30'50" E	73.85	L174	N 03°44'59" W	76.81	L224	S 22°23'48" E	16.16	L324	S 35°40'40" W	26.89
L25	S 03°10'54" W	12.89	L125	N 33°59'44" W	76.76	L125	N 02°30'50" E	73.85	L175	N 03°44'59" W	76.81	L225	S 22°23'48" E	16.16	L325	S 35°40'40" W	26.89
L26	S 21°54'42" W	19.19	L126	N 23°59'44" W	76.76	L126	N 02°30'50" E	73.85	L176	N 03°44'59" W	76.81	L226	S 22°23'48" E	16.16	L326	S 35°40'40" W	26.89
L27	S 03°10																