



**KNOXVILLE/KNOX COUNTY METROPOLITAN PLANNING COMMISSION  
PLAN AMENDMENT/REZONING REPORT**

**FILE #:** 10-U-07-RZ  
10-F-07-SP

**AGENDA ITEM #:** 78  
**AGENDA DATE:** 10/11/2007

**APPLICANT:** LEGACY DEVELOPMENT  
**OWNER(S):** LEGACY DEVELOPMENT

**TAX ID NUMBER:** 20 132.07  
**JURISDICTION:** Commission District 8

**LOCATION:** North side Brackett Rd., northwest of E. Emory Rd., northeast of Bell Rd.

**TRACT INFORMATION:** 34.7 acres.

**SECTOR PLAN:** Northeast County

**GROWTH POLICY PLAN:** Rural Area

**ACCESSIBILITY:** Access is via Brackett Rd., a local street with a 19' pavement width within a 40' of right-of-way.

**UTILITIES:** Water Source: Hallsdale-Powell Utility District  
Sewer Source: Hallsdale-Powell Utility District

**WATERSHED:** Beaver Creek

**PRESENT PLAN DESIGNATION/ZONING:** A/RR (Agricultural/Rural Residential)/SLPA (Slope Protection)/STPA (Stream Protection) / A (Agricultural)

**PROPOSED PLAN DESIGNATION/ZONING:** LDR (Low Density Residential)/SLPA (Slope Protection)/STPA (Stream Protection) / PR (Planned Residential)

**EXISTING LAND USE:** Vacant land

**PROPOSED USE:** Detached residential subdivision

**DENSITY PROPOSED:** 2 du/ac

**EXTENSION OF PLAN DESIGNATION/ZONING:** Yes, LDR designation to the south.

**HISTORY OF ZONING REQUESTS:** None noted

**SURROUNDING LAND USE, PLAN DESIGNATION, ZONING:**  
North: Residences / A (Agricultural)  
South: Residences / A (Agricultural) & RA (Low Density Residential)  
East: Residences / A (Agricultural)  
West: Residences / A (Agricultural)

**NEIGHBORHOOD CONTEXT:** This area has been developed with large lot residential uses under Agricultural zoning.

**STAFF RECOMMENDATION:**

**DENY LDR (Low Density Residential) designation for this site**

LDR is an extension of the plan designation from the south; however, staff believes that the current LDR boundary is appropriate considering the surrounding rural residential pattern and the property's steep terrain. According to the Growth Policy Plan (Sec. 3.2), rezoning to Planned Residential within the Rural area shall be limited to 2 dwellings units per acre based on the site's environmental characteristics and availability of utilities. The applicant has provided documentation stating that water and sewer utilities are available to serve the site. The applicant's request therefore would not require a sector plan amendment and staff believes that it is appropriate to leave this site designated as Agricultural and Rural Residential.

► **APPROVE PR (Planned Residential) zoning**  
**APPROVE a density of up to 2 dwelling per acre.**

PR zoning will permit the applicant to submit a development proposal for this site that can address the environmental constraint of steep slopes and stream protection found on this site, as well as compatibility with the character of surrounding rural residential development. PR zoning at the recommended density is compatible with the surrounding zoning pattern and is consistent with the policies of the Growth Policy Plan for the Rural Area. The recommended density of 2 du/ac is the maximum that may be permitted under the Rural Area policies of the Growth Plan for this property.

**COMMENTS:**

**NEED AND JUSTIFICATION FOR THE PROPOSAL**

1. PR zoning at a density up to 2 du/ac will allow development that is compatible with the scale and intensity of the surrounding rural residential development pattern.
2. PR zoning will require plan review and approval prior to development of the property. During this review, issues such as traffic, sight distance, drainage, slope, lot layout and other development concerns can be addressed.
3. The Growth Policy Plan restricts development in the rural area to densities of 1 dwelling per 2 acres on steep slopes (25% or greater) and 1 acre minimum lot sizes on moderate slopes (15-25%). Approximately 12% of the site is characterized by steep slopes and 31% has moderate slopes. Approximately 19.3 acres, or 57% of the site, would be appropriate for low density development at 1 -3 dwellings per acre. (See attached map.) A density of 2 dwelling per acre would be more in keeping with the Growth Policy Plan guidelines.

**THE EFFECTS OF THE PROPOSAL**

1. Hallsdale Powell reports that public water and sewer utilities can be made available to serve the site, but at the developer's expense. (See attached letter.)
2. PR zoning at up to 2 du/ac would allow a maximum of 69 dwelling units. Approximately 737 new vehicle trips would be generated and approximately 30 school-aged children would be added to the school system.
3. Since the subject property is located in the Rural Area, the applicant was required to submit a traffic impact study as part of this request (see attached study). According to the Knox County Department of Engineering and Public Works, the applicant will be required to provide a 3-way stop at the proposed entrance onto Brackett Rd. due to severely limited sight distance. This requirement will help alleviate the existing traffic situation located at the 90 degree curve in Brackett Rd. which is the location of the proposed subdivision entrance.
4. PR zoning at 2 du/ac would allow more intensive residential development that is found in the immediate area along Brackett Rd., but will be compatible with the scale and intensity of other residential development found in the surrounding area and along E. Emory Rd. and Bell Rd.

**CONFORMITY OF THE PROPOSAL TO ADOPTED PLANS**

1. The Northeast County Sector Plan proposes Agricultural and Rural Residential, Slope Protection and Stream Protection. The developer of the property should understand that such constraints may not allow development of the property at the approved density.
2. Since the subject property adjoins the Planned Growth Area to the south, PR zoning at up to 2 dwellings per acre would be consistent with the development potential of those properties.
3. The site is located within the Rural Area of the Knoxville-Knox County-Farragut Growth Policy Plan which allows consideration of PR zoning at up to 2 du/ac where urban services can be extended to serve the site, and the development will not unreasonably impact traffic flow from the subject site through the Planned Growth Area.

ESTIMATED TRAFFIC IMPACT: 737 (average daily vehicle trips)

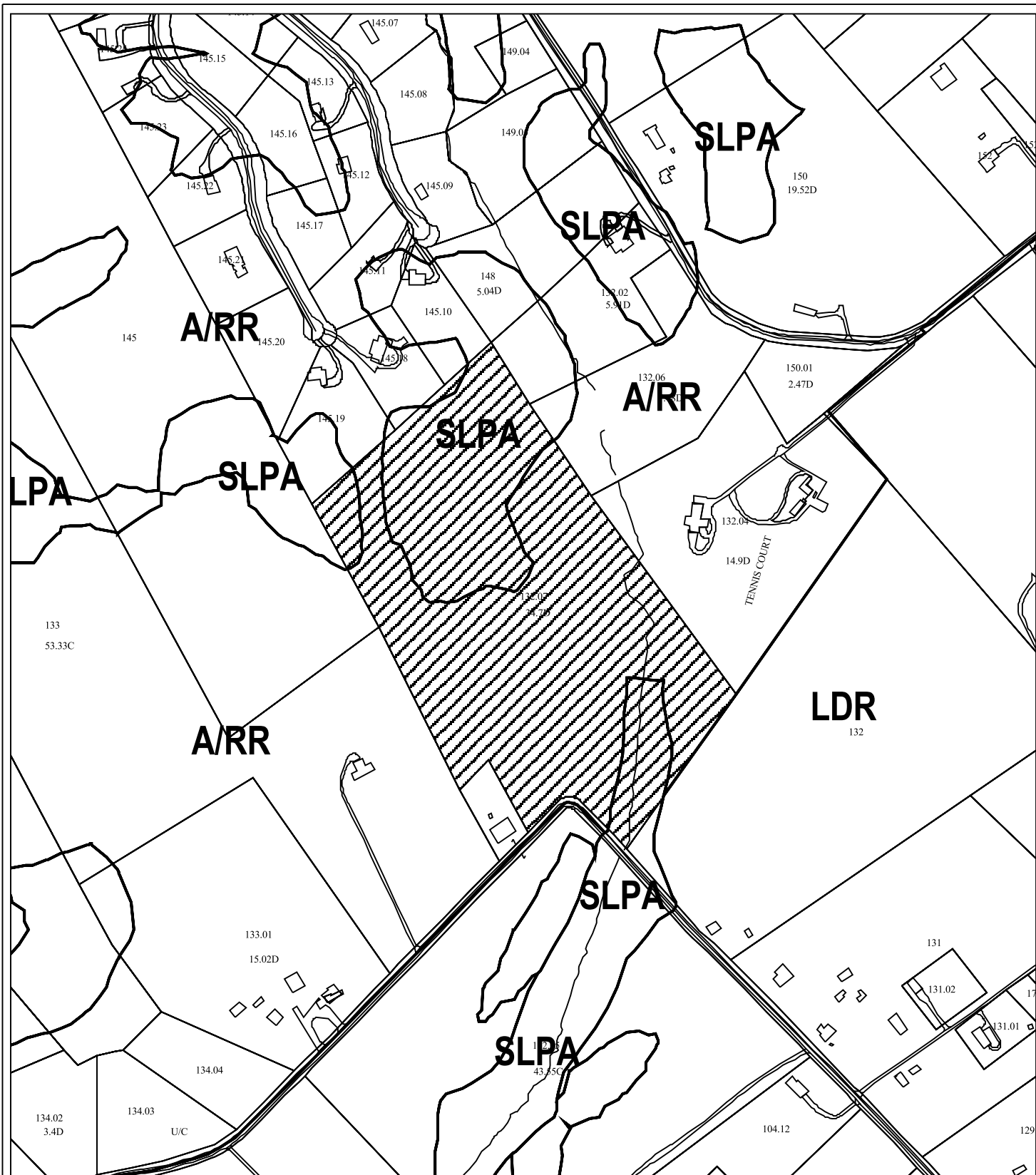
Average Daily Vehicle Trips are computed using national average trip rates reported in the latest edition of "Trip Generation," published by the Institute of Transportation Engineers. Average Daily Vehicle Trips represent the total number of trips that a particular land use can be expected to generate during a 24-hour day (Monday through Friday), with a "trip" counted each time a vehicle enters or exits a proposed development.

ESTIMATED STUDENT YIELD: 30 (public and private school children, ages 5-18 years)

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

- School-age population (ages 5–18) is estimated by MPC using data from a variety of sources.
- While most children will attend public schools, the estimate includes population that may be home-schooled, attend private schools at various stages of enrollment, or drop out of the public system.
- Students are assigned to schools based on current attendance zones as determined by Knox County Schools. 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.
- School capacities are subject to change by Knox County Schools through building additions, curriculum or scheduling changes, or amendments to attendance zone boundaries.


If approved, this item will be forwarded to Knox County Commission for action on 11/19/2007. If denied, MPC's action is final, unless the action to deny is appealed to Knox County Commission. The date of the appeal hearing will depend on when the appeal application is filed. Appellants have 30 days to appeal an MPC decision in the County.



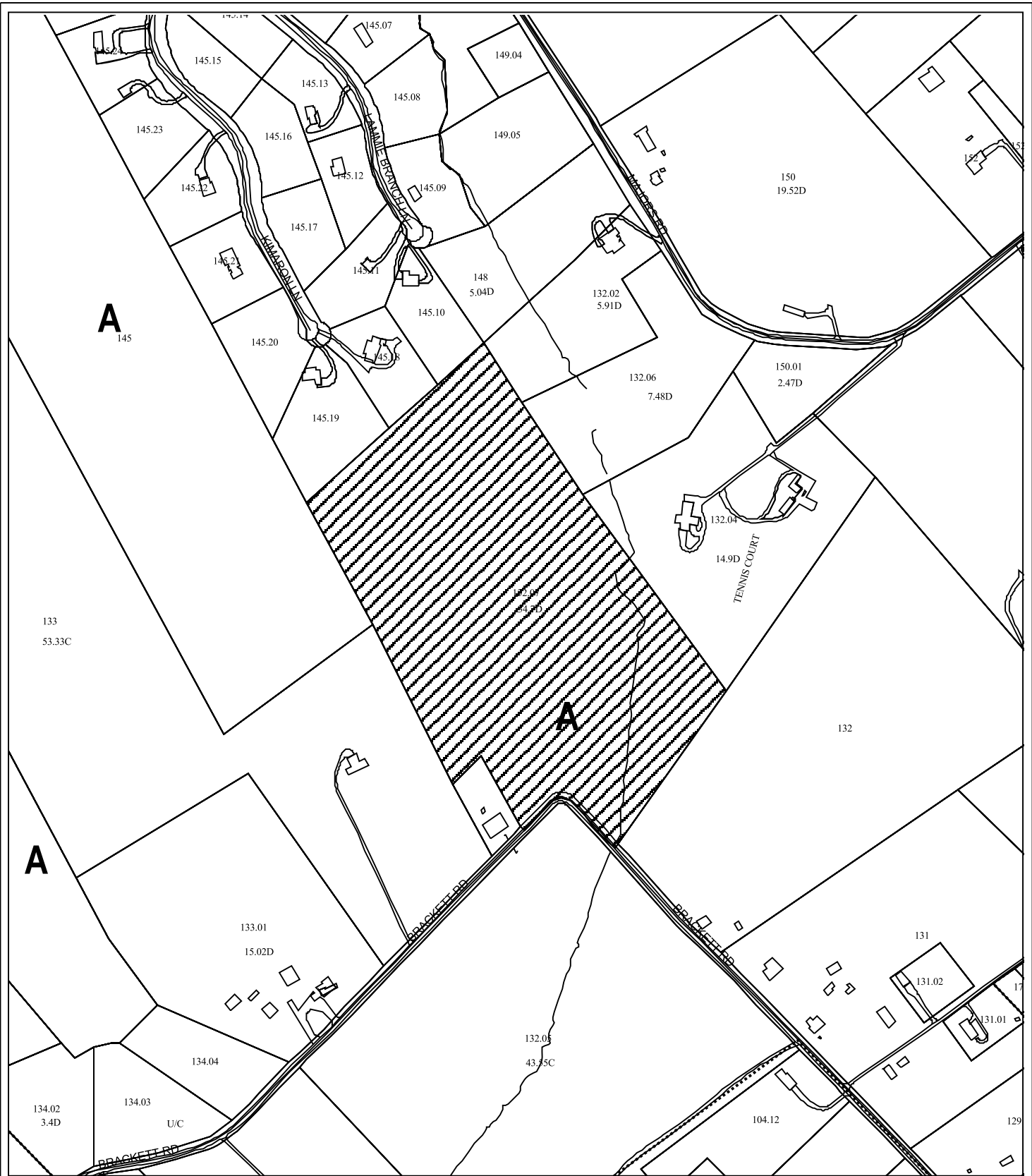
**10-F-07-SP/10-U-07-RZ  
SECTOR PLAN AMENDMENT  
NORTHEAST COUNTY SECTOR PLAN AMENDMENT**

Petitioner: Legacy Development  
 Map No: 20  
 Jurisdiction: County



 From: A/RR (Agricultural/Rural Residential)  
 To: LDR (Low Density Residential)

Original Print Date: 09/25/07 Revised:  
 Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902



**10-U-07-RZ  
REZONING**

Petitioner: Legacy Development

Map No: 20

Jurisdiction: County



From: A (Agricultural)

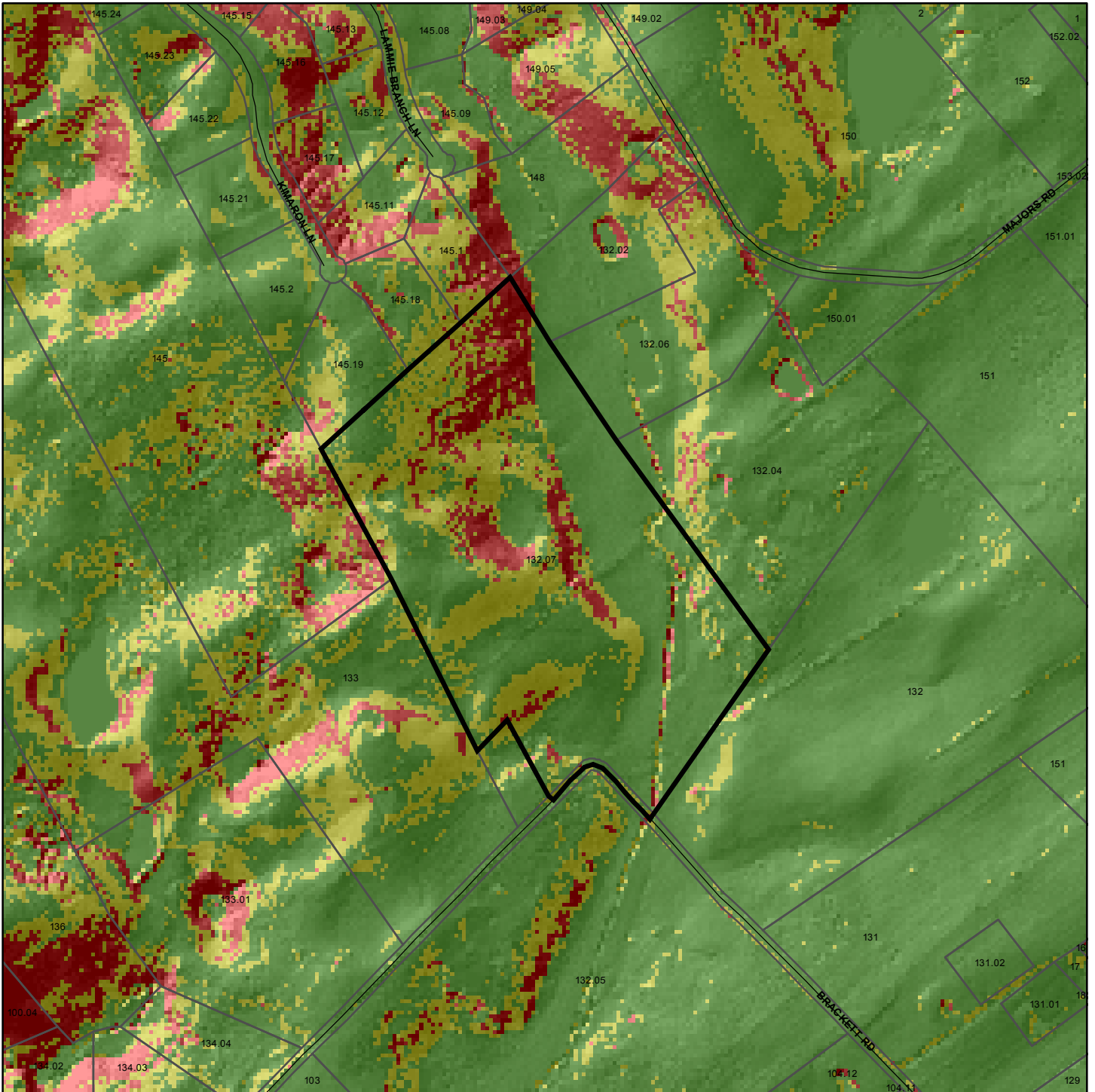
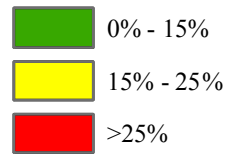
To: PR (Planned Residential)

Original Print Date: 09/25/07 Revised:

Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902

# 10-U-07-RZ Slope Analysis

## Percent Slope



### 10-U-07-RZ REZONING

Petitioner: Legacy Development



From: A (Agricultural)  
To: PR (Planned Residential)

Map No: 20

Jurisdiction: County

Original Print Date: 9/272007 Revised:  
Metropolitan Planning Commission \* City / County Building \* Knoxville, TN 37902



10-U-07-RZ Slope Analysis

Slope	Gridcode	Cells	Sum_Acres	Percentage
0%-15%	1	33688	19.3343	57.16%
15%-25%	2	18108	10.3926	30.73%
> 25%	3	7139	4.0972	12.11%
Total Acres			33.8240	100.00%

**From:** "John Sexton" <john.sexton@knoxcounty.org>  
**To:** "Cindy Pionke" <cindy.pionke@knoxcounty.org>  
**Date:** 9/21/2007 4:48:43 PM  
**Subject:** Brackett Road sight distance

I checked the sight distance at the 90-degree turn on Brackett Road (location of rezoned site). There is a wooded pasture on the inside of the turn such that any traffic coming from the west on Brackett Road to enter the site will not be able to see traffic approaching from their right on Brackett Road. The intersection will have to be made a three-way STOP under this condition.

Sight distance from the site approach is adequate.

John W. Sexton, PE  
Staff Transportation Engineer  
Knox County Department of Engineering and Public Works  
205 West Baxter Avenue  
Knoxville, TN 37917  
Phone (865) 215-5860  
Fax (865) 215-5827

**CC:** "Nathan Benditz" <Nathan.Benditz@knoxtrans.org>





Commissioners  
Jim Hill  
Kevin Julian  
Paul Corum

President/CEO  
Marvin L. Hammond

10-U-07-RZ/10-F-07-SP

September 4, 2007


RE: Parcel 132.07 on Brackett Road  
Sewer and Water Availability

To Whom It May Concern:

Sewer and water service is available near parcel 132.07 on Brackett Road. The property owner will be responsible for all cost to extend sewer and water service to the property. The water line along Brackett Road will have to be upgraded before it can support a development. The development can either build a sewer lift station or gravity sewer line to connect to the sewer system but an analysis will have to be done to check for capacity in the existing sewer system.

If we can be of further service to you on this subject, please contact us.

Sincerely,

  
Darren Cardwell  
Vice President/Chief Operating Officer

September 10, 2007



Mr. Robert G. Campbell, P.E.  
**Robert G. Campbell and Associates, L.P.**  
7523 Taggart Lane  
Knoxville, TN 37938

10-U-07-RZ  
10-F-07-SP

**RE: BRACKETT ROAD ZONE CHANGE, KNOX COUNTY, TENNESSEE.**

Dear Mr. Campbell:

Wilbur Smith Associates has completed the preliminary review of the traffic impact associated with the proposed zone change from agriculture (AG) to low density residential (PR3) on Brackett Road in northeast Knox County. The request for zone change is outside the urban growth boundary in the rural area of the county. The site is located east of Bell Road and north of E. Emory Road. Figure 1 illustrates the site location and vicinity

**Project Description**

The proposed development is for approximately 47 single family units on approximately 30 acres with 5 acres in a flood fringe. Therefore, with a net 25 acres, the development is proposing a density of 1.9 units per acre. There are proposed to be two different lot types. Eleven lots are to be 1 acres or greater in size. The remaining 36 lots will be a smaller size having a 70 foot width. The 36 lots are located on the east side of the development and provided access by an approximately 2,200 foot cul-de-sac residential street. The 1 acre lots are located on the west side of the development and served by an approximately 1,000 cul-de-sac residential street. The proposed development will have one access intersecting Brackett Road. The access to Brackett Road is within a 90 degree angle curve. Figure 2 illustrates the proposed site.

**Existing Conditions**

The proposed zone change and development of 47 single family units is located northeast of Brackett Road. Brackett Road is classified as a local facility. The average daily traffic (ADT) volume on Brackett Road in 2007 was approximately 96 vehicles per day (vpd). Brackett Road is a 2-lane roadway with an approximate width of 21-feet. Figure 3 illustrates the 2007 ADT volumes

Regional access to this site is E. Emory Road to the south with an intersection to Brackett Road. E. Emory Road extends southwest to Maynardville Highway, I-75, and continues toward Anderson County. To the northeast, E. Emory Road intersects Tazewell Pike, Washington Pike, and continues to Grainger County. The ADT of E. Emory Road near Maynardville Highway is approximately 11,770 vpd in 2007. Brackett Road intersects Bell Road to the west of the proposed development. Alternate routes are available to access E. Emory Road via Bell Road and Maynardville Highway via Tell Mynatt Road. The ADT's of Bell Road are 780 vpd and Tell Mynatt Road are 610 vpd. These are shown in Figure 3.

**Projected Conditions**

Background traffic is traffic that can be anticipated regardless of the proposed development. Traffic within the study area should continue to grow due to other developments as well as the continued growth within the surrounding area. This background traffic must be considered for the purpose of establishing a baseline. In addition, the background traffic reflects the historical traffic volumes in the area of the proposed development.

In reviewing the history of the average daily traffic volume in the site's vicinity, traffic growth appears to be minimal. Therefore, for the purpose of this review an annual growth rate of 1.5-percent and a horizon year of 2012 are assumed. Therefore, using a 1.5 percent annual growth rate until 2012, background average daily traffic reflects a 7.5-percent growth. As illustrated in Figure 4, the 2012 background ADT for Brackett Road is 103 vpd; for Bell Road is 839 vpd and 655 vpd for Tell Mynatt Road. Count station 19 on E. Emory Road near Halls reflects an annual increase of 2.9% for the past two years. Count station 9 on E. Emory Road east of Tazewell Pike reflects an average annual increase of 2.0% for the past two years. It was assumed that a yearly average traffic growth on E. Emory Road of 3.0 percent could be expected for the area. The expected completion of the proposed single-family residential development is to be before 2012. Therefore, using a 3.0 percent annual growth rate, the study intersection reflects a 15-percent growth. The growth factor was applied to E. Emory Road and a 2012 ADT of 13,536 vpd is expected.

Traffic for the proposed site was determined using the publication, **Trip Generation, 7th Edition**. This reference is published by the Institute of Transportation Engineers (ITE) and represents national data collected for many different land uses including industrial, residential and commercial uses. **Trip Generation** is an essential tool in calculating the traffic, which may be generated by a proposed development. The study generated trips for 47 single-family units distinguishing trips generated for the proposed access to Brackett Road.

**TABLE 1  
TRIP GENERATION**

LAND USE	L.U.C.	Units	DAILY TRIPS	AM PEAK ENTER	AM PEAK EXIT	PM PEAK ENTER	PM PEAK EXIT
Single Family	210	47	468	10	32	34	20

Using the mechanical counter installed adjacent to the proposed development on Brackett Road, trips were distributed to Brackett Road with 60-percent of the generated trips distributed east toward E. Emory Road and 40-percent assigned to the west toward Bell Road. Figure 5 illustrates this trip distribution and resulting site generated daily trips. Adding the 2012 background ADT volumes and the distributed site generated daily trips result in the projected 2012 traffic with the proposed development as is illustrated in Figure 6.

**Findings**

For 2012 conditions, site traffic represents an approximate 75-percent traffic increase on Brackett Road. The daily traffic projection of 383 for Brackett Road reflects typical volumes for a local street. Current Knox County policy requires a minimum roadway width of 18-feet for proposed development. The proposed development impact on E. Emory Road may reflect an approximate 3-percent increase in the projected background traffic volumes. The projected 2012 traffic for E. Emory Road reflect an acceptable traffic volume for an arterial facility.

The adjacent roadways are classified appropriately for the proposed development and roadway widths exceed minimum requirements of the County. The proposed 47 single-family units, therefore, can be accommodated with the existing transportation system.

**Additional Comments**

Knox County Department of Public Works and Traffic Engineering made comment that E. Emory Road and Brackett Road intersection has a crash history. This review is out of the scope for this study. However, a summary of recorded crashes by County and State Law Enforcement may be necessary to establish quantity, severity, possible patterns, and causes for crashes. An antidotal description of crash experience from a neighbor suggested that a large number of crashes occur as rear-ends to turning vehicles onto Brackett Road. Very few may be from Brackett Road onto E. Emory Road. A further review of crash history may be beneficial.

The low volume of traffic on Brackett Road at the 90-degree curve may be worth consideration of STOP control on Brackett Road as the stem approach to the proposed "T" intersection. The heavier movement would be Brackett Road from E. Emory Road entering into the proposed subdivision

If you have any questions regarding this review, please call me.

Sincerely,

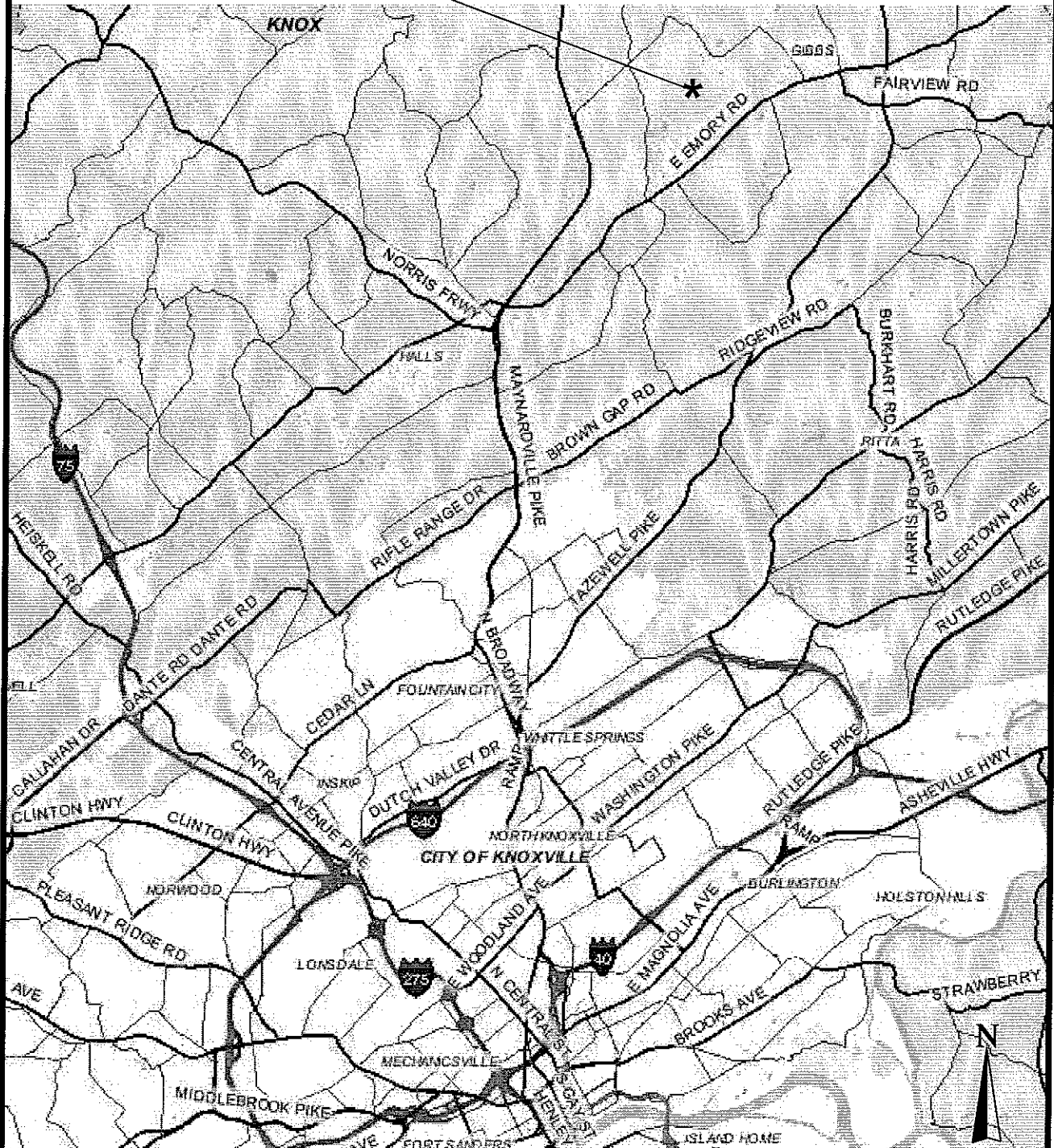
WILBUR SMITH ASSOCIATES, INC.

Kevin A. Cole, P.E.  
Senior Transportation Engineer

Enclosures    Figures 1-6  
                  Trip Generation  
                  Historical Traffic Count Data  
                  Mechanical Traffic Count Data

# VICINITY MAP Brackett Road

SITE



© KGIS 2007

0 1mi

Figure 1

**SITE PLAN**  
**Brackett Road**

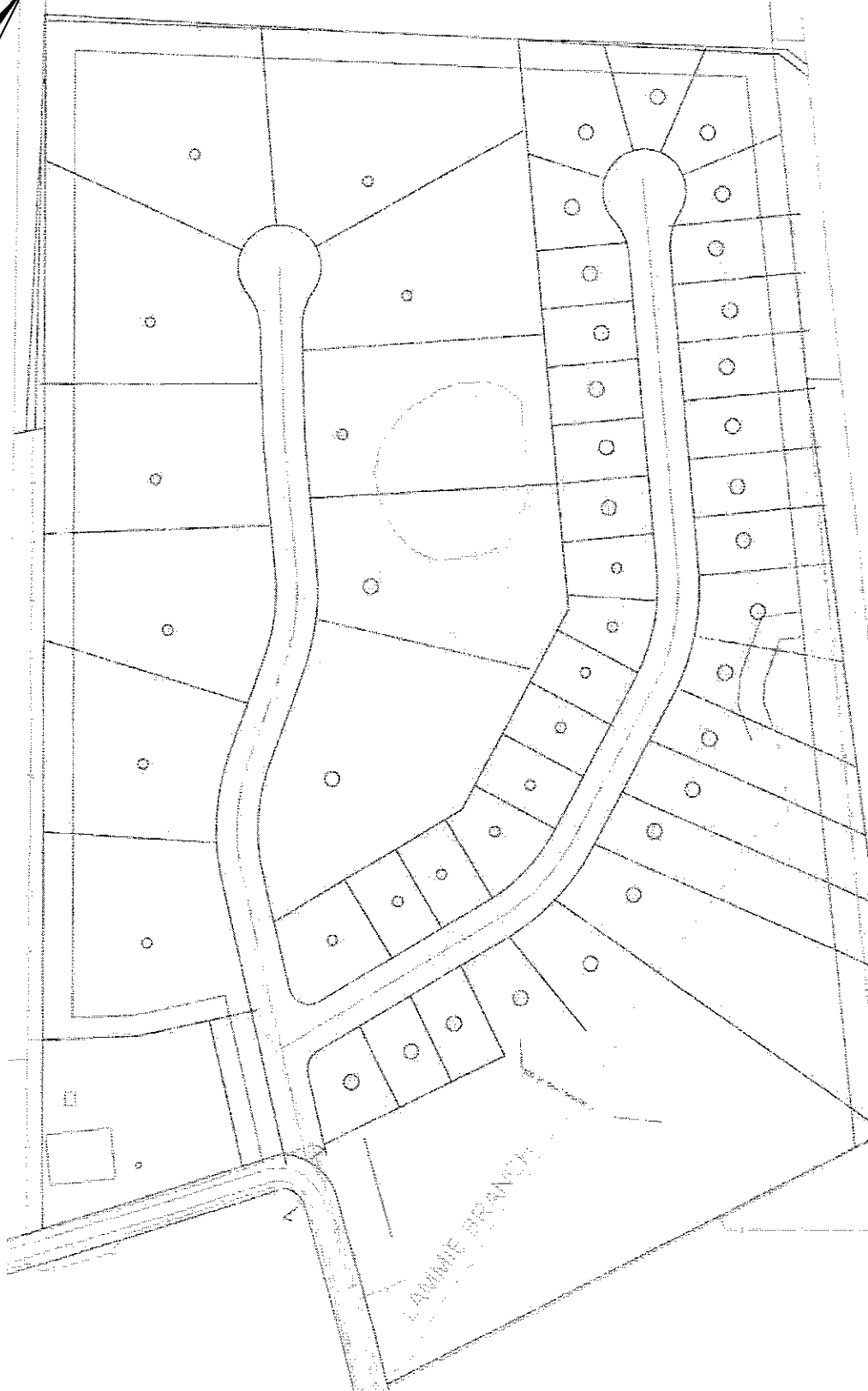


Figure 2