



TREE CANOPY STUDY UPDATE

DPO 9 TREE PRESERVATION, LANDSCAPING, & SCREENING



OVERVIEW

- **Study Purpose**
 - » Why Undertake?
 - » Background: Team, Methods
 - » Relation to Street Tree Inventory
- **Data Review**
 - » Tables, Maps of Change
 - » Reasons for Change
- **Next Steps**

PURPOSE

- **DPO 9 Changes Underway**
 - » Based on Data/Not Arbitrary
- **Paint Composite Picture**
 - » Useful Now, Useful Later
 - » Est. Baseline for Future Comparisons
 - » Part of Best Practices: Inventory/Canopy Study, Management Plan, Education/Engagement

TREE CANOPY

Footprint or Surface Area

Leaves, Branches, Stems

Intercept Rainfall

[Vegetation]



Project Overview

Team: PlanIt Geo [Denver, CO]

Data: State/Federal Agencies

Methods: LiDAR (Light Detecting & Ranging),
NAIP (Nat'l Agriculture Imaging Program)

INVENTORY VS. CANOPY STUDY

- **Street Tree Inventory (2018)**
 - » Focus: Public Right-of-Way (i.e. Streets)
 - » Level: Detailed (i.e. Individual Trees)
 - » Purpose: Assess, Inform Mgt. Program
- **Canopy Study (2019)**
 - » Focus: All Land Area (Includes ETJ)
 - » Level: Big Picture, Aggregate Measurements
 - » Purpose: Understand, Inform DPO + Future Plan

DAVIDSON 1930

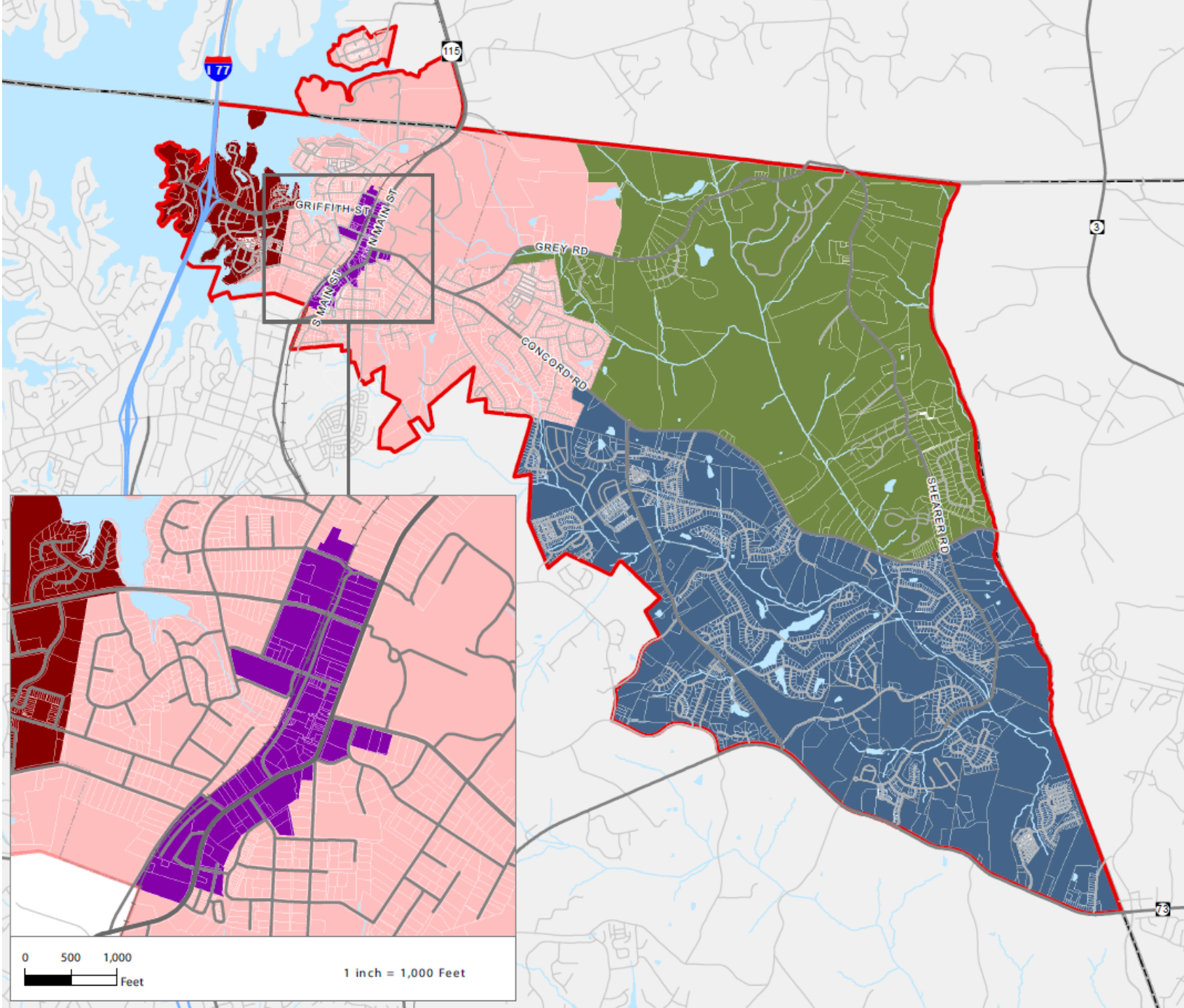


DAVIDSON 2000's





RESULTS



TREES ZONES

A map of the Town of Davidson with Parcel Lines.

LAND USE

- Circles at 30
- East Davidson
- Rural
- Village Infill College
- Downtown

STREETS / RAIL

- Rail
- Interstates
- Streets

WATER FEATURES

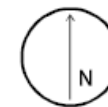
- Lakes and Ponds
- Creeks and Streams

BOUNDARIES

- Town of Davidson
- Sphere of Influence / ETJ
- County Boundary

TOWN OF DAVIDSON

MECKLENBURG COUNTY, NORTH CAROLINA



0 3,000
Feet

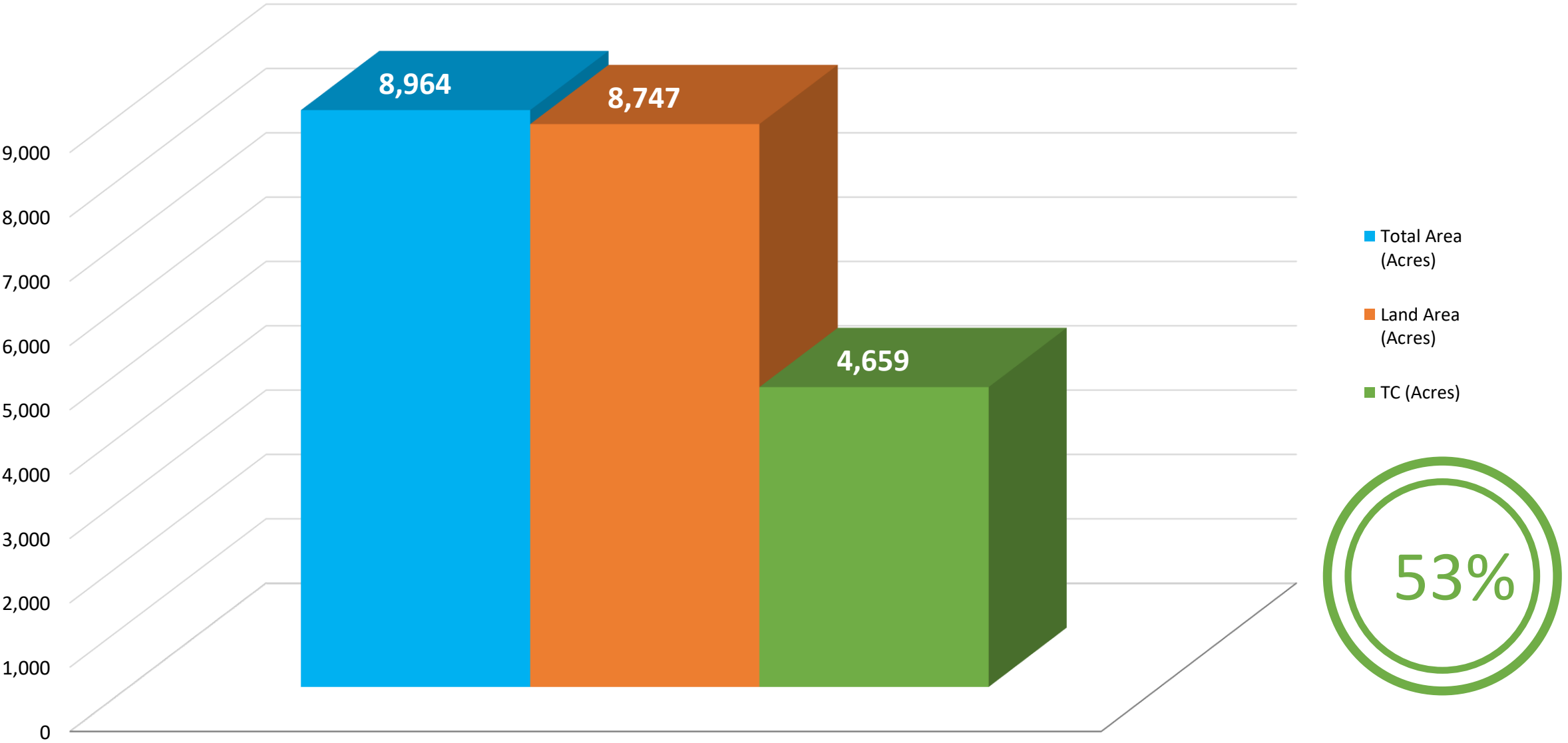
1 inch = 3,000 Feet

Date: 3/20/2019

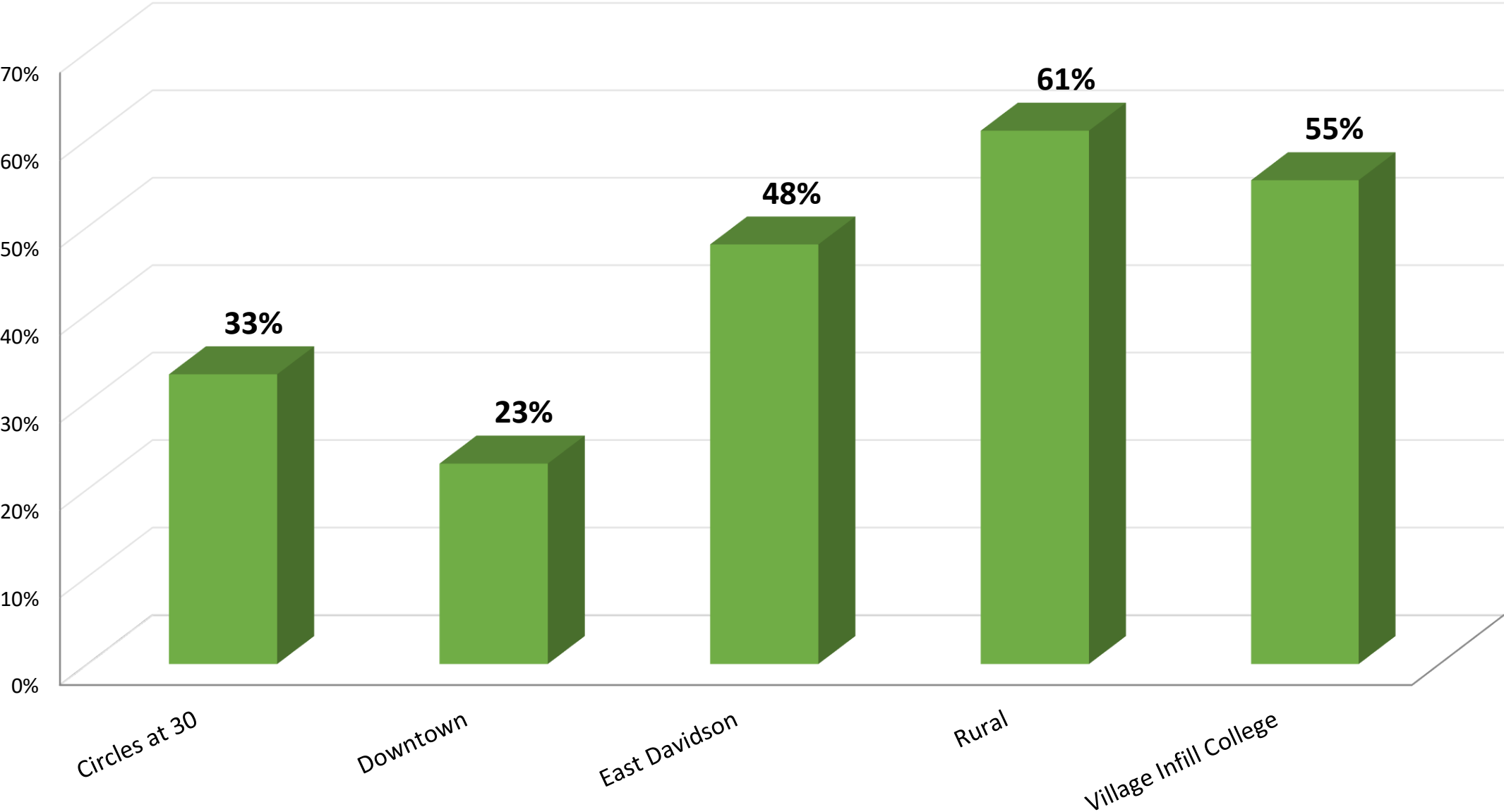
DATA SOURCES:
NC One Map
Mecklenburg County
Town of Davidson

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Tree Canopy (TC) Compared to Total Area & Land Area by Study Area



Existing Tree Canopy (%) by Tree Zones

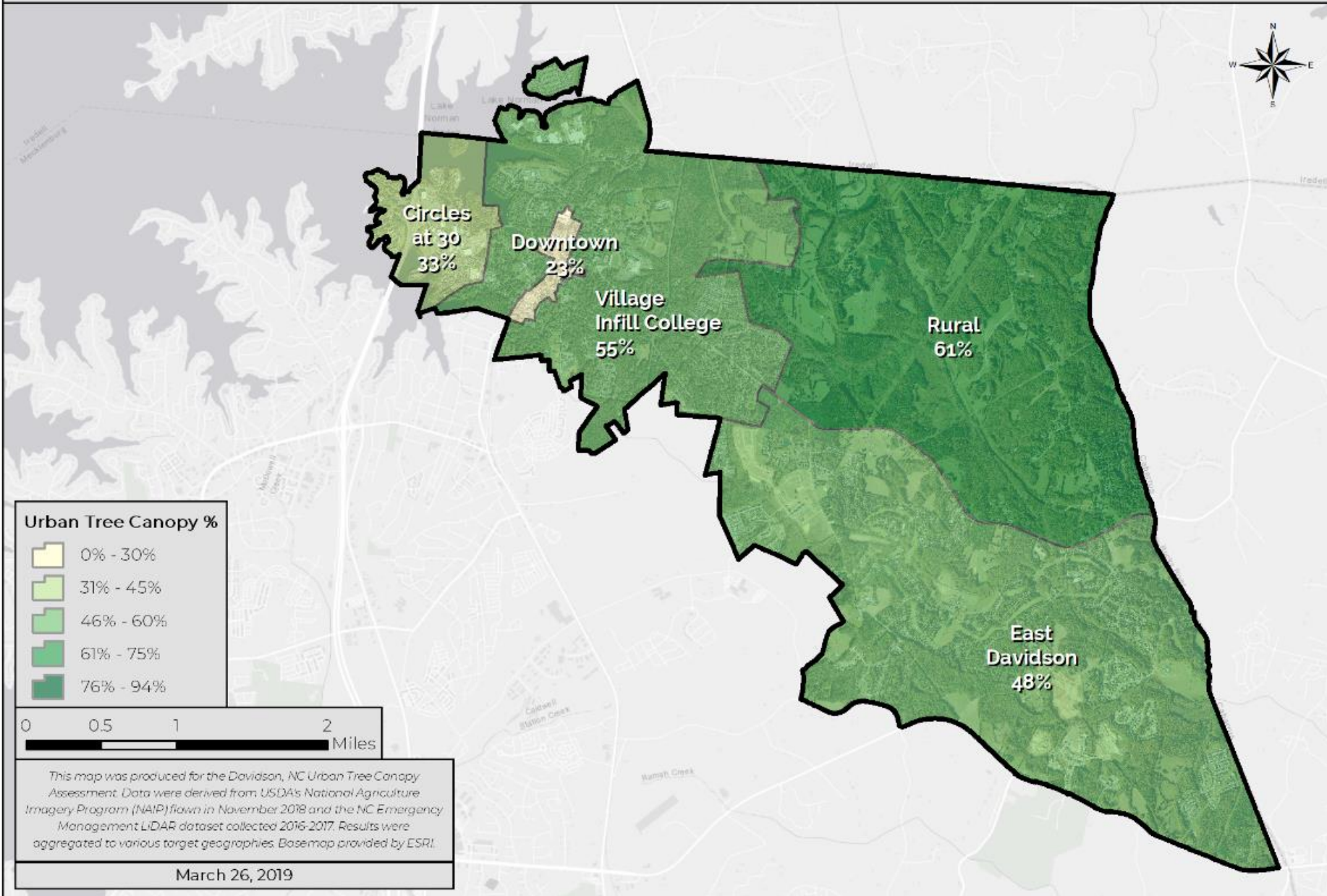


Urban Tree Canopy Assessment

Davidson, NC

plan-it
GEO

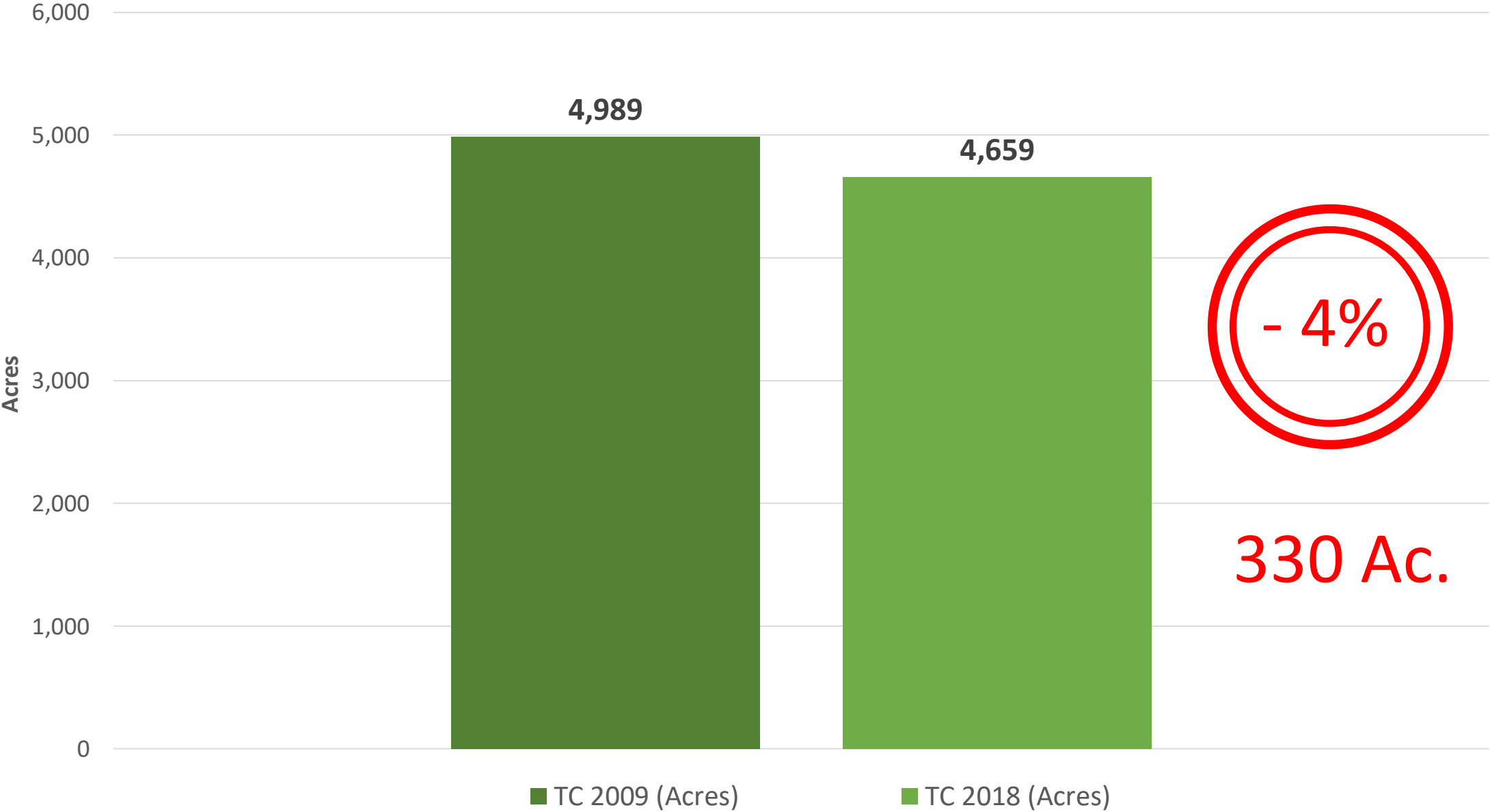
Urban Tree Canopy Percent by Tree Zone



“The distribution of tree canopy cover is generally not – and needn’t be – uniform across a municipality or even identical in every neighborhood.”

- USDA Sustainable Forest Guide

**Tree Canopy Change in Davidson
2009-2018**

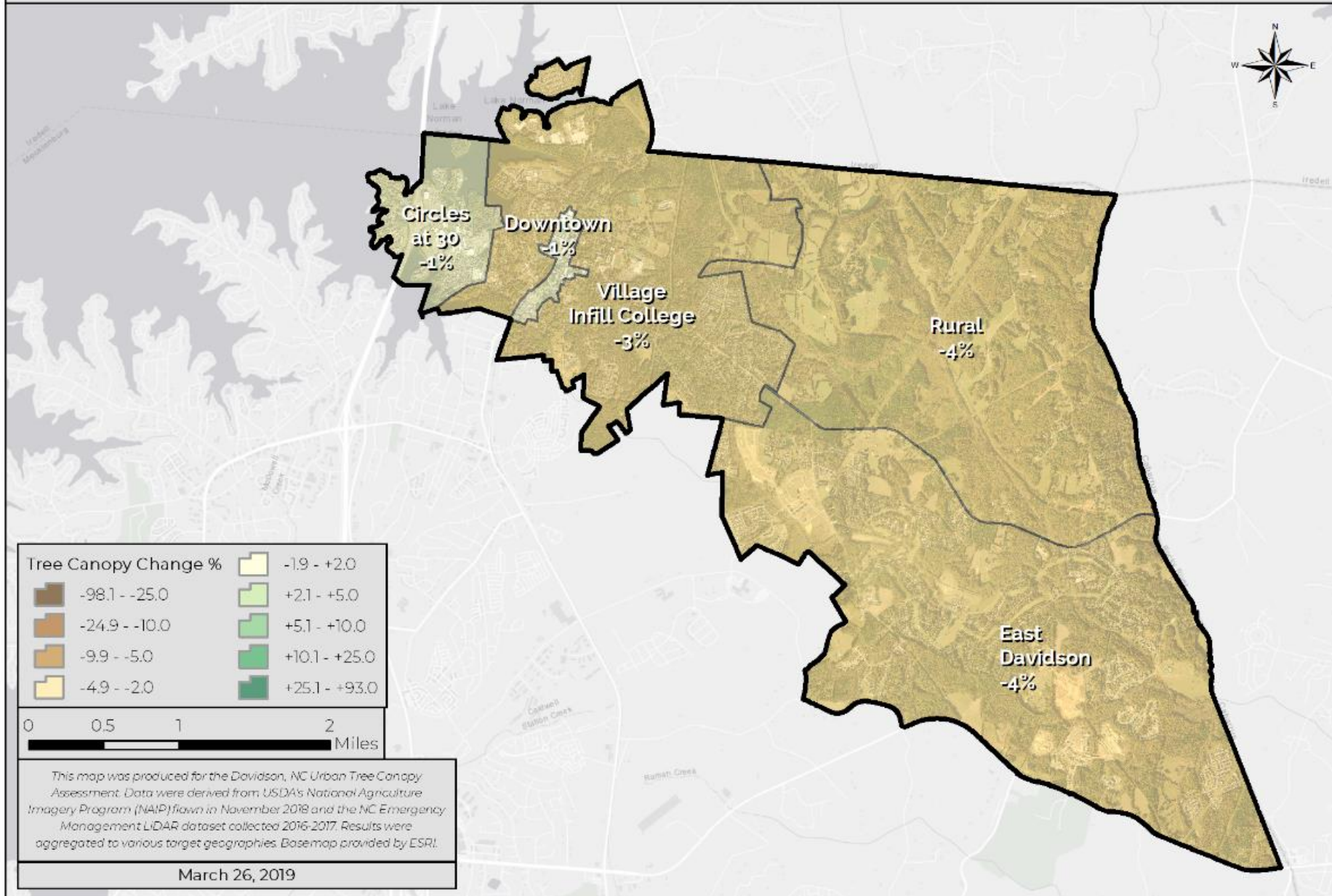


Urban Tree Canopy Assessment

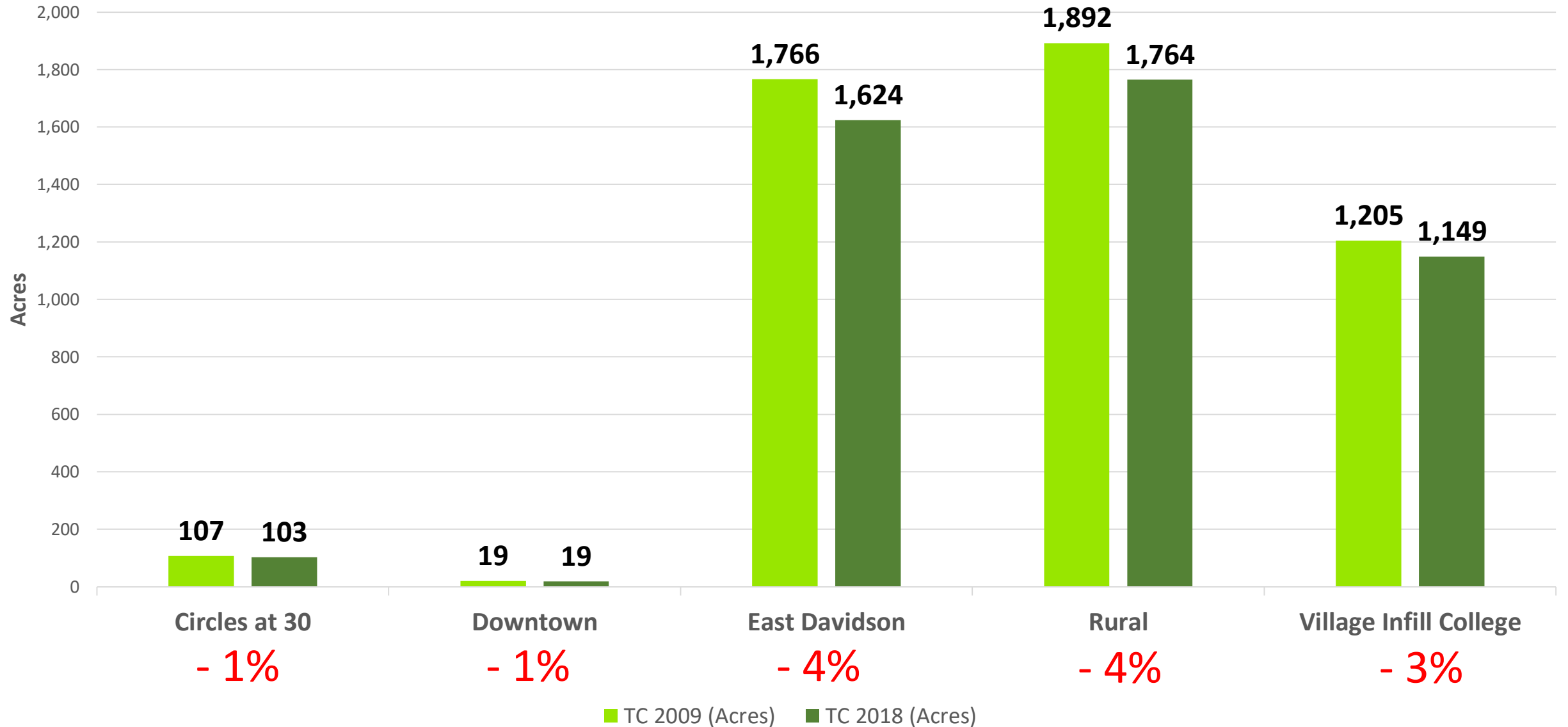
Davidson, NC



Urban Tree Canopy Change 2009-2018 by Tree Zone



Tree Canopy Change by Tree Zones 2009-2018



*Circles @ 30
Losses*



*Circles @ 30
Gains*



REASONS FOR CHANGE

- **Losses**

- » Rural: Utilities, Forestry, Residential Lot Clearing
- » East Davidson: Large-Scale Residential Development
- » Village Infill/College: College Activities, Infill Dev.
- » Downtown: Infill Dev. (College, Residential), Tree Age
- » Circles @ 30: Larger Individual Buildings

- **Gains**

- » Maturing Tree Canopy [Demolitions/Reforestation]
- » DPO 9 Requirements [Limits Loss via Min. Canopy/Street Trees]
- » Volunteer Planting Initiatives [Trees Davidson]

BENCHMARKING

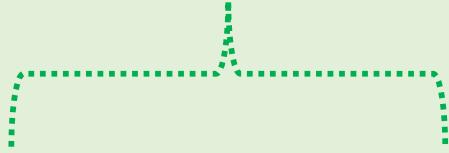
- **Similar Communities**

- » Fayetteville, AR: 2% Loss Over 10 Years (36% Total Canopy)
- » Davidson, NC: 4% Loss Over 9 Years (53% Total Canopy)
- » Charlottesville, VA: 6% Loss Over 9 Years (45% Total Canopy)

- **Takeaways**

- » Extent of Loss: Moderate/Important
- » Action Matters: Canopy Increases = Achievable

...pun intended?



“So at root, the quality of the urban forest is as important as the number of trees that comprise it.”

- USDA Sustainable Forest Guide

“The goal is to plant the right
trees in the right places.”

- US Forest Service

NEXT STEPS

Tree Canopy Study Data Informs 9.3 DPO Changes
Continued Research/Sustained PBOC Engagement
Planning/Livability Board Review
Additional Modifications
Public Hearing
Planning Board Recommendation
BOC Consideration of Approval