

REZONING REPORT

▶ **FILE #:** 12-A-20-RZ **AGENDA ITEM #:** 10

AGENDA DATE: 12/10/2020

▶ **APPLICANT:** TAYLOR FORRESTER OBO THE OFFICES AT ST. ANDREWS, LLC

OWNER(S): The Offices at Saint Andrews, LLC

TAX ID NUMBER: 120 H C 061

[View map on KGIS](#)

JURISDICTION: City Council District 2

STREET ADDRESS: 8300 E. Walker Springs Ln.

▶ **LOCATION:** East side of E. Walker Springs Ln., north of I-40 / I-75

▶ **APPX. SIZE OF TRACT:** 14.78 acres

SECTOR PLAN: Northwest City

GROWTH POLICY PLAN: N/A

ACCESSIBILITY: Access is via East Walker Springs Lane, a local street with a pavement width of 27.6 feet of pavement within a right-of-way width of 52.6 feet.

UTILITIES: Water Source: Knoxville Utilities Board

Sewer Source: Knoxville Utilities Board

WATERSHED: Ten Mile Creek

▶ **PRESENT ZONING:** OP (Office Park)

▶ **ZONING REQUESTED:** RN-6 (Multi-Family Residential Neighborhood)

▶ **EXISTING LAND USE:** Agriculture/forestry/vacant

▶ **EXTENSION OF ZONE:** No

HISTORY OF ZONING: 8-Q-81-RZ: R-1 to RP-1 (@ 4.1 du/ac); 6-G-83-RZ: RP-1 (@4.1 du/ac) to RP-1 (6 to 10 du/ac)

SURROUNDING LAND USE AND ZONING: North: Single family residential - RN-1 (Single-Family Residential Neighborhood Zoning District)

South: Right of Way - ROW (Right of Way)

East: Public/quasi-public - RN-2 (Single-Family Residential Neighborhood Zoning District)

West: Public/quasi-public - RN-1 (Single-Family Residential Neighborhood Zoning District)

NEIGHBORHOOD CONTEXT: The area is within 0.3 miles of the commercial/office node at the Gallaher View Road interchange with I-40/75, adjacent to the interstate and part of the West Hills neighborhood.

STAFF RECOMMENDATION:

▶ **Approve RN-5 (General Residential Neighborhood District) zoning because it is consistent with the Northwest City Sector Plan designation and the building height limitation of the zone district is 35 feet which is compatible with the adjacent single family residential neighborhood (Applicant requested RN-6 Multifamily Residential Neighborhood District).**

COMMENTS:

REZONING REQUIREMENTS FROM ZONING ORDINANCES (must meet all of these):

THE PROPOSED AMENDMENT SHALL BE NECESSARY BECAUSE OF SUBSTANTIALLY CHANGED OR CHANGING CONDITIONS IN THE AREA AND DISTRICTS AFFECTED, OR IN THE CITY GENERALLY:

1. There have been no recent, significant changes in this area that would prompt a rezoning. However, the staff recommendation to the RN-5 zone district is compatible with the adjacent single family residential neighborhood and allows for multi-family development. This site is located along a greenway, in an area with sidewalks, bike lanes and a connection to transit on Gallaher View Road.

THE PROPOSED AMENDMENT SHALL BE CONSISTENT WITH THE INTENT AND PURPOSE OF THE ZONING ORDINANCE:

1. The RN-5 (General Residential Neighborhood) District is intended to accommodate medium density residential neighborhoods comprising a heterogeneous mix of single-family, two-family, townhouse, and multi-family dwellings. The RN-5 District may also serve as a functional transition between traditionally single-family and two-family residential neighborhoods within the City, and more intensely developed residential or commercial areas. Limited nonresidential uses that are compatible with the character of the district may also be permitted.
2. Rezoning should be based on the entire range of uses allowed within a zone to ensure that any development brought forth at a future time would be compatible with the surrounding land uses.
3. In the RN-5 District, building height is limited to 35 feet which is more compatible with the adjacent single family residential neighborhood. RN-6 permits building heights of 65 feet and would be out of character with the adjacent neighborhood.

THE PROPOSED AMENDMENT SHALL NOT ADVERSELY AFFECT ANY OTHER PART OF THE CITY, NOR SHALL ANY DIRECT OR INDIRECT ADVERSE EFFECTS RESULT FROM SUCH AMENDMENT.

1. RN-5 zoning should not cause any adverse effects for surrounding properties.
2. The location is well serviced by a variety of transportation options, including bus transit, sidewalks, greenways and interstate access. It is also within 0.3 miles of an interstate commercial node. A greenway runs through the property and connects to the West Hills and Bynon Park which lies within 500 feet of the site (See Exhibit A).
3. (REVISED: 12/7/2020) A Transportation Impact Study dated November 17, 2020 by Addie Kirkham with Fulghum MacIndoe & Associates evaluates the impact of a residential development consisting of 216 apartment units at this location. A recommendation for a new traffic signal at the existing intersection of N Gallaher View Road at E Walker Springs / Sam's Club Driveway is noted on page 3 of the study, and a northbound right turn lane and a southbound left turn lane were also studied at the intersection of N Gallaher View Road and E Walker Springs Rd., but all options will have to be evaluated further by the City of Knoxville Traffic Office. The study also describes in detail the proximity of the site to the transit network, as well as the pedestrian and bicycle network (See Exhibit B).
4. The maximum density based on minimum lot area alone for multi-family on this 14.78 acre parcel in RN-5 is 437 units, while the maximum density for the applicant requested RN-6 based on the same is 672 units.

THE PROPOSED AMENDMENT SHALL BE CONSISTENT WITH AND NOT IN CONFLICT WITH THE GENERAL PLAN OF KNOXVILLE AND KNOX COUNTY, INCLUDING ANY OF ITS ELEMENTS, MAJOR ROAD PLAN, LAND USE PLAN, COMMUNITY FACILITIES PLAN, AND OTHERS:

1. The Northwest City Sector Plan's current MDR/O (Medium Density Residential/Office) designation notes that this designation should be located near community activity centers, including uses, such as parks and commercial/office nodes, that are serviced by transit and sidewalks.
2. RN-5 is consistent with all other adopted plans.

ESTIMATED TRAFFIC IMPACT: 5290 (average daily vehicle trips)

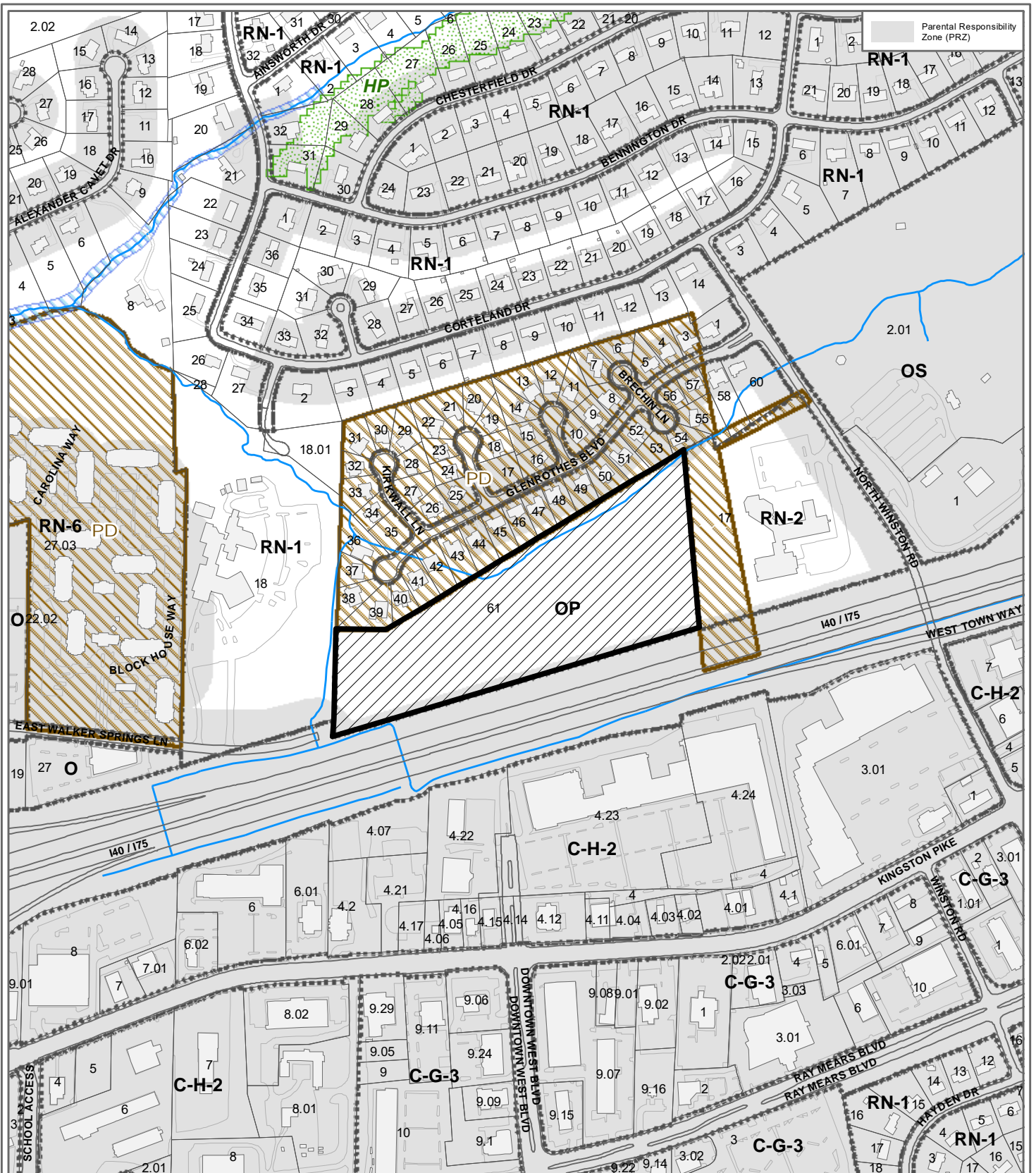
Average Daily Vehicle Trips are computed using national average trip rates reported in the latest edition of "Trip Generation," published by the Institute of Transportation Engineers. Average Daily Vehicle Trips represent the total number of trips that a particular land use can be expected to generate 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: 61 (public school children, grades K-12)

Schools affected by this proposal: West Hills Elementary, Bearden Middle, and Bearden High.

- Potential new school population is estimated using locally-derived data on public school student yield generated by new housing.
- Students are assigned to schools based on current attendance zones as determined by Knox County Schools. Students may request transfers to different zones, and zone boundaries are subject to change.
- Estimates presume full build-out of the proposed development. Build-out is subject to market forces, and timing varies widely from proposal to proposal.
- Student yields from new development do not reflect a net addition of children in schools. Additions occur incrementally over the build-out period. New students may replace current population that ages through the system or moves from the attendance zone.

If approved, this item will be forwarded to Knoxville City Council for action on 1/12/2021 and 1/28/2020. If denied, Knoxville-Knox County Planning Commission's action is final, unless the action to deny is appealed to Knoxville City Council. The date of the appeal hearing will depend on when the appeal application is filed. Appellants have 15 days to appeal a Planning Commission decision in the City.



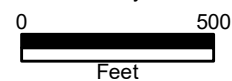
**12-A-20-RZ
REZONING**

From: OP (Office Park)
To: RN-6 (Multi-Family Residential Neighborhood)



Petitioner: Forrester obo The Offices at St. Andrews, LLC, Taylor

Map No: 120
Jurisdiction: City



Original Print Date: 11/6/2020 Revised:
Knoxville - Knox County Planning Commission * City / County Building * Knoxville, TN 37902

Exhibit A. 12-A-20-RZ Contextual Images

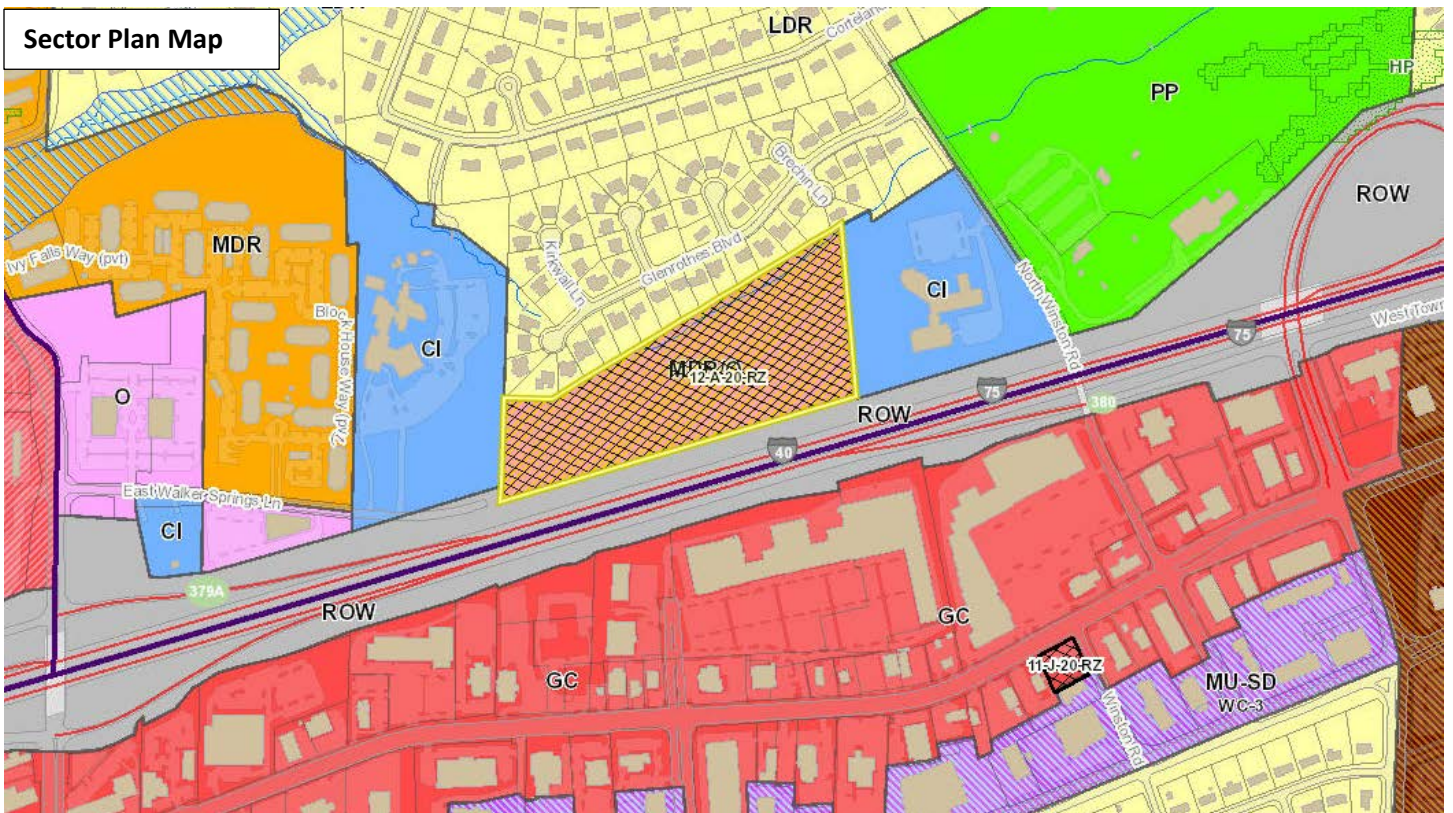
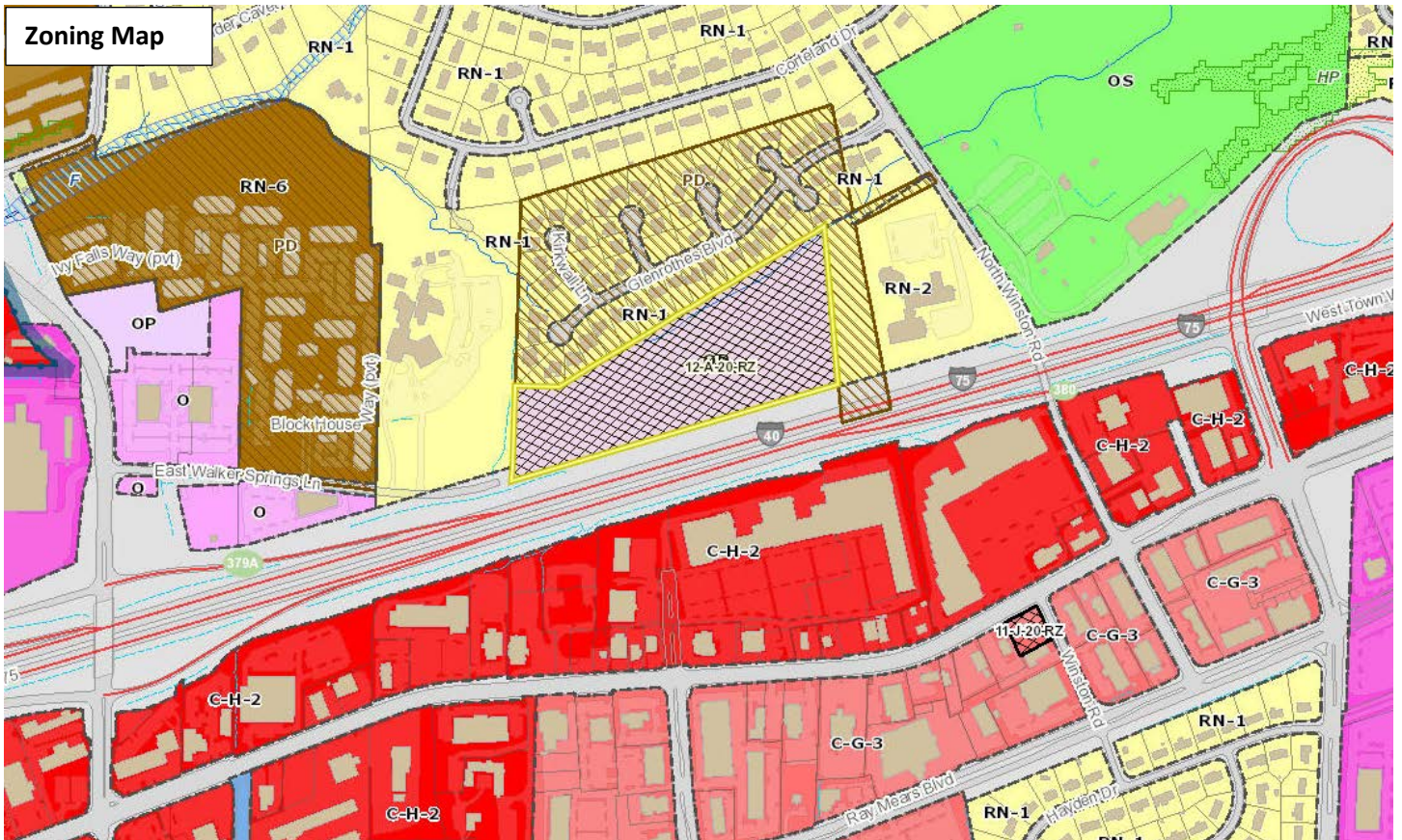
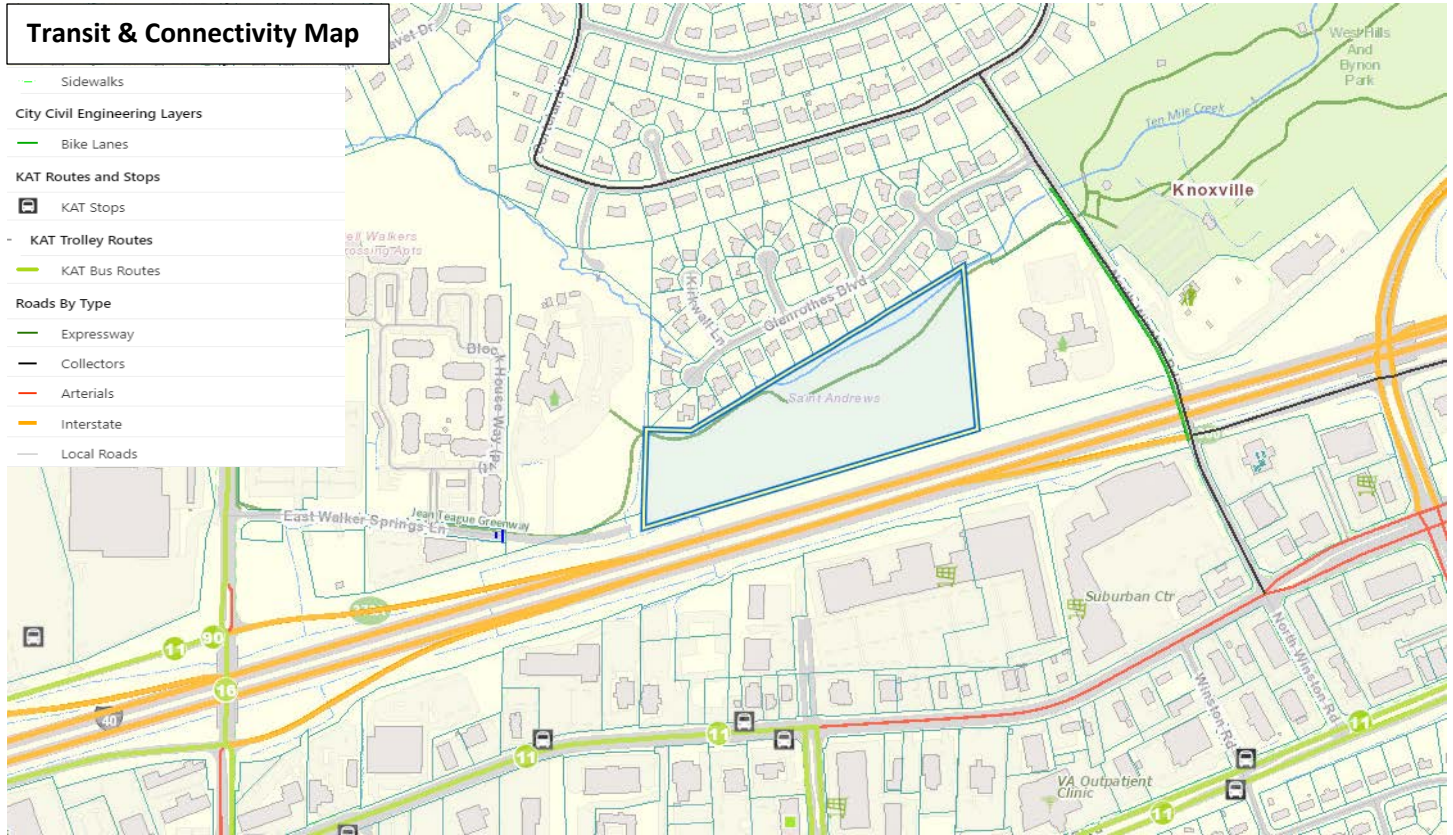


Exhibit A. 12-A-20-RZ Contextual Images



Exhibit A. 12-A-20-RZ Contextual Images



WALKER SPRINGS APARTMENTS

Traffic Impact Study

E Walker Springs Lane

Knoxville, TN

A Traffic Impact Study for the Walker Springs Apartments

Submitted to

City of Knoxville Department of Engineering

November 17, 2020
FMA Project No. 643.002

Submitted By:

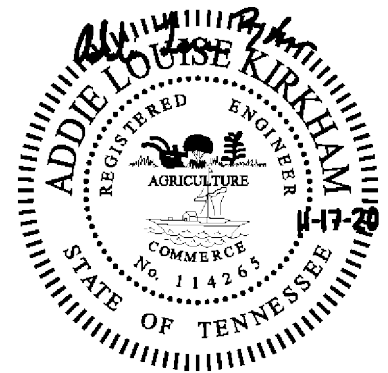


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Executive Summary

John Davenport is proposing a residential development located in Knoxville, Tennessee. The project is located on E Walker Springs Lane east of N Gallaher View Road. The full buildout of the development will consist of 216 apartment units. Construction is proposed to take place this year and this study assumes full build out for the development will occur in 2023.

All traffic from the apartment development will enter/exit via the intersection of N Gallaher View Road at E Walker Springs Road.

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

N Gallaher View Road @ E Walker Springs Lane / Sam's Club Driveway

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the unsignalized intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway operate at a LOS C for the eastbound approach (Sam's Club Driveway), a LOS F (108.0s) for the westbound approach (E Walker Springs Lane), a LOS B for the northbound approach and a LOS A for the southbound approach during the AM peak hour and a LOS E for the eastbound approach (Sam's Club Driveway), a LOS F (1256.1s) for the westbound approach (E Walker Springs Lane), and a LOS B for both the northbound and southbound approaches during the PM peak hour.

The need for a traffic control signal was analyzed using the "Manual of Uniform Traffic Control Devices" (MUTCD) published by the Federal Highway Administration in 2009. The intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway does meet the requirements for Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour for the existing and background conditions. . The intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway does meet the conditions for Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour after the completion of the Walker Springs Apartments. According to the MUTCD the "satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."

FMA recommends the installation of a new traffic signal at the existing intersection of N Gallaher View Road at E Walker Springs / Sam's Club Driveway.

N Gallaher View Road @ I-40 WB Ramp

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of N Gallaher View Road at I-40 WB Ramp / Walbrook Drive will continue to operate at a LOS B during the AM peak hour and a LOS D during the PM peak hour. The traffic from the Walker Springs Apartments will only cause a minor increase in delay to the signalized intersection; therefore there are no recommended improvements.

N Gallaher View Road @ Bridgedale Drive

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of N Gallaher View Road at Bridgedale Drive will operate at a LOS C during the AM peak hour and a LOS D during the PM peak hour. The traffic from the Walker Springs Apartments will only cause a minor increase in delay to the signalized intersection; therefore there are no recommended improvements.

Gallaher View Road @ Kingston Pike (SR 1)

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of Gallaher View Road at Kingston Pike (SR 1) will continue to operate at a LOS D during the AM peak hour and a LOS E during the PM peak hour. The traffic from the Walker Springs Apartments will only cause a minor increase in delay to the signalized intersection; therefore there are no recommended improvements.

1 Introduction

1.1 Project Description

This report provides a summary of a traffic impact study that was performed for the Walker Springs Apartments. The project is located on E Walker Springs Lane east of N Gallaher View Road. The location of the site is shown in Figure 1.

The full buildout of the development will consist of 216 apartment units. Construction is proposed to take place this year and this study assumes full build out for the development will occur in 2023.

All traffic from the apartment development will enter/exit via the intersection of N Gallaher View Road at E Walker Springs Road. The proposed site layout is shown in Figure 2.

The purpose of this study is to evaluate the impacts to the traffic conditions caused by the proposed development.

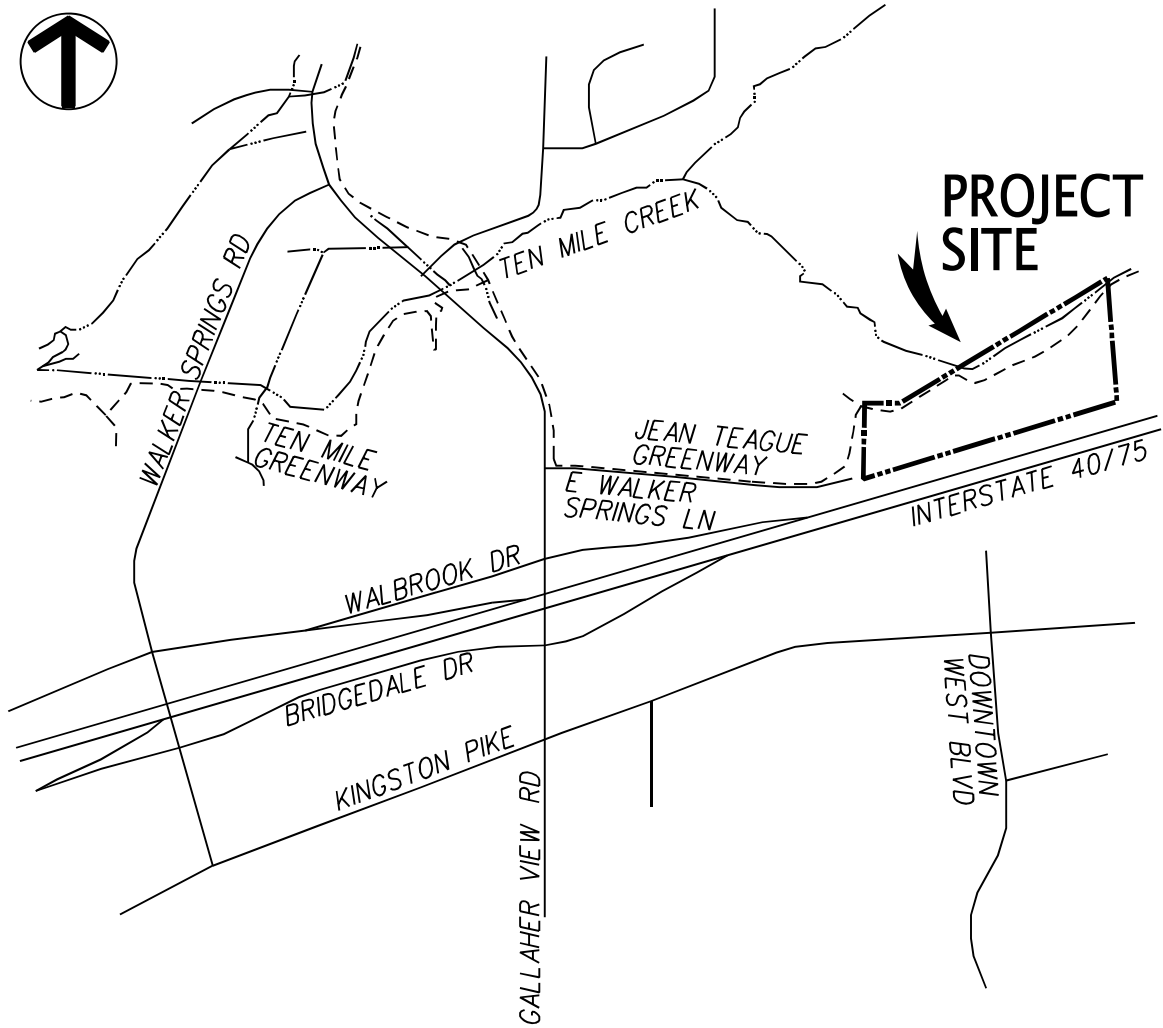


Figure 1: Location Map

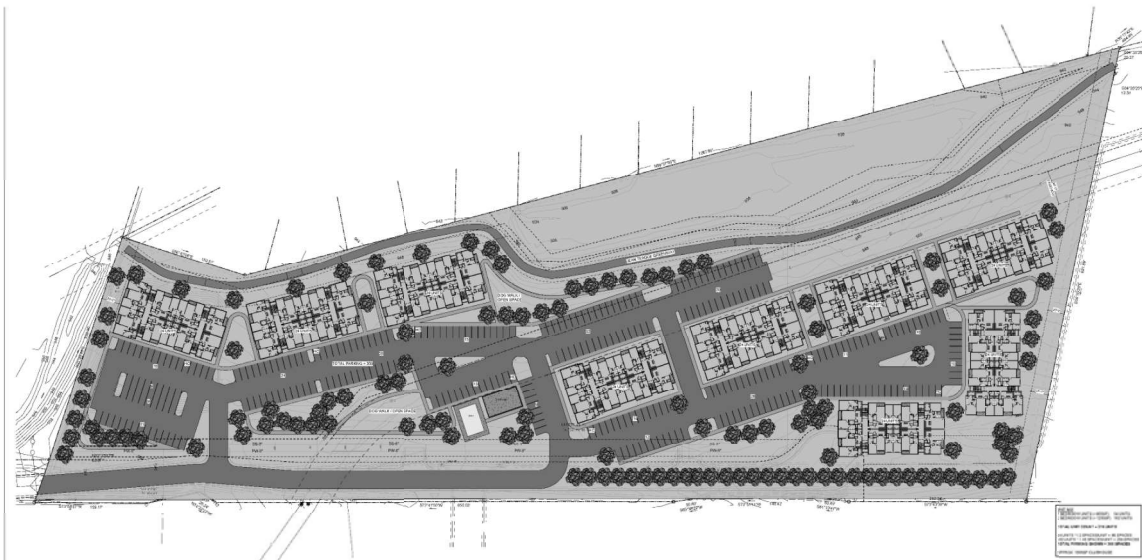
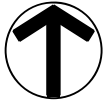


Figure 2: Site Plan

1.2 Existing Site Conditions

E Walker Springs Lane is a two-lane road. Knoxville-Knox County Planning does not classify E Walker Springs Lane; therefore, it is considered a local street. There is no posted speed limit on E Walker Springs Lane and the road is a dead end street with an approximate length of 1590 SF.

Gallaher View Road is five lane road with a two-way left turn lane north of E Walker Springs Road four lane road including turn lanes south of the intersection of E Walker Springs Road. The Knoxville-Knox County Planning classifies N Gallaher View Road as a Minor Arterial in the vicinity of the studied intersections with a 100 foot right-of-way north of Interstate 40/75 and an 88 foot right-of-way south of Interstate 40/75 per the Major Road Plan. The posted speed limit on Gallaher View Road is 40 mph.

Kingston Pike (SR 1) is a six-lane road including left and right turn lanes at the intersection with Gallaher View Road. The Knoxville-Knox County Planning classifies Kingston Pike (SR 1) as a Major Arterial (with a 100 foot right-of-way) per the Major Road Plan. The posted speed limit on Kingston Pike is 45 mph.

At the intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway there is an existing northbound left turn lane with a 185 foot storage length and a 75 taper and a southbound two-way left turn lane. The existing eastbound Sam's Club Driveway has a separate left/thru lane and right turn lane, both with an approximate storage length of 200 feet.

At the intersection of N Gallaher View Road at I-40 WB Ramp / Walbrook Drive there is an existing northbound left turn lane with a 300 foot storage length and a 50 foot taper. The I-40 WB Ramp has an existing right/thru lane and left/thru lane with a length of 415 feet each and a 135 feet taper and an approximate total length of 1200 feet.

At the intersection of N Gallaher View Road at Bridgedale Drive there is an existing southbound right turn lane with a 310 foot storage length and a 50 foot taper. Bridgedale Drive at the intersection with N Gallaher View Road has an eastbound right turn lane and left turn lane both with a 315 feet storage length and 150 feet taper.

At the intersection of Gallaher View Road at Kingston Pike (SR 1) there is an existing eastbound right turn lane and left turn lane with a 200 feet storage length and 100 feet taper, a westbound right turn lane with a 150 feet storage length with a 160 feet taper, a westbound left turn lane with a 75 feet storage, a northbound left turn lane with a 280 feet storage length and a 120 feet taper, southbound double left turn

lanes with 290 feet storage lengths and 125 feet tapers and a southbound right turn lane with a 330 feet storage length.

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

1.3 Transit Network

The Knoxville Area Transit (KAT) operates in the vicinity of the proposed development. Route 11 (Kingston Pike) travels from Knoxville Station to the intersection of Walker Springs Road at Kingston Pike (SR 1) and makes stops along Kingston Pike (SR 1) and at West Town Mall. Route 16 (Cedar Bluff Connector) travels from Walmart to Windsor Square Apartments and makes stops at Parkwest Hospital and Cedar Bluff at Fox Lonas. Route 90 (Crosstown) travels from Knoxville Center Mall to Walbrook Super Stop and makes stops along Middlebrook Pike, Pleasant Ridge Road, Merchants Drive and Fountain City.

The nearest KAT bus stop is currently located on Walbrook Drive near the Walmart parking lot on Route 11, Route 16 and Route 90.

A map of KAT bus route 11, 16 and 90 are included in Attachment 11.

1.4 Pedestrian/Bicycle Network

There are existing sidewalks in the vicinity of the proposed development along N Gallaher View Road that connect to Kingston Pike (SR 1) on the east side of road and sidewalks that connect to Walker Springs Road north of the intersection with E Walker Springs Lane.

The proposed development will also connect to the Jean Teague Greenway which then connects to both the Cavet Station Greenway and the Ten Mile Creek Greenway.

A copy of the Knoxville Bicycle Map 2017 is included in Attachment 11.

2 Existing Traffic Volumes

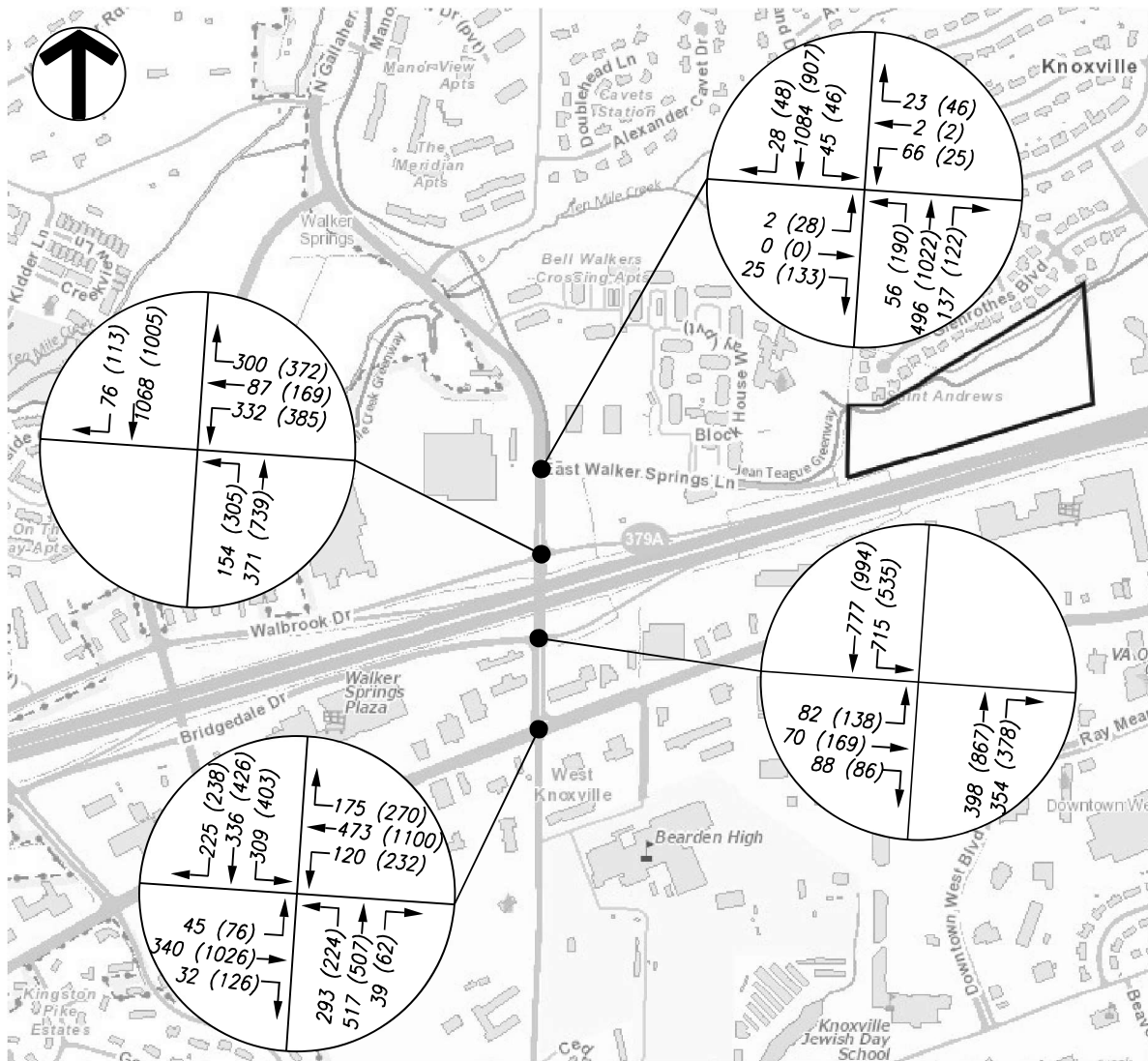
FMA conducted turning movement counts at the following intersections; N Gallaher View Road at E Walker Spring Lane / Sam's Club Driveway on Tuesday September 22, 2020, N Gallaher View Road at I-40 WB Ramp on Wednesday September 23, 2020, N Gallaher View Road at Bridgedale Drive on Thursday October 1, 2020 and Gallaher View Road at Kingston Pike (SR 1) on Wednesday September 30, 2020.

The existing AM peak hour and PM peak hour at the studied intersections on N Gallaher View Road occurred between 7:30 am and 8:30 am, and 4:30 pm and 6:00 pm.

Due to the altered traffic patterns from COVID-19 the Tennessee Department of Transportation, City of Knoxville Department of Engineering and Knoxville-Knox County Planning reviewed the existing 2020 traffic counts. The result was a requirement to increase the traffic on N Gallaher View Road and Kingston Pike by 40% and to increase the traffic on the side roads (E Walker Springs Lane, Sam's Club Driveway, Bridgedale Drive, Walkbrook Drive and Interstate Ramps) by 20%.

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.

Walker Springs Apartments
 Transportation Impact Analysis
 November 17, 2020



LEGEND:

← 5 (16)

TURNING MOVEMENT VOLUME AM (PM)

Figure 3: 2020 Existing Peak Hour Traffic

3 Background Growth

The Tennessee Department of Transportation (TDOT) and the Knoxville Regional Transportation Planning Organization (TPO) maintain count stations in the vicinity of the proposed development.

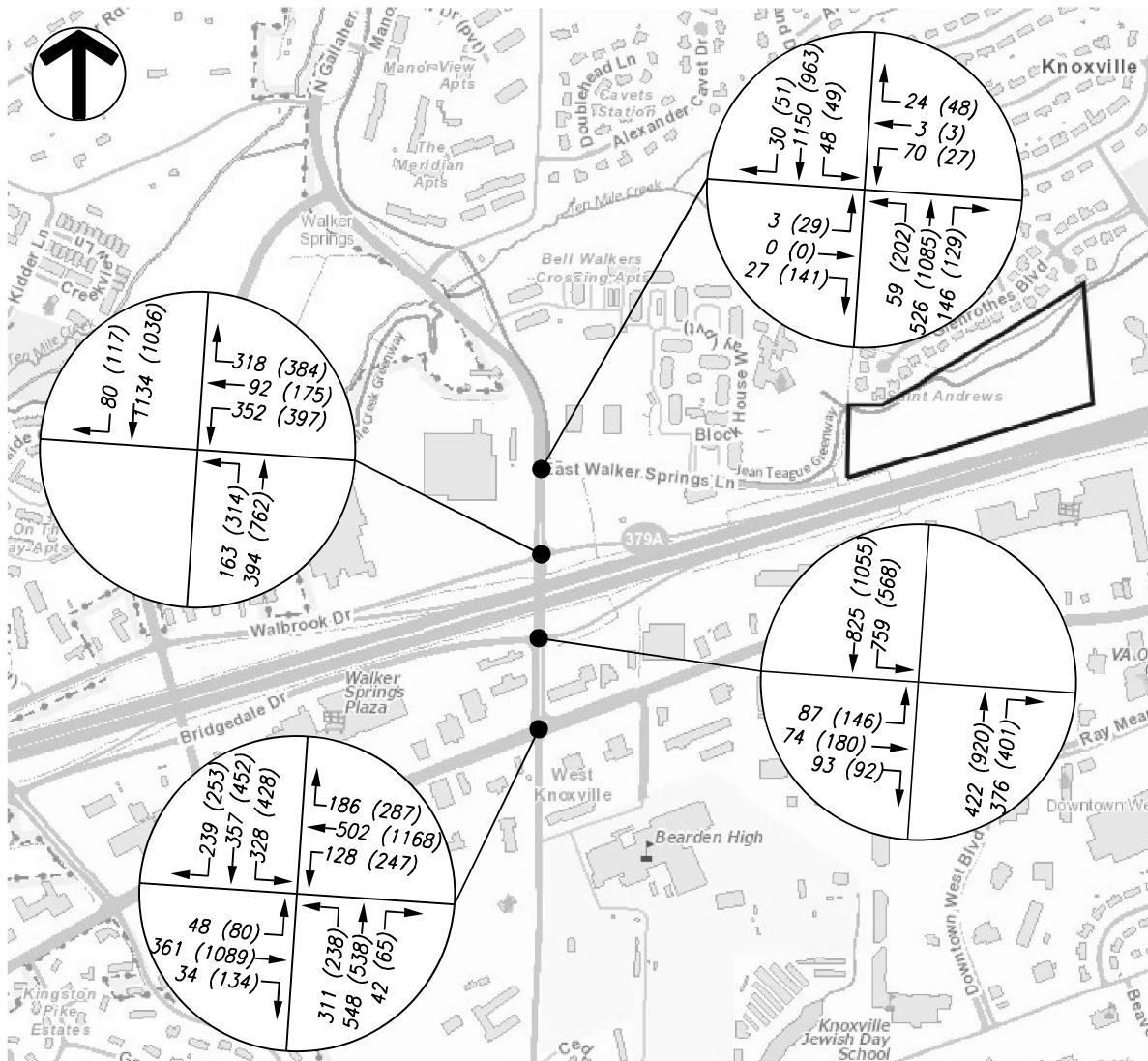
TDOT count station #000500 is located on N Gallaher View Road Street between Kingston Pike (SR 1) and Bridgedale Drive and south of the proposed development. The annual growth rate for this station over the last eight years is approximately 1.86%. The 2019 ADT was 20,778 vehicles per day.

Knoxville TPO count station ID: 093C533 is located on N Gallaher View road north of Walker Springs Road. The annual growth rate for this station over the last eight years is approximately 0.82% and the 2019 ADT was 22,540 vehicles per day.

For the purpose of this study, an annual growth rate of 2.0% was assumed for traffic at the intersections of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway, N Gallaher View Road at I-40 WB Ramp, N Gallaher View Road at Bridgedale Drive and Gallaher View Road at Kingston Pike (SR 1) until full occupancy is reached in 2023. Attachment 3 shows the trend line growth charts for the TDOT and Knoxville TPO count stations.

Figure 4 demonstrates the projected background peak hour volumes at the studied intersections after applying the background growth rate to the existing conditions.

Walker Springs Apartments
 Transportation Impact Analysis
 November 17, 2020



LEGEND:

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

Figure 4: 2023 Background Peak Hour Traffic

4 Trip Generation and Trip Distribution

The Walker Springs Apartments proposed 216 apartment units. 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 Walker Street Apartment units. The land use worksheets are included in Attachment 4.

The total new trips generated by the Walker Springs Apartments were estimated to be 1,907 daily trips. The estimated trips are 109 trips during the AM peak hour and 155 trips during the PM peak hour. A trip generation summary is shown in Table 4-1.

**Table 4-1
Walker Springs Apartments
Trip Generation Summary**

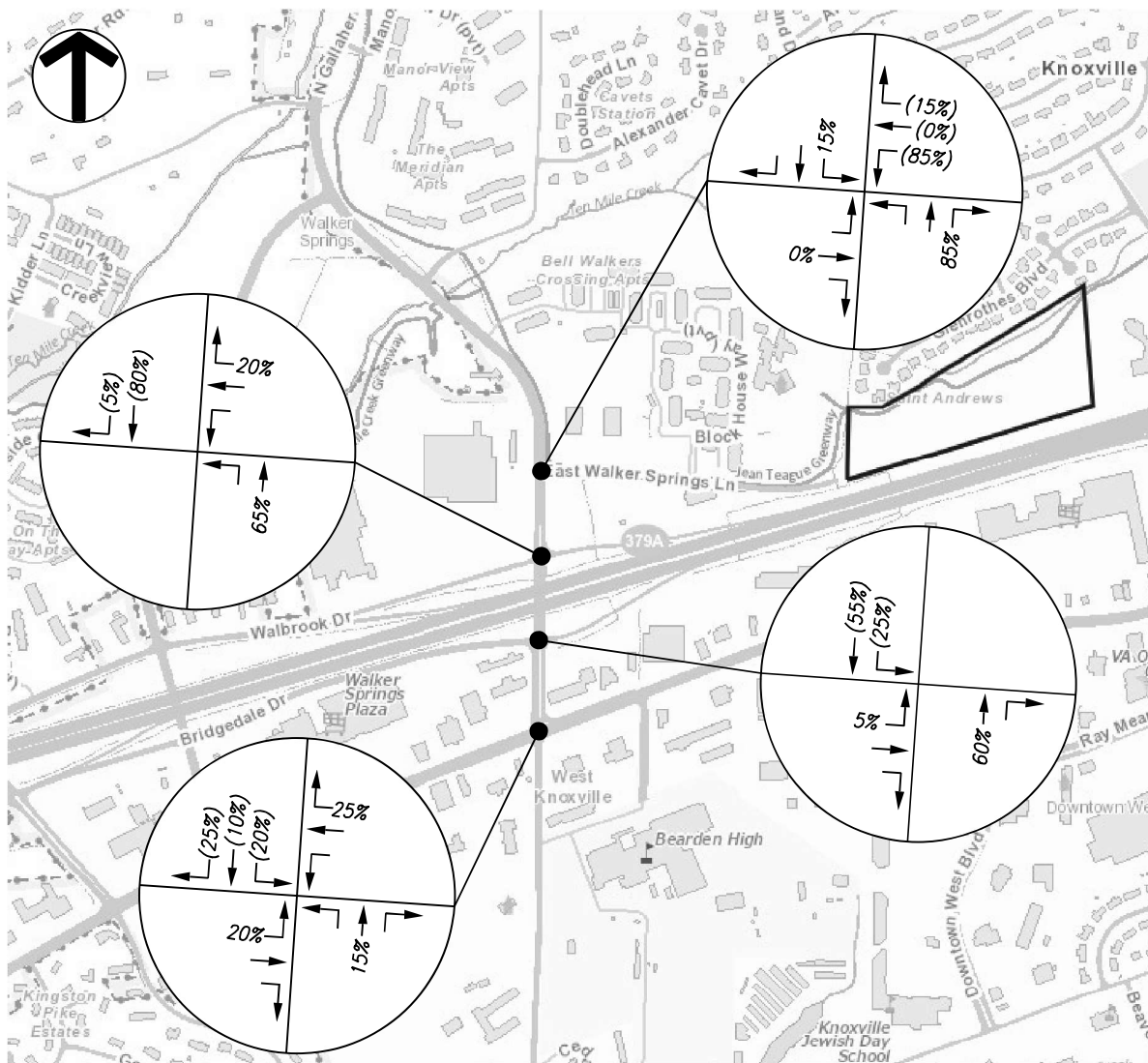
Land Use	Density	Daily Trips	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
Apartments (Local Trip Gen Study)	216 Units	1,907	24	85	85	70

N Gallaher View Road at the intersection with E Walker Springs Lane / Sam’s Club Driveway has an existing trip distribution of 30% northbound and 70% southbound during the AM peak hour and 50% northbound and 50% southbound during the PM peak hour.

The directional distribution of the traffic generated by the Walker Springs Apartments was determined using the existing traffic volumes in combination with the concept plan layout. The entering traffic was assumed to be 15% N Gallaher View Road southbound, 15% S Gallaher View Road northbound, 20% I-40 Westbound Ramp, 5% Bridgedale Drive, 20% Kingston Pike eastbound and 25% Kingston Pike westbound. The exiting trip distribution was assumed to be 15% N Gallaher View Road northbound, 10% S Gallaher View Road southbound, 5% Walbrook Drive, 25% I-40 Eastbound Ramp, 20% Kingston Pike eastbound and 25% Kingston Pike westbound. Figure 5 shows the peak hour trip distribution.

Figure 6 shows the peak hour site traffic from the Walker Springs Apartments and Figure 7 shows the full buildout peak hour traffic after the completion of the Walker Springs Apartments.

Walker Springs Apartments
 Transportation Impact Analysis
 November 17, 2020



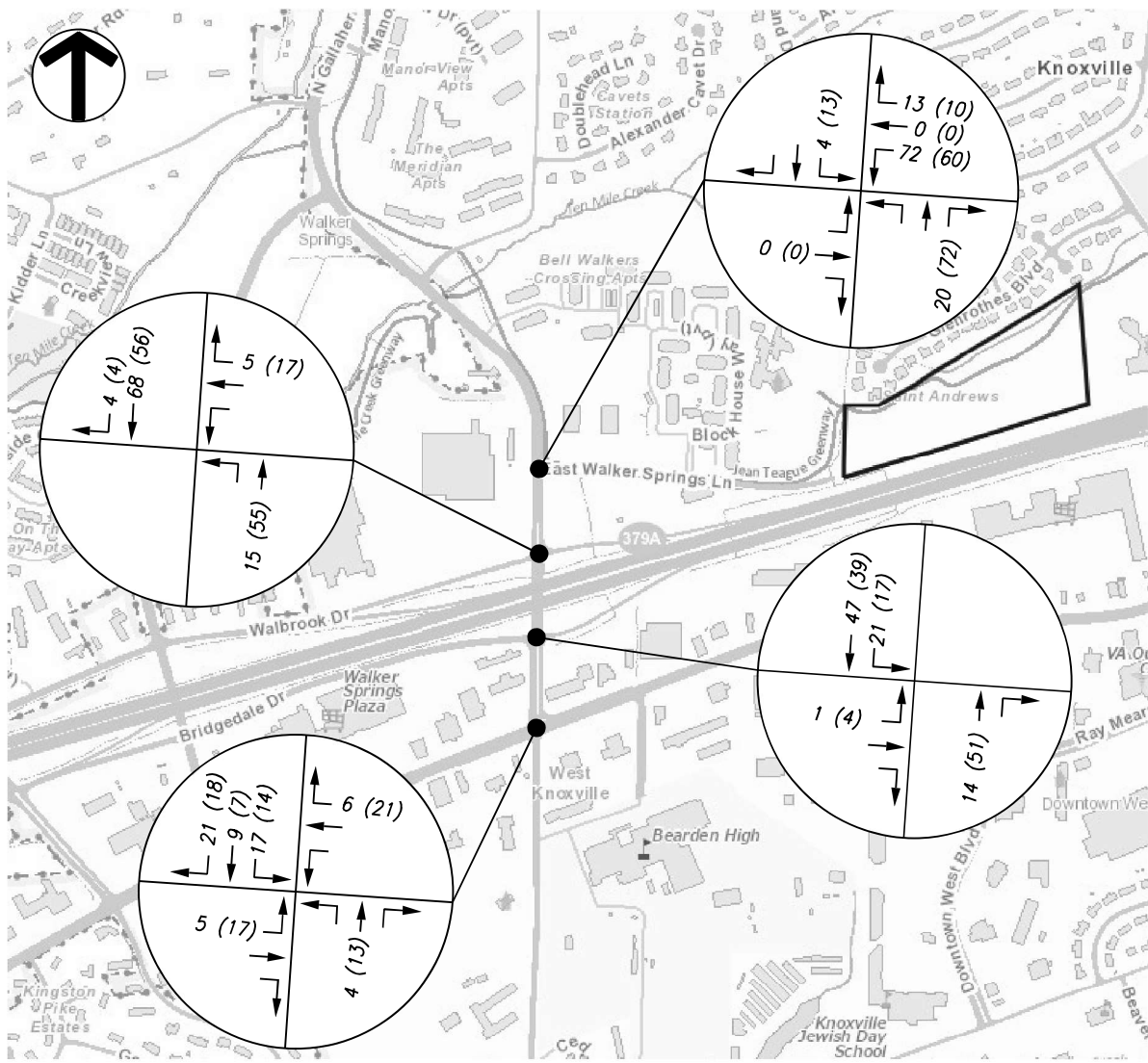
LEGEND:

← 5 (16)

TURNING MOVEMENT VOLUME AM (PM)

Figure 5: Peak Hour Trip Distribution

Walker Springs Apartments
 Transportation Impact Analysis
 November 17, 2020

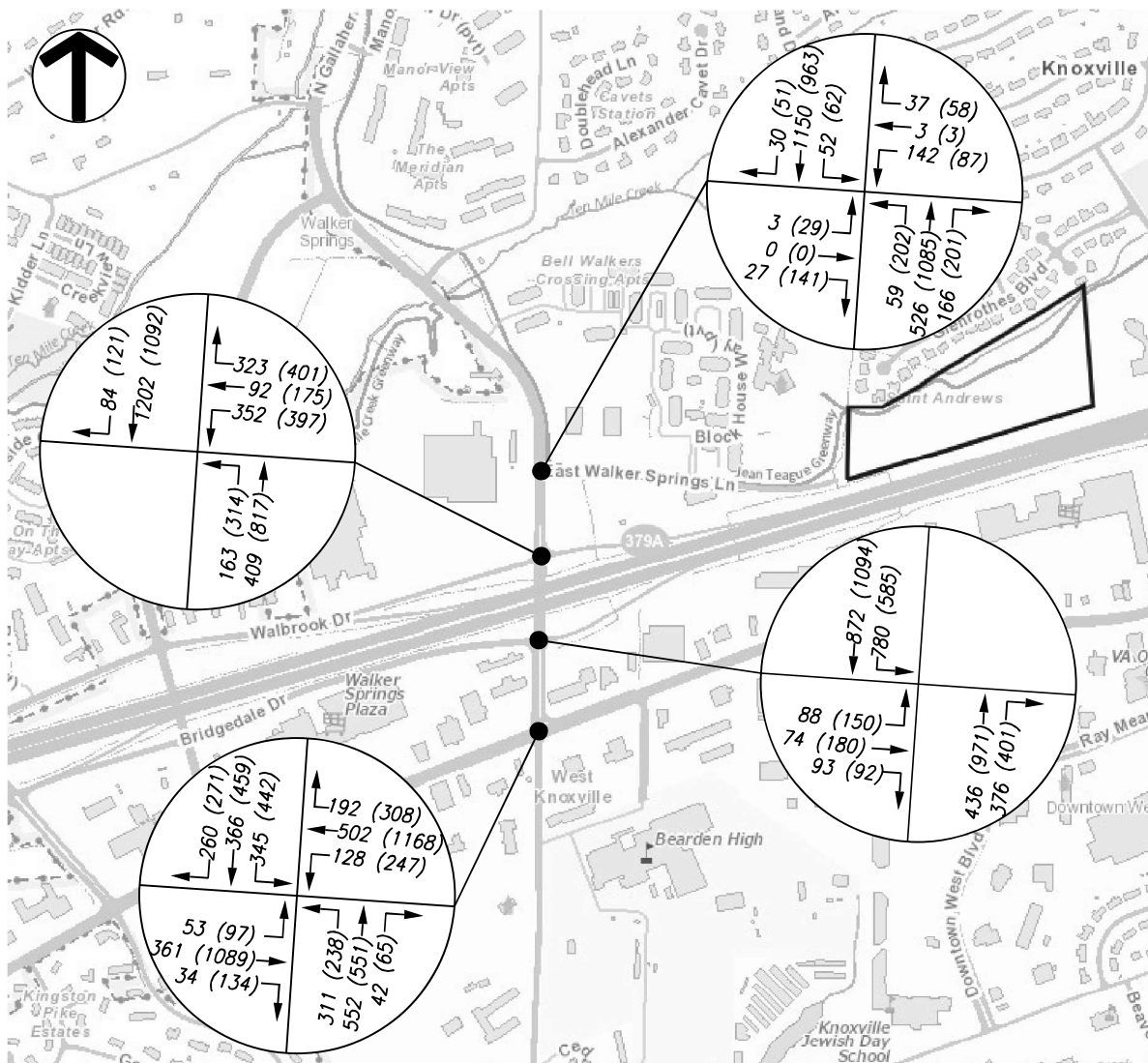


LEGEND:

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

Figure 6: Apartment Peak Hour Site Trips

Walker Springs Apartments
 Transportation Impact Analysis
 November 17, 2020



LEGEND:

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

Figure 7: 2023 Full Buildout Peak Hour Traffic

5 Projected Capacity and Level of Service

N Gallaher View Road at I-40 WB Ramp, N Gallaher View Road at Bridgedale Drive and Gallaher View Road at Kingston Pike (SR 1) are signalized intersections. N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway is a two-way stop controlled intersection.

Signalized intersection capacity analyses were performed using the Highway Capacity Software (HCS7) for the AM and PM peak hours at the intersections of N Gallaher View Road at I-40 WB Ramp, N Gallaher View Road at Bridgedale Drive and Gallaher View Road at Kingston Pike (SR 1). The existing signal timing for the signalized intersections was provided by the City of Knoxville and is included in Attachment 5.

Unsignalized intersection capacity analyses were performed using the Highway Capacity Software (HCS7) for the AM and PM peak hours to evaluate the traffic conditions at the intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway.

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 6, 7, and 8.

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

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

Delay (sec)/LOS		
N Gallaher View Road @ E Walker Springs Lane / Sam's Club Driveway (Existing 2020)		
AM Peak	EB Approach	14.5 / B
	WB Approach	31.3 / D
	NB Left Turn	11.7 / B
	SB Left Turn	9.1 / A
<hr/>		
PM Peak	EB Approach	23.7 / C
	WB Approach	81.4 / F
	NB Left Turn	12.4 / B
	SB Left Turn	11.8 / B
<hr/>		
N Gallaher View Road @ I-40 WB Ramp (Existing 2020)		
AM Peak	Intersection	16.0 / B
<hr/>		
PM Peak	Intersection	36.6 / D
<hr/>		
N Gallaher View Road @ Bridgedale Drive (Existing 2020)		
AM Peak	Intersection	16.7 / B
<hr/>		
PM Peak	Intersection	20.4 / C
<hr/>		
Gallaher View Road @ Kingston Pike (SR 1) (Existing 2020)		
AM Peak	Intersection	44.2 / D
<hr/>		
PM Peak	Intersection	57.7 / E
<hr/>		
N Gallaher View Road @ E Walker Springs Lane / Sam's Club Driveway (Background 2023)		
AM Peak	EB Approach	15.8 / C
	WB Approach	38.7 / D
	NB Left Turn	12.3 / B
	SB Left Turn	9.3 / A
<hr/>		
PM Peak	EB Approach	30.0 / D
	WB Approach	188.2 / F
	NB Left Turn	13.2 / B
	SB Left Turn	12.4 / B
<hr/>		

**Walker Springs Apartments
Traffic Impact Study
November 17, 2020**

N Gallaher View Road @ I-40 WB Ramp (Background 2023)		
AM Peak	Intersection	16.0 / B
PM Peak	Intersection	45.3 / D
N Gallaher View Road @ Bridgedale Drive (Background 2023)		
AM Peak	Intersection	16.7 / B
PM Peak	Intersection	25.6 / C
Gallaher View Road @ Kingston Pike (SR 1) (Background 2023)		
AM Peak	Intersection	49.8 / D
PM Peak	Intersection	73.6 / E
N Gallaher View Road @ E Walker Springs Lane / Sam's Club Driveway (Full Buildout 2023)		
AM Peak	EB Approach	15.9 / C
	WB Approach	108.0 / F
	NB Left Turn	12.3 / B
	SB Left Turn	9.4 / A
PM Peak	EB Approach	36.5 / E
	WB Approach	1256.1 / F
	NB Left Turn	13.2 / B
	SB Left Turn	13.2 / B
N Gallaher View Road @ I-40 WB Ramp (Full Buildout 2023)		
AM Peak	Intersection	17.6 / B
PM Peak	Intersection	50.2 / D
N Gallaher View Road @ Bridgedale Drive (Full Buildout 2023)		
AM Peak	Intersection	22.2 / C
PM Peak	Intersection	35.1 / D
Gallaher View Road @ Kingston Pike (SR 1) (Full Buildout 2023)		
AM Peak	Intersection	51.4 / D
PM Peak	Intersection	75.8 / E

6 Turn Lane Warrant Analysis

The intersection of N Gallaher View Road at E Walker Springs Road / Sam's Club Driveway has an existing northbound left turn lane and a southbound right turn lane into the Sam's Club Driveway. There is also an existing two-way left turn lane southbound on N Gallaher View Road.

The intersection of N Gallaher View Road at E Walker Springs Road / Sam's Club Driveway was evaluated to determine if a northbound right turn lane or a southbound left turn lane on N Gallaher View Road is warranted. The Knox County Department of Engineering and Public Works handbook, "Access Control and Driveway Design Policy," was used to analyze the information.

Both a northbound right turn lane and a southbound left turn lane are warranted at the intersection of N Gallaher View Road at E Walker Springs Road. The turn lane warrant worksheets and analysis are included in Attachment 9.

7 Signal Warrant Analysis

The intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway was evaluated to determine if a traffic signal is warranted for the full buildout conditions. The "Manual of Uniform Traffic Control Devices" (MUTCD) published by the Federal Highway Administration in 2009 was used to determine if the intersection met a warrant for a signal. The volume based warrants including Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour were evaluated based on existing, background and full buildout conditions. The traffic signal warrant worksheet is included in Attachment 10.

The intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway does meet the requirements for Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour for the existing and background conditions. Warrant 1, Eight-Hour Vehicular Volume will be met after the completion of the Walker Springs Apartments.

8 Conclusions and Recommendations

8.1 N Gallaher View Road @ E Walker Springs Lane / Sam's Club Driveway

The existing, background and full buildout conditions at the unsignalized intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway were analyzed using the Highway Capacity Software (HCS7).

The existing traffic conditions for the unsignalized intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway operate at a LOS B for the eastbound approach (Sam's Club Driveway), a LOS D for the westbound approach (E Walker Springs Lane), a LOS B for the northbound approach and a LOS A for the southbound approach during the AM peak hour and a LOS C for the eastbound approach (Sam's Club Driveway), a LOS F (81.4s) for the westbound approach (E Walker Springs Lane), and a LOS B for both the northbound and southbound approaches during the PM peak hour.

The background traffic conditions for the unsignalized intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway operate at a LOS C for the eastbound approach (Sam's Club Driveway), a LOS E for the westbound approach (E Walker Springs Lane), a LOS B for the northbound approach and a LOS A for the southbound approach during the AM peak hour and a LOS D for the eastbound approach (Sam's Club Driveway), a LOS F (188.2s) for the westbound approach (E Walker Springs Lane), and a LOS B for both the northbound and southbound approaches during the PM peak hour.

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the unsignalized intersection of N Gallaher View Road at E Walker Springs Lane / Sam's Club Driveway operate at a LOS C for the eastbound approach (Sam's Club Driveway), a LOS F (108.0s) for the westbound approach (E Walker Springs Lane), a LOS B for the northbound approach and a LOS A for the southbound approach during the AM peak hour and a LOS E for the eastbound approach (Sam's Club Driveway), a LOS F (1256.1s) for the westbound approach (E Walker Springs Lane), and a LOS B for both the northbound and southbound approaches during the PM peak hour.

The average queue length reflects the capacity of the traffic signals and the 95% queue length is defined as the queue length that has only a 5-percent probability of being exceeded during the analysis time period. The 95% queue length is typically used to determine the length of turning lanes in order to minimize the risk of blockage.

The unsignalized intersection capacity analysis shows the existing 95% queue length for the westbound approach (E Walker Springs Lane) of 1.9 car lengths during the AM peak hour and 3.4 car lengths during the PM peak hour. The background 95% queue length for the westbound approach (E Walker Springs Lane) is 2.5 car lengths during the AM peak hour and 5.5 car lengths during the PM peak hour. After the completion of the Walker Springs Apartments and with no improvements to the existing intersection the 95% queue length for the westbound approach (E Walker Springs Lane) is 8.2 car lengths during the AM peak hour and 17.1 car lengths during the PM peak hour.

The need for a traffic control signal was analyzed using the “Manual of Uniform Traffic Control Devices” (MUTCD) published by the Federal Highway Administration in 2009. The intersection of N Gallaher View Road at E Walker Springs Lane / Sam’s Club Driveway does meet the requirements for Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour for the existing and background conditions. . The intersection of N Gallaher View Road at E Walker Springs Lane / Sam’s Club Driveway does meet the conditions for Warrant 1, Eight-Hour Vehicular Volume, Warrant 2, Four-Hour Vehicular Volume and Warrant 3, Peak Hour after the completion of the Walker Springs Apartments. According to the MUTCD the “satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.”

It should also be noted that the Sam’s Club Driveway was used for the minor approach during the midday and PM peak hours and that E Walker Springs Lane was used for the minor approach during the AM peak hour.

FMA considered two scenarios to improve the existing intersection of N Gallaher View Road at E Walker Springs Road / Sam’s Club Driveway in order to better accommodate the traffic from the Walker Springs Apartments.

The first scenario was to widen E Walker Springs Lane to allow for a separate left turn lane and right/thru lane similar to the existing Sam’s Club Driveway and to also install a northbound right turn lane on N Gallaher View Road. This scenario would still result in a LOS F during both the AM and PM peak hours for the westbound approach (E Walker Springs Lane) and a 95% queue length for the left turning movement of 5.8 car lengths during the AM peak hour and 10.5 car lengths during the PM peak hour. The HCS7 worksheets are included in Attachment 12.

The second scenario was to install a signal at the existing intersection of N Gallaher View Road at E Walker Springs Lane/ Sam’s Club Driveway. The proposed signalized intersection was analyzed using the Highway Capacity Software (HCS7) and resulted in an overall LOS A during the AM peak hour and a LOS C during the

PM peak hour after the completion of the Walker Springs Apartments. The HCS7 worksheets are included in Attachment 12.

FMA recommends the installation of a new traffic signal at the existing intersection of N Gallaher View Road at E Walker Springs / Sam's Club Driveway.

8.2 N Gallaher View Road @ I-40 WB Ramp

The existing, background and full buildout conditions at the signalized intersection of N Gallaher View Road at I-40 WB Ramp / Walbrook Drive were analyzed using the Highway Capacity Software (HCS7). The existing signal timing was provided by the City of Knoxville.

The existing and background traffic conditions for the signalized intersection of N Gallaher View Road at I-40 WB Ramp / Walbrook Drive operate at a LOS B during the AM peak hour and a LOS D during the PM peak hour.

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of N Gallaher View Road at I-40 WB Ramp / Walbrook Drive will continue to operate at a LOS B during the AM peak hour and a LOS D during the PM peak hour.

8.3 N Gallaher View Road @ Bridgedale Drive

The existing, background and full buildout conditions at the signalized intersection of N Gallaher View Road at Bridgedale Drive were analyzed using the Highway Capacity Software (HCS7). The existing signal timing was provided by the City of Knoxville.

The existing and background traffic conditions for the signalized intersection of N Gallaher View Road at Bridgedale Drive operate at a LOS B during the AM peak hour and a LOS C during the PM peak hour.

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of N Gallaher View Road at Bridgedale Drive will operate at a LOS C during the AM peak hour and a LOS D during the PM peak hour.

8.4 Gallaher View Road @ Kingston Pike (SR 1)

The existing, background and full buildout conditions at the signalized intersection of Gallaher View Road at Kingston Pike (SR 1) were analyzed using the Highway

**Walker Springs Apartments
Traffic Impact Study
November 17, 2020**

Capacity Software (HCS7). The existing signal timing was provided by the City of Knoxville.

The existing and background traffic conditions for the signalized intersection of Gallaher View Road at Kingston Pike (SR 1) operate at a LOS D during the AM peak hour and a LOS E during the PM peak hour.

After the completion of the Walker Springs Apartments the full buildout traffic conditions for the signalized intersection of Gallaher View Road at Kingston Pike (SR 1) will continue to operate at a LOS D during the AM peak hour and a LOS E during the PM peak hour.



DEVELOPMENT REQUEST

DEVELOPMENT

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

SUBDIVISION

- Concept Plan
- Final Plat

ZONING

- Plan Amendment
- Rezoning

Taylor D. Forrester o/b/o The Offices at Saint Andrews, LLC

Attorney

Applicant Name

Affiliation

10/26/2020

12/10/20

12-A-20-RZ

Date Filed

Meeting Date (if applicable)

File Numbers(s)

CORRESPONDENCE

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

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

Taylor D. Forrester

Long, Ragsdale & Waters, P.C.

Name

Company

1111 N. Northshore Drive, Suite S-700

Knoxville

TN

37919

Address

City

State

Zip

865-584-4040

tforrester@lrwlaw.com

Phone

Email

CURRENT PROPERTY INFO

The Offices at Saint Andrews, LLC

7200 Wellington Dr, Ste 1, Knoxville, TN

865-584-2000

Owner Name (if different)

Owner Address

Owner Phone

8300 E. Walker Springs

120HC061

Property Address

Parcel ID

E/S E. Walker Springs Ln, Doc # I-48/I-75

14.78 acres

General Location

Tract Size

2nd District

OP

Jurisdiction (specify district above)

- City
- County

Zoning District

Northwest City

MDR/O

N/A

Planning Sector

Sector Plan Land Use Classification

Growth Policy Plan Designation

Vacant

N

KUB

KUB

Existing Land Use

Septic (Y/N)

Sewer Provider

Water Provider

REQUEST

DEVELOPMENT

Development Plan Use on Review / Special Use

Residential Non-Residential

Home Occupation (specify): _____

Other (specify): _____

SUBDIVISION

Proposed Subdivision Name _____ Unit / Phase Number _____

Parcel Change

Combine Parcels Divide Parcel Total Number of Lots Created: _____

Other (specify): _____

Attachments / Additional Requirements

ZONING

Zoning Change: RN-6
Proposed Zoning _____

Plan Amendment Change: _____
Proposed Plan Designation(s) _____

Proposed Property Use (specify) _____ 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 only*)
- Use on Review / Special Use (*Concept Plan only*)
- Traffic Impact Study

FEE 1:

\$1,340.00

TOTAL:

FEE 2:

FEE 3:

AUTHORIZATION

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

Taylor Forrester

Digitally signed by Taylor Forrester
DN: cn=Taylor Forrester, o=Taylor Forrester c/LS United States PLUS United
States
Reason: I am the author of this document
Date: 2020.10.26 13:51:05-0500

Taylor D. Forrester

10/26/20

Applicant Signature

Please Print

Date

865-584-4040

tforrester@lrwlaw.com

Phone Number

Email

Staff Signature

Please Print

Date

[Handwritten signature]

[Handwritten signature]

10/26/2020

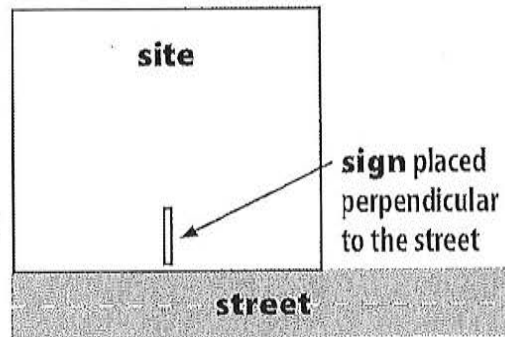
REQUIRED SIGN POSTING AGREEMENT

For all rezoning, plan amendment, concept plan, use on review, right-of-way closure, and street name change applications, a sign must be posted on the subject property, consistent with the adopted Administrative Rules and Procedures.

At the time of application, staff will provide a sign(s) to post on the property as part of the application process. If the sign(s) go missing for any reason and need to be replaced, then the applicant will be responsible for picking up a new sign(s) from the Planning offices. The applicant will be charged a fee of \$10 for each replacement sign.

LOCATION AND VISIBILITY

The sign must be posted in a location that is clearly visible from vehicles traveling in either direction on the nearest adjacent/frontage street. If the property has more than one street frontage, then the sign should be placed along the street that carries more traffic. Planning staff may recommend a preferred location for the sign to be posted at the time of application.

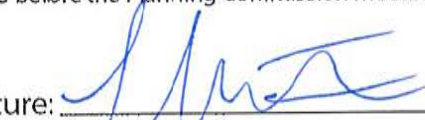


TIMING

The sign(s) must be posted 15 days before the scheduled Planning Commission public hearing and must remain in place until the day after the meeting. In the case of a postponement, the sign can either remain in place or be removed and reposted 15 days before the next Planning Commission meeting.

I hereby agree to post and remove the sign(s) provided on the subject property consistent with the above guidelines and between the dates of:

11/25/2020 and 12/11/2020
 (15 days before the Planning Commission meeting) (the day after the Planning Commission meeting)

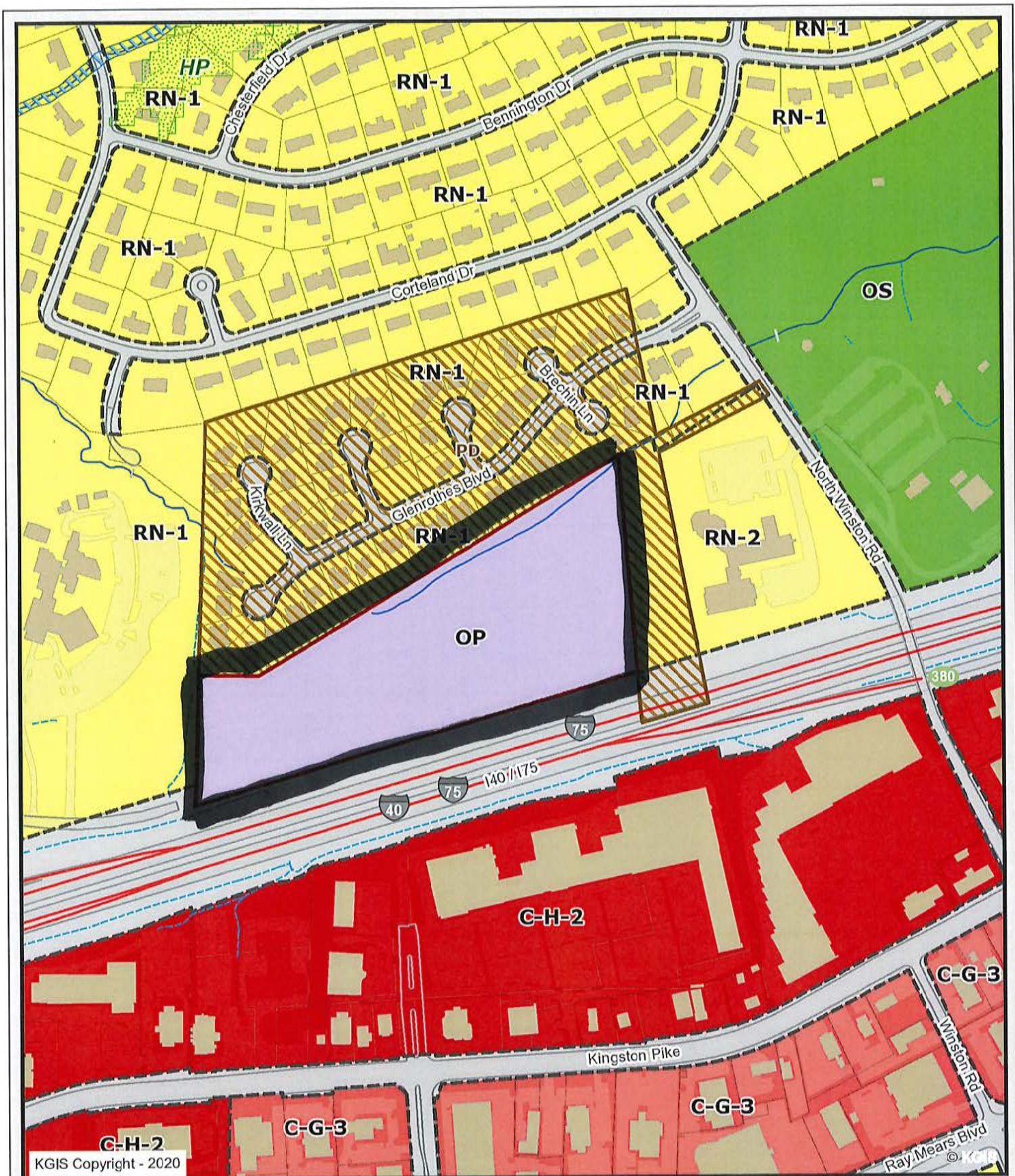
Signature: 

Printed Name: Louis Moran IV

Phone: 865-584-4040 Email: L.MORAN3@vols.utk.edu

Date: 10-26-20

File Number: 12-A-20-RZ

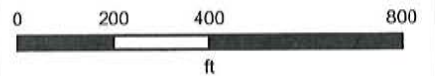


Letter Portrait

Knoxville - Knox County - KUB Geographic Information System



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