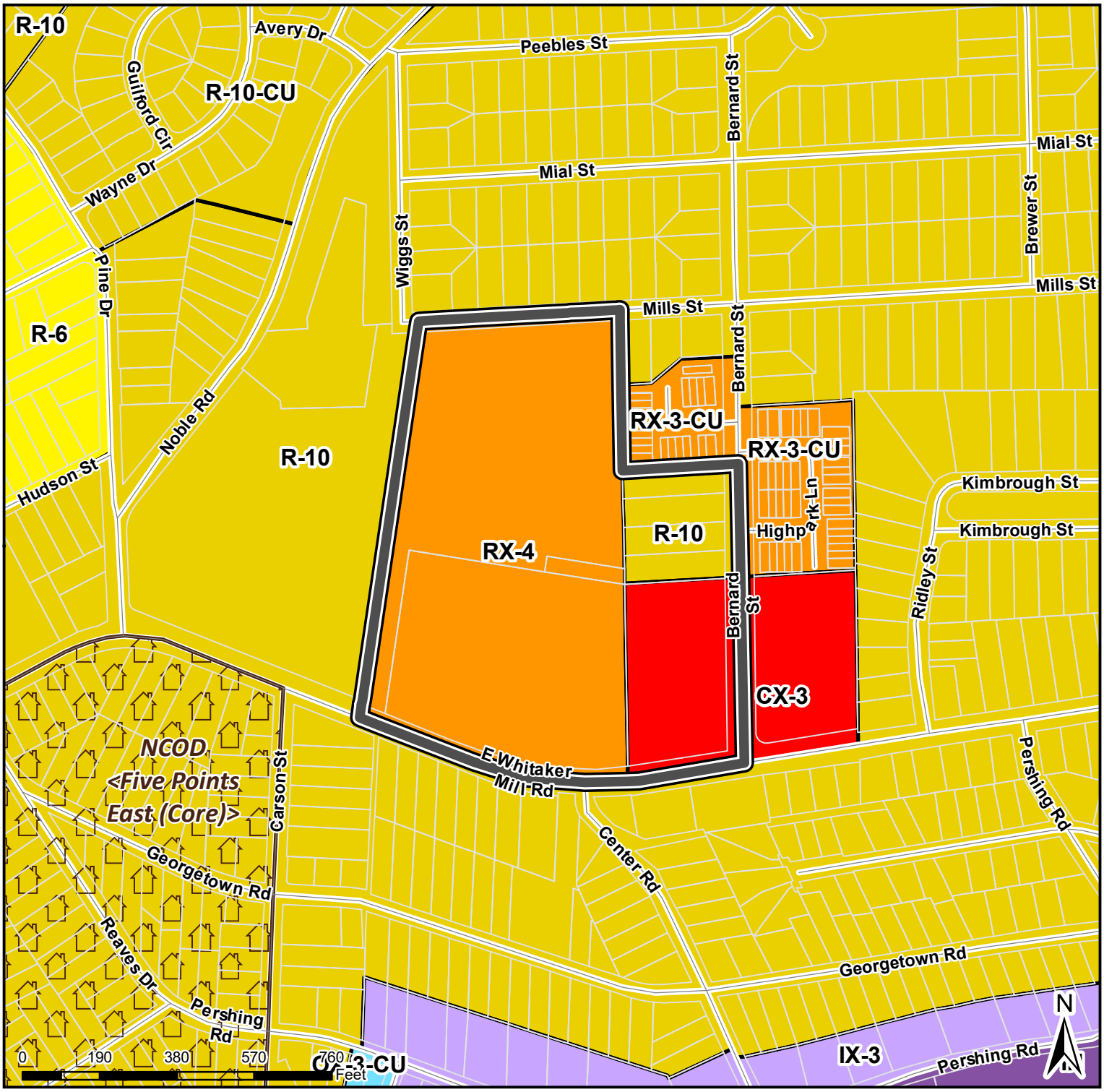
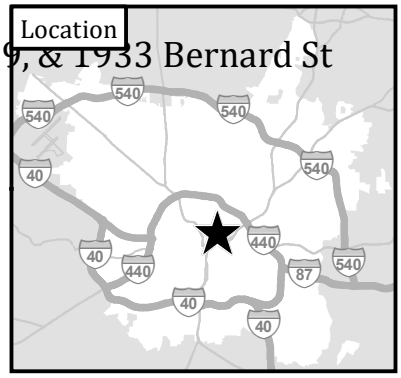
Existing Zoning Z-17-2021



Property	501, 513, 521, & 615 E Whitaker Mill Rd; 1921, 1925, 1929, & 1933 Bernard St
Size	17.96 acres
Existing Zoning	RX-4, CX-3, R-10
Requested Zoning	PD



Map by Raleigh Department of City Planning (mansolfj): 4/8/2021

Rezoning Application

RCP RALEIGH DEPARTMENT OF CITY PLANNING

Department of City Planning | 1 Exchange Plaza, Suite 300 | Raleigh, NC 27601 | 919-996-2682

REZONING REQUEST

☐ General Use ☒ Conditional Use ☐ Master Plan

Existing Zoning Base District CX Height 3 Frontage N/A Overlay(s) N/A

Proposed Zoning Base District NX Height 5 Frontage N/A Overlay(s) N/A

Click here to view the Zoning Map. Search for the address to be rezoned, then turn on the 'Zoning' and 'Overlay' layers.

OFFICE USE ONLY

Rezoning Case #

If the property has been previously rezoned, provide the rezoning case number:

GENERAL INFORMATION

Date | Date Amended (1) | Date Amended (2)

Property Address See attached.

Property PIN See attached. | Deed Reference (book/page) See Attached

Nearest Intersection Whitaker Mill Road and Bernard Street

Property Size (acres) 17.96 ±acres in total of which 13.07± to be zoned RX-4; 2.73 ± acres to be zoned RX-3 and 2.16± acres to be zoned NX-5

For Planned Development Applications Only: Total Units | Total Square Footage | Total Parcels | Total Buildings

Property Owner Name/Address
See Attached

Phone | Fax | Email

Applicant Name/Address
Beth Trahos
Nelson Mullins
4140 Parklake Avenue, Suite 200
Raleigh, North Carolina 27612

Phone 919.329.3884 | Fax | Email beth.trahos@nelsonmullins.com

Applicant* Signature(s) DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... WHITAKER GLEN PROPERTIES INC. Neil Pruitt, Jr., Chairman and CEO

Email

*Please see Page 11 for information about who may submit rezoning applications. A rezoning application will not be considered complete until all required submittal components listed on the Rezoning Checklist have been received and approved.

DocuSign Envelope ID: 9FA18FE6-A551-41C6-895F-176D3F1A5E24

Rezoning Application

RCP RALEIGH DEPARTMENT OF CITY PLANNING

Department of City Planning | 1 Exchange Plaza, Suite 300 | Raleigh, NC 27601 | 919-996-2682

REZONING REQUEST

☐ General Use ☒ Conditional Use ☐ Master Plan

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Click here to view the Zoning Map. Search for the address to be rezoned, then turn on the 'Zoning' and 'Overlay' layers.

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For Planned Development Applications Only: Total Units | Total Square Footage | Total Parcels | Total Buildings

Property Owner Name/Address
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Applicant Name/Address
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Phone 919.329.3884 | Fax | Email beth.trahos@nelsonmullins.com

Applicant* Signature(s) PRUITT PROPERTIES INC. DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... Neil Pruitt, Jr., Chairman and CEO

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Rezoning Application

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☐ General Use ☒ Conditional Use ☐ Master Plan

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Click here to view the Zoning Map. Search for the address to be rezoned, then turn on the 'Zoning' and 'Overlay' layers.

OFFICE USE ONLY

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If the property has been previously rezoned, provide the rezoning case number:

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Property Owner Name/Address
See Attached

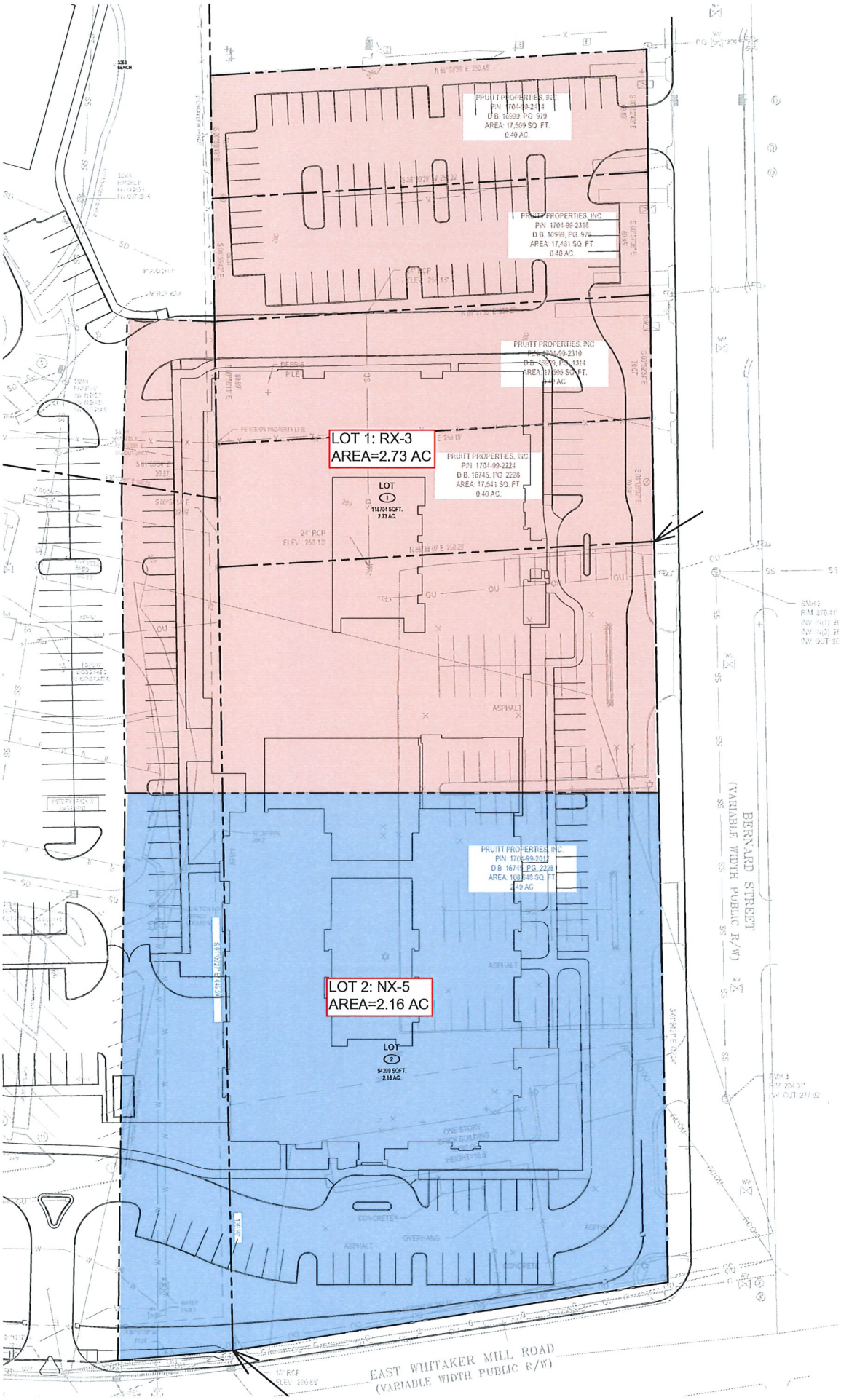
Phone | Fax | Email

Applicant Name/Address
Beth Trahos
Nelson Mullins
4140 Parklake Avenue, Suite 200
Raleigh, North Carolina 27612

Phone 919.329.3884 | Fax | Email beth.trahos@nelsonmullins.com

Applicant* Signature(s) MAYVIEW HEALTHCARE PROPERTIES INC. DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... Neil Pruitt, Jr., Chairman and CEO | Email

*Please see Page 11 for information about who may submit rezoning applications. A rezoning application will not be considered complete until all required submittal components listed on the Rezoning Checklist have been received and approved.



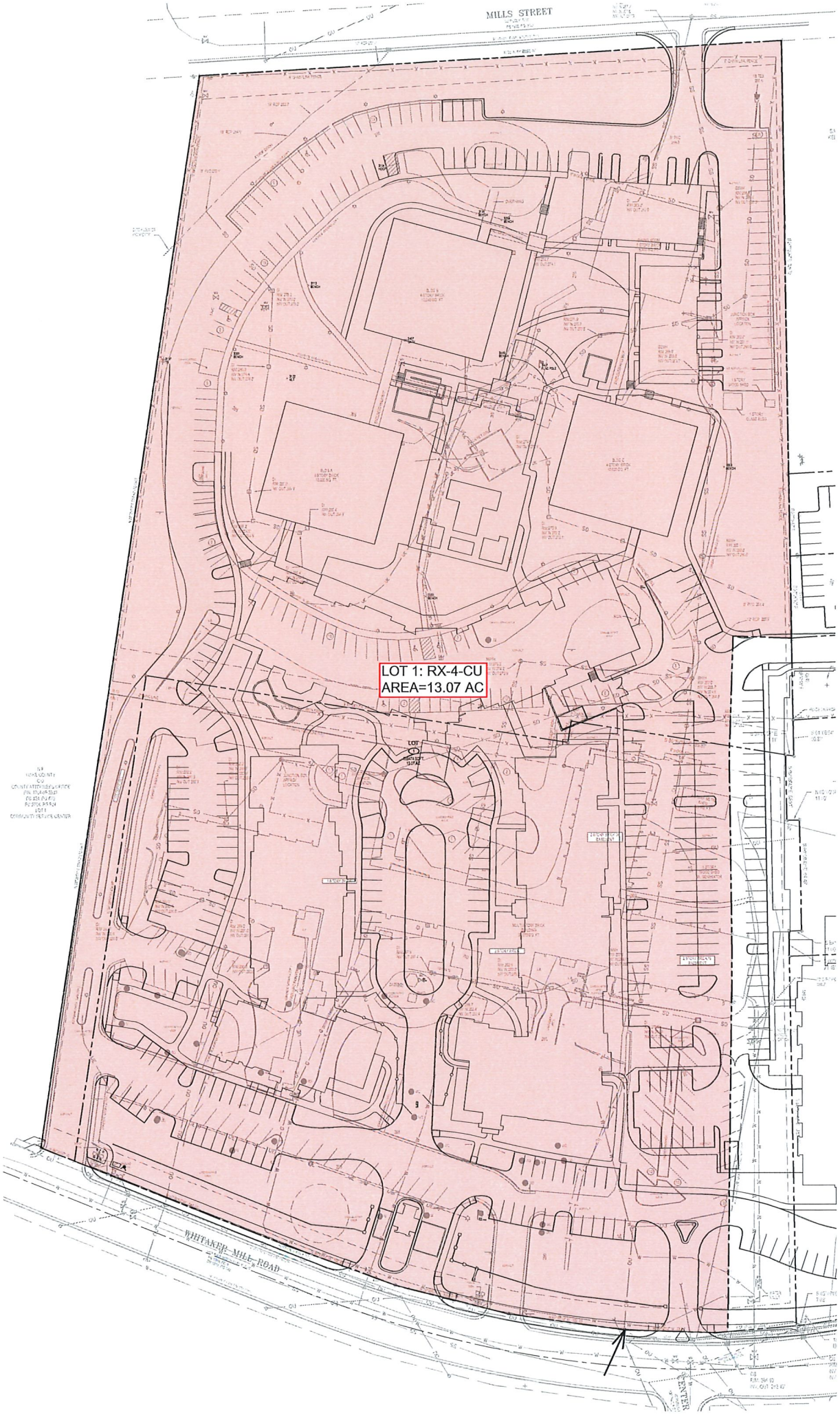
LOT 1: RX-3
AREA=2.73 AC
LOT 2: NX-5
AREA=2.16 AC
PRUITT PROPERTIES, INC.
PIN 1704-99-2318
D.B. 16999, PG. 979
AREA: 17,481 SQ. FT.
0.40 AC.
PRUITT PROPERTIES, INC.
PIN 1704-99-2224
D.B. 16745, PG. 2228
AREA: 17,541 SQ. FT.
0.40 AC.
LOT 1
118704 SQFT.
2.73 AC.
LOT 2
94208 SQFT.
2.16 AC.
ASPHALT
CONCRETE
OVERHANG
BERNARD STREET
(VARIABLE WIDTH PUBLIC R/W)
EAST WHITAKER MILL ROAD
(VARIABLE WIDTH PUBLIC R/W)

Lot 1

From the POINT OF BEGINNING at an existing iron pipe along eastern boundary; Thence, S 01degrees 00minutes 21seconds E for a distance of 143.2559 feet to a point on a line.
Thence, N 90degrees 00minutes 00seconds W for a distance of 306.0947 feet to a point on a line.
Thence, N 00degrees 42minutes 31seconds W for a distance of 169.6502 feet to a point on a line.
Thence, N 01degrees 50minutes 01seconds E for a distance of 100.5308 feet to a point on a line.
Thence, S 88degrees 09minutes 59seconds E for a distance of 50.2414 feet to a point on a line.
Thence, N 00degrees 59minutes 42seconds W for a distance of 69.8676 feet to a point on a line.
Thence, N 00degrees 59minutes 42seconds W for a distance of 70.1089 feet to a point on a line.
Thence, N 86degrees 33minutes 38seconds E for a distance of 250.4498 feet to a point on a line.
Thence, S 00degrees 52minutes 43seconds E for a distance of 69.8859 feet to a point on a line.
Thence, S 00degrees 57minutes 36seconds E for a distance of 69.9492 feet to a point on a line.
Thence, S 00degrees 52minutes 34seconds E for a distance of 70.0671 feet to a point on a line.
thence S 01degrees 06minutes 32seconds E a distance of 70.3937 feet to the POINT OF BEGINNING. Total area = 118,703.56 sf (2.73 ac)

Lot 2

From the POINT OF BEGINNING at an existing iron pipe along southern boundary; Thence, S 85degrees 07minutes 09seconds W for a distance of 66.1700 feet to a point on a line.
Thence, N 00degrees 46minutes 18seconds E for a distance of 323.6012 feet to a point on a line.
Thence, N 90degrees 00minutes 00seconds E for a distance of 306.0947 feet to a point on a line.
Thence, S 01degrees 00minutes 21seconds E for a distance of 139.0917 feet to a point on a line.
Thence, S 01degrees 00minutes 21seconds E for a distance of 139.9900 feet to a point on a line.
thence S 81degrees 08minutes 05seconds W a distance of 252.4381 feet to the POINT OF BEGINNING. Total area = 94,209 sf (2.16 ac)


MILLS STREET
LOT 1: RX-4-CU
AREA=13.07 AC
WHITAKER MILL ROAD

Lot 1

From the POINT OF BEGINNING at an existing iron pipe along southern boundary; Thence, N 82degrees 10minutes 12seconds W for a distance of 100.42 feet to a point on a line.
Thence, N 75degrees 43minutes 57seconds W for a distance of 100.51 feet to a point on a line.
Thence, N 69degrees 57minutes 12seconds W for a distance of 100.40 feet to a point on a line.
Thence, N 68degrees 20minutes 57seconds W for a distance of 194.70 feet to a point on a line.
Thence, N 68degrees 20minutes 57seconds W for a distance of 30.81 feet to a point on a line.
Thence, N 08degrees 28minutes 51seconds E for a distance of 924.62 feet to a point on a line.
Thence, N 86degrees 35minutes 58seconds E for a distance of 500.49 feet to a point on a line.
Thence, S 01degrees 00minutes 48seconds E for a distance of 159.35 feet to a point on a line.
Thence, S 00degrees 09minutes 17seconds E for a distance of 19.26 feet to a point on a line.
Thence, S 00degrees 57minutes 49seconds E for a distance of 191.15 feet to a point on a line.
Thence, S 00degrees 59minutes 42seconds E for a distance of 70.11 feet to a point on a line.
Thence, S 00degrees 59minutes 42seconds E for a distance of 69.87 feet to a point on a line.
Thence, N 88degrees 09minutes 59seconds W for a distance of 50.24 feet to a point on a line.
Thence, S 01degrees 50minutes 01seconds W for a distance of 100.53 feet to a point on a line.
Thence, S 00degrees 42minutes 31seconds E for a distance of 169.65 feet to a point on a line.
Thence, S 00degrees 46minutes 18seconds W for a distance of 323.60 feet to a point on a line.
Thence, S 85degrees 07minutes 09seconds W for a distance of 10.92 feet to a point on a line.
Thence, N 88degrees 12minutes 12seconds W for a distance of 77.14 feet to the POINT OF BEGINNING. Total area = 569,474 sf (13.07 ac)

CONDITIONAL USE DISTRICT ZONING CONDITIONS	
Zoning Case Number Z-17-21 (pending rezoning case)	OFFICE USE ONLY
Date Submitted	Rezoning Case #
Existing Zoning CX-3 and R-10 Proposed Zoning NX-5, RX-4 and RX-3	

Narrative of Zoning Conditions Offered

The following conditions shall apply to both the NX-5-CU, RX-4-CU and the RX-3-CU properties:

A. The total amount of development on the Property shall not exceed the intensities for each use as set forth below:

i. Non-Residential Uses open to the public – 28,500 square feet gross floor area.
ii. Residential Uses – 470 dwelling units. Except for skilled nursing care units which may service people of any age requiring skilled nursing care, residential uses shall service only persons meeting the housing for Older Persons Exemption to the Fair Housing Act (24 C.F.R. Sections 100.300 through 100.308, as the same may be amended from time to time.) In addition, the following amenity spaces shall be permitted in support of the residential units: common meeting spaces; common living areas; game rooms; business centers; craft and/or activity areas; dining room; coffee shop and/or café; kitchens and storage areas; chapel; theater; spa/salon/barbershop; and gym/ fitness centers but all are limited to use by residents, occupants, employees and their respective guests only. Nothing herein shall prohibit non-residential uses open to the public pursuant to the square footage limit in Paragraph A(i) above.

B. As a part of the development of the subject property, the property owner shall black out and restripe E. Whitaker Mill Road between Bernard Street and Reaves Street to a two-lane cross section with a center turn lane and a bike path generally as shown on attached Exhibit A. In addition, the property owner shall install a median refuge in the area of E. Whitaker Mill Road parallel to the subject property generally as shown on attached Exhibit A.

C. As a part of the development of the subject property, the property owner shall install a median refuge in Bernard Street in the area of Bernard Street parallel to the subject property generally as shown on attached Exhibit A.

D. All buildings shall have a maximum setback of one hundred and twenty feet (120') from the street right-of-way of E. Whitaker Mill Road and a maximum setback of ninety feet (90') from the street right-of-way of Bernard Street. In addition, no more than two (2) bays of on-site parking with a single drive aisle shall be located between any building and the street right-of-way of E. Whitaker Mill Road, nor shall more than one (1) bay of on-site parking with a single drive aisle be located between any building and the street right-of-way of Bernard Street.

E. The Block Perimeter shall be increased to 5700 linear feet for the subject property. Please see the attached Exhibit B for additional information regarding this request.

On the property zoned NX-5-CU only, the following conditions shall apply:

F. The following principal uses otherwise permitted in the NX zoning district as listed in UDO section 6.1.4 shall be prohibited:

i. Vehicle Fuel Sales
ii. Vehicle Sales/Rental
iii. Detention Center, Jail, Prison
iv. Vehicle Repair (Minor)

The property owner(s) hereby offers, consents to, and agrees to abide by, if the rezoning request is approved, the conditions written above. All property owners must sign each condition page. This page may be photocopied if additional space is needed. WHITAKER GLEN PROPERTIES INC.

Property Owner(s) Signature DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... Print Name Neil Pruitt, Jr., Chairman and CEO

CONDITIONAL USE DISTRICT ZONING CONDITIONS	
Zoning Case Number Z-17-21 (pending rezoning case)	OFFICE USE ONLY
Date Submitted	Rezoning Case #
Existing Zoning CX-3 and R-10 Proposed Zoning NX-5, RX-4 and RX-3	

Narrative of Zoning Conditions Offered

The following conditions shall apply to both the NX-5-CU, RX-4-CU and the RX-3-CU properties:

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ii. Residential Uses – 470 dwelling units. Except for skilled nursing care units which may service people of any age requiring skilled nursing care, residential uses shall service only persons meeting the housing for Older Persons Exemption to the Fair Housing Act (24 C.F.R. Sections 100.300 through 100.308, as the same may be amended from time to time.) In addition, the following amenity spaces shall be permitted in support of the residential units: common meeting spaces; common living areas; game rooms; business centers; craft and/or activity areas; dining room; coffee shop and/or café; kitchens and storage areas; chapel; theater; spa/salon/barbershop; and gym/ fitness centers but all are limited to use by residents, occupants, employees and their respective guests only. Nothing herein shall prohibit non-residential uses open to the public pursuant to the square footage limit in Paragraph A(i) above.

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i. Vehicle Fuel Sales
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iii. Detention Center, Jail, Prison
iv. Vehicle Repair (Minor)

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Property Owner(s) Signature DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... Print Name Neil Pruitt, Jr., Chairman and CEO

CONDITIONAL USE DISTRICT ZONING CONDITIONS	
Zoning Case Number Z-17-21 (pending rezoning case)	OFFICE USE ONLY
Date Submitted	Rezoning Case #
Existing Zoning CX-3 and R-10 Proposed Zoning NX-5, RX-4 and RX-3	

Narrative of Zoning Conditions Offered

The following conditions shall apply to both the NX-5-CU, RX-4-CU and the RX-3-CU properties:

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On the property zoned NX-5-CU only, the following conditions shall apply:

F. The following principal uses otherwise permitted in the NX zoning district as listed in UDO section 6.1.4 shall be prohibited:

i. Vehicle Fuel Sales
ii. Vehicle Sales/Rental
iii. Detention Center, Jail, Prison
iv. Vehicle Repair (Minor)

The property owner(s) hereby offers, consents to, and agrees to abide by, if the rezoning request is approved, the conditions written above. All property owners must sign each condition page. This page may be photocopied if additional space is needed. MAYVIEW HEALTHCARE PROPERTIES INC.

Property Owner(s) Signature DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452 Print Name Neil Pruitt, Jr., Chairman and CEO

DocuSign

Certificate Of Completion

Envelope Id: 9FA18FE6A55141C6895F176D3F1A5E24 | Status: Completed

Subject: Please DocuSign: 03.21.22 OVB Cover page for DocuSign Document Request -.pdf, Rezoning Petition...

Source Envelope:

Document Pages: 68	Signatures: 29	Envelope Originator:
Certificate Pages: 5	Initials: 0	PruittHealth
AutoNav: Enabled		nclements@pruitthealth.com
EnvelopeId Stamping: Enabled		IP Address: 73.207.21.26
Time Zone: (UTC-05:00) Eastern Time (US & Canada)		

Record Tracking

Status: Original 3/21/2022 9:52:55 PM	Holder: PruittHealth nclements@pruitthealth.com	Location: DocuSign

Signer Events	Signature	Timestamp
Andrew Crosby acrosby@pruitthealth.com Assistant General Counsel PruittHealth Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	DocuSigned by: Andrew Crosby A4EF4C31D2524DD... Signature Adoption: Pre-selected Style Using IP Address: 12.1.84.135	Sent: 3/21/2022 10:50:41 PM Viewed: 3/22/2022 9:21:47 AM Signed: 3/22/2022 9:24:09 AM
Neil L. Pruitt, Jr. npruitt@pruitthealth.com Chairman and CEO Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 3/24/2022 12:35:38 PM ID: eedf76f3-0216-40b8-a124-0473a7a32006	DocuSigned by: Neil L. Pruitt, Jr. FF54EB4412A7452... Signature Adoption: Pre-selected Style Using IP Address: 12.1.84.135	Sent: 3/21/2022 10:50:41 PM Viewed: 3/24/2022 12:35:38 PM Signed: 3/24/2022 12:42:20 PM
Robert Strang rstrang@pruitthealth.com Authorized Representative Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Accepted: 3/22/2022 7:05:26 AM ID: b1b15868-6cd4-4e16-9b03-f5b804a0e974	DocuSigned by: Robert Strang 41C3F95AB726443... Signature Adoption: Pre-selected Style Using IP Address: 73.184.107.54 Signed using mobile	Sent: 3/21/2022 10:50:42 PM Viewed: 3/22/2022 7:05:26 AM Signed: 3/22/2022 7:05:33 AM
Teresa Rabun trabun@pruitthealth.com Corporate Affairs Director and Assistant to Neil L. Pruitt, Jr. PruittHealth Corporate Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	DocuSigned by: Teresa Rabun F688EA7734CF44C... Signature Adoption: Pre-selected Style Using IP Address: 75.139.139.89	Sent: 3/21/2022 10:50:42 PM Viewed: 3/21/2022 10:51:28 PM Signed: 3/21/2022 10:51:42 PM

In Person Signer Events	Signature	Timestamp

Editor Delivery Events	Status	Timestamp

Agent Delivery Events	Status	Timestamp

Intermediary Delivery Events	Status	Timestamp

Certified Delivery Events	Status	Timestamp

Carbon Copy Events	Status	Timestamp
Olga Bjelkic objelkic@pruitthealth.com Corporate Paralegal PruittHealth Security Level: Email, Account Authentication (None) **Electronic Record and Signature Disclosure:** Not Offered via DocuSign	COPIED	Sent: 3/21/2022 10:50:43 PM Viewed: 3/21/2022 10:51:18 PM

Witness Events	Signature	Timestamp

Notary Events	Signature	Timestamp

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	3/21/2022 10:50:43 PM
Certified Delivered	Security Checked	3/21/2022 10:51:28 PM
Signing Complete	Security Checked	3/21/2022 10:51:42 PM
Completed	Security Checked	3/24/2022 12:42:20 PM

Payment Events	Status	Timestamps

Electronic Record and Signature Disclosure

REZONING APPLICATION SUBMITTAL REQUIREMENTS ("Rezoning Checklist")					
TO BE COMPLETED BY APPLICANT			COMPLETED BY CITY STAFF		
General Requirements – General Use or Conditional Use Rezoning	**YES**	**N/A**	**YES**	**NO**	**N/A**
1. I have referenced this **Rezoning Checklist** and by using this as a guide, it will ensure that I receive a complete and thorough first review by the City of Raleigh	☑	☐			
2. Pre-Application Conference	☑	☐			
3. Neighborhood Meeting notice and report	☑	☐			
4. Rezoning application review fee (see **Fee Schedule** for rate)	☑	☐			
5. Completed application, submitted through Permit & Development Portal	☑	☐			
Completed Comprehensive Plan Consistency Analysis	☑	☐			
Completed Response to the Urban Design Guidelines	☐	☑			
6. Two sets of stamped envelopes addressed to all property owners of area to be rezoned and properties within 500 feet of area to be rezoned	☑	☐			
7. Trip Generation Study	☐	☐			
8. Traffic Impact Analysis	☐	☐			
For properties requesting a conditional use district:					
9. Completed zoning conditions, signed by property owner(s)	☐	☑			
If applicable (see Page 11):					
10. Proof of power of attorney or owner affidavit	☐	☐			
For properties requesting a Planned Development (PD) or Campus District (CMP):					
10. Master Plan (see Master Plan Submittal Requirements)	☑	☐			
For properties requesting an Accessory Dwelling Unit Overlay District (ADUOD):					
15. Copy of ballot and mailing list	☐	☑			

MASTER PLAN SUBMITTAL REQUIREMENTS					
TO BE COMPLETED BY APPLICANT			COMPLETED BY CITY STAFF		
General Requirements – Master Plan	**YES**	**N/A**	**YES**	**NO**	**N/A**
1. I have referenced the **Master Plan Checklist** and by using this as a guide, it will ensure that I receive a complete and thorough first review by the City of Raleigh	☑	☐			
2. Total number of units and square feet	☑	☐			
3. 12 sets of plans	☑	☐			
4. Completed application; submitted through Permit & Development Portal	☑	☐			
5. Vicinity Map	☑	☐			
6. Existing Conditions Map	☑	☐			
7. Street and Block Layout Plan	☑	☐			
8. General Layout Map/Height and Frontage Map	☑	☐			
9. Description of Modification to Standards, 12 sets	☑	☐			
10. Development Plan (location of building types)	☑	☐			
11. Pedestrian Circulation Plan	☑	☐			
12. Parking Plan	☑	☐			
13. Open Space Plan	☑	☐			
14. Tree Conservation Plan (if site is 2 acres or more)	☑	☐			
15. Major Utilities Plan/Utilities Service Plan	☑	☐			
16. Generalized Stormwater Plan	☑	☐			
17. Phasing Plan	☑	☐			
18. Three-Dimensional Model/renderings	☑	☐			
19. Common Signage Plan	☑	☐			

OAKS AT MAYVIEW
PLANNED DEVELOPMENT (PD) DISTRICT
MASTER PLAN

Developer:	PruittHealth
Address:	1626 Jeurgens Court, Norcross, GA 30093
Phone Number:	678.533.6770
Attention:	Nicole Frazier
Email:	nfrazier@pruitthealth.com
Civil Engineer:	The Curry Engineering Group, PLLC
Address:	P.O. Box 2018, 205 S. Fuquay Ave., Fuquay-Varina, NC 27526
Phone Number:	919.552.0849
Attention:	Don Curry, PE
Email:	don@currryeng.com
Architect:	Foley Design
Address:	21 Puritan Mill, 950 Lowery Blvd. NW, Atlanta, GA 30318
Phone Number:	404.400.2297
Attention:	Bryce Jennings, AIA
Email:	brycejennings@foleydesign.com
Landscape Architect:	Southwell Design, PLLC
Address:	P.O. Box 37178, Raleigh, NC 27627
Phone Number:	919.272.6729
Attention:	Adam Southwell, PLA, ASLA
Email:	adam@southwelldesign.com
Attorney:	Nelson Mullins Riley & Scarborough, LLP
Address:	4140 Parklake Avenue, Suite 200, Raleigh, NC 27612
Phone Number:	919.329.3884
Attention:	Beth Trahos
Email:	beth.trahos@nelsonmullins.com

OAKS AT MAYVIEW

MASTER PLAN NARRATIVE

1. INTRODUCTION

This document and the associated plan sheets submitted herewith (collectively, the Master Plan) are provided pursuant to the Unified Development Ordinance for the Planned Development District for the Oaks at Mayview development (the "Development"). This Development concerns the 17.96 acres located in the northwest quadrant of the Bernard Street and E. Whitaker Mill Road intersection. The property is located immediately west of the Hi-Mount neighborhood. Currently, the property is developed as an Independent Living Facility, a Skilled Nursing Facility, and a Home Health Agency. The Master Plan proposes a continuing care retirement community, providing a continuum of care, with retail and office land uses intended to serve the residents, occupants and employees of the development and the immediate surrounding area.

2. STATEMENT OF INTENT

The Development meets the intent of the PD District set forth in UDO Section 4.1.1.F. in several ways. First, the PD District will allow the Development to achieve a high-quality project design. It will facilitate the integration of a cohesive development that provides residents, occupants and employees access to a range of housing types, services and amenities, and better pedestrian circulation, all while maintaining compatibility with the surrounding area and minimizing impact on the area's infrastructure. Second, the PD District allows the applicant to provide greater transparency and certainty to the public and surrounding residents regarding the location of uses and building height, which is particularly important given the location of this property as it transitions to lower density neighborhoods. Third, the PD District allows the applicant to modify various UDO standards that better enable the applicant to develop a more compact, pedestrian-friendly, mixed-use project than would otherwise be possible without the modifications.

3. COMPREHENSIVE PLAN CONFORMANCE

The Master Plan addresses the development and redevelopment of approximately 17.96 acres located along E. Whitaker Mill Road and Bernard Street. The purpose of this rezoning and Master Plan is to support, in an economically viable manner, the redevelopment of the property, which: (a) provides the residents, occupants and employees of the project to a continuum of care and associated amenities; (b) facilitates the renovation of existing buildings; and (c) adds appropriately scaled buildings to meet the City's growing senior population.

The Future Land Use Map identifies the property as Institutional to the north of E. Whitaker Mill Rd., Neighborhood Mixed Use at the intersection of E. Whitaker Mill Rd. and Bernard St., and Moderate Density Residential to the north of the Neighborhood Mixed Use portion of the property along Bernard St. Institutional recommends land and facilities occupied by hospitals and medical complexes. Neighborhood Mixed Use applies to neighborhood shopping centers and pedestrian-oriented retail districts, as well as Medium Density residential uses that complement

those commercial uses. Moderate Density Residential recommends a mix of single-family detached homes, townhomes and multifamily dwellings with overall gross density not exceeding fourteen (14) units per acre. The Project is consistent with this policy guidance given the continuing care retirement community use and associated residential, retail and office land uses.

4. GENERAL DESIGN PRINCIPLES AND URBAN DESIGN GUIDELINES CONFORMANCE

The Project complies with many of the General Design Principles set forth in UDO section 4.7.5. Specifically, the Project includes the opportunity to provide new residential development to meet the City's growth. Internal connections provide convenient pedestrian access throughout the development along with connections to the surrounding street network.

The Development also will be well-integrated and provide ample recreational amenities – both passive and active – to serve the residents, occupants and employees of the project. Architecture and landscaping will provide a cohesive design to the buildings and site layout, complimenting the site's features. Finally, the Development is limited to a scale that ensures ample access to light and air for the residents, occupants and employees of the project, as well as the residents of surrounding properties.

In addition, the Development incorporates a number of elements of the Urban Design Guidelines. For example, open spaces provide convenient seating opportunities and are integrated throughout the Development. Internal streets are interconnected throughout, providing ease of vehicular and pedestrian circulation and access for residents, occupants and employees. The Development transitions to the surrounding neighborhoods through the use of setbacks and landscaping.

5. BLOCK PERIMETER

The block perimeter standards shall be satisfied for the Development per the Master Plan. The project is not proposing any new public streets. The property is bordered on the west side by the Wake County Home, a Raleigh Historic Landmark. On the east side, the property is bordered by a single-family home and townhome lots. The property is proposed to be developed with a continuing care retirement community use, which includes skilled nursing and assisted living components, all of which would be negatively impacted by a public street traversing the property. Instead of internal public streets, the project proposes internal drive aisles that provide interconnected access throughout the property, and intersect with the adjacent public streets on the north, east and south sides of the property. The Master Plan's proposed street network will facilitate safe and efficient vehicular and pedestrian access throughout the property. As shown on Plan Sheet C-06, the Project includes a variety of street types to meet the needs of pedestrian and vehicular traffic.

6. PHASING

The Project contains five (5) phases and is shown in detail on Master Plan Sheet C-03. The initial phase of development may either be within Phase 1 (POD A) or Phase 2 (POD B), or a

combination of those. Project phasing may be by entire Phase or by portions of any Phase, and is not required to be sequential. Final project phasing will be determined at the time of site permitting. Utility infrastructure that serves a particular phase of development shall be installed during the development of said phase, as provided by the UDO.

7. LAND USES & INTENSITY

A. Base District. The base district for this Planned Development district shall be the Neighborhood Mixed Use (NX) district. All principal and accessory land uses permitted in the NX district shall be permitted on the property in accordance with the Allowed Principal Use Table, except as prohibited by Section 9.A. of this Master Plan.

B. Overall Maximum Development Intensity. The total amount of development on the Property shall not exceed the intensities for each use as set forth below:
   i. Non-Residential Uses – 38,500 square feet gross floor area, which can be located in Apartment, General, Mixed Use, and Open Lot building types.
   ii. Residential Uses – 415 dwelling units, which can be located in Townhouse, Apartment, Civic, Mixed Use, and Open Lot building types.
   iii. Remote Parking – During construction, each POD may be used for Remote Parking to another Tract.

C. Pod A Maximum Development Intensity.
   i. Uses & Density – 125 dwelling units; 4,500 SF non-residential floor area
   ii. Building Height – 5 stories
   iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

D. Pod B Maximum Development Intensity.
   i. Uses & Density – 180 dwelling units; 25,000 SF non-residential floor area
   ii. Building Height – 5 stories
   iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

E. Pod C Maximum Development Intensity.
   i. Uses & Density – 55 dwelling units; 4,500 SF non-residential floor area
   ii. Building Height – 5 stories
   iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

F. Pod D Maximum Development Intensity.
   i. Uses & Density – 100 dwelling units; 4,500 SF non-residential floor area
   ii. Building Height – 4 stories
   iii. Building Types – Townhouse, Apartment, Civic, General, Mixed-Use, Open Lot

G. Pod E Maximum Development Intensity.
   i. Uses & Density – 10 dwelling units
   ii. Building Height – 3 stories
   iii. Building Types – Townhouse, Apartment, Civic, Open Lot

H. General Notes.

i. Within each tract, an Apartment or Mixed-Use building type can have all, none or a portion of the amount of permitted residential dwelling units.

ii. References to land uses in this Section 7 shall have the meaning as ascribed in the Allowed Principal Use Table (UDO section 6.1.4). This Section 7 shall not act as a prohibition on specific land uses otherwise allowed as a permitted, limited or special use in UDO Section 6.1.4. and not listed in Section 9.A. of the Master Plan. Additionally, the floor area for any land use permitted by this Master Plan that is not expressly listed in Section 9.A. shall be counted against the amount of floor area assigned for the Office and Medical land uses.

8. MODIFICATIONS

A. Building Setbacks – In order to have the buildings define the streetscape and promote walkability, the primary and side street minimum setback requirements of UDO Sections 3.2.4., 3.2.5. and 3.2.6. shall not apply to any internal street.

B. Building Separation – No building separation that may be required by the UDO shall be applicable. Instead, building separation shall be governed by the North Carolina Building Code.

C. Ground Floor Elevation – The minimum ground floor elevation requirements of UDO Sections 3.2.4., 3.2.5. and 3.2.6. shall not apply to any building type in any tract.

D. Parking Standards – The Project shall be exempt from the parking standards set forth in UDO Section 7.1.2. and shall following the parking ratios set forth below:

i. One space per dwelling unit of independent living use.

ii. One space per 3 beds for assisted living and skilled nursing use.

iii. One space per 400 square feet gross floor area for any non-residential principal use.

iv. No parking is required for accessory uses.

E. Outdoor Amenity Area – The outdoor amenity standards shall not apply.

F. Build-To – Build-to standards shall not apply to any public street.

G. Driveway Spacing – The minimum driveway spacing requirement of UDO Section 8.3.5.C.3. shall be reduced to fifty feet (50') in order to provide efficient access to each of the Tracts.

H. Intersection Spacing – The minimum driveway spacing from intersections requirement found in Raleigh Street Design Manual Article 9.5 shall be reduced to fifty feet (50') in order to provide efficient access to each of the Tracts.

I. Neighborhood Transitions – Due to the limited space between the proposed internal street and the adjacent residential properties on Mills Street, coupled with the need for buffering and street trees, the Neighborhood Transition standards found in UDO Article 3.5 shall not apply to POD D.

9. ADDITIONAL DEVELOPMENT STANDARDS

A. The following principal uses as listed in UDO section 6.1.4 shall be prohibited:
   i. Vehicle Fuel Sales
   ii. Vehicle Sales/Rental
   iii. Detention Center, Jail, Prison
   iv. Vehicle Repair (Minor)

B. For that portion of Pod B adjoining the southern boundary line of Lot 20 as shown on the plat recorded in Book of Maps 2014, Page 975 (the "Highpark Court Townhomes Association Property"), there shall be a minimum principal building setback of 125 feet as measured perpendicular from the southern boundary line of the Highpark Court Townhomes Association Property.

C. For those portions of Pod D and Pod E adjoining the western boundary line of the Highpark Court Townhomes Association Property, there shall be a minimum principal building setback of 50 feet as measured perpendicular from the western boundary line of the Highpark Court Townhomes Association Property.

REZONING OF PROPERTY CONSISTING OF +/- 17.7 ACRES,
LOCATED AT 501, 513, 521 AND 615 E. WHITAKER MILL ROAD, AND 1921, 1925, 1929 AND 1933 BERNARD STREET, IN THE CITY OF RALEIGH

REPORT OF NEIGHBORHOOD MEETING WITH ADJACENT PROPERTY OWNERS AND TENANTS ON
MARCH 1, 2021

Pursuant to applicable provisions of the Unified Development Ordinance, a neighborhood meeting was held with respect to a potential rezoning with adjacent property owners and tenants on Monday, March 1, 2021, at 5:00 p.m. The property considered for this potential rezoning totals approximately 17.7 acres, and is located at 501, 513, 521 and 615 E. Whitaker Mill Road, and 1921, 1925, 1929 and 1933 Bernard Street, having Wake County Parcel Identification Numbers 1704898505, 1704897093, 1704899293, 1704992012, 1704992224, 1704992310, 1704992318, and 1704992414. This meeting was held virtually on Zoom with an option to call in by telephone. All owners and tenants of property within 500 feet of the subject property were invited to attend the meeting. Attached hereto as **Exhibit A** is a copy of the neighborhood meeting notice. A copy of the required mailing list for the meeting invitations is attached hereto as **Exhibit B**. A list of the individuals who attended the meeting is attached hereto as **Exhibit C**. A summary of the items discussed at the meeting is attached hereto as **Exhibit D**.

EXHIBIT A – NEIGHBORHOOD MEETING NOTICE

LONGLEAF
LAW PARTNERS

To: Neighboring Property Owner or Tenant

From: Michael Birch, Longleaf Law Partners

Date: February 18, 2021

Re: Neighborhood Meeting for Rezoning of The Oaks at Whitaker Glen

---

I am writing to you on behalf of PruittHealth, Inc., the owner and operator of The Oaks at Whitaker Glen. You are invited to attend a virtual neighborhood meeting to discuss the proposed rezoning of eight parcels totaling approximately 18 acres, with the addresses of 501, 513, 521 and 615 E Whitaker Mill Road, and 1921, 1925, 1929 and 1933 Bernard Street. A map highlighting the parcels is included with this notice.

We have scheduled an informational meeting with surrounding property owners and tenants for Monday, March 1st at 5:00 PM until 7:00 PM. Due to the COVID-19 Pandemic, this meeting will be held virtually. You can participate online or by telephone using the directions below:

To Join with Video:	**To Join by Telephone:**
https://zoom.us/join	**+1 646 558 8656**
Meeting ID: 883 7394 6185	**Meeting ID: 883 7394 6185**
Password: 914124	**Password: 914124**

PruittHealth is considering redeveloping the property with new and renovated buildings to provide a mix of independent living, skilled care, and assisted living units, along with amenities to serve this continuing care retirement community. As part of this redevelopment, PruittHealth is seeking to rezone the property to provide for a more integrated, cohesive community. The properties are zoned CX-3, RX-4 and R-10. The proposed zoning is PD (Planned Development).

The City of Raleigh requires a neighborhood meeting involving the owners and tenants of property within 500 feet of the properties prior to filing a rezoning application. During this meeting we will provide details about the rezoning request and receive questions and comments. After the meeting, we will prepare a report for the Planning Department regarding the items discussed.

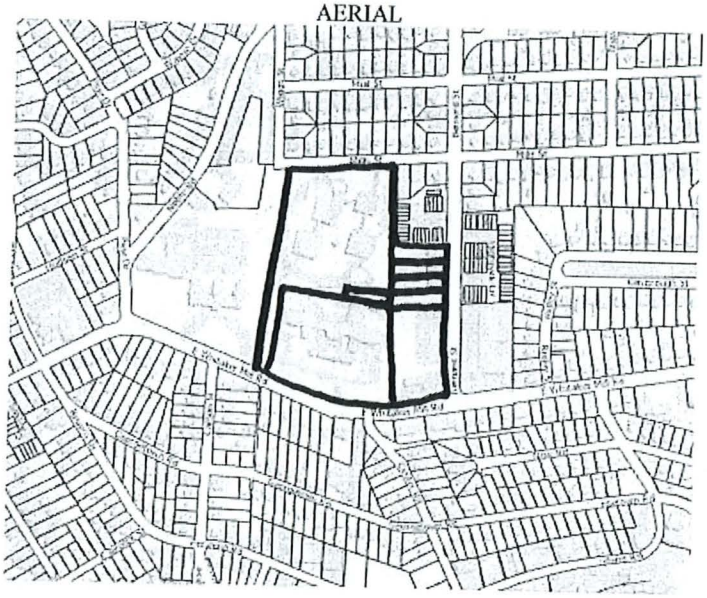
We held a neighborhood meeting on November 19, 2020 regarding the same rezoning request. We are holding this meeting in order to comply with the City's new notice regulations requiring notification of tenants, which was effective after our initial meeting. The information provided at the meeting on March 1st will be similar to that provided at the first meeting.

Please do not hesitate to contact me directly if you have any questions or wish to discuss the proposed rezoning. I can be reached at 919.645.4317 and mbirch@longleaflp.com. Also, for more information about rezoning, you may visit www.raleighnc.gov or contact the City's Planning and Development Department at 919.996.2682 or rezoning@raleighnc.gov.

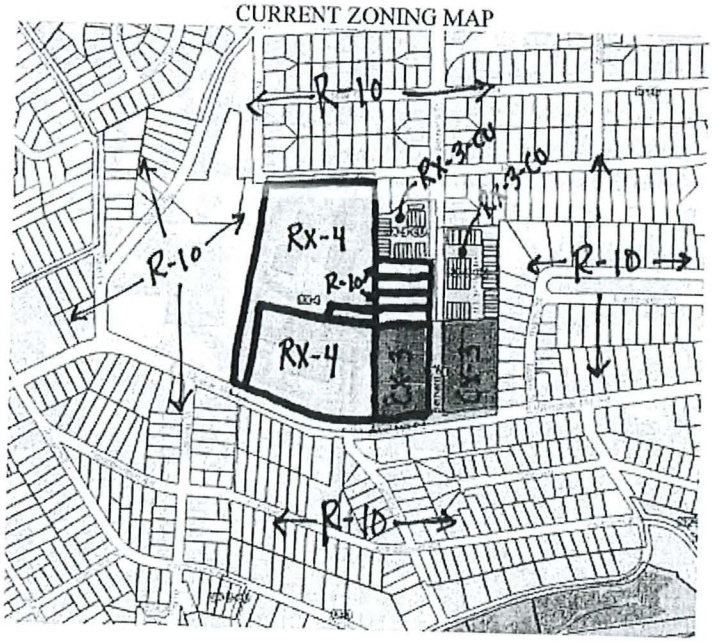
The following exhibits are included with this notice:

1. Aerial of Properties
2. Current Zoning Map of Properties
3. Draft of Rezoning Application, Page 1
4. Draft Plan Sheet of Proposed Master Plan

AERIAL



CURRENT ZONING MAP



Rezoning Application

RCP RALEIGH DEPARTMENT OF CITY PLANNING

Department of City Planning | 1 Exchange Plaza, Suite 300 | Raleigh, NC 27601 | 919-996-2682

REZONING REQUEST	
☐ General Use ☐ Conditional Use ■ Master Plan Existing Zoning Base District Height Frontage N/A Overlay(s) N/A Proposed Zoning Base District PD Height N/A Frontage N/A Overlay(s) N/A *Click here to view the Zoning Map. Search for the address to be rezoned, then turn on the 'Zoning' and 'Overlay' layers.*	OFFICE USE ONLY Rezoning Case #
If the property has been previously rezoned, provide the rezoning case number:	

GENERAL INFORMATION			
Date	Date Amended (1)	Date Amended (2)	
Property Address See Attached			
Property PIN See Attached		Deed Reference (book/page) See Attached	
Nearest Intersection Whitaker Mill Road and Bernard Street			
Property Size (acres) 18	For Planned Development Applications Only.	Total Units TBD Total Parcels TBD	Total Square Footage TBD Total Buildings TBD
Property Owner Name/Address See Attached		Phone	Fax
		Email	
Applicant Name/Address Michael Birch, Longleaf Law Partners 4509 Creedmoor Road, Suite 302 Raleigh, NC 27612		Phone 919.645.4317	Fax
		Email mbirch@longleaflp.com	
Applicant* Signature(s)		Email	

*Please see Page 11 for information about who may submit rezoning applications. A rezoning application will not be considered complete until all required submittal components listed on the Rezoning Checklist have been received and approved.

ATTACHMENT TO REZONING APPLICATION

1. 501 E Whitaker Mill Road
    a. PIN: 1704-89-8505
    b. Owner: Whitaker Glen Properties Inc.
    c. Deed Book / Page: 13814/1709
    d. Size: 7.75 acres
    e. Current Zoning: RX-4

2. 513 E Whitaker Mill Road
    a. PIN: 1704-89-7093
    b. Owner: Mayview Healthcare Properties Inc.
    c. Deed Book / Page:
    d. Size: 5.94 acres
    e. Current Zoning: RX-4

3. 521 E Whitaker Mill Road
    a. PIN: 1704-89-9293
    b. Owner: Mayview Healthcare Properties Inc.
    c. Deed Book / Page:
    d. Size: 0.17 acres
    e. Current Zoning: RX-4

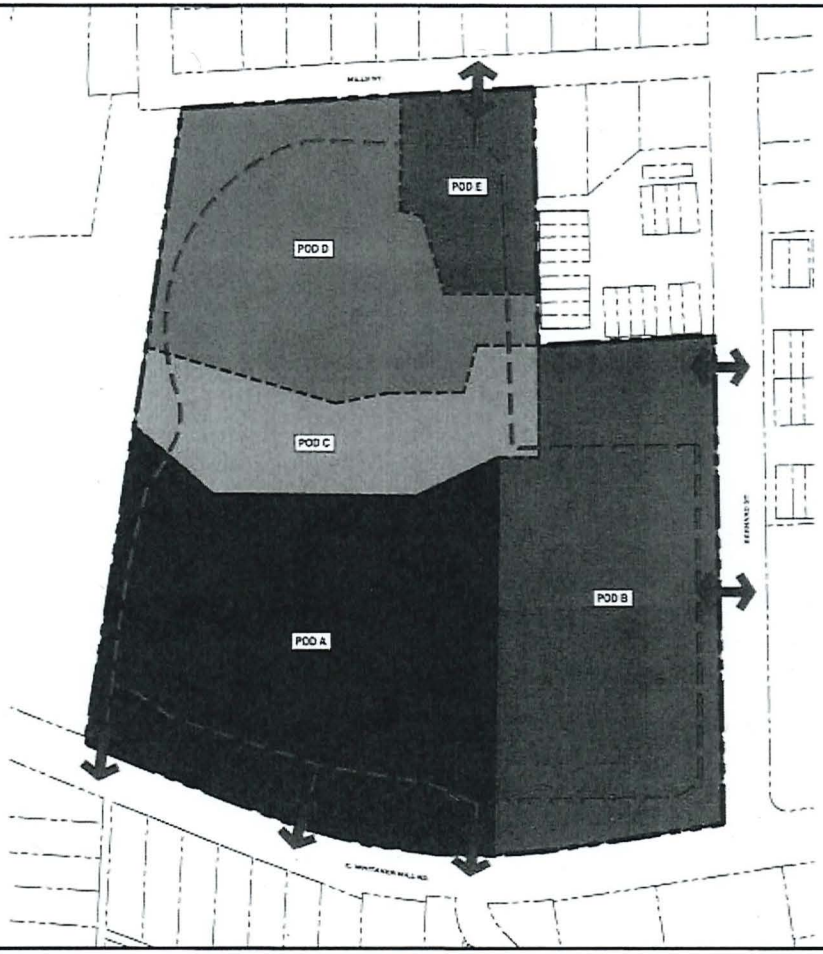
4. 615 E Whitaker Mill Road
    a. PIN: 1704-99-2012
    b. Owner: Pruitt Properties Inc.
    c. Deed Book / Page: 16745/2228
    d. Size: 2.5 acres
    e. Current Zoning: CX-3

5. 1921 Bernard Street
    a. PIN: 1704-99-2224
    b. Owner: Pruitt Properties Inc.
    c. Deed Book / Page: 16745/2228
    d. Size: 0.39 acres
    e. Current Zoning: R-10

6. 1925 Bernard Street
    a. PIN: 1704-99-2310
    b. Owner: Pruitt Properties Inc.
    c. Deed Book / Page: 16999/1314
    d. Size: 0.4 acres
    e. Current Zoning: R-10

7. 1929 Bernard Street
    a. PIN: 1704-99-2318
    b. Owner: Pruitt Properties Inc.
    c. Deed Book / Page: 16999/979
    d. Size: 0.4 acres
    e. Current Zoning: R-10

8. 1933 Bernard Street
    a. PIN: 1704-99-2414
    b. Owner: Pruitt Properties Inc.
    c. Deed Book / Page: 16999/979
    d. Size: 0.4 acres
    e. Current Zoning: R-10



GENERAL NOTES:

DEVELOPMENT USES:

POD BREAKDOWN:

LEGEND:

NOT FOR CONSTRUCTION

PRELIMINARY

OAKS AT MAYVIEW - PD MASTER PLAN

DEVELOPMENT PLAN

Curry

C-03

EXHIBIT B – NOTICE LIST

H·BROOKS·REAL·ESTATE·LLC·¶ 2320·BEECHRIDGE·RD¶ RALEIGH·NC·27608-1430¶ ¤	VAUGHN,·KATHERINE·¶ 538·LEDBETTER·CT¶ RALEIGH·NC·27608-2665¶ ¤	DAVILA,·AMY·M·¶ 540·LEDBETTER·CT¶ RALEIGH·NC·27608-2665¶ ¤
DIXON,·MADISON·TAYLOR·SASSER,· CARSON·GRAY¶ 542·LEDBETTER·CT¶ RALEIGH·NC·27608-2665¶ ¤	LOSE,·ZACHARY·R·¶ 408·CHAVIS·WAY¶ RALEIGH·NC·27601-1956¶ ¤	GOING·FAR·LLC·¶ 1501·SPRUCE·VIEW·LN¶ RALEIGH·NC·27614-8032¶ ¤
KANE,·WILLIAM·DRAKE·¶ 552·LEDBETTER·CT¶ RALEIGH·NC·27608-2665¶ ¤	AMASH,·JOSEPH·R·¶ 554·LEDBETTER·CT¶ RALEIGH·NC·27608-2665¶ ¤	TOON,·GORDON·T·TOON,·MEAGHAN·R¶ 113·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤
CLARK,·JOSEPH·G·CLARK,·ANGELA·W¶ 115·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤	KASINOFF,·JESSICA·D·¶ 117·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤	FULTON,·MARY·A·¶ 119·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤
TYNAN,·SEAN·TYNAN,·LINDSEY·M¶ 123·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤	WORTH,·MARSHALL·BOULDIN·WORTH,· VALERIE·BROCK¶ 127·GEORGETOWN·RD¶ RALEIGH·NC·27608-2615¶ ¤	CAMPBELL,·KEVIN·S·¶ 2805·NC·97·HWY¶ WENDELL·NC·27591-6986¶ ¤
RESIDENT/TENANT¶ 1608·CARSON·ST¶ RALEIGH·NC·27608¶ ¤	JENKINS,·SUZANNE·HARDEMAN· JENKINS,·NATHAN·ROBERT¶ 1701·CENTER·RD¶ RALEIGH·NC·27608-2611¶ ¤	URBAN·BUILDING·SOLUTIONS·LLC·¶ PO·BOX·6627¶ RALEIGH·NC·27628-6627¶ ¤
RESIDENT/TENANT¶ 1703·CENTER·RD¶ RALEIGH·NC·27608¶ ¤	THOMPSON·SMITH·VENTURES·LLC·¶ 703·EDGEWATER·DR¶ GARNER·NC·27529-9020¶ ¤	WINN,·SARAH·E·T·¶ 1704·CENTER·RD¶ RALEIGH·NC·27608-2612¶ ¤
O'TOOLE,·BRIAN·BUSSE,·MARISA¶ 1705·CARSON·ST¶ RALEIGH·NC·27608-2607¶ ¤	ELIS,·MARY·MARTHA·DEAN·¶ 107·BERKSHIRE·RD¶ RALEIGH·NC·27608-1341¶ ¤	RESIDENT/TENANT¶ 1705·CENTER·RD¶ RALEIGH·NC·27608¶ ¤
WRENN,·PAULETTE·YOUNG·¶ 1477·SID·MITCHELL·RD¶ YOUNGSVILLE·NC·27596-8605¶ ¤	RESIDENT/TENANT¶ 1706·CENTER·RD¶ RALEIGH·NC·27608¶ ¤	MANNING,·JEFFREY·P·SPRUILL,· WILLIAM·R¶ 1707·CARSON·ST¶ RALEIGH·NC·27608-2607¶ ¤
KREINER,·JOSEPH·KREINER,·ROMEY¶ 1707·CENTER·RD¶ RALEIGH·NC·27608-2611¶ ¤	WEHBIE,·MARY·PB·WEHBIE,·ROBERT·S¶ 2508·KINGSLEY·RD¶ RALEIGH·NC·27612-2920¶ ¤	RESIDENT/TENANT¶ 1708·CARSON·ST¶ RALEIGH·NC·27608¶ ¤

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PRADO, PHILIP G PRADO, MARGARET W 211 E EARLE AVE EASTON MD 21601-2812	RESIDENT/TENANT 1708 CENTER RD RALEIGH NC 27608	MCCULLOUGH, THOMAS H III MCCULLOUGH, CYNTHIA KELLY PO BOX 6627 RALEIGH NC 27628-6627
STONEHAM, HENRY BRYANT III 1710 CARSON ST RALEIGH NC 27608-2608	JENKINS, JONATHAN H JENKINS, CHRISTINA W 1710 CENTER RD RALEIGH NC 27608-2612	DOZIER, DAKOTA DURAN DOZIER, HALEY BLANKENSHIP 1711 CENTER RD RALEIGH NC 27608-2611
STEVENS, CHARLES EDWARD STEVENS, CLARA 1712 CARSON ST RALEIGH NC 27608-2608	HULER, SCOTT D HULER, JUNE SPENCE 1712 CENTER RD RALEIGH NC 27608-2612	EARLS, ZACHARY JOHN EALRS, ALEXANDRA DOMBALAGIAN 1713 CARSON ST RALEIGH NC 27608-2607
WALKER, JENNIFER E 1713 CENTER RD RALEIGH NC 27608-2611	PERRY, STEPHEN JOHNSON FARRIS, ANNALISE HOPE 1714 CARSON ST RALEIGH NC 27608-2608	KELLY, KARI B KELLY, PATRICK J 1715 CENTER RD RALEIGH NC 27608-2611
MCSHANE, ELIZABETH TIETGEN MCSHANE, IAN C 1717 CARSON ST RALEIGH NC 27608-2607	WATERS, JORDAN BURWELL, LEON 1721 CARSON ST RALEIGH NC 27608-2607	PARKER, VIRGINIA LEA 1801 RIDLEY ST RALEIGH NC 27608-2725
PARKER, VIRGINIA LEA 1803 RIDLEY ST RALEIGH NC 27608-2725	DIACHENKO, WILLIAM KENT DIACHENKO, MEGAN MCBRIDE 1805 RIDLEY ST RALEIGH NC 27608-2725	HILL, TIMOTHY LANE 1807 RIDLEY ST RALEIGH NC 27608-2725
HARRINGTON, BRIAN S HARRINGTON, DOROTHY ANDREWS 1811 RIDLEY ST RALEIGH NC 27608-2725	LATIGUE, KAYLA GABRIELLE LATIGUE, GABRIEL STUART 1812 RIDLEY ST RALEIGH NC 27608-2726	MCCLUSKEY, DEVAN LEIGH MCCLUSKEY, CODY JAMES 1813 RIDLEY ST RALEIGH NC 27608-2725
KING, JENNIFER RENEE 1814 RIDLEY ST RALEIGH NC 27608-2726	STANLEY, JON C 1815 RIDLEY ST RALEIGH NC 27608-2725	DAIGLE, ADAM S DAIGLE, RACHEL E 1816 RIDLEY ST RALEIGH NC 27608-2726
MCGRAW, PATRICK A MCGRAW, JESSICA M 1817 RIDLEY ST RALEIGH NC 27608-2725	LONG, JESSE DANIEL LONG, SARAH A 1901 RIDLEY ST RALEIGH NC 27608-2727	CAMPBELL, REID A CAMPBELL, KATHLEEN J 2020 MALLARD LN RALEIGH NC 27609-4118
RESIDENT/TENANT 1903 RIDLEY ST RALEIGH NC 27608	NORTHSIDE ASSOCIATES C/O YORK PROPERTIES 2108 CLARK AVE RALEIGH NC 27605-1606	RESIDENT/TENANT 1910 BERNARD ST RALEIGH NC 27608

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RESIDENT/TENANT 902 BERNARD ST RALEIGH NC 27608	RESIDENT/TENANT 1906 BERNARD ST RALEIGH NC 27608	RESIDENT/TENANT 1908 BERNARD ST RALEIGH NC 27608
RESIDENT/TENANT 1912 BERNARD ST RALEIGH NC 27608	RESIDENT/TENANT 1914 BERNARD ST RALEIGH NC 27608	RESIDENT/TENANT 1916 BERNARD ST RALEIGH NC 27608
RESIDENT/TENANT 625 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 627 E WHITAKER MILL RD RALEIGH NC 27608	PRUITT PROPERTIES, INC 1626 JEURGENS CT NORCROSS GA 30093-2219
PRUITT PROPERTIES INC 1626 JEURGENS CT NORCROSS GA 30093-2219	PRUITT PROPERTIES INC 1626 JEURGENS CT NORCROSS GA 30093-2219	PRUITT PROPERTIES INC 1626 JEURGENS CT NORCROSS GA 30093-2219
MCCONNELL, MARYANNA E JOHNSON, WILLIAM W 1946 BERNARD ST RALEIGH NC 27608-2638	HIGHPARK COURT TOWNHOMES ASSOCIATION INC 812 SALEM WOODS DR RALEIGH NC 27615-3346	BACON, TIMOTHY R BACON, JACQUELYN L 4736 ADLER PASS RALEIGH NC 27612-3678
RESIDENT/TENANT 1950 BERNARD ST RALEIGH NC 27608	KOHN, MARY ANN 1953 BERNARD ST RALEIGH NC 27608-2637	PALFFY, JOHN III PALFFY, KARIE 1954 BERNARD ST RALEIGH NC 27608-2638
FLYNN, KEVIN F FLYNN, SHERRY E 141 CLAIRE DR CLAYTON NC 27520-5539	RESIDENT/TENANT 1955 BERNARD ST RALEIGH NC 27608	RESIDENT/TENANT 1957 BERNARD ST RALEIGH NC 27608
CAMPBELL, KEVIN S 2805 NC 97 HWY WENDELL NC 27591-6986	RESIDENT/TENANT 200 GEORGETOWN RD RALEIGH NC 27608	LEIPPE, CHARLES WILLIAM LEIPPE, BELINDA BARNES 401 FOXHALL ST RALEIGH NC 27609-5605
RESIDENT/TENANT 2000 BERNARD ST RALEIGH NC 27608	MERRIMAN, MATTHEW MERRIMAN, JULIE 2000 WIGGS ST RALEIGH NC 27608-1846	POLK, LEONARD H 2001 BERNARD ST RALEIGH NC 27608-1807
RAINES, WILLIAM CORBETT 2004 BERNARD ST RALEIGH NC 27608-1808	REITER, JACQUELINE M 2004 WIGGS ST RALEIGH NC 27608-1846	DELAGE, GREGORY S DELAGE, MONIQUE L 2005 BERNARD ST RALEIGH NC 27608-1807

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ROGERS,·ELAINE·B·ROGERS,·LEE·C¶ 2008·BERNARD·ST¶ RALEIGH·NC·27608-1808¶ ¤	BERNARD·STREET·HOLDINGS·LLC·¶ 2009·BERNARD·ST¶ RALEIGH·NC·27608-1807¶ ¤	MASON,·EDWARD·A·MASON,·ALLISON¶ 2009·NOBLE·RD¶ RALEIGH·NC·27608-1841¶ ¤
COOK,·KEVIN·FREID·CEDRONE,· CHRISTOPHER·ROBERT¶ 201·GEORGETOWN·RD¶ RALEIGH·NC·27608-2617¶ ¤	THORNTON,·EDSEL·R·TRUSTEE·¶ 2013·NOBLE·RD¶ RALEIGH·NC·27608-1841¶ ¤	MUNDT,·KARL·MUNDT,·JENNIFER¶ 2017·NOBLE·RD¶ RALEIGH·NC·27608-1841¶ ¤
WAGNER,·TERESA·B·JONES·WAGNER,· STEVEN·E¶ 2021·NOBLE·RD¶ RALEIGH·NC·27608-1841¶ ¤	WAKE·COUNTY·¶ WAKE·COUNTY·ATTORNEY'S·OFFICE¶ PO·BOX·550¶ RALEIGH·NC·27602-0550¶ ¤	RESIDENT/TENANT¶ 2024·NOBLE·RD¶ RALEIGH·NC·27608¶ ¤
IVEY,·CHANCE·IVEY,·ASHLEY¶ 203·GEORGETOWN·RD¶ RALEIGH·NC·27608-2617¶ ¤	ROBERTS,·KELLY·C·SOTHCOTT,· ANDREW·R¶ 203·1/2·GEORGETOWN·RD¶ RALEIGH·NC·27608-2617¶ ¤	RESIDENT/TENANT¶ 203·GEORGETOWN·RD¶ RALEIGH·NC·27608¶ ¤
COBB,·CARSON·L·JR·TRUSTEE·COBB,· DEBRA·T·TRUSTEE¶ 4209·MARVIN·PL¶ RALEIGH·NC·27609-5951¶ ¤	RESIDENT/TENANT¶ 205·GEORGETOWN·RD¶ RALEIGH·NC·27608¶ ¤	BOWMAN,·WILLIAM·P·BOWMAN,· KATHERINE·A¶ 206·GEORGETOWN·RD¶ RALEIGH·NC·27608-2618¶ ¤
PENNINGER,·VICKIE·M·¶ 711·KIMBROUGH·ST¶ RALEIGH·NC·27608-2723¶ ¤	RESIDENT/TENANT¶ 207·GEORGETOWN·RD¶ RALEIGH·NC·27608¶ ¤	JEFFREY,·DEAN·HOWARD·¶ 208·GEORGETOWN·RD¶ RALEIGH·NC·27608-2618¶ ¤
MERCER,·ROBERT·R·III·MERCER,· CAROLYN·M¶ 714·1/2·S·STATE·ST¶ RALEIGH·NC·27601-2048¶ ¤	RESIDENT/TENANT¶ 209·GEORGETOWN·RD¶ RALEIGH·NC·27608¶ ¤	MELCHIOR,·AUGUST·SHELBY·JR·BLACK,· DANIELLE¶ 212·GEORGETOWN·RD¶ RALEIGH·NC·27608-2618¶ ¤
RESIDENT/TENANT¶ 210·GEORGETOWN·RD¶ RALEIGH·NC·27608¶ ¤	EMMANUEL·BAPTIST·CHURCH·OF·RAL· NC·¶ L·W·GARRETT·TRUSTEES¶ 2100·NOBLE·RD¶ RALEIGH·NC·27608-1844¶	RESIDENT/TENANT¶ 2100·NOBLE·RD¶ RALEIGH·NC·27608¶ ¤
O'NEAL,·BRIAN·O'NEAL,·MEREDITH¶ 801·WAYNE·DR¶ RALEIGH·NC·27608-1547¶ ¤	RESIDENT/TENANT¶ 2101·NOBLE·RD¶ RALEIGH·NC·27608¶ ¤	SNOW,·AMY·D·¶ 2104·WIGGS·ST¶ RALEIGH·NC·27608-1848¶ ¤

OCONNELL, TIMOTHY OCONNELL, BETH ANN 2105 NOBLE RD RALEIGH NC 27608-1843	HENSGEN, JOE HENSGEN, NANCY 6536 WYNBROOK WAY RALEIGH NC 27612-2369	RESIDENT/TENANT 2109 NOBLE RD RALEIGH NC 27608
MIRACLE, ROBERT EVAN MIRACLE, AUDREY CHRISTINE 211 GEORGETOWN RD RALEIGH NC 27608-2617	CARRARA, DEBORAH ANN 2113 NOBLE RD RALEIGH NC 27608-1843	TAYLOR, WILLIAM B BARNES, ALLISON R 212 GEORGETOWN RD RALEIGH NC 27608-2618
WHITAKER PARK NEIGHBORHOOD ASSN INC 3700 GLENWOOD AVE STE 510 RALEIGH NC 27612-5538	KROEGER, STEVEN 213 GEORGETOWN RD RALEIGH NC 27608-2617	MARCH, LAUREN P 214 GEORGETOWN RD RALEIGH NC 27608-2618
PROPST, IAN S PROPST, KELLY 215 GEORGETOWN RD RALEIGH NC 27608-2617	PARKER, JEFFREY T PARKER, CHARLSIE S 216 GEORGETOWN RD RALEIGH NC 27608-2618	SMITH, WILLIAM D SMITH, SUMMER 217 GEORGETOWN RD RALEIGH NC 27608-2617
HAMBURG, ANNA M 218 GEORGETOWN RD RALEIGH NC 27608-2618	SHILOH PRESBYTERIAN CHURCH 5201 RED WING CT FUQUAY VARINA NC 27526-9058	RESIDENT/TENANT 219 GEORGETOWN RD RALEIGH NC 27608
PUPILLI, TARA W PUPILLI, KRISTOPHER MARK 220 GEORGETOWN RD RALEIGH NC 27608-2618	GIBBONS, PATRICIA KAY FITZGERALD, RICHARD L 222 GEORGETOWN RD RALEIGH NC 27608-2618	BLACK, RICHARD JR 225 GEORGETOWN RD RALEIGH NC 27608-2617
KREINER, JOSEPH KREINER, ROMEY 1707 CENTER RD RALEIGH NC 27608-2611	RESIDENT/TENANT 227 GEORGETOWN RD RALEIGH NC 27608	GAY, CHRISTINE J 301 GEORGETOWN RD RALEIGH NC 27608-2701
SCISLOW, JONATHAN JAMES RIN ARBOGAST, KATHLEEN CHAE 305 GEORGETOWN RD RALEIGH NC 27608-2701	SERRANO, NICHOLAS A SERRANO, ERIN 2205 DIGBY CT RALEIGH NC 27613-4320	RESIDENT/TENANT 307 GEORGETOWN RD RALEIGH NC 27608
RESIDENT/TENANT 307 GEORGETOWN RD UNIT A RALEIGH NC 27608	HUBER, JOSHUA JOSEPH HUBER, ASTRID OLFENBUTTEL 309 GEORGETOWN RD RALEIGH NC 27608-2701	HUBER, JOSHUA J HUBER, ASTRID O 309 GEORGETOWN RD RALEIGH NC 27608-2701
RESIDENT/TENANT 311 GEORGETOWN RD RALEIGH NC 27608	HERRING, DAVID II HERRING, SALLY O 313 GEORGETOWN RD RALEIGH NC 27608-2701	WAKE COUNTY WAKE COUNTY ATTORNEY'S OFFICE PO BOX 550 RALEIGH NC 27602-0550

RESIDENT/TENANT 401 E WHITAKER MILL RD RALEIGH NC 27608	STRONACH, SAMUEL 402 E WHITAKER MILL RD RALEIGH NC 27608-2632	MCBRIDE, TRACY ANN STORY, DYLAN FRANK 404 E WHITAKER MILL RD RALEIGH NC 27608-2632
GUASTINI, MICHAEL A BIRD, MARY ANNA 406 E WHITAKER MILL RD RALEIGH NC 27608-2632	BLACKFORD, JERAMY BLACKFORD, APRIL 408 E WHITAKER MILL RD RALEIGH NC 27608-2632	KITTRELL, ROBERT L JR 410 E WHITAKER MILL RD RALEIGH NC 27608-2632
WOODS, JOHN M PO BOX 1929 DAVIDSON NC 28036-1929	RESIDENT/TENANT 412 E WHITAKER MILL RD RALEIGH NC 27608	7AM VENTURES LLC 3434 EDWARDS MILL RD STE 112-384 RALEIGH NC 27612-4275
RESIDENT/TENANT 500 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 502 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 504 E WHITAKER MILL RD RALEIGH NC 27608
BUTLER, KEITH BUTLER, JUDY 500 MIAL ST RALEIGH NC 27608-1818	WHITAKER GLEN PROPERTIES INC 1626 JEURGENS CT NORCROSS GA 30093-2219	RESIDENT/TENANT 501 E WHITAKER MILL RD RALEIGH NC 27608
MORRISON, LEIGH KFOURY 501 MIAL ST RALEIGH NC 27608-1817	KEMPSON, OTIS CRAIG KEMPSON, SYDNEY K 504 MIAL ST RALEIGH NC 27608-1818	MARIENCHECK, ROBERT C MARIENCHECK, SHELLEY NIKOLE 505 MIAL ST RALEIGH NC 27608-1817
SASSER, MADISON D SASSER, CARSON G 505 MILLS ST RALEIGH NC 27608-1823	ROGACKI, DANIEL 506 E WHITAKER MILL RD RALEIGH NC 27608-2634	BLASKO, DONNA A 506 MIAL ST RALEIGH NC 27608-1818
JACKSON, JAMES JACKSON, LEIGH ANN 507 MIAL ST RALEIGH NC 27608-1817	BHAR, HARDEEP PAUL BHAR, ELIZABETH MATTA 507 MILLS ST RALEIGH NC 27608-1823	BURNS, BONNIE C SMITH, BENJAMIN H 1817 REAVES DR RALEIGH NC 27608-2545
RESIDENT/TENANT 508 E WHITAKER MILL RD RALEIGH NC 27608	FULLER, JOEL C FULLER, CASSANDRA C 212 VAN BUREN ST HERNDON VA 20170-5325	RESIDENT/TENANT 508 MIAL ST RALEIGH NC 27608
JOHNSEN, DAVID JOHNSEN, LISA C 509 MIAL ST RALEIGH NC 27608-1817	FINNAMORE, BRIAN FINNAMORE, SIOBHAN 509 MILLS ST RALEIGH NC 27608-1823	SLATTERY, MARK SLATTERY, SCOTT CAUDILL 510 E WHITAKER MILL RD RALEIGH NC 27608-2634

RICE, NATALIE M WELBORN, JUDSON A 510 MIAL ST RALEIGH NC 27608-1818	MCNAMARA, MICHELLE J 511 MIAL ST RALEIGH NC 27608-1817	HOLT, FRANK H 511 MILLS ST RALEIGH NC 27608-1823
JACKSON, DANIEL WAYNE TRUSTEE THE DANIEL W JACKSON TRUST 512 E WHITAKER MILL RD RALEIGH NC 27608-2634	MATTHEWS, KIRK J JR MATTHEWS, JORDYN R 512 MIAL ST RALEIGH NC 27608-1818	MAYVIEW HEALTHCARE PROPERTIES INC ATTN: PROPERTY MANAGEMENT 1626 JEURGENS CT NORCROSS GA 30093-2219
RESIDENT/TENANT 513 E WHITAKER MILL RD RALEIGH NC 27608	BOBRYSHEV, PAUL V BOBRYSHEV, ELIZA A 513 MIAL ST RALEIGH NC 27608-1817	RORK, TYLER 513 MILLS ST RALEIGH NC 27608-1823
WILLIAMS, FRANCIS CHARLES JR 514 E WHITAKER MILL RD RALEIGH NC 27608-2634	BARROW, SAMUEL L BOLUS, SHARON YVONNE 514 MIAL ST RALEIGH NC 27608-1818	DARAB, ANDREW D WEST, BLAIR E 515 MIAL ST RALEIGH NC 27608-1817
GRAYSON HOMES LLC 5711 SIX FORKS RD STE 103 RALEIGH NC 27609-3888	RESIDENT/TENANT 515 MILLS ST RALEIGH NC 27608	GOTTSCHALL, CHERYL A 516 E WHITAKER MILL RD RALEIGH NC 27608-2634
BRINCEFIELD, RAY NELSON 516 MIAL ST RALEIGH NC 27608-1818	KIRBY, KRISTEN 517 MIAL ST RALEIGH NC 27608-1817	MINTON, CORA J 517 MILLS ST RALEIGH NC 27608-1823
FOSTER, ANTOINETTE P 518 E WHITAKER MILL RD RALEIGH NC 27608-2634	LINDLEY, MATTHEW M GRAHAM, CYNTHIA MILLICENT 518 MIAL ST RALEIGH NC 27608-1818	REILLY, THOMAS J REILLY, NGHI T 519 MIAL ST RALEIGH NC 27608-1817
REID, TARA 519 MILLS ST RALEIGH NC 27608-1823	KOWALKE, ELIZABETH ROSE KOWALKE, DAVID STEPHEN 520 LEDBETTER CT RALEIGH NC 27608-2665	JOHNSON, MICHAEL W II JOHNSON, TYLER 520 MIAL ST RALEIGH NC 27608-1818
CRISP, SAMUEL JESSE CRISP, KELLY MCSWAIN 520 MILLS ST RALEIGH NC 27608-1824	MAYVIEW HEALTHCARE PROPERTIES INC ATTN: PROPERTY MANAGEMENT 1626 JEURGENS CT NORCROSS GA 30093-2219	BLAESER, ALLISON D GILLOOLY, JAMES R 521 LEDBETTER CT RALEIGH NC 27608-2665
ARNOLD, JASON ARNOLD, CATHERINE 521 MIAL ST RALEIGH NC 27608-1817	VIVES, KATHERINE P CABRE, FRANCESC DASSIS VIVES 521 MILLS ST RALEIGH NC 27608-1823	KING FAMILY REAL ESTATE LLC 10724 BEAVER POND LN RALEIGH NC 27614-9661

RESIDENT/TENANT 522 E WHITAKER MILL RD RALEIGH NC 27608	GLISSON, KELSEY PO BOX 6311 RALEIGH NC 27628-6311	RESIDENT/TENANT 522 LEDBETTER CT RALEIGH NC 27608
HERRING, FLEMING C HERRING, SARAH A 522 MILLS ST RALEIGH NC 27608-1824	GARRELL, MONIKA G 523 LEDBETTER CT RALEIGH NC 27608-2665	COHEN, MAYA JEAN 525 LEDBETTER CT RALEIGH NC 27608-2665
HEBERER, DREW ANSLEY HEBERER, KELLY PRETTMAN 525 MIAL ST RALEIGH NC 27608-1817	SMITH, HEATHER 527 LEDBETTER CT RALEIGH NC 27608-2665	HAMMER, HOLLY ELIZABETH ROSS 528 LEDBETTER CT RALEIGH NC 27608-2665
LANCASTER, ABIGAIL GARDNER, MADISON 529 MIAL ST RALEIGH NC 27608-1817	SHOOP, MARY MELISSA 530 LEDBETTER CT RALEIGH NC 27608-2665	DIMAGGIO, BARBARA 532 LEDBETTER CT RALEIGH NC 27608-2665
ALFORD, JULIE WILSON 534 LEDBETTER CT RALEIGH NC 27608-2665	VAUGHN, KATHERINE 538 LEDBETTER CT RALEIGH NC 27608-2665	DAVILA, AMY M 540 LEDBETTER CT RALEIGH NC 27608-2665
DIXON, MADISON TAYLOR SASSER, CARSON GRAY 542 LEDBETTER CT RALEIGH NC 27608-2665	BLAKE, BETSY 544 LEDBETTER CT RALEIGH NC 27608-2665	SIGNATURE VENTURES PARTNERS, LLC ATTN: MANAGER 4208 SIX FORKS RD STE 1700 RALEIGH NC 27609-5734
RESIDENT/TENANT 548 LEDBETTER CT RALEIGH NC 27608	NEOLA, STEPHEN A NEOLA, VIORICA MARCIN 77 JEFFERSON ST APT 3 HOBOKEN NJ 07030-7842	RESIDENT/TENANT 550 LEDBETTER CT RALEIGH NC 27608
KANE, WILLIAM DRAKE 552 LEDBETTER CT RALEIGH NC 27608-2665	AMASH, JOSEPH R 554 LEDBETTER CT RALEIGH NC 27608-2665	TILLMAN, JOHN EDWARD TILLMAN, ERIN CALLAHAN 600 E WHITAKER MILL RD RALEIGH NC 27608-2636
SMITH, ASHLEY DAVIS SMITH, BENJAMIN WILLIAM 601 NEW RD RALEIGH NC 27608-2705	TILLMAN, JOHN M TILLMAN, SHEILA 249 ECHO LAKES DR HENDERSONVILLE NC 28739-7960	RESIDENT/TENANT 602 E WHITAKER MILL RD RALEIGH NC 27608
TOMLINSON, TRAVIS H TOMLINSON, LINDA C 3320 THOMAS RD RALEIGH NC 27607-6744	RESIDENT/TENANT 604 E WHITAKER MILL RD RALEIGH NC 27608	RUFFNER, ANNE H 604 HIGHPARK LN RALEIGH NC 27608-1794

STONE, CHRISTOPHER CRAIG / TR STONE, NORWOOD EDWARD / TR PO BOX 395 JAMESTOWN NC 27282-0395	RESIDENT/TENANT 604 MILLS ST RALEIGH NC 27608	WIGGINS, BARKER E 605 HIGHPARK LN RALEIGH NC 27608-1793
PECHELES, JOSEPH BRIAN PECHELES, MELISSA WHITE 605 MILLS ST RALEIGH NC 27608-1825	FORD, PATRICK TYLER FORD, ELIZABETH W 605 NEW RD RALEIGH NC 27608-2705	TILLMAN, JOHN E 606 E WHITAKER MILL RD RALEIGH NC 27608-2636
SHANKLAND, WHITNEY 606 HIGHPARK LN RALEIGH NC 27608-1794	HADLEY, CHRIS HADLEY, JENNIFER 606 MILLS ST RALEIGH NC 27608-1826	HOLT, ROBERT W 3820 WOODMONT LN NASHVILLE TN 37215-1716
RESIDENT/TENANT 607 HIGHPARK LN RALEIGH NC 27608	MARSHBURN, STANLEY K 607 MILLS ST RALEIGH NC 27608-1825	WHITAKER ROW II CONDOMINIUMS 602 E WHITAKER MILL RD RALEIGH NC 27608-2636
TILLMAN, JOHN EDWARD 606 E WHITAKER MILL RD RALEIGH NC 27608-2636	RESIDENT/TENANT 602 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 604 E WHITAKER MILL RD RALEIGH NC 27608
RESIDENT/TENANT 606 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 608 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 608 E WHITAKER MILL RD RALEIGH NC 27608
THORNHILL, COOPER 608 HIGHPARK LN RALEIGH NC 27608-1794	JONES, PATRICK A JONES, NORA P 608 MILLS ST RALEIGH NC 27608-1826	DAVIDSON, KATHLEEN E 609 HIGHPARK LN RALEIGH NC 27608-1793
BACON, DANIEL A BACON, MARIA CONSTANZA 609 NEW RD RALEIGH NC 27608-2705	SLAWSON, JENNA 610 E WHITAKER MILL RD RALEIGH NC 27608-2636	ONDINA, DAVID MAGOCS, ASHLEY 610 HIGHPARK LN RALEIGH NC 27608-1794
BAILEY, WILLIAM W JR 610 MILLS ST RALEIGH NC 27608-1826	JORDAN, PHILIP H HENDRICK, KATHERINE E 610 NEW RD RALEIGH NC 27608-2706	DODGE, GREGORY ALAN 611 NEW RD RALEIGH NC 27608-2705
JO-CE ASSOCIATES LIMITED PARTNERSHIP 2204 ASSOCIATE DR STE F RALEIGH NC 27603-8125	RESIDENT/TENANT 612 E WHITAKER MILL RD RALEIGH NC 27608	BIZZELL, MARGARET REAMS 612 HIGHPARK LN RALEIGH NC 27608-1794

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EZZELL, MARK MITCHELL 616A E WHITAKER MILL RD RALEIGH NC 27608-2636	RESIDENT/TENANT 616 E WHITAKER MILL RD RALEIGH NC 27608	RESIDENT/TENANT 616 E WHITAKER MILL RD RALEIGH NC 27608
OWENS, LYNN CORNEY OWENS, MICHAEL ADAM 616 NEW RD RALEIGH NC 27608-2706	ENZWEILER, LUKE JOSEPH 617 HIGHPARK LN RALEIGH NC 27608-1793	MOUGHAMER, TODD PINEAU, NICHOLE 617 NEW RD RALEIGH NC 27608-2705
THORP, SAMUEL THORP, ANNA BAUCOM 618 E WHITAKER MILL RD RALEIGH NC 27608-2636	LEWIS, LEE ELIZABETH LEWIS, JAMES ADDISON 618 NEW RD RALEIGH NC 27608-2706	HIGHPARK TOWNHOMES HOMEOWNERS ASSOCIATION, INC YORK PROPERTIES INC 2108 CLARK AVE RALEIGH NC 27605-1606
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LISTON, RUSSELL SETH 625 NEW RD RALEIGH NC 27608-2705	SCOTT, GRANT J SCOTT, ERIN O 626 E WHITAKER MILL RD RALEIGH NC 27608-2636	RANDOLPH, KIMBERLY SENNA 631 HIGHPARK LN RALEIGH NC 27608-1793
WOOD, STUART FREDERICK WOOD, RONNIE MICHELE 632 E WHITAKER MILL RD RALEIGH NC 27608-2636	FRENCH, NICHOLAS M 633 HIGHPARK LN RALEIGH NC 27608-1793	TWIN STATES FARMING INC PO BOX 1352 SMITHFIELD NC 27577-1352
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RESIDENT/TENANT 643 HIGHPARK LN RALEIGH NC 27608	TROXLER, KATHERINE L 645 HIGHPARK LN RALEIGH NC 27608-1793	E & F PROPERTIES INC PO BOX 1352 SMITHFIELD NC 27577-1352
RESIDENT/TENANT 651 HIGHPARK LN RALEIGH NC 27608	GRIFFIN, E SHELTON JR 2108 CLARK AVE RALEIGH NC 27605-1606	RESIDENT/TENANT 653 HIGHPARK LN RALEIGH NC 27608
DEJOYA, GERMAN DEJOYA, ANASTACIA 5136 TERRA COTTA DR RALEIGH NC 27613-6254	RESIDENT/TENANT 655 HIGHPARK LN RALEIGH NC 27608	SPR ONE LLC 2328 BYRD ST RALEIGH NC 27608-1412
RESIDENT/TENANT 657 HIGHPARK LN RALEIGH NC 27608	MOORE, SUZANNE ROTCHFORD 659 HIGHPARK LN RALEIGH NC 27608-1793	RUMLEY, SETH C RUMLEY, PARKER W 2328 BYRD ST RALEIGH NC 27608-1412
RESIDENT/TENANT 661 HIGHPARK LN RALEIGH NC 27608	SLOAN, E FERRELL 671 HIGHPARK LN RALEIGH NC 27608-1793	GARTEN, CHARLES 672 HIGHPARK LN RALEIGH NC 27608-1794

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RESIDENT/TENANT 674 HIGHPARK LN RALEIGH NC 27608 	SPILLARS, CHRISTINA N 675 HIGHPARK LN RALEIGH NC 27608-1793 	BELVIDERE INVESTMENT COMPANY LLP 3327 LANDOR RD RALEIGH NC 27609-7012
RESIDENT/TENANT 676 HIGHPARK LN RALEIGH NC 27608 	BLACK, LINDSEY C 677 HIGHPARK LN RALEIGH NC 27608-1793 	CITY OF OAKS PROPERTIES LLC 2700 CAMBRIDGE RD RALEIGH NC 27608-1142
RESIDENT/TENANT 678 HIGHPARK LN RALEIGH NC 27608 	MINTON, WILLIAM WESLEY IV MINTON, ELLIS EDWARDS 702 DANIELS ST RALEIGH NC 27605-1117 	RESIDENT/TENANT 679 HIGHPARK LN RALEIGH NC 27608
FELDMAN, CRYSTAL M 680 HIGHPARK LN RALEIGH NC 27608-1794 	BREWER, JOSEPH BEAMAN IV BAITSHOLTS, TARA NICOLE 700 E WHITAKER MILL RD RALEIGH NC 27608-2746 	HALE, ERIC D HALE, ANNA ELIZABETH 701 E WHITAKER MILL RD RALEIGH NC 27608-2717
NORMAN, FRANK ALVIN NORMAN, JAMIE LOUISE 701 KIMBROUGH ST RALEIGH NC 27608-2723 	LEAGUE, CHRISTOPHER J 754 TIMBER LN WILMINGTON NC 28405-3837 	RESIDENT/TENANT 703 E WHITAKER MILL RD RALEIGH NC 27608
RESIDENT/TENANT 703 E WHITAKER MILL RD Unit A RALEIGH NC 27608 		

EXHIBIT C – MEETING ATTENDEES

1. Michael Birch
2. Aneel Gill
3. Nicole Frazier
4. Jennifer Ashton
5. Ira Mabel
6. Don Curry
7. Jennifer Mundt
8. Carrie Hasbrouck
9. Judd Welborn
10. Natalie Welborn
11. Mark Slattery
12. Dan Hamilla
13. Bryce Jennings
14. Edie (no last name provided)
15. Jackie Reiter
16. Molly Diggins
17. Anna Singer
18. Harlan Shays
19. Carol Ashcraft
20. Lynn Kavcsak
21. Mark Ezzell
22. Mary Ann (no last name provided)
23. Megan Riley
24. Moira (no last name provided)
25. Dave Johnson
26. Cheryl Gottschall
27. Sam Crisp

EXHIBIT D – ITEMS DISCUSSED

1. Development team introductions
2. Rezoning process
3. Current site data and proposed zoning district
4. Primary entrance for guests and deliveries is proposed to be off of E. Whitaker Mill Rd.
5. Discussion regarding building types and location of independent living units, assisted living beds, and skilled nursing beds
6. Discussion regarding traffic volumes onto E. Whitaker Mill Rd. generated by proposed development
7. Discussion regarding speed issues along E. Whitaker Mill Rd.
8. Traffic mitigation steps for E. Whitaker Mill Rd.
9. Phasing Plan for development; potential displacement of existing facility residents during construction
10. Rezoning and construction timeframes for project
11. Density and height of proposed buildings
12. Stormwater run-off caused by proposed development, and detention facilities
13. Environmental impacts from existing auto facility
14. Tear-down of certain existing buildings
15. Buffer/vegetation maintenance
16. Proposed development will not impact existing Wake County Community Center
17. Presentation at Five Points CAC once TIA review complete
18. Setbacks of proposed buildings along E. Whitaker Mill Rd.
19. Proposed development will not include stand-a-lone retail open to the general public
20. Additional residents should increase foot traffic to existing retail/restaurants
21. Discussion regarding how residents may track the project as it moves through the rezoning process
22. Lighting impacts on surrounding neighborhoods
23. Construction traffic will most likely use entrance off E. Whitaker Mill Rd., although constructions plans are not definite at this time
24. Elevations of proposed buildings are not completed at this stage
25. TIA process looks at trip generations in general. TIA does not breakdown trips specifically attributed to emergency vehicles

OAKS AT WHITAKER GLEN
PLANNED DEVELOPMENT (PD) DISTRICT
MASTER PLAN

Developer:	PruittHealth
Address:	1626 Jeurgens Court, Norcross, GA 30093
Phone Number:	678.533.6770
Attention:	Nicole Frazier
Email:	nfrazier@pruitthealth.com
Civil Engineer:	The Curry Engineering Group, PLLC
Address:	P.O. Box 2018, 205 S. Fuquay Ave., Fuquay-Varina, NC 27526
Phone Number:	919.552.0849
Attention:	Don Curry, PE
Email:	don@currryeng.com
Architect:	Foley Design
Address:	21 Puritan Mill, 950 Lowery Blvd. NW, Atlanta, GA 30318
Phone Number:	404.400.2297
Attention:	Bryce Jennings, AIA
Email:	brycejennings@foleydesign.com
Landscape Architect:	Southwell Design, PLLC
Address:	P.O. Box 37178, Raleigh, NC 27627
Phone Number:	919.272.6729
Attention:	Adam Southwell, PLA, ASLA
Email:	adam@southwelldesign.com
Attorney:	Nelson Mullins Riley & Scarborough, LLP
Address:	4140 Parklake Avenue, Suite 200, Raleigh, NC 27612
Phone Number:	919.329.3884
Attention:	Beth Trahos
Email:	beth.trahos@nelsonmullins.com

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OAKS AT WHITAKER GLEN

MASTER PLAN NARRATIVE

1. INTRODUCTION

This document and the associated plan sheets submitted herewith (collectively, the Master Plan) are provided pursuant to the Unified Development Ordinance for the Planned Development District for the Oaks at Whitaker Glen development (the "Development"). This Development concerns the 17.96 acres located in the northwest quadrant of the Bernard Street and E. Whitaker Mill Road intersection. The property is located immediately west of the Hi-Mount neighborhood. Currently, the property is developed as a retirement community. The Master Plan proposes a retirement community, providing a continuum of care, with retail and office land uses intended to serve the residents, occupants and employees of the development and the immediate surrounding area.

2. STATEMENT OF INTENT

The Development meets the intent of the PD District set forth in UDO Section 4.1.1.F. in several ways. First, the PD District will allow the Development to achieve a high-quality project design. It will facilitate the integration of a cohesive development that provides residents, occupants and employees access to a range of housing types, services and amenities, and better pedestrian circulation, all while maintaining compatibility with the surrounding area and minimizing impact on the area's infrastructure. Second, the PD District allows the applicant to provide greater transparency and certainty to the public and surrounding residents regarding the location of uses and building height, which is particularly important given the location of this property as it transitions to lower density neighborhoods. Third, the PD District allows the applicant to modify various UDO standards that better enable the applicant to develop a more compact, pedestrian-friendly, mixed-use project than would otherwise be possible without the modifications.

3. COMPREHENSIVE PLAN CONFORMANCE

The Master Plan addresses the development and redevelopment of approximately 17.96 acres located along E. Whitaker Mill Road and Bernard Street. The purpose of this rezoning and Master Plan is to support, in an economically viable manner, the redevelopment of the property, which: (a) provides the residents, occupants and employees of the project with a continuum of care and associated amenities; (b) facilitates the renovation of existing buildings; and (c) adds appropriately scaled buildings to meet the City's growing senior population.

The Future Land Use Map identifies the property as Institutional to the north of E. Whitaker Mill Road, Neighborhood Mixed Use at the intersection of E. Whitaker Mill Road. and Bernard Street, and Moderate Density Residential to the north of the Neighborhood Mixed Use portion of the property along Bernard Street. Institutional recommends land and facilities occupied by hospitals and medical complexes. Neighborhood Mixed Use applies to neighborhood shopping centers and pedestrian-oriented retail districts, as well as Medium Density residential uses that

complement those commercial uses. Moderate Density Residential recommends a mix of single-family detached homes, townhomes and multifamily dwellings with overall gross density not exceeding fourteen (14) units per acre. The Project is consistent with this policy guidance given the proposed continuum of care retirement community uses and associated residential, retail and office land uses.

4. GENERAL DESIGN PRINCIPLES AND URBAN DESIGN GUIDELINES CONFORMANCE

The Project complies with many of the General Design Principles set forth in UDO section 4.7.5. Specifically, the Project includes the opportunity to provide new residential development to meet the City's growth. Internal connections provide convenient pedestrian access throughout the development along with connections to the surrounding street network designed to serve residents, occupants and employees of this community.

The Development also will be well-integrated and provide ample recreational amenities – both passive and active – to serve the residents, occupants and employees of the project. Architecture and landscaping will provide a cohesive design to the buildings and site layout, complimenting the site's features. Finally, the Development is limited to a scale that ensures ample access to light and air for the residents, occupants and employees of the community, as well as the residents of surrounding properties.

In addition, the Development incorporates a number of elements of the Urban Design Guidelines. For example, open spaces provide convenient seating opportunities and are integrated throughout the Development. Internal accessways are interconnected throughout, providing ease of vehicular and pedestrian circulation and access for residents, occupants and employees. The Development transitions to the surrounding neighborhoods through the use of setbacks and landscaping.

5. BLOCK PERIMETER AND SITE ACCESS

The block perimeter and site access standards shall be satisfied for the Development per the Master Plan. The project is not proposing any new public streets. The property is bordered on the west side by the Wake County Home, a Raleigh Historic Landmark. On the east side, the property is bordered by a single-family home and townhome lots. The property is developed with a retirement community. The proposed redevelopment will continue the existing use and expand the continuum of care, which includes skilled nursing, memory care services and assisted living components, all of which would be negatively impacted by a public street traversing the property. Instead of internal public streets, the project proposes internal accessways that provide interconnected access throughout the property for use by residents, occupants and employees of this community, and intersect with the adjacent public streets on the north, east and south sides of the property. The Master Plan's proposed drive network will facilitate safe and efficient vehicular and pedestrian access throughout the property without the necessity of additional public streets. In addition, improvements are being made to E. Whitaker Mill and Bernard Streets that will improve public access for vehicles, bikes and pedestrians in the area.

6. PHASING

The Project contains five (5) phases and is shown in detail on Master Plan Sheet C-03. The initial phase of development may either be within Phase 1 (Pod D) or Phase 2 (Pod A), or a combination of those. Project phasing may be by entire Phase or by portions of any Phase, and is not required to be sequential. Final project phasing will be determined at the time of site permitting. Utility infrastructure that serves a particular phase of development shall be installed during the development of said phase, as provided by the UDO.

7. LAND USES & INTENSITY

A. Base District. The base district for this Planned Development district shall be the Neighborhood Mixed Use (NX) district. All principal and accessory land uses permitted in the NX district shall be permitted on the property in accordance with the Allowed Principal Use Table, except that the following principal uses as listed in UDO section 6.1.4 shall be prohibited:

i. Vehicle Fuel Sales
ii. Vehicle Sales/Rental
iii. Detention Center, Jail, Prison
iv. Vehicle Repair (Minor)

B. Overall Maximum Development Intensity. The total amount of development on the Property shall not exceed the intensities for each use as set forth below:

i. Non-Residential Uses – 28,500 square feet gross floor area, which can be located in Apartment, General, Mixed Use, and Open Lot building types.
ii. Residential Uses – 470 dwelling units, which can be located in Townhouse, Apartment, Civic, Mixed Use, and Open Lot building types. Except for skilled nursing care units which may service people of any age requiring skilled nursing care, residential uses shall service only persons meeting the housing for Older Persons Exemption to the Fair Housing Act (24 C.F.R. Sections 100.300 through 100.308, as the same may be amended from time to time.) In addition, the following interior amenity spaces totaling no more than 80,000 square feet of building area shall be permitted in support of the age-restricted residential units: common meeting spaces; common living areas; game rooms; business centers; craft and/or activity areas; dining room; coffee shop and/or café; kitchens and storage areas; chapel; theater; spa/salon/barbershop; and gym/ fitness centers but all are limited to use by residents, occupants and employees only (the "Residential Service Areas.")
iii. Remote Parking – During construction, each Pod may be used as Remote Parking for another Pod.

C. Pod A Maximum Development Intensity.

i. Uses & Density – 125 dwelling units and Residential Service Areas; 4,000 SF non-residential floor area
ii. Building Height – 5 stories
iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

D. Pod B Maximum Development Intensity.

i. Uses & Density – 180 dwelling units and Residential Service Areas; 24,500 SF non-residential floor area
ii. Building Height – 5 stories
iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

E. Pod C Maximum Development Intensity.

i. Uses & Density – 55 dwelling units and Residential Service Areas
ii. Building Height – 5 stories
iii. Building Types – Townhouse, Apartment, Civic, General, Mixed Use, Open Lot

F. Pod D Maximum Development Intensity.

i. Uses & Density – 100 dwelling units and Residential Service Areas
ii. Building Height – 4 stories
iii. Building Types – Townhouse, Apartment, Civic, General, Mixed-Use, Open Lot

G. Pod E Maximum Development Intensity.

i. Uses & Density – 10 dwelling units
ii. Building Height – 3 stories
iii. Building Types – Townhouse, Apartment, Civic, Open Lot

H. General Notes.

i. Within each Pod, an Apartment or Mixed-Use building type can have all, none or a portion of the amount of permitted residential dwelling units.
ii. References to land uses in this Section 7 shall have the meaning as ascribed in the Allowed Principal Use Table (UDO section 6.1.4). This Section 7 shall not act as a prohibition on specific land uses otherwise allowed as a permitted, limited or special use in UDO Section 6.1.4. and not listed in Section 7.B. of the Master Plan. Additionally, the floor area for any land use permitted by this Master Plan that is not expressly listed in Section 9.B. shall be counted against the amount of floor area assigned for non-residential land uses.

iii. Signage shall be permitted in accordance with Article 7.3 of the UDO as if the property were zoned NX.

8. MODIFICATIONS

A. Building Setbacks – In order to allow for design flexibility and promote walkability, the side lot line and rear lot line setback requirements of UDO Sections 3.2.3, 3.2.4., 3.2.5, 3.2.6., and 3.2.7. shall be a minimum of 0'.

B. Building Separation – No building separation that may be required by the UDO shall be applicable. Instead, building separation shall be governed by the North Carolina Building Code.

C. Ground Floor Elevation – The minimum ground floor elevation requirements of UDO Sections 3.2.3, 3.2.4., 3.2.5., 3.2.6., and 3.2.7. shall not apply.

D. Parking Standards – The Project shall be exempt from the parking standards set forth in UDO Section 7.1.2.C. and shall following the parking ratios set forth below:

i. One space per dwelling unit of independent living use.
ii. One space per 3 beds for assisted living and skilled nursing use.
iii. One space per 400 square feet gross floor area for any non-residential principal use.
iv. No parking is required for accessory uses.

E. Outdoor Amenity Area – The outdoor amenity standards shall not apply.

F. Build-To – Build-to standards shall not apply to any public street; however, all buildings within Pod B shall have a maximum setback of one hundred and twenty feet (120') from the street right-of-way of E. Whitaker Mill Road and a maximum setback of ninety feet (90') from the street right-of-way of Bernard Street. In addition, no more than two bays of on-site parking with a single drive aisle shall be located between any building and the street right-of-way of E. Whitaker Mill Road, nor shall more than one bay of on-site parking with a single drive aisle be located between any building and the street right-of-way of Bernard Street.

G. Driveway Spacing –The minimum driveway spacing requirement of UDO Section 8.3.5.C.3. shall be reduced to two hundred feet (200') in order to provide efficient access to each of the Pods except that the existing westernmost drive shall be permitted to remain generally in its current location. There shall be no more than three (3) site driveways along E. Whitaker Mill and no more than two (2) site driveways along Bernard Street, unless required by Raleigh Transportation.

H. Intersection Spacing – The minimum driveway spacing from intersections requirement found in Raleigh Street Design Manual Article 9.5 shall be reduced to two hundred feet (200') in order to provide efficient access to each of the Pods.

I. Neighborhood Transitions – Due to the limited space between the proposed internal accessways and the adjacent residential properties on Mills Street, coupled with the need for buffering and street trees, the Neighborhood Transition standards found in UDO Article 3.5 shall not apply to Pod D or Pod E.

9. ADDITIONAL DEVELOPMENT STANDARDS

A. For that portion of Pod B adjoining the southern boundary line of Lot 20 as shown on the plat recorded in Book of Maps 2014, Page 975 (the "Highpark Court Townhomes Association Property"), there shall be a minimum principal building setback of 125 feet as measured perpendicular from the southern boundary line of the Highpark Court Townhomes Association Property.

B. For those portions of Pod D and Pod E adjoining the western boundary line of the Highpark Court Townhomes Association Property, there shall be a minimum principal building setback of 50 feet as measured perpendicular from the western boundary line of the Highpark Court Townhomes Association Property.

C. As a part of Phase 1, the property owner shall black out and restripe E. Whitaker Mill Road between Bernard Street and Reaves Street to a two-lane cross section with a center turn lane and a bike path generally as shown on Map C-04. In addition, the property owner shall install a median refuge in the area of E. Whitaker Mill Road parallel to the subject property generally as shown on Map C-04.

D. As a part of Phase 3, the property owner shall install a median refuge in Bernard Street in the area of Bernard Street parallel to the subject property generally as shown on Map C-04.

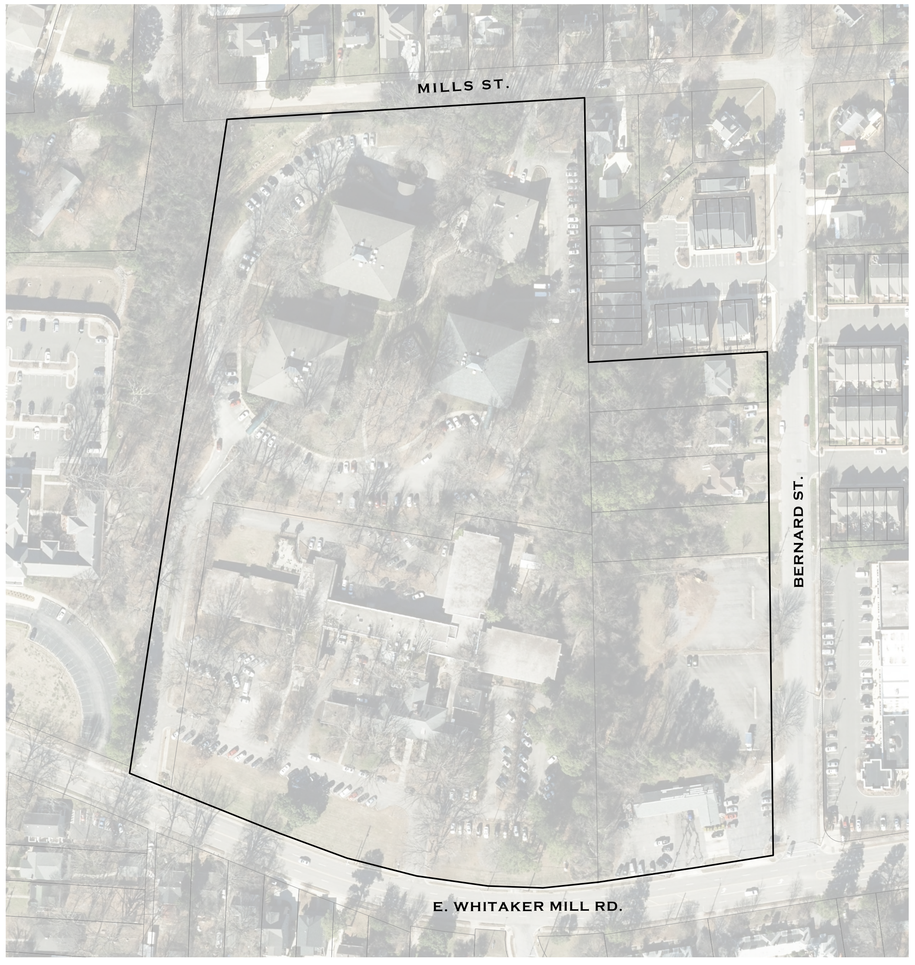
OAKS AT WHITAKER GLEN

CITY OF RALEIGH - WAKE COUNTY, NORTH CAROLINA

PD MASTER PLAN

PLANNED DEVELOPMENT MASTER PLAN #Z-17-21

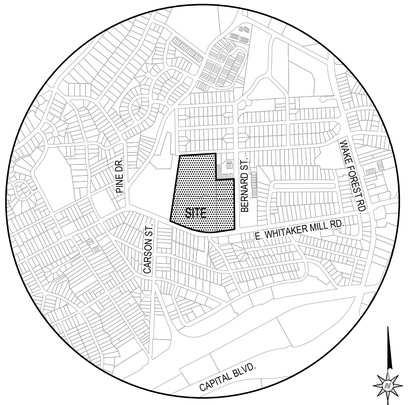
1st SUBMITTAL TO CITY OF RALEIGH: DECEMBER 23, 2020
2nd SUBMITTAL TO CITY OF RALEIGH: AUGUST 18, 2021



SCALE: 1 IN = 100 FT
100' 50' 0 100' 200'
SCALE IN FEET
HORIZONTAL

DRAWING INDEX

C-00	COVER SHEET
C-01	EXISTING CONDITIONS PLAN
C-02	CURRENT USES PLAN
C-03	DEVELOPMENT PLAN
C-04	ACCESS, PARKING, & PEDESTRIAN CIRCULATION PLAN
C-05	OPEN SPACE & TREE CONSERVATION PLAN
C-06	MAJOR UTILITIES & GENERALIZED STORMWATER PLAN
C-07	3D MASSING MODEL



VICINITY MAP
SCALE: 1" = 1000'

SITE INFORMATION:

LOCATION:	513 E. WHITAKER MILL RD. RALEIGH, NC 27608
COUNTY:	WAKE
PARCEL #:	1704-89-7093, 1704-89-8505, 1704-99-2012, 1704-99-2224, 1704-99-2310, 1704-99-2318, 1704-99-2414
CURRENT ZONING:	RX-4, CX-3, R-10
PROPOSED ZONING:	PD
TOTAL SITE AREA:	17.96 AC

Civil Engineer:

The Curry Engineering Group, PLLC
NC License # P-0799
PO Box 2018
205 S. Fuquay Ave
Fuquay-Varina, NC 27526
919.552.0849 (o)
919.880.9857 (m)
Contact: Don Curry, PE
don@curryeng.com

Landscape Architect:

Southwell Design, PLLC
P.O. Box 37178
Raleigh, NC 27627
919.272.6729 (v)
Contact: Adam Southwell, PLA, ASLA
adam@southwelldesign.com

Surveyor:

McAdams
2905 Meridian Parkway
Durham, NC 27713
919.361.5000 x284 (o)
919.361.0477 (m)
Contact: John R. Pickens, PLS
pickens@mcadamsco.com

Owner:

PruittHealth
1626 Jeurgens Court
Norcross, GA 30093
678.533.6770 (o)
706.491.9099 (m)
Contact: Nicole Frazier
nfrazier@pruitthealth.com

Architect:

Foley Design
21 Puritan Mill
950 Lowery Blvd. NW
Atlanta, GA 30318
404.400.2297 (o)
770.663.6341 (m)
Contact: Bryce Jennings, AIA
brycejennings@foleydesign.com

Attorney:

Nelson Mullins Riley & Scarborough, LLP
GlenLake One
4140 Parklake Ave, Suite 200
Raleigh, NC 27612
919.329.3884
Contact: Beth Trahos
beth.trahos@nelsonmullins.com

GOVERNING AGENCIES:

PLANNING/ZONING:
CITY OF RALEIGH
ONE EXCHANGE PLAZA SUITE 304
RALEIGH, NC 27601
919-996-2437

STORMWATER ENGINEERING
CITY OF RALEIGH
ONE EXCHANGE PLAZA
RALEIGH, NC 27601
919-996-3515 (o)
CONTACT: BEN BROWN
EMAIL: ben.brown@raleighnc.gov

SEDIMENTATION & EROSION CONTROL
CITY OF RALEIGH
ONE EXCHANGE PLAZA
RALEIGH, NC 27601
919-996-3515 (o)
CONTACT: BEN BROWN
EMAIL: ben.brown@raleighnc.gov

UTILITY AGENCIES:

WATER & SEWER
CITY OF RALEIGH PUBLIC UTILITIES
ONE EXCHANGE PLAZA
RALEIGH, NC 27601
919-996-3484 (o)
CONTACT: KEITH TEW
EMAIL: keith.tew@raleighnc.gov

NATURAL GAS
PSNC ENERGY - SCANA
3516 SPRING FOREST ROAD
RALEIGH, NC 27616
919-501-7665 (o)
919-501-7685 (f)
CONTACT: CRAIG SCHOLL
EMAIL: cscholl@scana.com

ELECTRIC
PROGRESS ENERGY BUSINESS
9920 FAYETTEVILLE ROAD
RALEIGH, NC 27603
919-557-2611 (o)

PHONE
AT&T NC
5715 GLENWOOD AVE.
RALEIGH, NC 27612
910-785-7856 (o)
CONTACT: WANDA HARRIS
EMAIL: wh1741@att.com (e)

CABLE
TIME WARNER CABLE
101 INNOVATION AVE.
MORRISVILLE, NC 27560
919-882-4748 (o)
CONTACT: JEFF HUNTER
EMAIL: jeffrey.hunter@twcable.com

SEAL

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

NOT FOR CONSTRUCTION

REVISIONS	
1	8/11/2021
	COOR COMMENTS

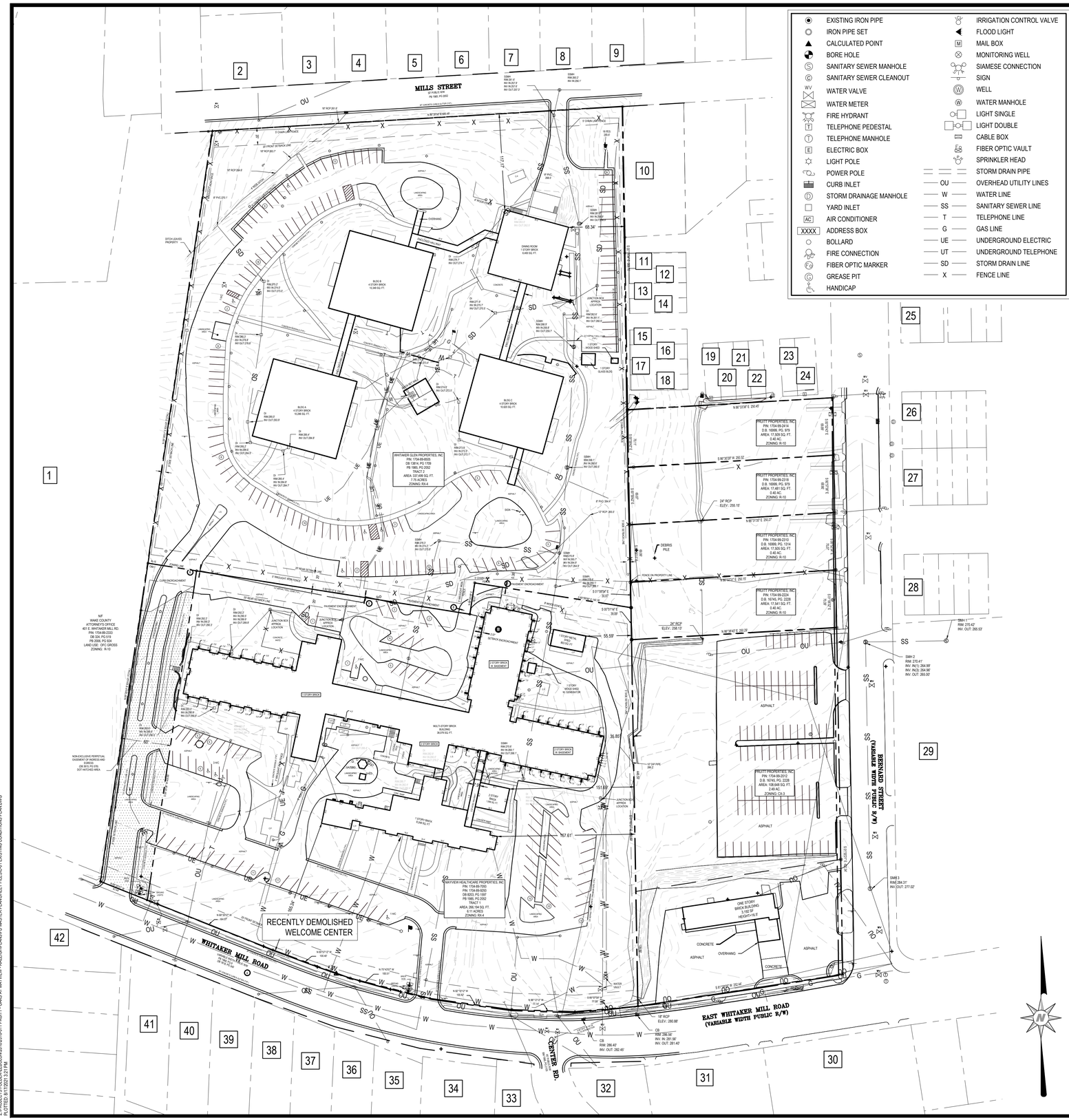
DATE: 12/23/2020
FILE NO: 2018-011
HORZ. SCALE: NONE
ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
COVER SHEET

T (919) 552-0849
F (919) 552-2043
205 S. Fuquay Avenue
Fuquay-Varina, NC 27526
NC LIC. NO. P-0799
Curry ENGINEERING

C-00

Z:\PROJECTS FOLDER\ZEBULON\2018\2018-011 PRUITT - OAKS AT MAYVIEW - RALEIGH\PLANS\PD MASTER PLAN\SHEET FILES\C-00 COVER SHEET.DWG
PLOTTED: 8/17/2021 3:19 PM



EXISTING IRON PIPE	IRRIGATION CONTROL VALVE
IRON PIPE SET	FLOOD LIGHT
CALCULATED POINT	MAIL BOX
BORE HOLE	MONITORING WELL
SANITARY SEWER MANHOLE	SIAMESE CONNECTION
SANITARY SEWER CLEANOUT	SIGN
WATER VALVE	WELL
WATER METER	WATER MANHOLE
FIRE HYDRANT	LIGHT SINGLE
TELEPHONE PEDESTAL	LIGHT DOUBLE
TELEPHONE MANHOLE	CABLE BOX
ELECTRIC BOX	FIBER OPTIC VAULT
LIGHT POLE	SPRINKLER HEAD
POWER POLE	STORM DRAIN PIPE
CURB INLET	OVERHEAD UTILITY LINES
STORM DRAINAGE MANHOLE	WATER LINE
YARD INLET	SANITARY SEWER LINE
AIR CONDITIONER	TELEPHONE LINE
ADDRESS BOX	GAS LINE
BOLLARD	UNDERGROUND ELECTRIC
FIRE CONNECTION	UNDERGROUND TELEPHONE
FIBER OPTIC MARKER	STORM DRAIN LINE
GREASE PIT	FENCE LINE
HANDICAP	

GENERAL NOTES:

1. THIS PLAN IS NOT INTENDED FOR PLATTING OR RECORDATION.
2. THE INTENT OF THIS PLAN IS TO ILLUSTRATE THE EXISTING FEATURES, STRUCTURES, AND TOPOGRAPHY OF THE PROPERTY. THE INFORMATION SHOWN ON THIS PLAN WAS PROVIDED AND DEVELOPED BY OTHERS. CURRY ENGINEERING DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION, THUS IT HAS NOT BEEN SEALED. THE BOUNDARY & ENVIRONMENTAL INFORMATION SHOWN REPRESENTS A SERIES OF FIELD SURVEYS CONDUCTED IN NOVEMBER 2019 AND APRIL-JUNE 2020.
3. TOPOGRAPHY SHOWN ON THIS PLAN IS PER FIELD SURVEY.
4. THE ENGINEER UNDERSTANDS THE SURVEY INFORMATION PROVIDED TO MEET THE FOLLOWING CRITERIA:
   - THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING SAME. PROPERTY BOUNDARY SHOWN BASED PER MAPS AND DEEDS OF RECORD ONLY.
   - NO TITLE SEARCH HAS BEEN PERFORMED BY THIS FIRM DURING THE COURSE OF THIS SURVEY.
   - THIS SURVEYOR DOES NOT CERTIFY TO THE EXISTENCE OR NON-EXISTENCE OF ANY UNDER GROUND UTILITIES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
   - HORIZONTAL DATUM = NAD83, VERTICAL DATUM = NAVD88
6. A FINAL JURISDICTIONAL DETERMINATION OF ENVIRONMENTAL FEATURES ON SITE HAS BEEN CONDUCTED AND NO CORRESPONDING FEATURES ARE PRESENT ON SITE.
7. SOME SITE UTILITIES MAY BE RETAINED UPON REDEVELOPMENT OF THE SUBJECT PROPERTY. THIS WILL BE DETERMINED AT THE TIME OF PERMITTING AND IN CONJUNCTION WITH THE CITY OF RALEIGH AND OTHER UTILITY PROVIDERS.

PROPERTY ID	PIN	Owner	Deed Book	Deed Page	Deed Acres	Site Address	Zoning
1	1704892333	WAKE COUNTY	324	519	8.9	401 E WHITAKER MILL RD	R-10
2	1704896931	MERRIMAN, MATTHEW MERRIMAN, JULIE	16745	118	0.21	2000 WIGGS ST	R-10
3	1704897913	SASSER, MADISON D SASSER, CARSON G	18158	1469	0.17	505 MILLS ST	R-10
4	1704897973	BHAR, HARDEEP PAUL BHAR, ELIZABETH MATTA	17450	105	0.22	507 MILLS ST	R-10
5	1704898934	FINNAMORE, BRIAN FINNAMORE, SIOBHAN	16307	2680	0.22	509 MILLS ST	R-10
6	1704898994	HOLT, FRANK H	1009	320	0.21	511 MILLS ST	R-10
7	1704899954	RORK, TYLER	17783	439	0.22	513 MILLS ST	R-10
8	1704990924	GRAYSON HOMES LLC	17657	2122	0.22	515 MILLS ST	R-10
9	1704990984	MINTON, CORA J	9702	719	0.22	517 MILLS ST	R-10
10	1704991727	CRISP, SAMUEL JESSE CRISP, KELLY MCSWAIN	16893	61	0.28	520 MILLS ST	R-10
11	1704991636	AMASH, JOSEPH R	15732	589	0.03	554 LEDBETTER CT	RX-3-CU
12	1704991634	KANE, WILLIAM DRAKE	15753	1044	0.03	552 LEDBETTER CT	RX-3-CU
13	1704991632	NEOLA, STEPHEN A NEOLA, VIORICA MARCIN	15730	2330	0.03	550 LEDBETTER CT	RX-3-CU
14	1704991630	SIGNATURE VENTURES PARTNERS, LLC	16684	2311	0.03	548 LEDBETTER CT	RX-3-CU
15	1704991537	BLAKE, BETSY	17604	2624	0.03	544 LEDBETTER CT	RX-3-CU
16	1704991535	DIXON, MADISON TAYLOR SASSER, CARSON GRAY	15812	2478	0.03	542 LEDBETTER CT	RX-3-CU
17	1704991533	DAVILA, AMY M	17034	1330	0.03	540 LEDBETTER CT	RX-3-CU
18	1704991531	VAUGHN, KATHERINE	15791	464	0.03	538 LEDBETTER CT	RX-3-CU
19	1704992502	ALFORD, JULIE WILSON	17901	1518	0.03	534 LEDBETTER CT	RX-3-CU
20	1704992512	CLARK, LEE MILLER	17591	848	0.03	532 LEDBETTER CT	RX-3-CU
21	1704992532	SHOOP, MARY MELISSA	15945	2203	0.03	530 LEDBETTER CT	RX-3-CU
22	1704992553	HAMMER, HOLLY ELIZABETH-ROSS	15918	1327	0.03	528 LEDBETTER CT	RX-3-CU
23	1704992593	GLISSON, KELSEY	15967	227	0.03	522 LEDBETTER CT	RX-3-CU
24	1704993513	KOWALKE, ELIZABETH ROSE KOWALKE, DAVID STEPHEN	15872	2008	0.04	520 LEDBETTER CT	RX-3-CU
25	1704994549	WIGGINS, BARKER E	16829	1568	0.04	605 HIGHPARK LN	RX-3-CU
26	1704994446	RUFFNER, ANNE H	12278	1818	0.04	604 HIGHPARK LN	RX-3-CU
27	1704994349	FELDMAN, CRYSTAL M	16782	1953	0.04	680 HIGHPARK LN	RX-3-CU
28	1704994246	MINTON, WILLIAM WESLEY IV MINTON, ELLIS EDWARDS	17833	636	0.04	679 HIGHPARK LN	RX-3-CU
29	1704995042	NORTHSIDE ASSOCIATES	2766	408	2.3	1910 BERNARD ST	CX-3
30	1704983645	WHITAKER ROW CONDOMINIUM	9479	383	0.5	616 E WHITAKER MILL RD	R-10
30	1704983645	SLAWSON, JENNA	16780	676	0	610 E WHITAKER MILL RD	R-10
30	1704983645	JO-CE ASSOCIATES LIMITED PARTNERSHIP	17828	1853	0	612 E WHITAKER MILL RD	R-10
30	1704983645	SMITH, REBECCA HOLCOMB	12658	1471	0	614 E WHITAKER MILL RD	R-10
30	1704983645	RUSHING, JILL L	11445	1933	0	616 E WHITAKER MILL RD	R-10
30	1704983645	EZZELL, MARK MITCHELL	9426	592	0	616 E WHITAKER MILL RD	R-10
31	1704981683	WHITAKER ROW II CONDOMINIUMS	10593	2664	0.37	608 E WHITAKER MILL RD	R-10
31	1704981683	TILLMAN, JOHN M TILLMAN, SHEILA	15970	1771	0	602 E WHITAKER MILL RD	R-10
31	1704981683	TOMLINSON, TRAVIS H TOMLINSON, LINDA C	11582	1197	0	604 E WHITAKER MILL RD	R-10
31	1704981683	TILLMAN, JOHN E	11896	2581	0	606 E WHITAKER MILL RD	R-10
31	1704981683	TILLMAN, JOHN EDWARD	15698	1953	0	608 E WHITAKER MILL RD	R-10
32	1704980674	TILLMAN, JOHN EDWARD TILLMAN, ERIN CALLAHAN	17085	315	0.15	600 E WHITAKER MILL RD	R-10
33	1704889414	SHILOH PRESBYTERIAN CHURCH	16201	1484	0.9	219 GEORGETOWN RD	R-10
34	1704888587	KING FAMILY REAL ESTATE LLC	15552	956	0.41	522 E WHITAKER MILL RD	R-10
35	1704888519	FOSTER, ANTOINETTE P	2874	159	0.25	518 E WHITAKER MILL RD	R-10
36	1704887651	GOTTSCHALL, CHERYL A	10648	289	0.21	516 E WHITAKER MILL RD	R-10
37	1704887602	WILLIAMS, FRANCIS CHARLES JR	16119	1524	0.21	514 E WHITAKER MILL RD	R-10
38	1704886665	JACKSON, DANIEL WAYNE TRUSTEE THE DANIEL W JACKSON TRUST	16308	1742	0.22	512 E WHITAKER MILL RD	R-10
39	1704886618	SLATTERY, MARK SLATTERY, SCOTT CAUDILL	9060	597	0.22	510 E WHITAKER MILL RD	R-10
40	1704885668	BURNS, BONNIE C SMITH, BENJAMIN H	17464	1046	0.22	508 E WHITAKER MILL RD	R-10
41	1704885710	ROGACKI, DANIEL	17509	1211	0.22	506 E WHITAKER MILL RD	R-10
42	1704883853	7AM VENTURES LLC	13937	318	0.31	500 E WHITAKER MILL RD	R-10

SCALE: 1 IN = 60 FT

60' 30' 0 60' 120'

SCALE IN FEET HORIZONTAL

NOT FOR CONSTRUCTION

SEAL

PROFESSIONAL ENGINEER SEAL NOT AFFIXED TO SHEET AS ENGINEER DOES NOT CERTIFY INFORMATION PROVIDED BY OTHERS

REVISIONS	
1	8/11/2021
	COK COMMENTS

DATE: 12/23/2020 HORZ. SCALE: 1" = 60'

FILE NO. 2018-011 ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN

EXISTING CONDITIONS PLAN

205 S. Fuquay Avenue
Fuquay-Varina, NC 27526

T (919) 552-0849
F (919) 552-2343

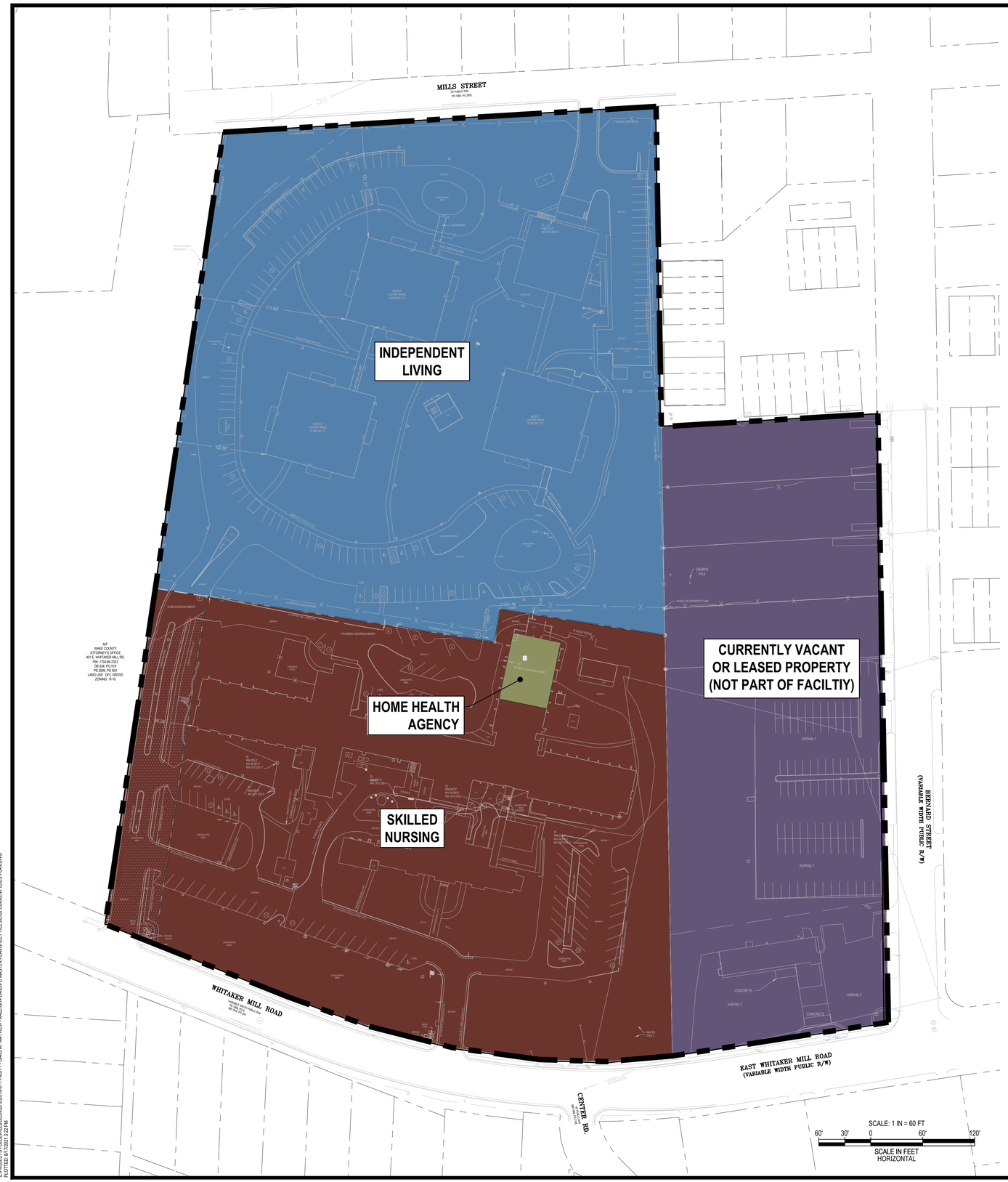
CURRY ENGINEERS LLP EST. 1977 NORTH CAROLINA

NC LIC. NO. P-0759

Curry ENGINEERING

C-01

Z:\PROJECTS\PLDR_REBUILDN\2018\2018-011 PRUITT - OAKS AT MAYVIEW - RALEIGH\PLANSET\MASTER\PLANSHEET FILES\C-01 EXISTING CONDITIONS PLAN.DWG
PLOTTED: 8/17/2021 1:21 PM



GENERAL NOTES:

1. THIS PLAN IS NOT INTENDED FOR PLATTING OR RECORDATION.
2. THE INTENT OF THIS PLAN IS TO PROVIDE A DEPICTION OF EXISTING USES ASSOCIATED WITH THE PROPERTY. THE PROJECT BOUNDARY INCLUDES ADJACENT PROPERTIES ON BERNARD STREET THAT ARE OWNED BY PRUITT HEALTH BUT ARE NOT CURRENTLY UTILIZED. THE PROPOSED PROGRAM WILL INCORPORATE THESE PROPERTIES. SEE DEVELOPMENT PLAN FOR ADDITIONAL DETAIL.
3. EXISTING ZONING IS A COMBINATION OF RX-4, CX-3, AND R-10.
4. CURRENT PROPERTY USES INCLUDE THE FOLLOWING:
   - 4.1. INDEPENDENT LIVING
   - 4.2. SKILLED NURSING
   - 4.3. HOME HEALTH AGENCY
   - 4.4. VACANT
   - 4.5. AUTOMOBILE REPAIR (NOT ACTIVE PART OF PRUITT OPERATIONS)
5. EXISTING PLAN INFORMATION IS A COMBINATION OF RECENT FIELD SURVEY AND WAKE COUNTY GIS INFORMATION.

1 / C-02 AERIAL IMAGE OVERLAY
SCALE: 1" = 100'

SCALE: 1 IN = 100 FT
100' 50' 0 100' 200'
SCALE IN FEET HORIZONTAL

NOT FOR CONSTRUCTION

SEAL
PRELIMINARY
DO NOT USE FOR CONSTRUCTION

		REVISIONS
1	8/11/2021	COOK COMMENTS

DATE: 12/23/2020 | HORZ. SCALE: AS SHOWN
FILE NO: 2018-011 | ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
CURRENT USES PLAN

205 S. Fuquay Avenue
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F (919) 552-2443
Curry ENGINEERING
NC LIC. NO. P-0759

C-02

Z:\PROJECTS FOLDER-REBUILDN\2018\2018-011 PRUITT - OAKS AT MAYVIEW - RALEIGH\PLANS\PD MASTER PLAN\SHEET FILES\C-02 CURRENT USES PLAN.DWG
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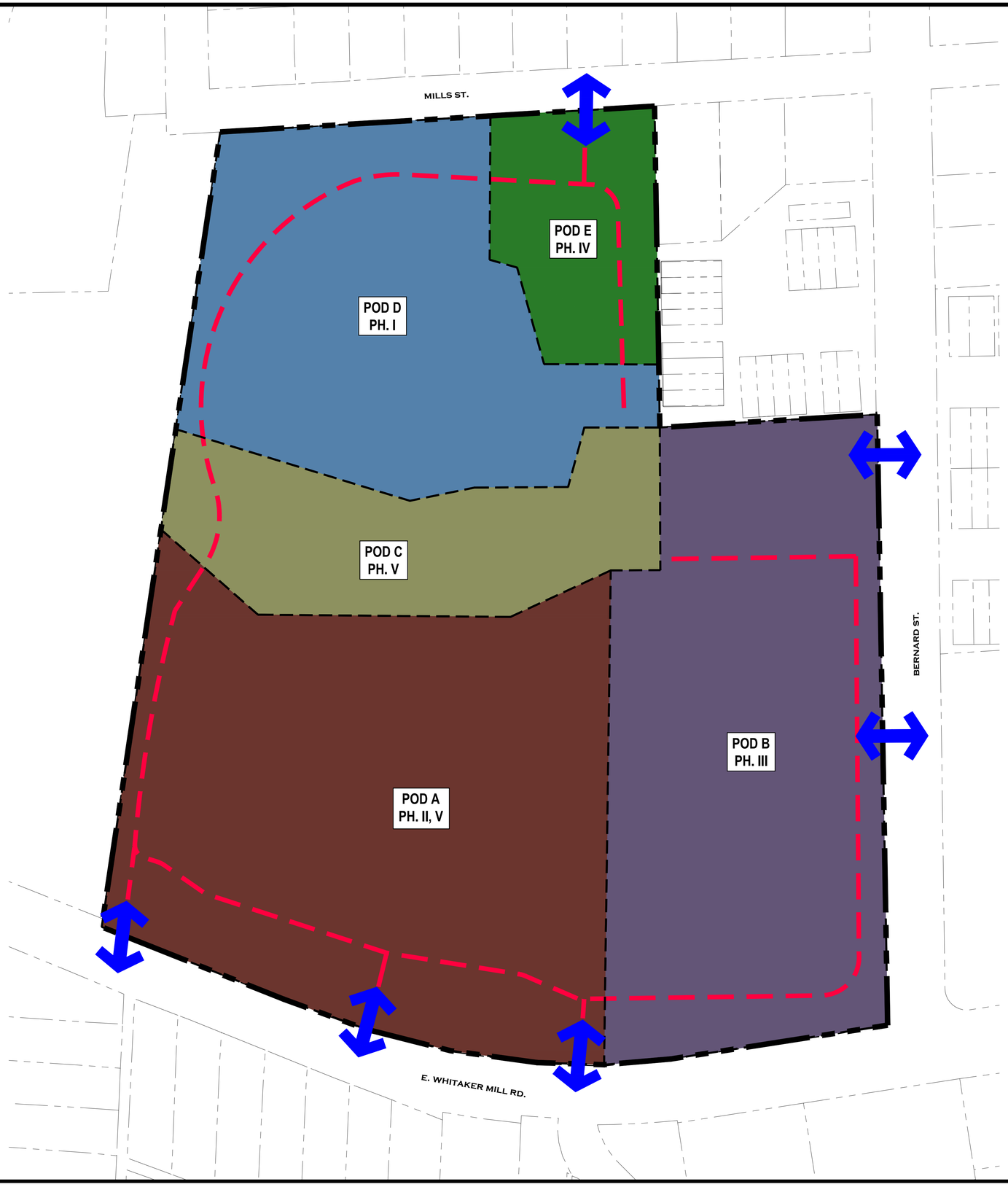

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO IDENTIFY PROPOSED USES AND THEIR ASSOCIATED LOCATIONS ON THE PROPERTY. THIS LAYOUT INCORPORATES THE NEW PARCELS ALONG BERNARD STREET WHICH WERE PREVIOUSLY NOT PART OF THE PRUITT DEVELOPMENT.
2. ALL CONSTRUCTION SHALL BE PER CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS, SUBJECT TO THE STIPULATIONS PER THIS MASTER PLAN DOCUMENT.
3. SEE C-01 FOR CURRENT ZONING.
4. LAYOUT INFORMATION IS PER WAKE COUNTY GIS.

DEVELOPMENT USES:

1. THE BASE DISTRICT FOR THIS PLANNED DEVELOPMENT DISTRICT SHALL BE THE NEIGHBORHOOD MIXED USE (NX) DISTRICT.
2. PROPOSED USES FOR THIS PD PROGRAM INCLUDE A CONTINUING CARE RETIREMENT COMMUNITY WITH AN ASSORTMENT OF INDEPENDENT LIVING, SKILLED NURSING, ASSISTED LIVING, RETAIL, AND OFFICE USES.
3. SEE LEGEND BELOW FOR CURRENT PROGRAMMED INTENSITIES.
4. FUTURE CITY OF RALEIGH LAND USE MAP DESIGNATIONS FOR THE PROPERTIES IN QUESTION INCLUDE INSTITUTIONAL, NEIGHBORHOOD MIXED USE, AND MODERATE DENSITY RESIDENTIAL.
5. SIDE LOT LINE AND REAR LOT LINE SETBACK REQUREMENTS PER UDO SECTIONS 3.2.4, 3.2.5, AND 3.2.6 SHALL BE A MINIMUM OF 0'.
6. THE MINIMUM GROUND FLOOR ELEVATION REQUIREMENTS OF CITY OF RALEIGH UDO SECTIONS 3.2.3, 3.2.4, 3.2.5, 3.2.6, AND 3.2.7 SHALL NOT APPLY.
7. BUILDING SEPARATION SHALL BE GOVERNED BY THE NORTH CAROLINA BUILDING CODE. CITY OF RALEIGH UDO SEPARATION STANDARDS SHALL NOT APPLY.
8. CITY OF RALEIGH UDO OUTDOOR AMENITY STANDARDS SHALL NOT APPLY.
9. CITY OF RALEIGH UDO BUILD TO STANDARDS SHALL APPLY TO PUBLIC STREETS, REVISED AS OUTLINED IN THE MASTER PLAN DOCUMENT.
10. NEIGHBORHOOD TRANSITION STANDARDS, FOUND IN UDO ARTICLE 3.5, SHALL NOT APPLY TO POD D.
11. PROJECT PHASING MAY BE BY ENTIRE PHASE OR BY PORTIONS OF ANY PHASE AND IS NOT REQUIRED TO BE SEQUENTIAL. FINAL PROJECT PHASING WILL BE DETERMINED AT THE TIME OF SITE PERMITTING.
12. THE FOLLOWING PRINCIPAL USES AS LISTED IN CITY OF RALEIGH UDO SECTION 6.1.4 SHALL BE PROHIBITED:
    - 12.1. VEHICLE FUEL SALES.
    - 12.2. VEHICLE SALES/RENTAL
    - 12.3. DETENTION CENTER, JAIL, PRISON
    - 12.4. VEHICLE REPAIR (MINOR)

POD BREAKDOWN:

POD A MAXIMUM DEVELOPMENT INTENSITY:
- i. USES & DENSITY - 125 DWELLING UNITS; 4,000 SF NON-RESIDENTIAL FLOOR AREA
- ii. BUILDING HEIGHT - 5 STORIES
- iii. BUILDING TYPES - TOWNHOUSE, APARTMENT, CIVIC, GENERAL, MIXED USE, OPEN LOT

POD B MAXIMUM DEVELOPMENT INTENSITY:
- i. USES & DENSITY - 180 DWELLING UNITS; 24,500 SF NON-RESIDENTIAL FLOOR AREA
- ii. BUILDING HEIGHT - 5 STORIES
- iii. BUILDING TYPES - TOWNHOUSE, APARTMENT, CIVIC, GENERAL, MIXED USE, OPEN LOT

POD C MAXIMUM DEVELOPMENT INTENSITY:
- i. USES & DENSITY - 55 DWELLING UNITS
- ii. BUILDING HEIGHT - 5 STORIES
- iii. BUILDING TYPES - TOWNHOUSE, APARTMENT, CIVIC, GENERAL, MIXED USE, OPEN LOT

POD D MAXIMUM DEVELOPMENT INTENSITY:
- i. USES & DENSITY - 100 DWELLING UNITS
- ii. BUILDING HEIGHT - 4 STORIES
- iii. BUILDING TYPES - TOWNHOUSE, APARTMENT, CIVIC, GENERAL, MIXED USE, OPEN LOT

POD E MAXIMUM DEVELOPMENT INTENSITY:
- i. USES & DENSITY - 10 DWELLING UNITS
- ii. BUILDING HEIGHT - 3 STORIES
- iii. BUILDING TYPES - TOWNHOUSE, APARTMENT, CIVIC, OPEN LOT

* NOTE THAT THESE INTENSITIES MAY BE REDISTRIBUTED PURSUANT TO SECTION 7 OF THE MASTER PLAN

LEGEND:

PRIVATE, VEHICULAR, INTERNAL CIRCULATION

ACCESS POINTS TO PUBLIC STREETS

SCALE: 1 IN = 60 FT

60' 30' 0 60' 120'

SCALE IN FEET HORIZONTAL

NOT FOR CONSTRUCTION

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019681 RONALD L. CURRY

PRELIMINARY
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1	8/17/2021	COA COMMENTS

REVISIONS

DATE: 12/23/2020 HORZ. SCALE: 1" = 60'

FILE NO. 2018-011 ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
DEVELOPMENT PLAN

Curry ENGINEERING
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F (919) 552-2043
205 S. Fuquay Avenue
Fuquay-Varina, NC 27526
NC LIC. NO. P-0769

C-03

Z:\PROJECTS FOLDER\JERILJON\2018\2018-011 PRUITT - OAKS AT MAYVIEW - RALEIGH\PLANS\PD MASTER PLAN\SHEET FILES\C-03 DEVELOPMENT PLAN.DWG
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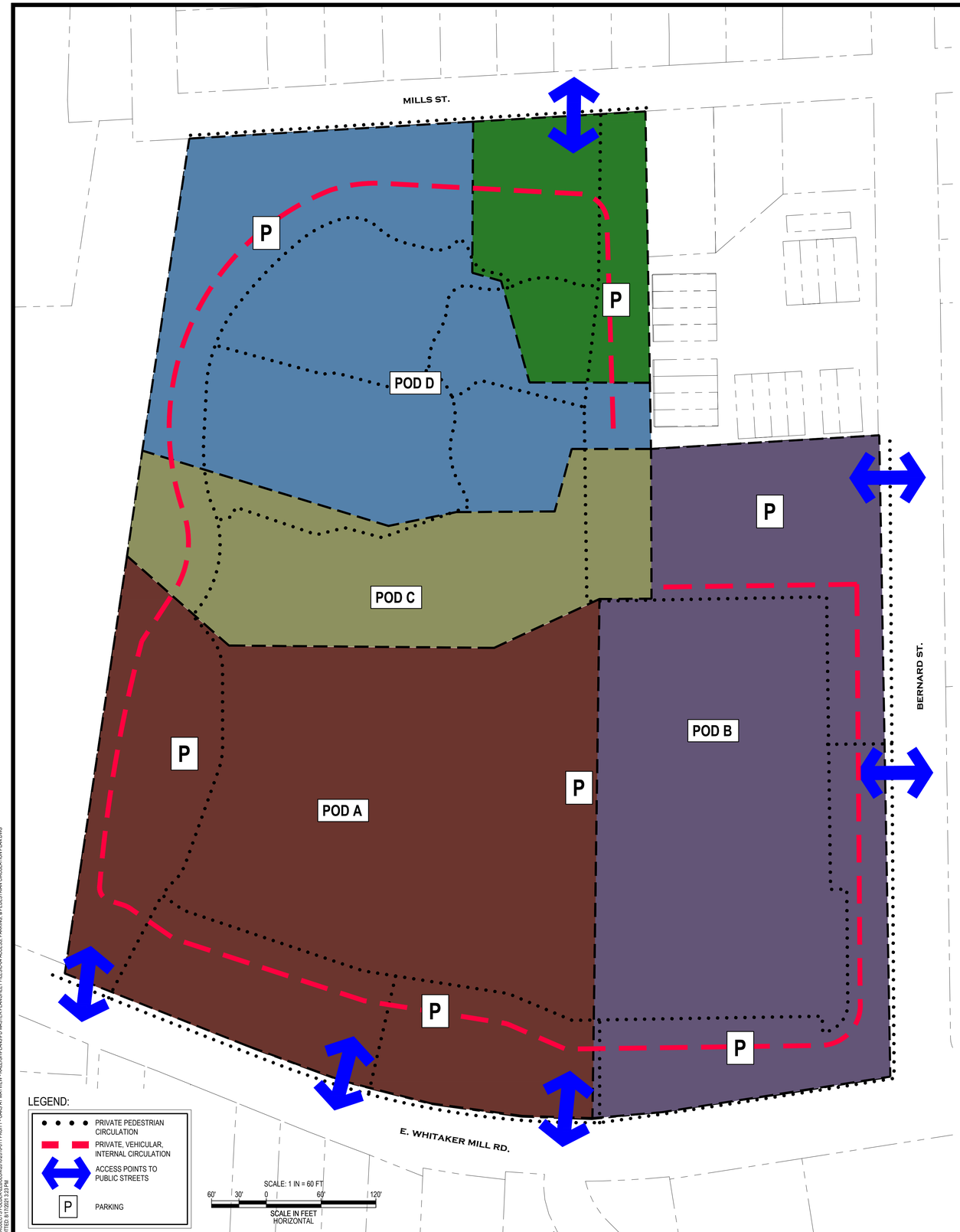

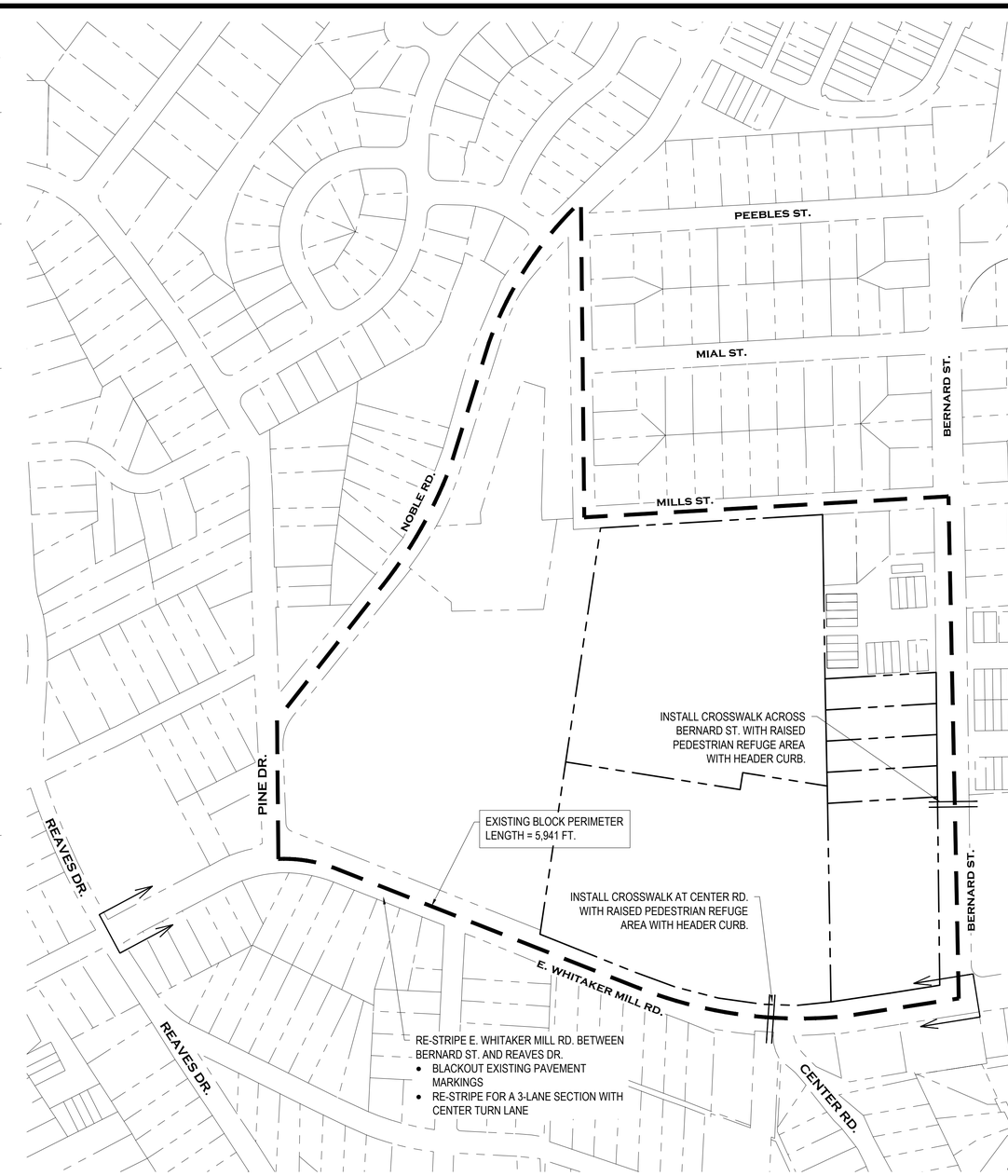

1 C-04 EXISTING BLOCK PERIMETER PLAN
SCALE: 1" = 120'

SCALE: 1 IN = 150 FT
150' 75' 0 150' 300'
SCALE IN FEET HORIZONTAL

ACCESS, PARKING, AND CIRCULATION NOTES:

1. ALL PARKING DIMENSIONS SHALL FOLLOW CITY OF RALEIGH UDO STANDARDS.
2. PARKING ADJACENT TO PROPOSED SIDEWALK AND PEDESTRIAN AREAS SHALL INCORPORATE MEASURES TO PREVENT VEHICLES FROM ENCROACHING ON SAID AREAS.
3. PARKING SHALL BE EXEMPT FROM THE CITY OF RALEIGH UDO PARKING STANDARDS OUTLINED IN SECTION 7.1.2. THE FOLLOWING PARKING RATIOS SHALL BE PROVIDED:
   - 3.1. ONE SPACE PER DWELLING UNIT OF INDEPENDENT LIVING USE.
   - 3.2. ONE SPACE PER 3 BEDS FOR ASSISTED LIVING AND SKILLED NURSING USE.
   - 3.3. ONE SPACE PER 400 SQUARE FEET GROSS FLOOR AREA FOR ANY NON-RESIDENTIAL PRINCIPAL USE.
   - 3.4. NO PARKING IS REQUIRED FOR ACCESSORY USES.
4. REFER TO PD NARRATIVE FOR TRAFFIC IMPACT ANALYSIS RECOMMENDATIONS.
5. ADDITIONAL ROW MAY BE REQUIRED ALONG E. WHITAKER MILL RD., MILLS ST., AND BERNARD ST.
6. THIS DEVELOPMENT DOES NOT PROPOSE ANY NEW PUBLIC STREETS TO SATISFY BLOCK PERIMETER STANDARDS DUE TO PROGRAMMED USES AND CORRESPONDING SAFETY CONCERNS. CIRCULATION, HOWEVER, IS PROVIDED VIA PRIVATE DRIVEWAYS AND PEDESTRIAN CONNECTIVITY.
7. THERE IS CURRENTLY AN EXTENSIVE NETWORK OF PEDESTRIAN CONNECTIVITY THROUGHOUT THE DEVELOPMENT WHICH WILL BE MAINTAINED AND IMPROVED AS INDIVIDUAL PODS ARE DEVELOPED. SUCH CONNECTIVITY WILL BE FURTHER ENHANCED WITH THE ADDITION OF PUBLIC SIDEWALK IMPROVEMENTS ALONG THE BORDERING PUBLIC ROADWAYS, PER CITY OF RALEIGH STREET STANDARDS.
8. THE ACCESS AND CIRCULATION PATTERNS SHOWN ARE SCHEMATIC IN NATURE AND SUBJECT TO CHANGE WITH INDIVIDUAL POD DEVELOPMENT.

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT ACCESS AND CIRCULATION THROUGHOUT THE PROPOSED DEVELOPMENT. THE INFORMATION SHOWN IS SCHEMATIC IN NATURE AND SUBJECT TO CHANGE AS INDIVIDUAL PODS ARE DEVELOPED.
2. ALL CONSTRUCTION SHALL BE PER CITY OF RALEIGH STANDARDS AND SPECIFICATIONS, SUBJECT TO THE STIPULATIONS PER THIS MASTER PLAN DOCUMENT.
3. LAYOUT INFORMATION IS PER WAKE COUNTY GIS.

NOT FOR CONSTRUCTION

SEAL
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REVISIONS	
1	8/11/2021 COOK COMMENTS

DATE: 12/23/2020
FILE NO. 2018-011
HORZ. SCALE: AS SHOWN
ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
ACCESS, PARKING, & PEDESTRIAN CIRCULATION PLAN

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205 S. Fuquay Avenue
Fuquay-Varina, NC 27526
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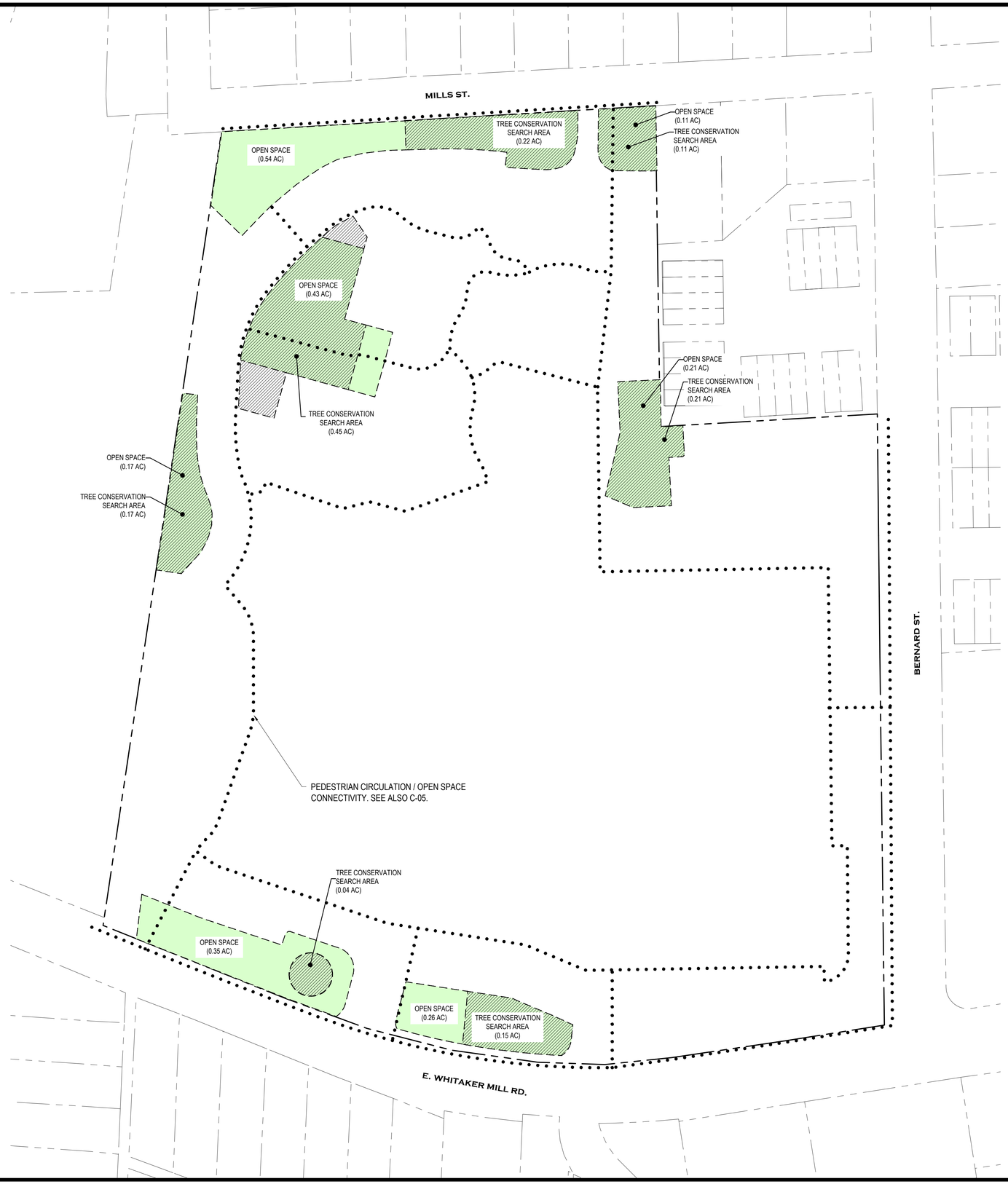
NC LIC. NO. P-0795

C-04

Z:\PROJECTS FOLDER JOB\LON\2018\2018-011 FRUIT - OAKS AT MAYVIEW - RALEIGH\PLANS\SET FILES\CAD ACCESS, PARKING & PEDESTRIAN CIRCULATION PLAN.DWG
PLOTTED: 8/17/2021 3:21 PM



LEGEND:

- TREE CONSERVATION SEARCH AREA (SUBJECT TO CHANGE)
- OPEN SPACE (SUBJECT TO CHANGE)

OPEN SPACE NOTES:

1. THE SITE'S OPEN SPACE SHALL BE IN COMPLIANCE WITH THE CITY OF RALEIGH'S UDO.
2. A MINIMUM OF 10% OF THE GROSS SITE AREA WILL BE PROVIDED AS OPEN SPACE.
3. REQUIRED OPEN SPACE MUST BE OWNED AND MAINTAINED BY EITHER A 1) LAND CONSERVANCY OR LAND TRUST OR 2) HOMEOWNERS' ASSOCIATION.
4. OPEN SPACE SHALL BE CONVEYED TO THE LAND CONSERVANCY OR HOMEOWNERS' ASSOCIATION IN FEE SIMPLE WITHOUT ANY ENCUMBRANCES EXCEPT DRAINAGE, GREENWAY AND UTILITY EASEMENTS. TITLE TO THE REAL PROPERTY SHALL BE CONVEYED NO LATER THAN THE TIME OF THE CONVEYANCE OF THE FIRST LOT WITHIN THE APPLICABLE PHASE OF THE DEVELOPMENT.
5. OPEN SPACE SHALL BE PRESERVED FOR THE PERPETUAL BENEFIT OF THE RESIDENTS WITHIN THE DEVELOPMENT AND IT SHALL BE RESTRICTED AGAINST PRIVATE OR PUBLIC OWNERSHIP FOR ANY OTHER PURPOSE EXCEPT ACQUISITION BY CONDEMNATION OR IN LIEU OF CONDEMNATION AND THE GRANTING OF UTILITY, DRAINAGE AND GREENWAY EASEMENTS.
6. IF THE HOMEOWNERS' ASSOCIATION IS DISSOLVED, THE OPEN SPACE MAY BE OFFERED TO ANOTHER ENTITY WHO SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE OPEN SPACE. IF NO OTHER OFFER IS ACCEPTED, THE OPEN SPACE SHALL BE OFFERED TO THE CITY AND IF ACCEPTED, DEEDED TO THE CITY.

OPEN SPACE CALCULATIONS:

GROSS SITE AREA:	17.96 AC	
REQUIRED OPEN SPACE (10%):	1.8 AC	
PROVIDED OPEN SPACE:	2.07 AC	
OPEN SPACE ALLOCATION:		
PRIMARY OPEN SPACE:	0 AC	NOT APPLICABLE
SECONDARY OPEN SPACE:	0 AC	NOT APPLICABLE
TERTIARY OPEN SPACE:	2.07 AC	

TREE CONSERVATION NOTES:

1. TREE CONSERVATION AREAS ARE DEPICTED IN CONCEPT ONLY & ARE SUBJECT TO CHANGE BASED ON FINAL LAYOUT & ENVIRONMENTAL DETERMINATIONS.
2. THE MAJORITY OF ELIGIBLE TREE CONSERVATION AREAS FOR THIS SITE WILL CONSIST OF INDIVIDUAL TREES 10" DBH OR GREATER. AS THIS IS AN EXISTING DEVELOPED SITE THE MAJORITY OF THOSE TREES MAY NOT MEET THE STANDARDS OF UDO SECTION 9.1 DUE TO EXISTING IMPERVIOUS SURFACE & UTILITY ENCROACHMENTS. CRITICAL ROOT ZONE ENCROACHMENTS WILL BE MEASURED AT DEVELOPMENT PLAN.
3. TREE CONSERVATION AREAS WILL BE ESTABLISHED & COMPLIANCE WITH UDO SECTION 9.1 WILL BE DETERMINED AT THE TIME A DEVELOPMENT PLAN IS SUBMITTED.

TREE CONSERVATION CALCULATIONS

SITE AREA:	17.96 AC
REQUIRED TREE CONSERVATION AREA (10%):	1.8 AC
PROVIDED TREE CONSERVATION SEARCH AREA:	1.35 AC (SEE TREE CONSERVATION NOTES)

SCALE: 1 IN = 60 FT

60' 30' 0 60' 120'

SCALE IN FEET HORIZONTAL

NOT FOR CONSTRUCTION

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019681 DAVID L. CURRY

PRELIMINARY
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REVISIONS	
1	8/11/2021 COOK COMMENTS

DATE: 12/23/2020 HORZ. SCALE: 1" = 60'
FILE NO. 2018-011 ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
OPEN SPACE & TREE CONSERVATION PLAN

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NC LIC. NO P-0799
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205 S. Fuquay Avenue Fuquay-Varina, NC 27526

C-05

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LEGEND:

SS	PROPOSED SANITARY SEWER
W	PROPOSED WATER MAIN
SD	PROPOSED STORM DRAIN
SD	EXISTING STORM DRAIN TO REMAIN

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO IDENTIFY PROGRAMMED WATER, SANITARY SEWER, AND STORMWATER ROUTING.
2. ALL CONSTRUCTION SHALL BE PER CITY OF RALEIGH AND NCDOT STANDARDS AND SPECIFICATIONS.
3. LAYOUT INFORMATION IS PER WAKE COUNTY GIS.

UTILITY AND STORMWATER NOTES:

1. THIS LAYOUT DEPICTS PROPOSED UTILITY CONNECTIONS FOR THE PROPOSED DEVELOPMENT. A PORTION OF THE PROPOSED UTILITIES WILL UTILIZE EXISTING CONNECTIONS TO PUBLIC MAINS. WHERE NECESSARY, THESE CONNECTIONS WILL BE UPGRADED TO MEET CURRENT STANDARDS.
2. THE WATERLINE SHOWN IS INTENDED TO REPRESENT INDIVIDUAL TAPS AND METERING PER THE INDIVIDUAL PODS AND BUILDINGS PER PHASE. AS DISCUSSED WITH COR STAFF, BUILDINGS WILL BE METERED INDIVIDUALLY AND TAPPED TO EXISTING PUBLIC MAINS IN ADJACENT ROADWAYS WITH APPROPRIATE BACKFLOW PREVENTION AND METERING PER COR CODE. FIRE HYDRANTS WILL ALSO TAP EXISTING PUBLIC MAINS TO SERVE FIRE PROTECTION NEEDS. BASED ON A PRELIMINARY REVIEW OF HYDRANT FLOWS, THE EXISTING SYSTEM APPEARS TO HAVE ADEQUATE PRESSURE TO SERVE THE DEVELOPMENT'S NEEDS.
3. THROUGHOUT THE POD PHASING, SOME UTILITIES MAY REQUIRE REMOVAL AND REPLACEMENT IN ORDER TO FACILITATE SERVING THE INTERIM NEEDS OF THE DEVELOPMENT.
4. THE CURRENT DEVELOPMENT CONSISTS OF SEVERAL PROPERTIES, ALL OWNED BY PRUITT HEALTH. IN THE EVENT PROPERTY LINES ARE PRESERVED, THE APPROPRIATE PUBLIC UTILITY EASEMENTS WILL BE INCORPORATED. THIS IS CURRENTLY SHOWN IN THE PLAN VIEW FOR THE SANITARY SEWER, WITH A 30' PUBLIC UTILITY EASEMENT.
5. WATER, SEWER, AND STORM SIZING WILL TAKE PLACE AS PODS ARE DEVELOPED.
6. STORMWATER MANAGEMENT WILL MEET CITY OF RALEIGH STANDARDS, WHICH INCLUDE BOTH QUALITY ATTENUATION AND QUANTITY ATTENUATION (2 AND 10-YEAR EVENTS). EXISTING OUTFALLS WILL BE UTILIZED WHERE FEASIBLE WITH EXTRA CARE GIVEN TO ENSURE THAT THE AFOREMENTIONED STANDARDS ARE MET.
7. STORMWATER MANAGEMENT ATTENUATION WILL BE ADDRESSED BY INCORPORATING AN UNDERGROUND SAND FILTER OR SIMILAR TYPE OF SYSTEM AS SHOWN IN THE PLAN VIEW.
8. ANTICIPATED SANITARY SEWER FLOWS OF 68,805 GPD ARE AS FOLLOWS. NOTE THAT DUE TO THE PRELIMINARY NATURE OF THE PROPOSED PD PLAN, NON-RESIDENTIAL FLOWS HAVE BEEN ESTIMATED AT THE RATE OF 130 GAL/1,000SF. ACTUAL FLOWS WILL BE ADJUSTED AS THE INDIVIDUAL PHASES ARE DEVELOPED.
   - 8.1. RESIDENTIAL: 290 UNITS @ 150 GAL/DAY/UNIT = 43,500 GPD
   - 8.2. RESIDENTIAL: 180 UNITS @ 120 GAL/DAY/UNIT = 21,600 GPD
   - 8.3. NON-RESIDENTIAL: 28,500 SF @ 130 GAL/1,000 SF = 3,705 GPD

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036963 RONALD L. CURRY

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

REVISIONS	
1	8/11/2021 COR COMMENTS

DATE: 12/23/2020 HORZ. SCALE: 1" = 60'
FILE NO. 2018-011 ORIG. SHEET SIZE: 24 x 36

OAKS AT MAYVIEW - PD MASTER PLAN
MAJOR UTILITIES & GENERALIZED STORMWATER PLAN

Curry ENGINEERING
T (919) 552-0849
F (919) 552-2943
205 S. Fuquay Avenue
Fuquay-Varina, NC 27526
NC LIC. NO. P-0795

C-06

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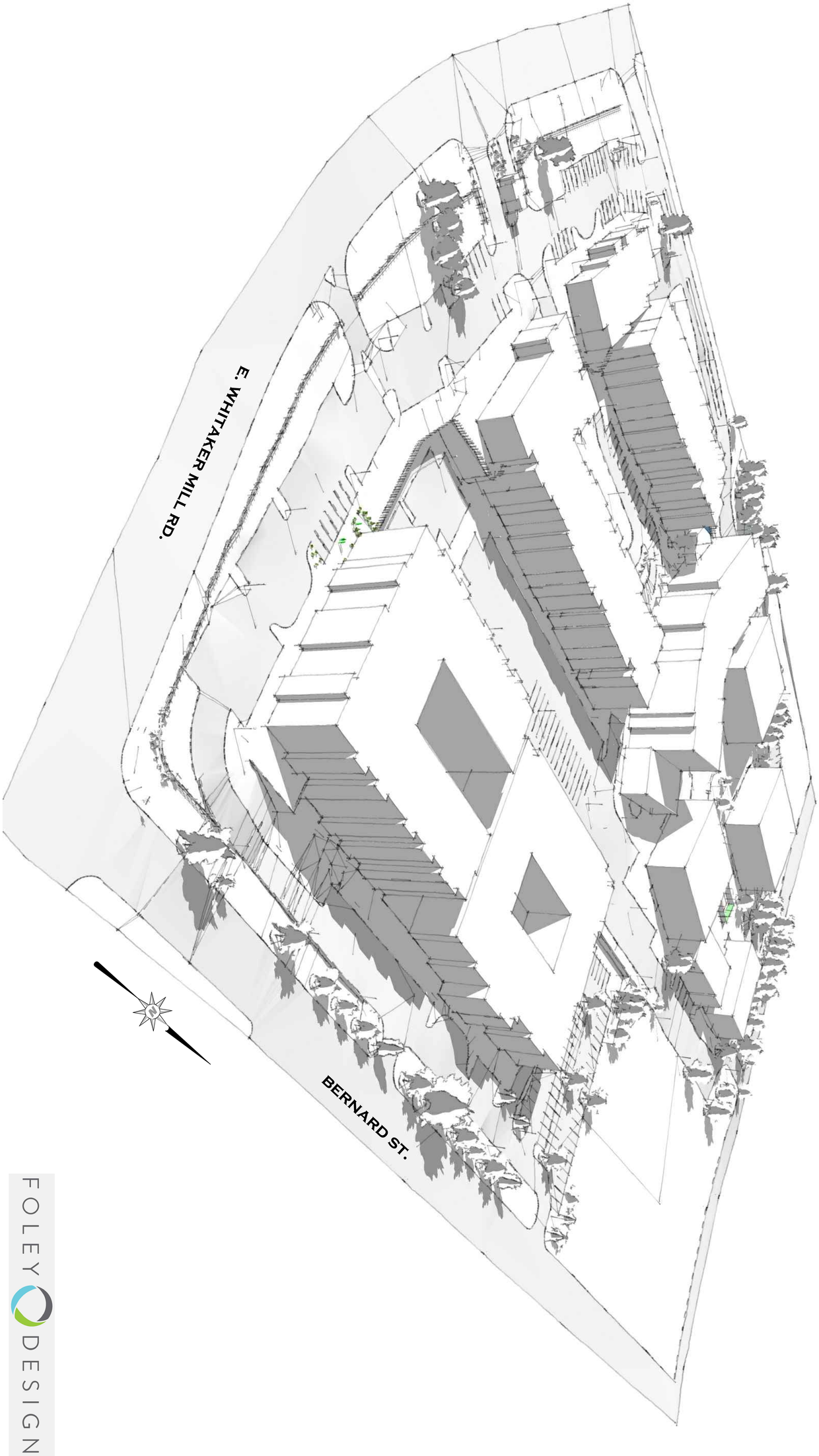

FOLEY DESIGN

SEAL

PROFESSIONAL ENGINEER SEAL NOT AFFIXED TO SHEET AS ENGINEER DOES NOT CERTIFY INFORMATION PROVIDED BY OTHERS

C-07

Curry ENGINEERING

CURRY ENGINEERS EST. 10 NORTH CAROLINA

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Fuquay-Varina, NC 27526

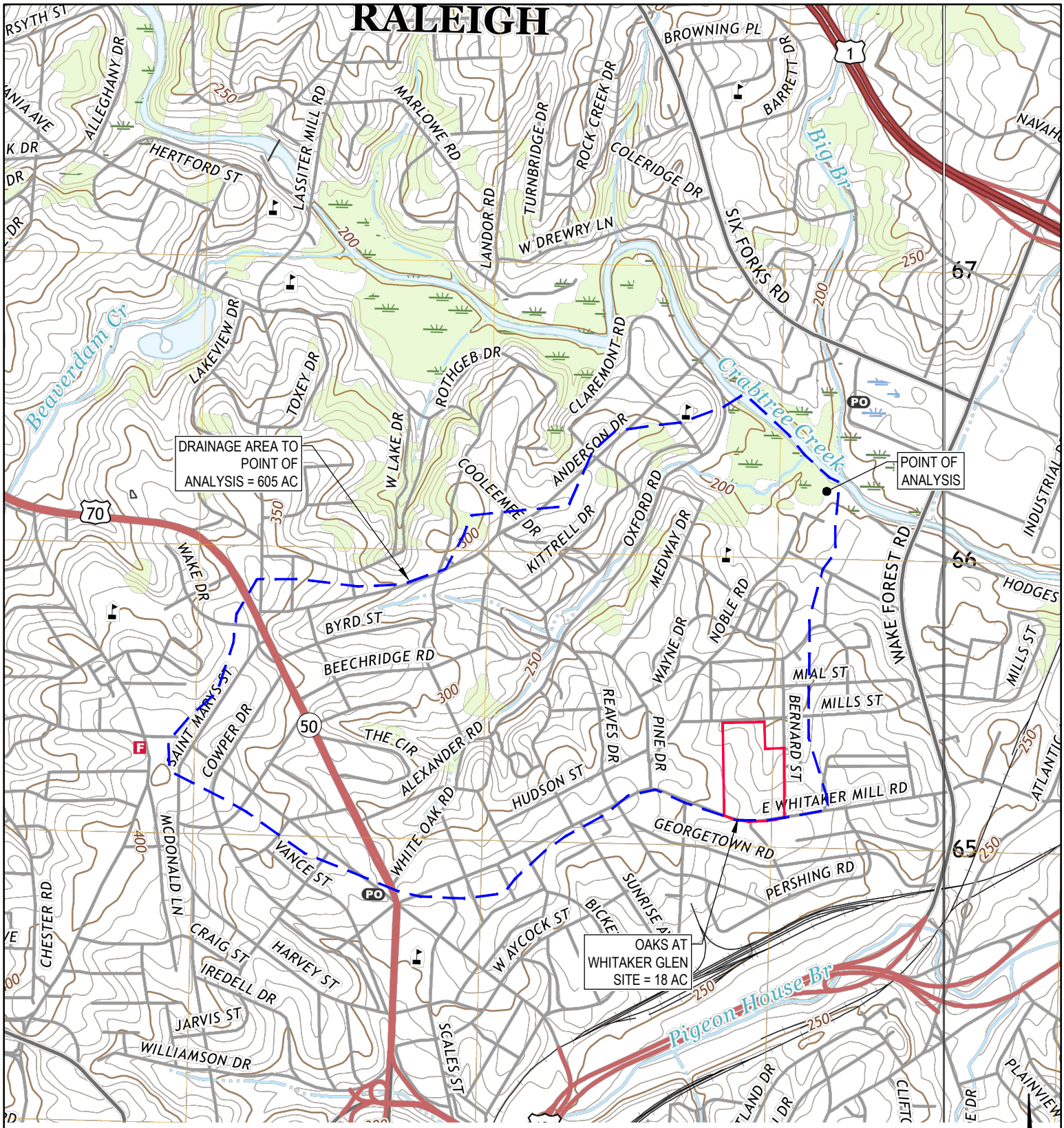
OAKS AT MAYVIEW - PD MASTER PLAN

3D MASSING MODEL

REVISIONS		
1	8/11/2021	COR COMMENTS

DATE: 12/23/2020 | HORZ. SCALE: N.T.S.

FILE NO. 2018-011 | ORIG. SHEET SIZE: 24 x 36



NOTES:

1. THIS EXHIBIT DEPICTS THE DRAINAGE AREA OF THE SITE RELATIVE TO UPSTREAM DRAINAGE AT THE ANALYSIS POINT SHOWN. IT ONLY REPRESENTS DRAINAGE AREA SOUTH OF CRABTREE CREEK AT POINT OF ANALYSIS.
2. AS SHOWN, THE SITE REPRESENTS APPROX. 2.98% OF THE OVERALL DRAINAGE AREA SHOWN.
3. USGS MAP REFERENCE "RALEIGH WEST, 2019" & "RALEIGH EAST, 2019".

SCALE: 1"=1500 FT

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Fuquay-Varina, NC 27526

NC LIC. NO. P-0799

OAKS AT WHITAKER GLEN - PD

513 E. WHITAKER MILL RD., RALEIGH, NC

5% DRAINAGE AREA MAP

AUGUST 2021

EX-1

NELSON MULLINS

Memorandum

To: Jason Hardin, AICP

cc: Nicole Frazier, Pruitt Health

From: Beth Trahos

Date: July 26, 2021

Re: Z-17-21 Whitaker Mill PD

Case Planner	Jason Hardin, AICP
Contact	919-996-2657; Jason.Hardin@raleighnc.gov

1. The request is generally consistent with land use policy guidance. However, the provisions exempting the site from block perimeter requirements and lack of public streets are inconsistent with several critical Comprehensive Plan policies that support connectivity through and improved street grid.

RESPONSE: The majority of this property is already developed as a continuum of care retirement community with memory care services. The proposed PD does not contemplate a wholesale redevelopment of these facilities. Instead, much of the existing community and associated infrastructure will remain generally as it exists today. We do not propose the construction of additional public streets through this existing community for the following reasons:

- The residential uses are and will continue to be age-restricted for senior living. This population is more fragile than the population at large, and it is paramount that the community be designed to protect the health, safety and welfare of its residents. We aim to maintain a campus feel where access through the community is limited to those who have a specific interest in being there. As we continue to navigate a global pandemic, it is readily apparent why we concerned about the potential negative impact of public access through this community
- There is an existing problem with high-speed racing on Whitaker Mill and we are concerned about inviting that activity onto our campus and into the neighborhood behind us.
- Further, it is our understanding that our neighbors are not interested in additional public street connectivity. We believe maintaining the existing level of connectivity serves the best interest of this community and the community at large.

This is a walkable area of Raleigh, and we believe many of our residents will venture off our campus to take advantage of the recreational areas, shopping, dining and other uses that are readily accessible by existing streets and sidewalks. Thus, we have committed to off-site improvements to Whitaker Mill and Bernard Streets, including the addition of bicycle lanes and pedestrian refuges, that will facilitate the safe movement of our residents and the community at large in this area. We believe these

improvements facilitate the goals of Comprehensive Plan Section T 5.1, T 5.2, T 5.11, T 5.13 and T 5.15.

2. The lack of any build-to specifications is inconsistent with key Comprehensive Plan policies that support more walkable and pedestrian-friendly development. An approach to addressing this would be to add language that is similar to an urban frontage in the UDO.

RESPONSE: We propose language in Section 8.F that creates a frontage similar to the existing built environment in this area while acknowledging the special needs of the population that lives within this continuum of care retirement community. We propose to generally retain the existing building configuration which includes large setbacks from the street with drive aisles and parking between the buildings and the street. Given the more limited mobility of the population in this community, maintaining vehicular access on all sides of each building is important. This is contextual with other area uses. The Wake County Human Services Building, located immediately north of this site, is setback approximately180 feet from Whitaker Mill Road with parking between the building and the street. The High Park Shopping Center at the intersection of Whitaker Mill and Bernard is setback approximately 80 feet from Whitaker Mill Road and approximately 90 feet from Bernard Street with parking between the building and the street.

3. The above considerations mean the request may be inconsistent with Comprehensive Plan policy language aimed at addressing climate change.

RESPONSE: We are providing off-site improvement that are designed to improve safety and efficiency for pedestrian circulation throughout the area. We believe these improvements will encourage the broader community to move about the area on foot, by bicycle, and scooter, and will result in a net benefit to climate change.

4. Please note the comments below from Current Planning, Public Utilities, Stormwater, and Transportation. A resubmittal is required before this request can proceed to the Planning Commission. Please reach out to me and to the listed reviewers below if you have questions. We are glad to talk through these items if that is helpful.

RESPONSE: Understood. Thank you.

Current Planner	Kasey Evans
Contact	919-996-2689; Kasey.Evans@raleighnc.gov

1. Sheet C-05 - Per UDO Section 4.7.1.G, a minimum 10% of the gross site area is required to be open space. Update the master plan to reflect the minimum required open space based on the gross site area.

RESPONSE: Please see the updated open space drawing detailing the open space approach along with the appropriate revision to accommodate your remarks.

2. Per UDO Section 4.7.4.A provide a common signage plan.

RESPONSE: We propose no changes to the signage permitted under the NX zoning district so we have not proposed a sign plan. See 7.H.iii.

3. Sheet C-03 - Update the Development Uses list and the POD Breakdown table to be consistent with the master plan narrative.

RESPONSE: Done.

4. Please update the language used in Section 7.B.iii which currently says "...During construction, each POD may be used for Remote Parking to another Tract." I don't see where the word Tract is used to define portions of the subject property elsewhere in the narrative. Do you mean "...another POD"? If so, please replace the word Tract with POD for clarity throughout the document.

RESPONSE: The word “Tract” has been changed to “Pod.”

5. Sheet C-07 - Label the streets with their street names and provide a north area on this plan sheet.

RESPONSE: Street names and a north area have been added to Sheet C-07.

6. Please revise Section 8.C to remove "to any building type in any tract" from the end of the sentence. The referenced UDO Sections are applicable to specific building types and would not be applicable to any other building type.

RESPONSE: Done.

7. Please provide written responses to each review comment with the project resubmittal.

RESPONSE: Written responses are being provided to each review comment via this memorandum.

8. Sheet C-05 - Remove the Open Space Notes 1 and 2, as they are inconsistent with the UDO requirements, and demonstrate compliance with UDO Section 2.5.3 through 2.5.7.

RESPONSE: Please see updated Sheet C-05 as per comment 1 above.

9. Sheet C-04 - Update the master plan narrative and Sheet C-04 to provide consistent parking ratios; they currently conflict with one another.

RESPONSE: Done.

10. Section 6 of the master plan narrative refers to Sheet C-03 as showing the proposed phasing plan, however Sheet C-03 does not provide any phasing information. If the project is intended to be developed in phases, a phasing plan sheet shall be added to the plan set clearly articulating the proposed phasing.

RESPONSE: Please see updated phasing information on Sheet C-03.

11. Sheet C-03 - In the Development Uses list, number 3, remove "Note that these development intensities are subject to change." Any modifications to the approved master plan shall be reviewed in accordance with UDO Section 4.7.6 (Master Plan Amendments).

RESPONSE: This language has been updated to read “Note that these intensities may be redistributed pursuant to Section 7 of the Master Plan.” The intent of this language to reflect the ability to redistribute uses between and among the Pods as set out in Section 7 of the Master Plan. We recognize that no change to the master plan will be approved without meeting the requirements of the UDO Section 4.7.6.

12. Move the list of prohibited uses from Section 9.A of the master plan narrative to Section 7.A of the narrative so all the use information is grouped together in one place.

RESPONSE: Done.

13. Section 8.B does not seem necessary, I did not find any UDO required building separation that would might be applicable to this project. Are there specific UDO provisions that you are referring to here?

RESPONSE: Please see UDO section 3.2.2.C.C6 which contains an internal building separation requirement for townhomes.

14. Sheet C-03 - Update the POD Breakdown table to include the list of permitted building types for each POD.

RESPONSE: Done.

15. Sheet C-05 - The open space shall be allocated in accordance with the standards and hierarchy set forth in UDO Section 2.5.2 (Open Space Allocation). Update the plans to allocate the open space per the UDO and provide a table showing the allocations and calculations broken down by the various open space types set forth in the UDO.

RESPONSE: Done.

16. The current version of narrative Section 8.I references a "proposed internal street". Does the project include dedicating right-of-way for new street(s) through the site? If not please change the language from "proposed internal street" to driveway or similar wording for clarity.

RESPONSE: We have replaced “proposed internal street” with “proposed internal accessways” or “internal drive aisles” throughout.

17. Section 8.A references internal streets, but I understand from the rest of the master plan narrative and plan set that no new streets are proposed. If there are no new streets proposed, then this section about building setbacks not applying to internal streets is not necessary (it seems to imply that there will be internal street). Primary and side street setbacks are measured from the edge of right-of-way per UDO Section 1.5.4.B, not from the edge of a private driveway.

RESPONSE: Done. This section was revised to address the side and rear lot line setbacks. These setbacks are listed as 0’ or 6’. Recent informal city interpretations have indicated that these are not

minimums and setbacks must be either 0’ or 6’ exactly. We have revised this provision to allow for 0’ as a minimum, allowing for building to be setback any amount greater than 0’.

18. Update narrative Section 8.D to correct the referenced UDO section from "UDO Section 7.1.2" to be "UDO Section 7.1.2.C" which is the actual Parking Requirements by Use table.

RESPONSE: Done.

19. Sheet C-01 - Update to provide the current zoning classifications of the subject property. Some of the lots are not labeled with their respective zoning classification, and others are incorrectly labeled.

RESPONSE: We have updated the zoning on this sheet to reflect the existing RX-4, CX-3 and R-10 zoning districts.

20. Sheet C-03 - Update the POD Breakdown table to identify the information as maximums, consistent with the narrative.

RESPONSE: Done.

21. What is the intent behind the last sentence in Section 7.H.ii? Any non-residential use on the property would count towards the non-residential maximum floor area, so it doesn't seem that this last sentence is necessary.

RESPONSE: This sentence confirm that all uses permitted in Section 7.A, except for those that prohibited, are permitted on the property; not just the uses listed in the remaining portions of Section 7. We have revised the last sentence to conform with your language regarding it above.

22. I don't understand the intent behind Section 7.H.i; it does not seem to add anything to the narrative and I think could be eliminated. What are you trying to get at here?

RESPONSE: The primary purpose here is to confirm that there is flexibility in the location of residential units throughout a Pod.

23. Include a table of contents in the Master Plan narrative.

RESPONSE: A table of contents has been added.

24. It does not appear that Section 8.I of the narrative is necessary because based on the criteria in UDO Section 3.5.1.A there is no neighborhood transition requirement along the west side of POD D where it abuts a residentially zoned property. At this time it appears that the neighborhood transition would only be required along the east side of POD E where it abuts property zoned R-10.

RESPONSE: This is an often debated portion of the code, and we want to confirm that no future interpretation will require a neighborhood transition.

Historic Preservation	Collette Kinane

Contact	919-996-2649; Collette.Kinane@raleighnc.gov

1. Reviewed by RHDC. No additional comments.

Parks, Recreation & Cultural Resources	Emma Liles
Contact	919-996-4871; Emma.Liles@raleighnc.gov

1. This site is not directly impacted by any existing or proposed greenway trails, corridors, or connectors.

RESPONSE: Agreed.

2. Nearest existing park access is provided by Five Points Center for Active Adults (1,200 ft) and Kimbrough Park (1,900 ft).

RESPONSE: Agreed.

3. Nearest existing greenway trail access is provided by the Walnut Creek Greenway Trail (1.2 miles).

RESPONSE: Agreed.

4. Current park access level of service in this area is graded an A letter grade.

RESPONSE: Agreed.

Public Utilities	Jonathan Ham
Contact	919-996-3543; Jonathan.Ham@raleighnc.gov

1. Show water to be private and master metered on PD master plans.

RESPONSE: The site will utilize individual meters per building with separate taps to the mains, per discussion between Mr. Hamm and engineer Don Curry.

2. Please provide a total breakdown of planned uses and proposed sewer flow from this redevelopment.

RESPONSE: Please see updated Sheet C-06 with proposed sewer flows.

Stormwater	Janet Boyer
Contact	919-996-4120; Janet.Boyer@raleighnc.gov

1. There are documented flood complaints downstream. Please provide a Drainage Area Map to the extent that the subject property is less than 5% of the drainage area. (UDO 9.2.2.E.3.d.)

RESPONSE: A Drainage Area Map has been included in this resubmittal.

Transportation	Jason S. Myers, Anne Conlon
Contact	919-996-2166, Jason.Myers@raleighnc.gov, 919-996-2160, Anne.Conlon@raleighnc.gov

1. Comments in **bold** are technical corrections that must be made for the rezoning case to proceed. Other comments are provided to guide potential improvements to the master plan that are informed by the Unified Development Ordinance and the 2030 Comprehensive Plan.
2. All comments on this campus master plan are subject to change, pending completion of the Traffic Impact Analysis (TIA). **Revisions to the master plan cannot be reviewed until the TIA review is complete.**

RESPONSE: We have provided a summary memo dated July 27, 2021 to supplement the TIA based on discussion with Jason and Anne.

3. This master plan does not propose any additional publicly accessible streets. This is not consistent with the Comprehensive Plan, including Policies T 2.3, T 2.4, T 2.5, and T 2.6, which all concern interconnected streets. These policies increase resiliency, reduce per-capita vehicle miles traveled, and increase the efficiency of providing services such as solid waste collection or emergency services.

RESPONSE:
The majority of this property is already developed as a continuum of care retirement community with memory care services. The proposed PD does not contemplate a wholesale redevelopment of these facilities. Instead, much of the existing community and associated infrastructure will remain generally as it exists today. We do not propose the construction of additional public streets through this existing community for the following reasons:

- The residential uses are and will continue to be age-restricted for senior living. This population is more fragile than the population at large, and it is paramount that the community be designed to protect the health, safety and welfare of its residents. We aim to maintain a campus feel where access through the community is limited to those who have a specific interest in being there. As we continue to navigate a global pandemic, it is readily apparent why we concerned about the potential negative impact of public access through this community
- There is an existing problem with high-speed racing on Whitaker Mill and we are concerned about inviting that activity onto our campus and into the neighborhood behind us.
- Further, it is our understanding that our neighbors are not interested in additional public street connectivity. We believe maintaining the existing level of connectivity serves the best interest of this community and the community at large.

This is a walkable area of Raleigh, and we believe many of our residents will venture off our campus to take advantage of the recreational areas, shopping, dining and other uses that are readily accessible by existing streets and sidewalks. Thus, we have committed to off-site improvements to Whitaker Mill and Bernard Streets, including the addition of bicycle lanes and pedestrian refuges, that will facilitate the safe movement of our residents and the community at large in this area. We believe these improvements facilitate the goals of Comprehensive Plan Section T 5.1, T 5.2, T 5.11, T 5.13 and T 5.15.

4. The existing block perimeter of approximately 5900 feet is much longer than the block perimeter standard of a base district (NXS-5) standard of 2500 feet. Conversion of the portion of the existing internal street network into a public street and connecting it to Mills St would result in blocks of approximately 3700 feet and 3500 feet in perimeter. The combined perimeter of POD A and POD B is approximately 2800 feet.

RESPONSE: Please see above.

5. UDO Section 4.7.2 allows modification of standards in UDO Article 8.4. This means that new streets to the master plan can be designed with custom cross sections and design parameters. This flexibility allows for consistency with Comprehensive Plan policies related to interconnectivity while also creating flexibility for the design of master plan developments.

RESPONSE: Understood.

6. The pedestrian circulation shown on sheet C-04 of the master plan does not appear to design for pedestrian travel from residential units within the development and nearby retail spaces. This is inconsistent with policies T 5.1, T 5.2, T 5.3, T 5.4, and T 5.9 in the 2030 Comprehensive Plan. Making the walking path less circuitous and improving a pedestrian crossing of Bernard Street would improve consistency with the comprehensive plan by making walking more comfortable, more direct, and safer. Bernard Street is built to approximately 41 feet in width; there is sufficient width to accommodate a median refuge.

RESPONSE: The walking paths are designed both to provide access between and among the building on campus and to be used for recreation. The paths will provide direct routes between buildings. We have revised the location of the access onto Bernard Street to provide for a better connection the High Park Shopping Center. See update Sheet C-04 based on our discussions with staff.

7. Map T-1 of the 2030 Comprehensive Plan (Street Plan) designates this section of Whitaker Mill Road to be a two-lane divided avenue (UDO Section 8.4.5.B). Conversion to a two-lane cross section with center turn lane and bike lanes is anticipated via street resurfacing and/or a standalone city-initiated remarking project. This change is planned partly to address concerns of speeding on Whitaker Mill Road that were discussed in the neighborhood meeting held for the case.

RESPONSE: Understood.

8. Build out of this master plan could commit to complete this implementation of the street plan between Bernard Street and either Pine Drive or Reaves Drive. This may result in the improvement

occurring more quickly and will also facilitate installation of a median refuge crossing on Whitaker Mil Road. Such a crossing would facilitate comfortable, direct, and safe pedestrian travel to the cluster of retail, pubs, and restaurants approximately 1/3 miles south of the master plan. This improvement would be consistent with Comprehensive Plan policies related to pedestrian circulation, such as policy T 5.9.

RESPONSE: We have proposed to complete the implementation of the street plan between Bernard Street and Pine Drive as a means of meeting the Comprehensive Plan requirements as to pedestrian and bicycle circulation and providing a public benefit. Please see updated Sheet C-04 per discussions with staff regarding pedestrian interconnectivity.

9. The master plan does not modify Article 8.5 of the UDO, sidewalk and streetscape improvements to all existing street are required at site plan review.

RESPONSE: Understood**.**

10. The master plan narrative mentions street types on Plan Sheet C-06. This information cannot be found in the master plan.

RESPONSE: This reference has been deleted from the Master Plan.

3. Plan Sheet C-04 mentions NCDOT standard specifications. All surrounding streets are City maintained. References to NCDOT standards should be removed.

RESPONSE: Done.

4. The master plan modifies driveway spacing standards in UDO Section 8.3.5.C.3 and in the Raleigh Street Design Manual Article 9.5, providing for a minimum spacing on 50' on all entrances. This is inconsistent with Comprehensive Plan policies T 2.8 and T 2.9.

RESPONSE: We propose to maintain the existing driveway on the western edge of the property, which is quite close to another driveway on the Wake County Human Services property. This provision is intended to allow that driveway to remain as it exists today. We have added a limitation of 3 driveway onto Whitaker Mill and 2 onto Bernard, unless required by Raleigh Transportation, as a means of addressing concerns that there will be too many driveways into this site.

5. Based on the Envision results, approval of case Z-17-21 would not increase the amount of projected vehicular peak hour trips to and from the site as indicated in the table below. The proposed rezoning from RX-4, R-10, and CX-3 to PD is projected to generate 149 fewer trips in the AM peak hour and 176 fewer trips in the PM peak hour. These results assume that all residential uses consist of senior housing, per the intent described in the Master Plan. **Additional language is recommended in the Master plan to state clearly that general residential uses will not be permitted, or an additional analysis representing the higher trip generation of general residential uses will be required.**

RESPONSE: We have added the following language to section 7.B.ii of the Master Plan: "Except for skilled nursing care units which may service people of any age requiring skilled nursing care, residential uses shall service only persons meeting the housing for Older Persons Exemption to the Fair Housing Act (24 C.F.R. Sections 100.300 through 100.308, as the same may be amended from time to time.)"

6. A TIA is required for all Planned Development Districts and has been submitted with a scenario matching the planned uses for the district. Since the planned build scenario produces similar trip generation to the maximum proposed zoning scenario identified below, the TIA is now considered complete. **Upon confirmation that residential uses will be restricted to various types of senior housing, staff will review the TIA.**
   RESPONSE: Done. Please see prior response.

.

Z-17-21 Existing Land Use	Daily	AM	PM
Senior Living and Nursing Home	1,000	51	63
Z-17-21 Current Zoning Entitlements	Daily	AM	PM
Mixed Use	4,333	276	349
Z-17-21 Proposed Zoning Maximums	Daily	AM	PM
Planned Development (Senior Living)	2,298	127	173
Z-17-21 Trip Volume Change	Daily	AM	PM
(Proposed Maximums minus Current Entitlements)	-2,035	-149	-176

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Oaks at Mayview

Traffic Impact Analysis

February 2021

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Oaks at Mayview

Traffic Impact Analysis

February 2021

NORTH CAROLINA PROFESSIONAL SEAL 36842 ENGINEER RICHARD T. PATE

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Issue and revision record

Revision	Date	Originator	Checker	Approver	Description

Document reference: 501379362-004 |

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Executive summary

Project Location and Description

Pruitt Health has plans to redevelop a site in Raleigh that currently houses a skilled nursing and rehabilitation center (The Oaks at Whitaker Glen – Mayview) and an independent living community (The Oaks at Whitaker Glen). The site is located along E Whitaker Mill Road, south of Mills Street and west of Bernard Street.

As shown in **Table ES-1**, the existing site has 93 units in the independent living facility and 139 beds in the skilled nursing facility. The proposed site will include 225 units in the independent living facility, 100 beds in the skilled nursing facility, a 90-bed assisted living facility, 8,000 square feet of rehab facilities, restaurants totaling 4,000 square feet, a 1,500-square-foot retail pharmacy and a home health and institutional pharmacy totaling 15,000 square feet.

Table ES-1: Existing and Proposed Land Uses and Densities

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Access to the existing site is provided via two access points along E Whitaker Mill Road and one along Mills Street. With the redevelopment, these access points will either be reconfigured or relocated. In the future, the site is proposed to have five access points – two along E Whitaker Mill Road, two along Bernard Street and one along Mills Street.

The development is anticipated to be fully constructed by 2023. **Figure ES-1** shows the study area, while the site plan is provided in **Figure ES-2**.

Background Information

A virtual scoping meeting was held between staff from Mott MacDonald, Curry Engineering, the City of Raleigh on September 3, 2020 to discuss the proposed development. It was agreed that following existing and future intersections would be included in the study area:

- E Whitaker Mill Road and Pine Drive – existing and future
- E Whitaker Mill Road and Center Road/Access #4 – existing and future
- E Whitaker Mill Road and Bernard Street – existing and future
- Bernard Street and Mills Street – existing and future
- Mills Street and Access #1 (Exit Only) – future only
- Bernard Street and Access #2 – future only
- Bernard Street and Access #3 – future only
- E Whitaker Mill Road and Access #5 – future only

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The existing site has two accesses along E Whitaker Mill Road and one along Mills Street. These accesses are anticipated to relocated or reconfigured as part of the redevelopment of the site; therefore, they will not be included in the Existing (2020) and Background (2023) scenario analysis.

Traffic analyses were performed for the study area intersections listed above for four scenarios, as follows:

- **Existing (2020)** – analyzes current conditions (traffic data from turning movement counts, aerial photography, site visit and existing traffic control information). Due to the effects of the Covid-19 pandemic on travel in North Carolina, turning movement counts were increased by20%, as required by the City. Additionally, the existing driveways were not included in the Existing (2020) analysis and the associated trips from these driveways were removed from the study area based on existing travel patterns.
- **Background (2023)** – estimates future conditions (build year) based on an average annual growth rate (AAGR) of 1% as dictated by the City of Raleigh. There were no nearby approved developments; therefore, no additional traffic will be included in the Background (2023) scenario.
- **Build (2023)** – combines the anticipated traffic from the proposed development and the Background (2023) volumes. This includes the total gross trips from the proposed development and not the net trip increase between the existing development and the proposed development.
- **Improved (2023)** – if necessary, analyzes potential improvements to provide acceptable levels of service

Background (2023) Analysis

Based on input from the City of Raleigh, future year traffic estimates were developed by applying an overall annual growth rate (AAGR) of 1% to the 2020 traffic volumes. There were no nearby approved developments; therefore, no additional traffic will be included in the Background (2023) scenario.

Trip Generation

The existing site has 93 units in the independent living facility and 139 beds in the skilled nursing facility. The proposed site will include 225 units in the independent living facility, 100 beds in the skilled nursing facility, a 90-bed assisted living facility, 8,000 square feet of rehab facilities, restaurants totaling 4,000 square feet, a 1,500-square-foot retail pharmacy and a home health and institutional pharmacy totaling 15,000 square feet.

With a few exceptions, NCDOT guidance was used to estimate the trips generated as part of the proposed development. The *ITE Trip Generation Manual, 10th Edition* does not provide data for a skilled nursing facility, rehab facility or home health facility, therefore, with the City's approval the nursing home land use (620), medical-dental office building land use (710) and office land use (710) were used, respectively. Additionally, due to the size of the home health/institutional pharmacy portion of the development, the rate was used instead of the equation. These deviations were approved by the City. As a result, the development is anticipated to generate 2,313 daily trips, 129 AM peak hour trips (78 entering, 51 exiting) and 209 PM peak hour trips (96 entering, 113 exiting).

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Findings

As reported, the proposed development is not anticipated to significantly affect delay at the study area intersections. The following intersection improvements and driveway configurations should be considered.

E Whitaker Mill Road and Pine Drive

The analysis indicates that this intersection is projected to operate at LOS A in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

E Whitaker Mill Road & Center Road/Access #4

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the southbound Access #4 approach to provide one right-in only ingress lane and one right-out only egress lane.
- Provide adequate channelization so as to dissuade any vehicles from turning left out of the site or left into the site.

E Whitaker Mill Road & Bernard Street

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

Mills Street & Bernard Street

The analysis indicates that all four stop-controlled approaches are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

Mills Street & Access #1

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the northbound Access #1 approach to provide one egress-only lane.

Bernard Street & Access #2

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the eastbound Access #2 approach to provide one ingress lane and one egress lane.

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Bernard Street & Access #3

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the eastbound Access #3 approach to provide one ingress lane and one egress lane.

E Whitaker Mill Road & Access #5

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the southbound Access #5 approach to provide one ingress lane and one egress lane.

Table ES-4 provides a summary of the intersection levels of service across all scenarios and the proposed laneage is shown in **Figure ES-3**.

Additional Considerations

At the direction of the City of Raleigh, 5-year crash data (11/1/2015 – 10/31/2020) was reviewed at the E Whitaker Mill Road and Bernard Street intersection. No crashes were reported during the period.

The City of Raleigh requires that Multimodal Level of Service be addressed as part of the TIA. The latest version of ARTPLAN was obtained from the Florida Department of Transportation (FDOT) and used for this analysis.

Additionally, the City of Raleigh has indicated that there are plans to complete a road diet along E Whitaker Mill Road within the study area; however, there are no details yet. For this analysis, at the direction of the City, it is assumed that the road diet along E Whitaker Mill Road would result in a 3-lane cross-section.

Multimodal Level of Service

The City of Raleigh requires that Multimodal Level of Service be addressed as part of the TIA. The latest version of ARTPLAN was obtained from the FDOT and used for this analysis. This software is used for arterials. Within the study area, only E Whitaker Mill Road could be considered an arterial, although it is classified as a major collector by NCDOT. Only one traffic signal is present along E Whitaker Mill Road within the study – at Pine Drive. The ARTPLAN analysis spans from just west of Pine Drive to just east of Bernard Street. Center Road and Bernard Street were included in the analysis even though they are not signalized intersections. While ARTPLAN does not analyze the off-peak direction, the numbers were adjusted in order to try to replicate off-peak conditions.

Sidewalks are currently present on the north and south sides of E Whitaker Mill Road within the study area. Travel lanes along E Whitaker Mill Road are approximately 10 feet wide with no bicycle lanes present. GoRaleigh indicates that there are two buses that traverse E Whitaker Mill Road every hour (from roughly 6 AM – 11 PM) as part of Route 2, however the route map does not show any designated stops on E Whitaker Mill. There are bus stops present in the field at Bernard Street and Pine Drive. For this analysis, since the GoRaleigh Route 2 does not show any stops, no buses were included in the analysis.

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Along E Whitaker Mill Road, the westbound direction is the peak direction in the AM peak hour and eastbound direction is the peak direction in the PM peak hour. Given that the characteristics of E Whitaker Mill Road are the same throughout the study area, the results are reported for the entire length of E Whitaker Mill Road. The ARTPLAN files do include the separate segments at Pine Drive, Center Road and Bernard Street; however, the differences in LOS and scores are very minimal.

As shown in **Table ES-2**, the pedestrian level of service along E Whitaker Mill Road is LOS B in the AM and PM peak hours. The reported bus level of service is LOS F for the AM and PM peak hours due to no buses stopping along E Whitaker Mill Road. Similarly, with no dedicated bike facilities, the bike level of service is acceptable – LOS C and LOS D in the AM and PM peak hours.

Table ES-2: E Whitaker Mill Road Multimodal LOS Results

E Whitaker Mill Road	Direction	Peak/ Off-Peak	Existing (2020)		Background (2023)		Build (2023)	
			AM	PM	AM	PM	AM	PM
Pedestrian LOS & Score	EB	Off	B – 2.06	-	B – 2.08	-	B – 2.08	-
	WB	Peak	B – 2.09	-	B – 2.09	-	B – 2.10	-
	EB	Peak	-	B – 2.16	-	B – 2.17	-	B – 2.18
	WB	Off	-	B – 2.09	-	B – 2.11	-	B – 2.12
Bus LOS & Score	EB	Off	F – 0.00	-	F – 0.00	-	F – 0.00	-
	WB	Peak	F – 0.00	-	F – 0.00	-	F – 0.00	-
	EB	Peak	-	F – 0.00	-	F – 0.00	-	F – 0.00
	WB	Off	-	F – 0.00	-	F – 0.00	-	F – 0.00
Bike LOS & Score	EB	Off	C – 3.23	-	C – 3.30	-	C – 3.34	-
	WB	Peak	C – 3.36	-	C – 3.39	-	C – 3.46	-
	EB	Peak	-	D – 3.76	-	D – 3.80	-	D – 3.86
	WB	Off	-	C – 3.40	-	C – 3.49	-	D – 3.54

E Whitaker Mill Road – Road Diet

The City of Raleigh has indicated that there are plans to complete a road diet along E Whitaker Mill Road within the study area; however, there are no details yet. For this analysis, at the direction of the City, it is assumed that the road diet along E Whitaker Mill Road would result in a 3-lane cross-section.

With the road diet, it is assumed that bike lanes would be provided, along with additional pedestrian accommodations and enhanced bus accommodations; however, those enhancements were not included in the analysis.

Synchro analysis files were prepared for the 3-lane road diet as well, with a single eastbound and westbound through lane and a two-way left-turn lane. No exclusive turn lanes were provided and the signal timings at the E Whitaker Mill Road and Pine Drive intersection were unchanged.

Vehicular operations along E Whitaker Mill Road are not anticipated to be materially different with a 4-lane cross-section or 3-lane cross-section; however, the bicycle operations are anticipated to degrade. **Table ES-3** shows the E Whitaker Mill Road multimodal LOS results with the road diet in place.

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Table ES-3: E Whitaker Mill Road with Road Diet Multimodal LOS Results

E Whitaker Mill Road	Direction	Peak/ Off-Peak	Build with Road Diet (2023)	
			AM	PM
Pedestrian LOS & Score	EB	Off	B – 2.23	-
	WB	Peak	B – 2.27	-
	EB	Peak	-	B – 2.43
	WB	Off	-	B – 2.30
Bus LOS & Score	EB	Off	F – 0.00	-
	WB	Peak	F – 0.00	-
	EB	Peak	-	F – 0.00
	WB	Off	-	F – 0.00
Bike LOS & Score	EB	Off	D – 4.10	-
	WB	Peak	E – 4.28	-
	EB	Peak	-	E – 4.80
	WB	Off	-	E – 4.41

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Table ES-4: Overall LOS Results

Intersection [Node #]	Approach	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Overall	A – 4.9	A – 5.0	A – 4.9	A – 5.0	A – 5.0	A – 5.1	A – 5.4	A – 5.6
	Eastbound	A – 2.6	A – 2.9	A – 2.6	A – 2.9	A – 2.6	A – 3.0	A – 2.9	A – 3.4
	Westbound	A – 2.3	A – 2.3	A – 2.3	A – 2.4	A – 2.3	A – 2.4	A – 3.0	A – 3.2
	Southbound	B – 15.0	B – 16.9	B – 15.1	B – 16.9	B – 16.0	B – 17.5	B – 16.0	B – 17.5
E Whitaker Mill Road & Center Road/Access #4 [2]	Overall	A – 0.4	A – 0.6	A – 0.4	A – 0.6	A – 0.5	A – 0.8	A – 0.5	A – 0.8
	Northbound Approach	B – 10.2	B – 11.6	B – 10.3	B – 11.7	B – 10.7	B – 12.7	B – 11.0	B – 12.6
	Westbound Thru/Left-Turn	A – 7.8	A – 8.2	A – 7.8	A – 8.3	A – 7.9	A – 8.3	A – 7.9	A – 8.3
	Southbound Approach	-	-	-	-	A – 9.2	A – 9.3	A – 9.8	B – 10.1
E Whitaker Mill Road & Bernard Street [3]	Overall	A – 1.0	A – 2.1	A – 1.1	A – 2.1	A – 1.5	A – 3.6	A – 1.6	A – 3.4
	Eastbound Left-Turn	A – 7.9	A – 8.0	A – 7.9	A – 8.1	A – 8.1	A – 8.3	A – 8.1	A – 8.2
	Southbound Approach	A – 9.6	B – 11.6	A – 9.7	B – 11.7	B – 11.2	C – 16.5	B – 11.3	C – 15.1
Mills Street & Bernard Street [4]	Overall	A – 6.9	A – 7.3	A – 6.9	A – 7.3	A – 7.0	A – 7.4	A – 7.0	A – 7.4
	Northbound Approach	A – 6.9	A – 7.2	A – 6.9	A – 7.2	A – 6.9	A – 7.3	A – 6.9	A – 7.3
	Eastbound Approach	A – 6.9	A – 6.9	A – 6.9	A – 6.9	A – 7.0	A – 7.1	A – 7.0	A – 7.1
	Westbound Approach	A – 6.8	A – 7.6	A – 6.8	A – 7.6	A – 7.0	A – 7.7	A – 7.0	A – 7.7
	Southbound Approach	A – 7.1	A – 7.3	A – 7.1	A – 7.3	A – 7.2	A – 7.3	A – 7.2	A – 7.3
Mills Street & Access #1 [5]	Overall	-	-	-	-	A – 1.3	A – 1.3	A – 1.3	A – 1.3
	Northbound Approach	-	-	-	-	A – 8.4	A – 8.4	A – 8.4	A – 8.4
	Westbound Thru/Left-Turn	-	-	-	-	A – 0.0	A – 0.0	A – 0.0	A – 0.0
Bernard Street & Access #2 [6]	Overall	-	-	-	-	A – 1.1	A – 0.6	A – 1.1	A – 0.6
	Northbound Thru/Left-Turn	-	-	-	-	A – 7.3	A – 7.4	A – 7.3	A – 7.4
	Eastbound Approach	-	-	-	-	A – 8.6	A – 9.0	A – 8.6	A – 9.0
Bernard Street & Access #3 [7]	Overall	-	-	-	-	A – 3.8	A – 3.2	A – 3.8	A – 3.2
	Northbound Thru/Left-Turn	-	-	-	-	A – 7.4	A – 7.4	A – 7.4	A – 7.4
	Eastbound Approach	-	-	-	-	A – 8.5	A – 9.0	A – 8.5	A – 9.0
E Whitaker Mill Road & Access #5 [8]	Overall	-	-	-	-	A – 0.3	A – 0.7	A – 0.5	A – 0.6
	Eastbound Thru/Left-Turn	-	-	-	-	A – 7.9	A – 8.0	A – 7.9	A – 8.0
	Southbound Approach	-	-	-	-	B – 10.5	B – 12.3	B – 10.9	B – 12.2

LEGEND: LOS – Delay (seconds/vehicle)

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Table ES-5: E Whitaker Mill Road & Pine Drive – Percent of Cycles Maxed Out (v/c)

Intersection [Node #]	Phase	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Ø2	37% (0.10)	55% (0.19)	39% (0.11)	55% (0.20)	49% (0.11)	58% (0.21)	52% (0.14)	62% (0.26)
	Ø4	0% (0.10)	0% (0.11)	0% (0.10)	0% (0.11)	0% (0.11)	0% (0.12)	0% (0.21)	0% (0.24)
	Ø6	37% 0.34)	55% 0.33)	39% 0.35)	54% 0.34)	49% 0.35)	58% 0.33)	52% (0.35)	62% (0.33)

*v/c is reported as the maximum v/c per phase

Table ES-6: Overall Queue Results - Average|Maximum (in feet) & [Upstream Block Time (%)|Storage Block Time (%)]

Intersection [Node #]	Approach	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Eastbound Thru/Left-Turn	21|75 [-|-]	36|84 [-|-]	19|75 [-|-]	35|90 [-|-]	22|76 [-|-]	41|104 [-|-]	-|- [-|-]	-|- [-|-]
	Eastbound Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	17|55 [-|-]	28|79 [-|-]
	Eastbound Thru	3|32 [-|-]	12|53 [-|-]	2|39 [-|-]	11|66 [-|-]	5|47 [-|-]	11|63 [-|-]	15|74 [-|-]	27|99 [-|-]
	Westbound Thru	13|80 [-|-]	17|76 [-|-]	11|58 [-|-]	19|87 [-|-]	17|83 [-|-]	21|73 [-|-]	-|- [-|-]	-|- [-|-]
	Westbound Thru/Right-Turn	3|34 [-|-]	6|50 [-|-]	2|38 [-|-]	5|32 [-|-]	3|31 [-|-]	7|44 [-|-]	23|95 [-|-]	26|92 [-|-]
	Southbound Left-Turn	23|62 [-|-]	34|75 [-|-]	24|72 [-|-]	31|73 [-|-]	29|72 [-|-]	36|78 [-|-]	29|63 [-|-]	40|90 [-|-]
	Southbound Right-Turn	33|65 [-|-]	31|70 [-|-]	33|68 [-|-]	33|65 [-|-]	33|67 [-|-]	33|75 [-|-]	34|71 [-|-]	35|74 [-|-]
E Whitaker Mill Road & Center Road/Access #4 [2]	Eastbound Thru	0|0 [-|-]	0|11 [-|-]	0|3 [-|-]	0|3 [-|-]	0|3	0|3	-|- [-|-]	-|- [-|-]
	Eastbound Thru/Right-Turn	0|5 [-|-]	0|8 [-|-]	0|3 [-|-]	0|3 [-|-]	-|- [-|-]	-|- [-|-]	1|14 [-|-]	0|3 [-|-]
	Westbound Thru/Left-Turn	1|17 [-|-]	3|30 [-|-]	1|12 [-|-]	4|35 [-|-]	2|30 [-|-]	3|35 [-|-]	1|21 [-|-]	3|25 [-|-]
	Westbound Thru/Right-Turn	-|- [-|-]	-|- [-|-]	0|6 [-|-]	-|- [-|-]	-|- [-|-]	0|5 [-|-]	0|7 [-|-]	0|3 [-|-]
	Northbound Approach	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	16|38 [-|-]	11|54 [-|-]	16|40 [-|-]
	Southbound Right-Turn	12|57 [-|-]	16|36 [-|-]	11|56 [-|-]	17|36 [-|-]	14|59 [-|-]	0|14 [-|-]	0|4 [-|-]	1|17 [-|-]
E Whitaker Mill Road & Bernard Street [3]	Eastbound Left-Turn	4|35 [-|-]	12|50 [-|-]	4|37 [-|-]	12|50 [-|-]	8|56 [-|-]	8|56 [-|-]	8|49 [-|-]	17|56 [-|-]
	Eastbound Thru	0|8 [-|-]	-|- [-|-]	0|6 [-|-]	0|6 [-|-]	-|- [-|-]	0|8 [-|-]	-|- [-|-]	0|8 [-|-]
	Westbound Thru	0|6 [-|-]	1|14 [-|-]	0|3 [-|-]	-|- [-|-]	0|6 [-|-]	0|8 [-|-]	-|- [-|-]	-|- [-|-]
	Westbound Thru/Right-Turn	-|- [-|-]	0|8 [-|-]	-|- [-|-]	0|10 [-|-]	0|3 [-|-]	1|14 [-|-]	0|12 [-|-]	1|11 [-|-]
	Southbound Left/Right-Turn	20|55 [-|-]	31|75 [-|-]	21|64 [-|-]	34|83 [-|-]	29|67 [-|-]	45|91 [-|-]	28|71 [-|-]	47|119 [-|-]
Mills Street & Bernard Street [4]	Eastbound Approach	4|30 [-|-]	7|31 [-|-]	4|30 [-|-]	7|33 [-|-]	9|31 [-|-]	10|31 [-|-]	7|31 [-|-]	10|31 [-|-]
	Westbound Approach	15|31 [-|-]	20|66 [-|-]	15|31 [-|-]	22|71 [-|-]	16|31 [-|-]	25|69 [-|-]	17|36 [-|-]	25|76 [-|-]
	Northbound Approach	8|30 [-|-]	25|47 [-|-]	10|30 [-|-]	25|45 [-|-]	10|32 [-|-]	27|53 [-|-]	10|34 [-|-]	26|37 [-|-]
	Southbound Approach	16|47 [-|-]	19|42 [-|-]	15|52 [-|-]	22|56 [-|-]	18|51 [-|-]	21|54 [-|-]	16|46 [-|-]	21|53 [-|-]
Mills Street & Access #1 [5]	Northbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	3|28 [-|-]	3|31 [-|-]	3|31 [-|-]	3|31 [-|-]
Bernard Street & Access #2 [6]	Eastbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	6|34 [-|-]	8|33 [-|-]	6|33 [-|-]	7|31 [-|-]
	Northbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	1|12 [-|-]	1|12 [-|-]	0|5 [-|-]	0|3 [-|-]
Bernard Street & Access #3 [7]	Eastbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	12|36 [-|-]	29|65 [-|-]	12|34 [-|-]	30|58 [-|-]
	Northbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	2|30 [-|-]	2|35 [-|-]	2|30 [-|-]	2|35 [-|-]
E Whitaker Mill Road & Access #5 [8]	Eastbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	1|21 [-|-]	4|40 [-|-]	1|21 [-|-]	4|33 [-|-]
	Southbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	16|33 [-|-]	18|41 [-|-]	17|45 [-|-]	19|47 [-|-]

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Table ES-7: E Whitaker Mill Road – Arterial Results (Eastbound|Westbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
- [12]	Delay (s/veh)	0.1|0.6	0.3|0.7	0.2|0.6	0.3|0.7	0.2|0.7	0.3|0.8	0.2|0.8	0.3|0.8
	Travel Time (s)	10.6|8.7	10.9|8.8	10.7|8.7	10.9|8.8	10.6|8.8	10.9|8.8	10.7|8.9	10.9|8.9
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|32	36|32	36|32	36|32	36|32	35|32	36|32	35|31
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Pine Drive [1]	Delay (s/veh)	1.2|1.3	1.9|1.8	1.2|1.2	1.8|1.8	1.5|1.6	2.3|2.0	1.4|2.3	1.7|2.6
	Travel Time (s)	9.2|18.3	9.8|18.8	9.2|18.3	9.8|18.9	9.4|18.8	10.2|19.2	9.4|19.5	9.7|19.9
	Distance (mi)	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	31|33	29|32	31|33	29|32	30|32	28|31	30|31	29|33
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
- [13]	Delay (s/veh)	0.4|0.1	0.6|0.1	0.4|0.1	0.6|0.1	-|-	-|-	-|-	-|-
	Travel Time (s)	17.8|6.2	18.0|6.2	17.8|6.2	18.0|6.2	-|-	-|-	-|-	-|-
	Distance (mi)	0.2|0.1	0.2|0.1	0.2|0.1	0.2|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	34|34	33|34	34|34	33|34	-|-	-|-	-|-	-|-
	LOS	A|A	A|A	A|A	A|A	-|-	-|-	-|-	-|-
Access #5 [8]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.5|0.1	0.8|0.1	0.7|0.3	1.1|0.3
	Travel Time (s)	-|-	-|-	-|-	-|-	16.9|6.1	18.0|6.2	17.3|6.3	18.3|6.3
	Distance (mi)	-|-	-|-	-|-	-|-	0.2|0.1	0.2|0.1	0.2|0.1	0.2|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	36|35	33|34	35|34	33|34
	LOS	-|-	-|-	-|-	-|-	A|A	A|A	A|A	A|A
Center Road/Access #4 [2]	Delay (s/veh)	0.1|0.1	0.2|0.3	0.2|0.2	0.2|0.2	0.1|0.2	0.2|0.3	0.3|0.4	0.4|0.6
	Travel Time (s)	5.9|8.2	6.1|8.3	5.9|8.2	6.1|8.2	6.2|8.2	6.3|8.2	6.4|8.4	6.5|8.5
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|33	35|33	36|33	35|33	34|33	34|33	33|32	33|32
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Bernard Street [3]	Delay (s/veh)	0.1|0.2	0.2|0.3	0.1|0.2	0.2|0.3	0.1|0.3	0.2|0.5	0.3|0.9	0.7|1.2
	Travel Time (s)	7.9|22.4	8.1|22.4	8.1|22.3	8.1|22.5	7.8|22.4	8.1|22.6	8.1|23.3	8.5|23.4
	Distance (mi)	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	34|36	33|36	33|36	33|36	34|36	33|35	33|35	32|34
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Total	Delay (s/veh)	2.0|2.5	3.1|3.2	2.0|2.3	3.1|3.2	2.3|3.0	3.8|3.7	3.0|4.7	4.2|5.5
	Travel Time (s)	51.5|63.8	53.0|64.5	51.6|63.7	53.0|64.7	50.9|64.4	53.5|64.9	51.8|66.4	53.9|67.0
	Distance (mi)	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6
	Arterial Speed	34|34	33|34	34|34	33|33	34|34	33|33	34|33	33|32
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A

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Table ES-8: Bernard Street – Arterial Results (Northbound|Southbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road [3]	Delay (s/veh)	-|6.4	-|6.6	-|6.3	-|6.9	-|6.3	-|8.5	-|6.9	-|11.2
	Travel Time (s)	-|15.0	-|13.3	-|15.2	-|13.6	-|14.3	-|16.5	-|14.2	-|19.3
	Distance (mi)	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1
	Arterial Speed	-|20	-|18	-|16	-|17	-|17	-|14	-|19	-|12
	LOS	-|C	-|D	-|D	-|D	-|D	-|E	-|C	-|E
- [15]	Delay (s/veh)	0.2|0.0	0.1|0.0	0.1|0.1	0.2|0.1	-|-	-|-	-|-	-|-
	Travel Time (s)	10.6|6.6	10.1|6.7	10.2|6.8	10.3|6.8	-|-	-|-	-|-	-|-
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	22|35	24|34	23|34	23|34	-|-	-|-	-|-	-|-
	LOS	C|A	B|A	C|A	C|A	-|-	-|-	-|-	-|-
- [17]	Delay (s/veh)	0.0|3.0	0.0|2.8	0.0|3.0	0.0|3.0	-|-	-|-	-|-	-|-
	Travel Time (s)	6.7|11.6	6.7|11.3	6.7|11.5	6.8|11.6	-|-	-|-	-|-	-|-
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	35|26	34|27	34|26	34|26	-|-	-|-	-|-	-|-
	LOS	A|B	A|B	A|B	A|B	-|-	-|-	-|-	-|-
Access #3 [7]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.2|0.1	0.2|0.2	0.3|0.1	0.3|0.2
	Travel Time (s)	-|-	-|-	-|-	-|-	10.0|6.5	10.1|6.6	9.9|6.4	10.1|6.7
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	24|36	24|35	24|36	24|35
	LOS	-|-	-|-	-|-	-|-	B|A	B|A	B|A	B|A
Access #2 [6]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.2|2.6	0.2|1.7	0.2|2.4	0.2|1.7
	Travel Time (s)	-|-	-|-	-|-	-|-	6.8|10.3	6.5|7.8	6.6|9.9	6.4|7.7
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	34|29	36|39	31|35	36|35
	LOS	-|-	-|-	-|-	-|-	A|A	A|A	A|A	A|A
Mills Street [4]	Delay (s/veh)	2.3|6.4	4.2|6.6	2.4|6.4	4.0|6.7	3.3|6.6	4.5|6.7	3.1|6.7	4.5|6.9
	Travel Time (s)	8.3|15.0	11.3|14.0	8.5|13.8	11.1|14.1	10.0|14.1	11.8|14.2	9.4|14.2	11.8|14.5
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|16	27|20	35|20	27|20	30|20	25|19	32|19	26|19
	LOS	A|D	A|C	A|C	B|C	A|C	B|C	A|C	B|C
Total	Delay (s/veh)	2.4|16.0	4.4|16.1	2.5|15.8	4.2|16.7	3.8|15.6	4.9|17.1	3.6|16.1	4.9|20.0
	Travel Time (s)	25.6|47.2	28.1|45.3	25.4|47.4	28.2|46.1	26.9|45.2	28.4|45.1	26.0|45.1	28.2|48.2
	Distance (mi)	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3
	Arterial Speed	30|22	27|23	30|22	27|23	29|23	27|23	30|23	27|22
	LOS	A|C	B|C	A|C	B|C	A|C	B|C	A|C	B|C

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Table ES-9: Mills Street – Arterial Results (Eastbound|Westbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
Access#1 [5]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.0|1.9	0.0|3.3	0.0|2.5	0.0|2.9
	Travel Time (s)	-|-	-|-	-|-	-|-	7.2|7.2	7.6|9.8	8.7|8.0	7.2|9.2
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	38|35	36|26	29|31	38|27
	LOS	-|-	-|-	-|-	-|-	A|A	A|B	A|A	A|B
Bernard Street [4]	Delay (s/veh)	-|-	-|-	-|-	-|-	3.4|5.2	5.5|7.0	3.2|6.0	6.3|7.1
	Travel Time (s)	-|-	-|-	-|-	-|-	9.2|16.9	11.9|20.4	8.7|18.3	13.7|22.0
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	28|29	21|24	29|27	18|27
	LOS	-|-	-|-	-|-	-|-	B|A	C|B	A|B	D|B
Total	Delay (s/veh)	-|-	-|-	-|-	-|-	3.5|7.2	5.5|10.3	3.2|8.5	6.4|9.9
	Travel Time (s)	-|-	-|-	-|-	-|-	16.4|24.1	19.6|30.2	16.5|26.4	20.9|31.2
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	-|-	-|-	-|-	-|-	32|31	27|25	32|28	25|24
	LOS	-|-	-|-	-|-	-|-	A|A	B|B	A|B	B|B

Table ES-10: Network Results

MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
	AM	PM	AM	PM	AM	PM	AM	PM
Vehicles Entered	622	887	651	918	786	1124	787	1121
Vehicles Exited	624	885	653	917	784	1131	788	1126
Total Delay (hr)	0.8	1.5	0.8	1.5	1.1	2.1	1.3	2.5
Delay/Vehicle (sec/veh)	4.4	6.0	4.4	6.0	4.9	6.6	5.9	7.8
Total Stops	254	452	260	475	350	633	349	621
Stops/Vehicle	0.40	0.50	0.39	0.51	0.44	0.55	0.44	0.54
Fuel Used (gal)	11.1	16.4	11.6	16.8	13.4	20.0	13.6	20.2
HC Emissions (g)	254	255	253	267	256	322	290	332
CO Emissions (g)	5575	6783	5622	7061	6121	8872	6761	9019
NOx Emissions (g)	774	812	780	844	797	1018	880	1042

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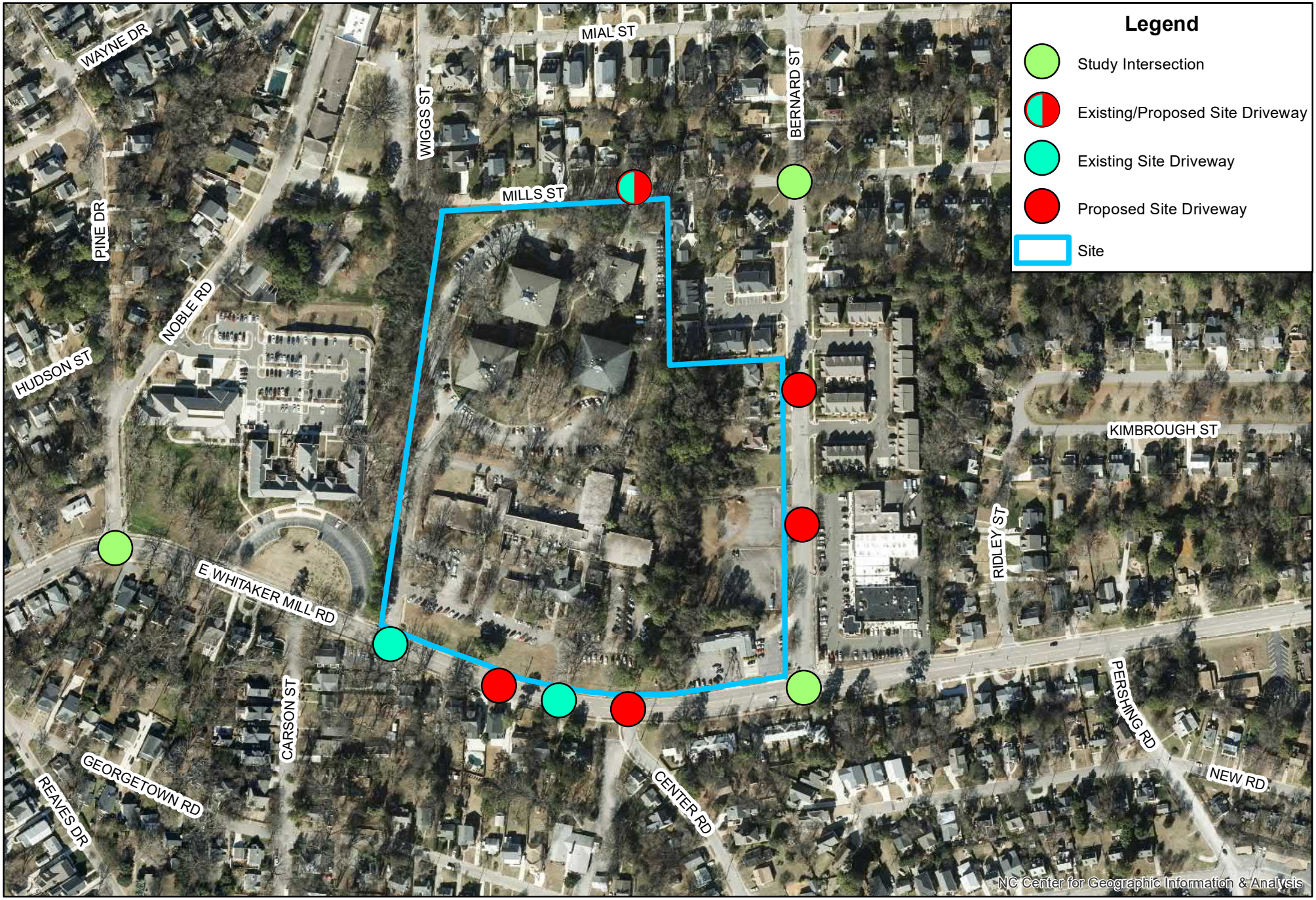

0 0.05 0.1 Miles

Figure ES-1: Vicinity Map

Oaks at Mayview

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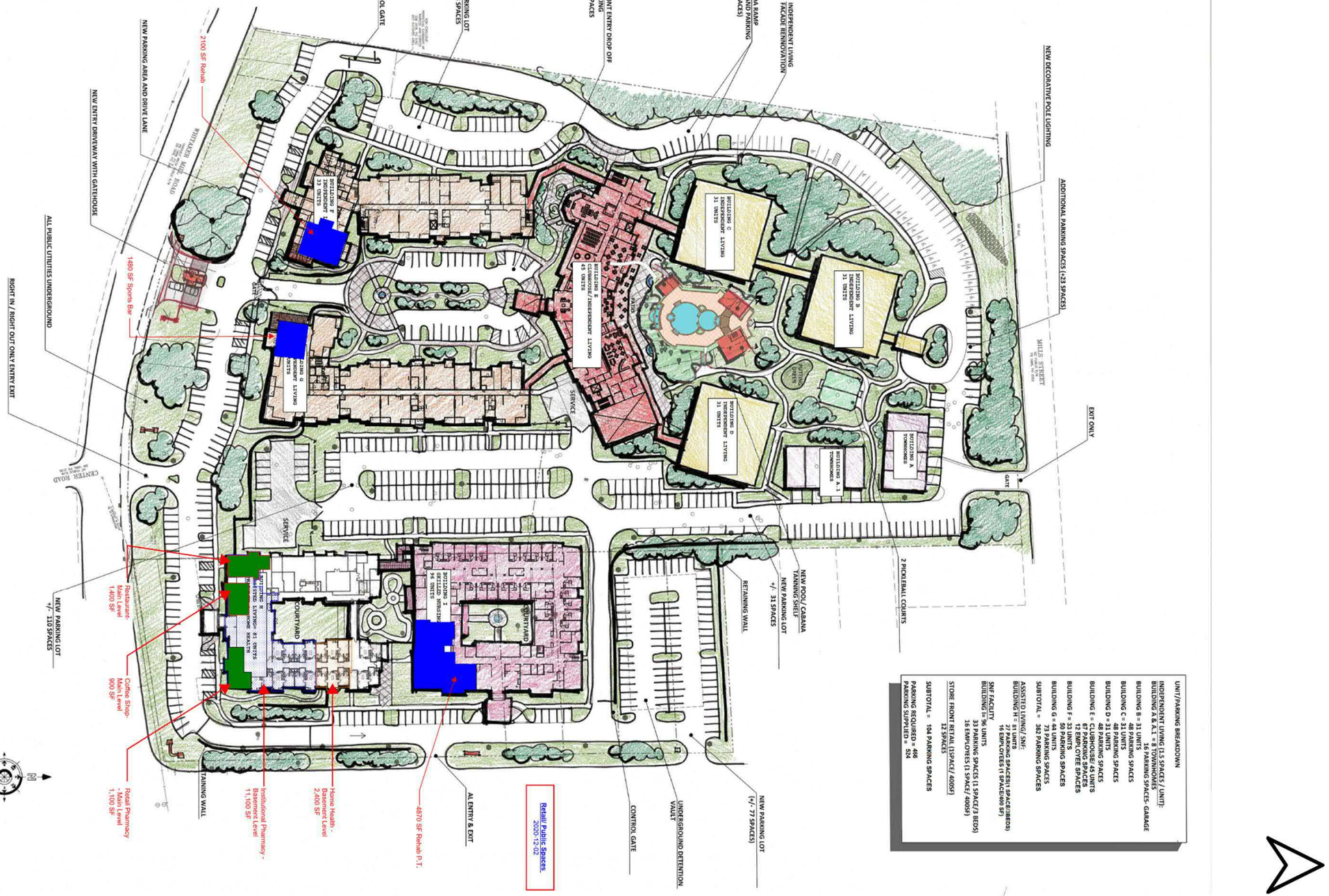

Oaks at Mayview
Raleigh, NC

Figure ES-2
Site Plan

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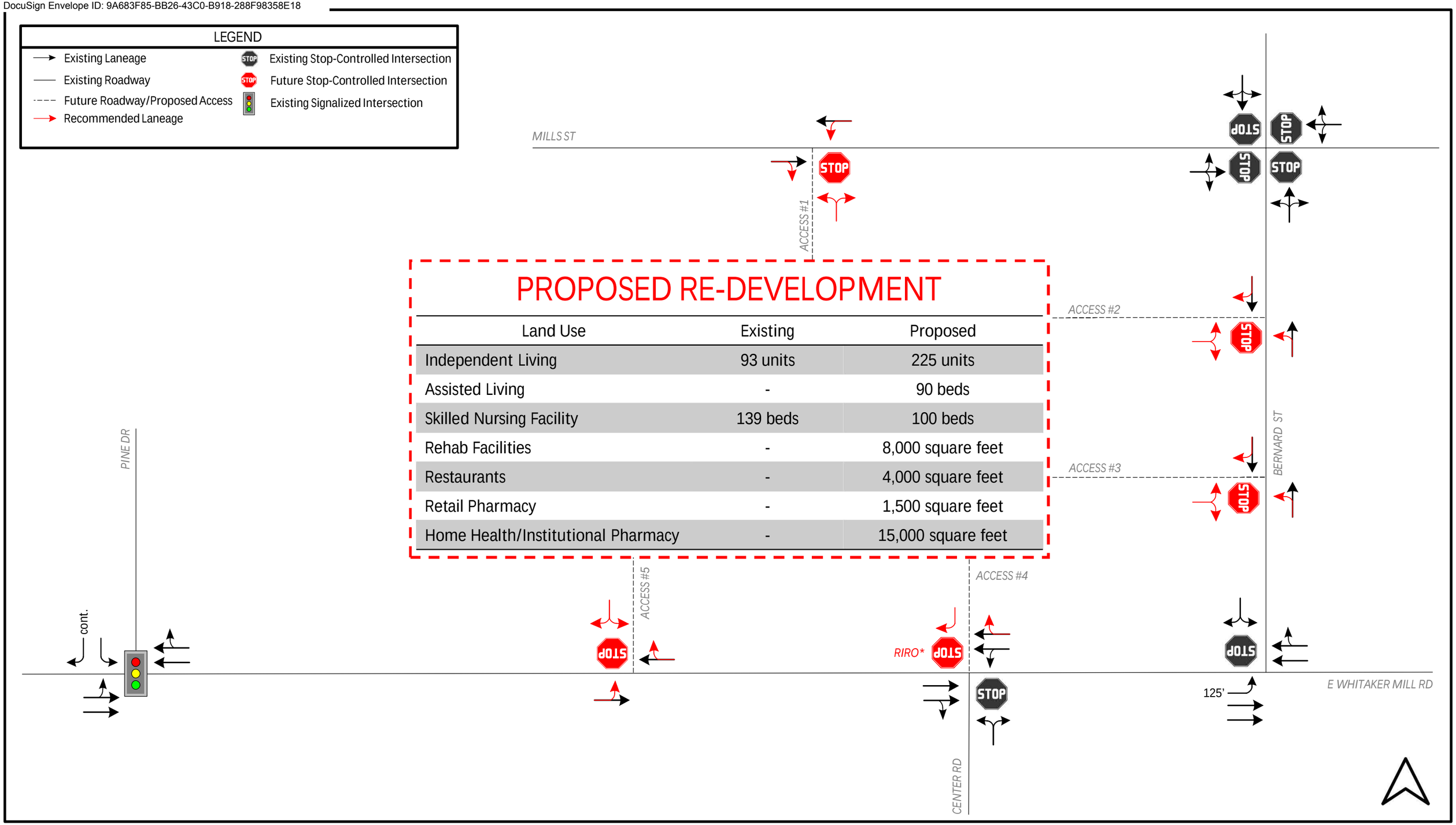

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
Raleigh, NC

Figure ES-3
Recommended (2023) Laneage

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1 Introduction

Pruitt Health has plans to redevelop a site in Raleigh that currently houses a skilled nursing and rehabilitation center (The Oaks at Whitaker Glen – Mayview) and an independent living community (The Oaks at Whitaker Glen). The site is located along E Whitaker Mill Road, south of Mills Street and west of Bernard Street.

The existing site has 93 units in the independent living facility and 139 beds in the skilled nursing facility. The proposed site will include 225 units in the independent living facility, 100 beds in the skilled nursing facility, a 90-bed assisted living facility, 8,000 square feet of rehab facilities, restaurants totaling 4,000 square feet, a 1,500-square-foot retail pharmacy and a home health and institutional pharmacy totaling 15,000 square feet.

Table 1: Existing and Proposed Land Uses and Densities

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Access to the existing site is provided via two access points along E Whitaker Mill Road and one along Mills Street. With the redevelopment, these access points will either be reconfigured or relocated. In the future, the site is proposed to have five access points – two along E Whitaker Mill Road, two along Bernard Street and one along Mills Street.

The development is anticipated to be fully constructed by 2023. **Figure 1** shows the study area, while the site plan is provided in **Figure 2**. All figures are located in **Appendix A**.

A virtual scoping meeting was held between staff from Mott MacDonald, Curry Engineering, the City of Raleigh on September 3, 2020 to discuss the proposed development. It was agreed that following existing and future intersections would be included in the study area:

- E Whitaker Mill Road and Pine Drive – existing and future
- E Whitaker Mill Road and Center Road/Access #4 – existing and future
- E Whitaker Mill Road and Bernard Street – existing and future
- Bernard Street and Mills Street – existing and future
- Mills Street and Access #1 (Exit Only) – future only
- Bernard Street and Access #2 – future only
- Bernard Street and Access #3 – future only
- E Whitaker Mill Road and Access #5 – future only

The existing site has two accesses along E Whitaker Mill Road and one along Mills Street. These accesses are anticipated to relocated or reconfigured as part of the redevelopment of the site; therefore, they will not be included in the Existing (2020) and Background (2023) scenario analysis.

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2 Existing (2020) Conditions

2.1 Existing Roadways

This section describes the existing roadways within the study area. No speed limit signs were present in the study; therefore, it was assumed that the speed limit along all roadways was 35 miles per hour (mph), with the exception of Pine Drive, which the provided signal plan indicated was 25 mph.

2.1.1 E Whitaker Mill Road

E Whitaker Mill Road is a four-lane, undivided avenue between Pine Drive and Wake Forest Road. Within the study area, the land uses along E Whitaker Mill Road are primarily commercial and residential. Per the NCDOT, the Average Annual Daily Traffic (AADT) along E Whitaker Mill Road in 2019 was 10,500 vehicles per day (vpd) west of the study area.

The City has indicated E Whitaker Mill Road may be converted to a 3-lane cross-section in the future via a road diet.

2.1.2 Pine Drive

Pine Drive is a local, two-lane roadway that extends from Reaves Drive to E Whitaker Mill Road. The land use along Pine Drive is primarily residential. Per the NCDOT, the AADT along Pine Drive in 2017 was 1,200 vpd.

2.1.3 Bernard Street

Bernard Street is a local, two-lane roadway that extends from McNeill Street to E Whitaker Mill Road. The land uses along Bernard Street are a mix of residential and commercial. The NCDOT does not provide AADT information along Bernard Street.

Per the City, there is a large amount of pedestrian traffic that crosses Bernard Street at the crosswalk just north of E Whitaker Mill Road; however, there are no pedestrian signals at this location. The turning movement counts showed 10 pedestrians making this movement in the AM peak hour and 15 in the PM peak hour.

2.1.4 Mills Street

Mills Street is a local, two-lane roadway mph that extends from McNeill Street to E Whitaker Mill Road. The land uses along Mills Street are a mix of residential and commercial. The NCDOT does not provide AADT information along Mills Street.

2.1.5 Center Road

Center Road is a local, two-lane roadway that extends from Gavin Street to E Whitaker Mill Road. The land uses along Center Road are a mix of residential and commercial. The NCDOT does not provide AADT information along Center Road.

2.2 Existing Intersections

The following existing intersections were analyzed as part of this study:

- E Whitaker Mill Road and Pine Drive

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- E Whitaker Mill Road and Center Road
- E Whitaker Mill Road and Bernard Street
- Bernard Street and Mills Street

Intersection geometrics along with intersection operation controls are provided in **Figure 3**.

2.3 Turning Movement Counts

Due to the effects of the Covid-19 pandemic on travel in North Carolina, turning movement counts were increased by 20%, as required by the City.

Turning movement counts were collected for the AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods in November 2020. The count data is located in **Appendix B**. The volumes used in the Existing (2020) analyses are shown in **Figure 4**. **Table 2** shows the schedule for the turning movement data collection.

Table 2: Turning Movement Data Collection Schedule

Intersection	Time Period	Date
E Whitaker Mill Road and Pine Drive	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Wednesday November 4, 2020
E Whitaker Mill Road and Center Road	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Wednesday November 4, 2020
E Whitaker Mill Road and Bernard Street	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Wednesday November 4, 2020
Bernard Street and Mills Street	7:00 AM – 9:00 AM 4:00 PM – 6:00 PM	Wednesday November 4, 2020

In addition to these intersections, turning movement counts were collected at the two existing driveways along E Whitaker Mill Road and the driveway along Mills Street. These volumes were compared to the trip generation estimates for the existing land uses and densities. Overall, the peak hour trip generation estimate for the existing development yield more trips than what is currently present. As a result, since the existing driveways are being removed or reconfigured, the existing trips were removed from the network based on the assumed existing travel patterns. These driveways are not included in the Existing (2020) analysis.

2.4 Crash Data

At the direction of the City of Raleigh, 5-year crash data (11/1/2015 – 10/31/2020) was reviewed at the E Whitaker Mill Road and Bernard Street intersection. No crashes were reported during the period. The report is shown in **Appendix D**.

2.5 Level of Service Criteria

Exhibit 19-8 in the Highway Capacity Manual 6th Edition provides the level of service (LOS) criteria for signalized intersections, while Exhibit 20-2 provides the level of service criteria for unsignalized intersections, as summarized in **Table 3**.

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Table 3: Intersection Level of Service Criteria

Level of Service	Signalized Intersection	Unsignalized Intersection
A	0-10	0-10
B	>10-20	>10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

Average Control Delay – seconds/vehicle

2.6 Existing (2020) Level of Service Analysis

The existing roadway network features and turning movement data were coded into *Synchro 10* and analyzed for the AM and PM peak hour conditions.

Signal plans and timings for the E Whitaker Mill Road and Pine Drive intersection were obtained from the City of Raleigh and are included in **Appendix C**. The signal phasing and timings were maintained for the AM and PM peak hours of each scenario.

As shown in **Table 4** below, the signalized E Whitaker Mill Road and Pine Drive intersection is currently operating at acceptable levels of service in both the AM and PM peak hours. Similarly, all stop-controlled approaches and yield movements are operating at acceptable levels of service in both the AM and PM peak hours.

The Existing (2020) analysis results are located in **Appendix E**.

Table 4: Existing (2020) LOS Results

Intersection [Node #]	Approach	Existing (2020)	
		AM	PM
E Whitaker Mill Road & Pine Drive [1]	**Overall**	A – 4.9	A – 5.0
	Eastbound	A – 2.6	A – 2.9
	Westbound	A – 2.3	A – 2.3
	Southbound	B – 15.0	B – 16.9
E Whitaker Mill Road & Center Road [2]	**Overall**	A – 0.4	A – 0.6
	Northbound Approach	B – 10.2	B – 11.6
	Westbound Thru/Left-Turn	A – 7.8	A – 8.2
E Whitaker Mill Road & Bernard Street [3]	**Overall**	A – 1.0	A – 2.1
	Eastbound Left-Turn	A – 7.9	A – 8.0
	Southbound Approach	A – 9.6	B – 11.6
Mills Street & Bernard Street [4]	**Overall**	A – 6.9	A – 7.3
	Northbound Approach	A – 6.9	A – 7.2
	Eastbound Approach	A – 6.9	A – 6.9
	Westbound Approach	A – 6.8	A – 7.6
	Southbound Approach	A – 7.1	A – 7.3

LEGEND: LOS – Delay (seconds/vehicle)

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3 Background (2023) Conditions

3.1 Background Growth and Development

Based on input from the City of Raleigh, future year traffic estimates were developed by applying an overall annual growth rate (AAGR) of 1% to the 2020 traffic volumes. Additionally, no approved developments were considered for inclusion in the Background (2023) scenario.

The North Carolina Department of Transportation (NCDOT) 2020 – 2029 State Transportation Improvement Program (STIP) and Capital Area Metropolitan Planning Organization (CAMPO) 2045 Metropolitan Transportation Plan (MTP) show no projects programmed in the area.

The Background (2023) traffic volumes are shown in **Figure 5**.

3.2 Background (2023) Level of Service Analysis

Level of service analyses were conducted for all of the study area intersections for the Background (2023) AM and PM peak hours. The volumes used in the Background (2023) analysis are shown in **Figure 5** and the summary level of service results are shown in **Table 5**.

As shown in **Table 5**, the signalized E Whitaker Mill Road and Pine Drive intersection is anticipated to continue operating at acceptable levels of service in both the AM and PM peak hours. Similarly, all stop-controlled approaches and yield movements are anticipated to continue operating at acceptable levels of service in both the AM and PM peak hours.

The Background (2023) analysis results are located in **Appendix F**.

Table 5: Background (2023) LOS Results

Intersection [Node #]	Approach	Background (2023)	
		AM	PM
E Whitaker Mill Road & Pine Drive [1]	**Overall**	A – 4.9	A – 5.0
	Eastbound	A – 2.6	A – 2.9
	Westbound	A – 2.3	A – 2.4
	Southbound	B – 15.1	B – 16.9
E Whitaker Mill Road & Center Road [2]	**Overall**	A – 0.4	A – 0.6
	Northbound Approach	B – 10.3	B – 11.7
	Westbound Thru/Left-Turn	A – 7.8	A – 8.3
E Whitaker Mill Road & Bernard Street [3]	**Overall**	A – 1.1	A – 2.1
	Eastbound Left-Turn	A – 7.9	A – 8.1
	Southbound Approach	A – 9.7	B – 11.7
Mills Street & Bernard Street [4]	**Overall**	A – 6.9	A – 7.3
	Northbound Approach	A – 6.9	A – 7.2
	Eastbound Approach	A – 6.9	A – 6.9
	Westbound Approach	A – 6.8	A – 7.6
	Southbound Approach	A – 7.1	A – 7.3

LEGEND: LOS – Delay (seconds/vehicle)

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4 Build (2023) Conditions

As previously described, Pruitt Health has plans to redevelop a site in Raleigh that currently houses a skilled nursing and rehabilitation center (The Oaks at Whitaker Glen – Mayview) and an independent living community (The Oaks at Whitaker Glen). The site is located along E Whitaker Mill Road, south of Mills Street and west of Bernard Street.

As shown in **Table 6**, existing site has 93 units in the independent living facility and 139 beds in the skilled nursing facility. The proposed site will include 225 units in the independent living facility, 100 beds in the skilled nursing facility, a 90-bed assisted living facility, 8,000 square feet of rehab facilities, restaurants totaling 4,000 square feet, a 1,500-square-foot retail pharmacy and a home health and institutional pharmacy totaling 15,000 square feet.

Table 6: Existing and Proposed Land Uses and Densities

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Access to the existing site is provided via two access points along E Whitaker Mill Road and one along Mills Street. With the redevelopment, these access points will either be reconfigured or relocated. In the future, the site is proposed to have five access points – two along E Whitaker Mill Road, two along Bernard Street and one along Mills Street.

The development is anticipated to be fully constructed by 2023.

4.1 Trip Generation and Distribution

The existing site has 93 units in the independent living facility and 139 beds in the skilled nursing facility. The proposed site will include 225 units in the independent living facility, 100 beds in the skilled nursing facility, a 90-bed assisted living facility, 8,000 square feet of rehab facilities, restaurants totaling 4,000 square feet, a 1,500-square-foot retail pharmacy and a home health and institutional pharmacy totaling 15,000 square feet.

With a few exceptions, NCDOT guidance was used to estimate the trips generated as part of the proposed development. The *ITE Trip Generation Manual, 10th Edition* does not provide data for a skilled nursing facility, rehab facility or home health facility, therefore, with the City's approval the nursing home land use (620), medical-dental office building land use (710) and office land use (710) were used, respectively. Additionally, due to the size of the home health/institutional pharmacy portion of the development, the rate was used instead of the equation. These deviations were approved by the City. As shown in **Table 7**, the development is anticipated to generate 2,313 daily trips, 129 AM peak hour trips (78 entering, 51 exiting) and 209 PM peak hour trips (96 entering, 113 exiting).

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Table 7: Trip Generation Results

Land Use (ITE Land Use Code)	Density	Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
Skilled Nursing Facility (620[1])	100 beds	306	11	6	12	17
Independent Living Facility (252)	225 units	879	16	29	31	25
Assisted Living Facility (254)	90 beds	234	11	5	14	17
Rehab Facilities (720[2])	8,000 square feet	278	17	5	8	20
Restaurants (931)		335	1	2	21	10
Pass-By	4,000 square feet	14	-	-	7	7
Non-Pass-By		21	1	2	14	3
Retail Pharmacy (880[3])		135	3	1	6	7
Pass-By	1,500 square feet	8	-	-	4	4
Non-Pass-By		127	3	1	2	3
Home Health[4]/Institutional Pharmacy[5] (710[6])	15,000 square feet	146	19	3	4	17
Total		***2,313***	***78***	***51***	***96***	***113***
Pass-By	-	***22***	***-***	***-***	***11***	***11***
Non-Pass-By		***2,291***	***78***	***51***	***85***	***102***

Source: ITE Trip Generation Manual, 10th Edition
[1]ITE does not have data for a Skilled Nursing Facility; data from the Nursing Home Land Use Code was used
[2]ITE does not have data for a Rehab facility; data from the Medical-Dental Office Building Land Use Code was used
[3]Data from Pharmacy/Drugstore without Drive-Through was used
[4]ITE does not have data for a Home Health facility; data from the Office Building Land Use Code was used
[5]Office was used for Institutional Pharmacy
[6]Rates were used due to the size

Based on the existing travel patterns observed in the field, most of the projected site trips are anticipated travel east along E Whitaker Mill Road to Wake Forest Road. The site trip distribution percentages for the proposed development are shown in **Figures 6**, **8**, **10**, **12**, **14**, **16**, **18**, **20** and **22**, with the resulting site trips shown in **Figures 7**, **9**, **11**, **13**, **15**, **17**, **19**, **21** and **23**. The total site trips are shown in **Figure 24**.

4.2 Build (2023) Level of Service Analysis

The Build (2023) scenario consists of the Background (2023) traffic as discussed previously with the addition of site generated trips from the proposed development. The volumes that are used in the Build (2023) analysis are shown in **Figure 25**. The laneage and traffic control used for the Build (2023) scenario is based on the existing conditions shown in **Figure 3**. The summary level of service results are shown in **Table 8**.

As shown in **Table 8**, the signalized E Whitaker Mill Road and Pine Drive intersection is anticipated to continue operating at acceptable levels of service in both the AM and PM peak hours. Similarly, all stop-controlled approaches and yield movements are anticipated to continue operating at acceptable levels of service in both the AM and PM peak hours.

All stop-controlled approaches and yield movements at the newly constructed accesses along E Whitaker Mill Road, Bernard Street, and Mills Street are anticipated to operate at acceptable levels of service in both the AM and PM peak hours.

The Build (2023) analysis results are located in **Appendix G**.

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Table 8: Build (2023) LOS Results

Intersection [Node #]	Approach	Build (2023)	
		AM	PM
E Whitaker Mill Road & Pine Drive [1]	Overall	A – 5.0	A – 5.1
	Eastbound	A – 2.6	A – 3.0
	Westbound	A – 2.3	A – 2.4
	Southbound	B – 16.0	B – 17.5
E Whitaker Mill Road & Center Road/Access #4 [2]	Overall	A – 0.5	A – 0.8
	Northbound Approach	B – 10.7	B – 12.7
	Westbound Thru/Left-Turn	A – 7.9	A – 8.3
	Southbound Approach	A – 9.2	A – 9.3
E Whitaker Mill Road & Bernard Street [3]	Overall	A – 1.5	A – 3.6
	Eastbound Left-Turn	A – 8.1	A – 8.3
	Southbound Approach	B – 11.2	C – 16.5
Mills Street & Bernard Street [4]	Overall	A – 7.0	A – 7.4
	Northbound Approach	A – 6.9	A – 7.3
	Eastbound Approach	A – 7.0	A – 7.1
	Westbound Approach	A – 7.0	A – 7.7
	Southbound Approach	A – 7.2	A – 7.3
Mills Street & Access #1 [5]	Overall	A – 1.3	A – 1.3
	Northbound Approach	A – 8.4	A – 8.4
	Westbound Thru/Left-Turn	A – 0.0	A – 0.0
Bernard Street & Access #2 [6]	Overall	A – 1.1	A – 0.6
	Northbound Thru/Left-Turn	A – 7.3	A – 7.4
	Eastbound Approach	A – 8.6	A – 9.0
Bernard Street & Access #3 [7]	Overall	A – 3.8	A – 3.2
	Northbound Thru/Left-Turn	A – 7.4	A – 7.4
	Eastbound Approach	A – 8.5	A – 9.0
E Whitaker Mill Road & Access #5 [8]	Overall	A – 0.3	A – 0.7
	Eastbound Thru/Left-Turn	A – 7.9	A – 8.0
	Southbound Approach	B – 10.5	B – 12.3

LEGEND: LOS – Delay (seconds/vehicle)

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5 Conclusions

As reported, the proposed development is not anticipated to significantly affect delay at the study area intersections. The following intersection improvements and driveway configurations should be considered.

E Whitaker Mill Road and Pine Drive

The analysis indicates that this intersection is projected to operate at LOS A in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

E Whitaker Mill Road & Center Road/Access #4

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the southbound Access #4 approach to provide one right-in only ingress lane and one right-out only egress lane.
- Provide adequate channelization so as to dissuade any vehicles from turning left out of the site or left into the site.

E Whitaker Mill Road & Bernard Street

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

Mills Street & Bernard Street

The analysis indicates that all four stop-controlled approaches are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. No improvements are recommended at this location.

Mills Street & Access #1

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the northbound Access #1 approach to provide one egress-only lane.

Bernard Street & Access #2

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the eastbound Access #2 approach to provide one ingress lane and one egress lane.

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Bernard Street & Access #3

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the eastbound Access #3 approach to provide one ingress lane and one egress lane.

E Whitaker Mill Road & Access #5

The analysis indicates that all stop-controlled approaches and yield movements are projected to operate at acceptable levels of service in both the AM and PM peak hours of the Build (2023) scenario. The following driveway configuration should be considered:

- Per the site plan, construct the southbound Access #5 approach to provide one ingress lane and one egress lane.

Table 11 provides a summary of the intersection levels of service across all scenarios and the proposed laneage is shown in **Figure 26**.

Additional Considerations

At the direction of the City of Raleigh, 5-year crash data (11/1/2015 – 10/31/2020) was reviewed at the E Whitaker Mill Road and Bernard Street intersection. No crashes were reported during the period.

The City of Raleigh requires that Multimodal Level of Service be addressed as part of the TIA. The latest version of ARTPLAN was obtained from the Florida Department of Transportation (FDOT) and used for this analysis.

Additionally, the City of Raleigh has indicated that there are plans to complete a road diet along E Whitaker Mill Road within the study area; however, there are no details yet. For this analysis, at the direction of the City, it is assumed that the road diet along E Whitaker Mill Road would result in a 3-lane cross-section.

Multimodal Level of Service

The City of Raleigh requires that Multimodal Level of Service be addressed as part of the TIA. The latest version of ARTPLAN was obtained from the FDOT and used for this analysis. This software is used for arterials. Within the study area, only E Whitaker Mill Road could be considered an arterial, although it is classified as a major collector by NCDOT. Only one traffic signal is present along E Whitaker Mill Road within the study – at Pine Drive. The ARTPLAN analysis spans from just west of Pine Drive to just east of Bernard Street. Center Road and Bernard Street were included in the analysis even though they are not signalized intersections. While ARTPLAN does not analyze the off-peak direction, the numbers were adjusted in order to try to replicate off-peak conditions.

Sidewalks are currently present on the north and south sides of E Whitaker Mill Road within the study area. Travel lanes along E Whitaker Mill Road are approximately 10 feet wide with no bicycle lanes present. GoRaleigh indicates that there are two buses that traverse E Whitaker Mill Road every hour (from roughly 6 AM – 11 PM) as part of Route 2, however the route map does not show any designated stops on E Whitaker Mill. There are bus stops present in the field at Bernard Street and Pine Drive. For this analysis, since the GoRaleigh Route 2 does not show any stops, no buses were included in the analysis.

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As shown in **Table 9**, the pedestrian level of service along E Whitaker Mill Road is LOS B in the AM and PM peak hours. The reported bus level of service is LOS F for the AM and PM peak hours due to no buses stopping along E Whitaker Mill Road. Similarly, with no dedicated bike facilities, the bike level of service is acceptable – LOS C and LOS D in the AM and PM peak hours.

Table 9: E Whitaker Mill Road Multimodal LOS Results

E Whitaker Mill Road	Direction	Peak/ Off-Peak	Existing (2020)		Background (2023)		Build (2023)	
			AM	PM	AM	PM	AM	PM
Pedestrian LOS & Score	EB	Off	B – 2.06	-	B – 2.08	-	B – 2.08	-
	WB	Peak	B – 2.09	-	B – 2.09	-	B – 2.10	-
	EB	Peak	-	B – 2.16	-	B – 2.17	-	B – 2.18
	WB	Off	-	B – 2.09	-	B – 2.11	-	B – 2.12
Bus LOS & Score	EB	Off	F – 0.00	-	F – 0.00	-	F – 0.00	-
	WB	Peak	F – 0.00	-	F – 0.00	-	F – 0.00	-
	EB	Peak	-	F – 0.00	-	F – 0.00	-	F – 0.00
	WB	Off	-	F – 0.00	-	F – 0.00	-	F – 0.00
Bike LOS & Score	EB	Off	C – 3.23	-	C – 3.30	-	C – 3.34	-
	WB	Peak	C – 3.36	-	C – 3.39	-	C – 3.46	-
	EB	Peak	-	D – 3.76	-	D – 3.80	-	D – 3.86
	WB	Off	-	C – 3.40	-	C – 3.49	-	D – 3.54

E Whitaker Mill Road – Road Diet

The City of Raleigh has indicated that there are plans to complete a road diet along E Whitaker Mill Road within the study area; however, there are no details yet. For this analysis, at the direction of the City, it is assumed that the road diet along E Whitaker Mill Road would result in a 3-lane cross-section.

With the road diet, it is assumed that bike lanes would be provided, along with additional pedestrian accommodations and enhanced bus accommodations; however, those enhancements were not included in the analysis.

Synchro analysis files were prepared for the 3-lane road diet as well, with a single eastbound and westbound through lane and a two-way left-turn lane. No exclusive turn lanes were provided and the signal timings at the E Whitaker Mill Road and Pine Drive intersection were unchanged.

Vehicular operations along E Whitaker Mill Road are not anticipated to be materially different with a 4-lane cross-section or 3-lane cross-section; however, the bicycle operations are anticipated to degrade. **Table 10** shows the E Whitaker Mill Road multimodal LOS results with the road diet in place.

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Table 10: E Whitaker Mill Road with Road Diet Multimodal LOS Results

E Whitaker Mill Road	Direction	Peak/ Off-Peak	Build with Road Diet (2023)	
			AM	PM
Pedestrian LOS & Score	EB	Off	B – 2.23	-
	WB	Peak	B – 2.27	-
	EB	Peak	-	B – 2.43
	WB	Off	-	B – 2.30
Bus LOS & Score	EB	Off	F – 0.00	-
	WB	Peak	F – 0.00	-
	EB	Peak	-	F – 0.00
	WB	Off	-	F – 0.00
Bike LOS & Score	EB	Off	D – 4.10	-
	WB	Peak	E – 4.28	-
	EB	Peak	-	E – 4.80
	WB	Off	-	E – 4.41

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Table 11: Overall LOS Results

Intersection [Node #]	Approach	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Overall	A – 4.9	A – 5.0	A – 4.9	A – 5.0	A – 5.0	A – 5.1	A – 5.4	A – 5.6
	Eastbound	A – 2.6	A – 2.9	A – 2.6	A – 2.9	A – 2.6	A – 3.0	A – 2.9	A – 3.4
	Westbound	A – 2.3	A – 2.3	A – 2.3	A – 2.4	A – 2.3	A – 2.4	A – 3.0	A – 3.2
	Southbound	B – 15.0	B – 16.9	B – 15.1	B – 16.9	B – 16.0	B – 17.5	B – 16.0	B – 17.5
E Whitaker Mill Road & Center Road/Access #4 [2]	Overall	A – 0.4	A – 0.6	A – 0.4	A – 0.6	A – 0.5	A – 0.8	A – 0.5	A – 0.8
	Northbound Approach	B – 10.2	B – 11.6	B – 10.3	B – 11.7	B – 10.7	B – 12.7	B – 11.0	B – 12.6
	Westbound Thru/Left-Turn	A – 7.8	A – 8.2	A – 7.8	A – 8.3	A – 7.9	A – 8.3	A – 7.9	A – 8.3
	Southbound Approach	-	-	-	-	A – 9.2	A – 9.3	A – 9.8	B – 10.1
E Whitaker Mill Road & Bernard Street [3]	Overall	A – 1.0	A – 2.1	A – 1.1	A – 2.1	A – 1.5	A – 3.6	A – 1.6	A – 3.4
	Eastbound Left-Turn	A – 7.9	A – 8.0	A – 7.9	A – 8.1	A – 8.1	A – 8.3	A – 8.1	A – 8.2
	Southbound Approach	A – 9.6	B – 11.6	A – 9.7	B – 11.7	B – 11.2	C – 16.5	B – 11.3	C – 15.1
Mills Street & Bernard Street [4]	Overall	A – 6.9	A – 7.3	A – 6.9	A – 7.3	A – 7.0	A – 7.4	A – 7.0	A – 7.4
	Northbound Approach	A – 6.9	A – 7.2	A – 6.9	A – 7.2	A – 6.9	A – 7.3	A – 6.9	A – 7.3
	Eastbound Approach	A – 6.9	A – 6.9	A – 6.9	A – 6.9	A – 7.0	A – 7.1	A – 7.0	A – 7.1
	Westbound Approach	A – 6.8	A – 7.6	A – 6.8	A – 7.6	A – 7.0	A – 7.7	A – 7.0	A – 7.7
	Southbound Approach	A – 7.1	A – 7.3	A – 7.1	A – 7.3	A – 7.2	A – 7.3	A – 7.2	A – 7.3
Mills Street & Access #1 [5]	Overall	-	-	-	-	A – 1.3	A – 1.3	A – 1.3	A – 1.3
	Northbound Approach	-	-	-	-	A – 8.4	A – 8.4	A – 8.4	A – 8.4
	Westbound Thru/Left-Turn	-	-	-	-	A – 0.0	A – 0.0	A – 0.0	A – 0.0
Bernard Street & Access #2 [6]	Overall	-	-	-	-	A – 1.1	A – 0.6	A – 1.1	A – 0.6
	Northbound Thru/Left-Turn	-	-	-	-	A – 7.3	A – 7.4	A – 7.3	A – 7.4
	Eastbound Approach	-	-	-	-	A – 8.6	A – 9.0	A – 8.6	A – 9.0
Bernard Street & Access #3 [7]	Overall	-	-	-	-	A – 3.8	A – 3.2	A – 3.8	A – 3.2
	Northbound Thru/Left-Turn	-	-	-	-	A – 7.4	A – 7.4	A – 7.4	A – 7.4
	Eastbound Approach	-	-	-	-	A – 8.5	A – 9.0	A – 8.5	A – 9.0
E Whitaker Mill Road & Access #5 [8]	Overall	-	-	-	-	A – 0.3	A – 0.7	A – 0.5	A – 0.6
	Eastbound Thru/Left-Turn	-	-	-	-	A – 7.9	A – 8.0	A – 7.9	A – 8.0
	Southbound Approach	-	-	-	-	B – 10.5	B – 12.3	B – 10.9	B – 12.2

LEGEND: LOS – Delay (seconds/vehicle)

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Table 12: E Whitaker Mill Road & Pine Drive – Percent of Cycles Maxed Out (v/c)

Intersection [Node #]	Phase	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Ø2	37% (0.10)	55% (0.19)	39% (0.11)	55% (0.20)	49% (0.11)	58% (0.21)	52% (0.14)	62% (0.26)
	Ø4	0% (0.10)	0% (0.11)	0% (0.10)	0% (0.11)	0% (0.11)	0% (0.12)	0% (0.21)	0% (0.24)
	Ø6	37% 0.34)	55% 0.33)	39% 0.35)	54% 0.34)	49% 0.35)	58% 0.33)	52% (0.35)	62% (0.33)

*v/c is reported as the maximum v/c per phase

Table 13: Overall Queue Results - Average|Maximum (in feet) & [Upstream Block Time (%)|Storage Block Time (%)]

Intersection [Node #]	Approach	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road & Pine Drive [1]	Eastbound Thru/Left-Turn	21|75 [-|-]	36|84 [-|-]	19|75 [-|-]	35|90 [-|-]	22|76 [-|-]	41|104 [-|-]	-|- [-|-]	-|- [-|-]
	Eastbound Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	17|55 [-|-]	28|79 [-|-]
	Eastbound Thru	3|32 [-|-]	12|53 [-|-]	2|39 [-|-]	11|66 [-|-]	5|47 [-|-]	11|63 [-|-]	15|74 [-|-]	27|99 [-|-]
	Westbound Thru	13|80 [-|-]	17|76 [-|-]	11|58 [-|-]	19|87 [-|-]	17|83 [-|-]	21|73 [-|-]	-|- [-|-]	-|- [-|-]
	Westbound Thru/Right-Turn	3|34 [-|-]	6|50 [-|-]	2|38 [-|-]	5|32 [-|-]	3|31 [-|-]	7|44 [-|-]	23|95 [-|-]	26|92 [-|-]
	Southbound Left-Turn	23|62 [-|-]	34|75 [-|-]	24|72 [-|-]	31|73 [-|-]	29|72 [-|-]	36|78 [-|-]	29|63 [-|-]	40|90 [-|-]
	Southbound Right-Turn	33|65 [-|-]	31|70 [-|-]	33|68 [-|-]	33|65 [-|-]	33|67 [-|-]	33|75 [-|-]	34|71 [-|-]	35|74 [-|-]
E Whitaker Mill Road & Center Road/Access #4 [2]	Eastbound Thru	0|0 [-|-]	0|11 [-|-]	0|3 [-|-]	0|3 [-|-]	0|3	0|3	-|- [-|-]	-|- [-|-]
	Eastbound Thru/Right-Turn	0|5 [-|-]	0|8 [-|-]	0|3 [-|-]	0|3 [-|-]	-|- [-|-]	-|- [-|-]	1|14 [-|-]	0|3 [-|-]
	Westbound Thru/Left-Turn	1|17 [-|-]	3|30 [-|-]	1|12 [-|-]	4|35 [-|-]	2|30 [-|-]	3|35 [-|-]	1|21 [-|-]	3|25 [-|-]
	Westbound Thru/Right-Turn	-|- [-|-]	-|- [-|-]	0|6 [-|-]	-|- [-|-]	-|- [-|-]	0|5 [-|-]	0|7 [-|-]	0|3 [-|-]
	Northbound Approach	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	16|38 [-|-]	11|54 [-|-]	16|40 [-|-]
	Southbound Right-Turn	12|57 [-|-]	16|36 [-|-]	11|56 [-|-]	17|36 [-|-]	14|59 [-|-]	0|14 [-|-]	0|4 [-|-]	1|17 [-|-]
E Whitaker Mill Road & Bernard Street [3]	Eastbound Left-Turn	4|35 [-|-]	12|50 [-|-]	4|37 [-|-]	12|50 [-|-]	8|56 [-|-]	8|56 [-|-]	8|49 [-|-]	17|56 [-|-]
	Eastbound Thru	0|8 [-|-]	-|- [-|-]	0|6 [-|-]	0|6 [-|-]	-|- [-|-]	0|8 [-|-]	-|- [-|-]	0|8 [-|-]
	Westbound Thru	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	0|12 [-|-]	-|- [-|-]	-|- [-|-]
	Westbound Thru/Right-Turn	0|6 [-|-]	1|14 [-|-]	0|3 [-|-]	-|- [-|-]	0|6 [-|-]	0|8 [-|-]	-|- [-|-]	-|- [-|-]
	Southbound Left/Right-Turn	-|- [-|-]	0|8 [-|-]	-|- [-|-]	0|10 [-|-]	0|3 [-|-]	1|14 [-|-]	0|12 [-|-]	1|11 [-|-]
		20|55 [-|-]	31|75 [-|-]	21|64 [-|-]	34|83 [-|-]	29|67 [-|-]	45|91 [-|-]	28|71 [-|-]	47|119 [-|-]
Mills Street & Bernard Street [4]	Eastbound Approach	4|30 [-|-]	7|31 [-|-]	4|30 [-|-]	7|33 [-|-]	9|31 [-|-]	10|31 [-|-]	7|31 [-|-]	10|31 [-|-]
	Westbound Approach	15|31 [-|-]	20|66 [-|-]	15|31 [-|-]	22|71 [-|-]	16|31 [-|-]	25|69 [-|-]	17|36 [-|-]	25|76 [-|-]
	Northbound Approach	8|30 [-|-]	25|47 [-|-]	10|30 [-|-]	25|45 [-|-]	10|32 [-|-]	27|53 [-|-]	10|34 [-|-]	26|37 [-|-]
	Southbound Approach	16|47 [-|-]	19|42 [-|-]	15|52 [-|-]	22|56 [-|-]	18|51 [-|-]	21|54 [-|-]	16|46 [-|-]	21|53 [-|-]
Mills Street & Access #1 [5]	Northbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	3|28 [-|-]	3|31 [-|-]	3|31 [-|-]	3|31 [-|-]
Bernard Street & Access #2 [6]	Eastbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	6|34 [-|-]	8|33 [-|-]	6|33 [-|-]	7|31 [-|-]
	Northbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	1|12 [-|-]	1|12 [-|-]	0|5 [-|-]	0|3 [-|-]
Bernard Street & Access #3 [7]	Eastbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	12|36 [-|-]	29|65 [-|-]	12|34 [-|-]	30|58 [-|-]
	Northbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	2|30 [-|-]	2|35 [-|-]	2|30 [-|-]	2|35 [-|-]
E Whitaker Mill Road & Access #5 [8]	Eastbound Thru/Left-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	1|21 [-|-]	4|40 [-|-]	1|21 [-|-]	4|33 [-|-]
	Southbound Left/Right-Turn	-|- [-|-]	-|- [-|-]	-|- [-|-]	-|- [-|-]	16|33 [-|-]	18|41 [-|-]	17|45 [-|-]	19|47 [-|-]

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Table 14: E Whitaker Mill Road – Arterial Results (Eastbound|Westbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
- [12]	Delay (s/veh)	0.1|0.6	0.3|0.7	0.2|0.6	0.3|0.7	0.2|0.7	0.3|0.8	0.2|0.8	0.3|0.8
	Travel Time (s)	10.6|8.7	10.9|8.8	10.7|8.7	10.9|8.8	10.6|8.8	10.9|8.8	10.7|8.9	10.9|8.9
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|32	36|32	36|32	36|32	36|32	35|32	36|32	35|31
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Pine Drive [1]	Delay (s/veh)	1.2|1.3	1.9|1.8	1.2|1.2	1.8|1.8	1.5|1.6	2.3|2.0	1.4|2.3	1.7|2.6
	Travel Time (s)	9.2|18.3	9.8|18.8	9.2|18.3	9.8|18.9	9.4|18.8	10.2|19.2	9.4|19.5	9.7|19.9
	Distance (mi)	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	31|33	29|32	31|33	29|32	30|32	28|31	30|31	29|33
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
- [13]	Delay (s/veh)	0.4|0.1	0.6|0.1	0.4|0.1	0.6|0.1	-|-	-|-	-|-	-|-
	Travel Time (s)	17.8|6.2	18.0|6.2	17.8|6.2	18.0|6.2	-|-	-|-	-|-	-|-
	Distance (mi)	0.2|0.1	0.2|0.1	0.2|0.1	0.2|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	34|34	33|34	34|34	33|34	-|-	-|-	-|-	-|-
	LOS	A|A	A|A	A|A	A|A	-|-	-|-	-|-	-|-
Access #5 [8]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.5|0.1	0.8|0.1	0.7|0.3	1.1|0.3
	Travel Time (s)	-|-	-|-	-|-	-|-	16.9|6.1	18.0|6.2	17.3|6.3	18.3|6.3
	Distance (mi)	-|-	-|-	-|-	-|-	0.2|0.1	0.2|0.1	0.2|0.1	0.2|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	36|35	33|34	35|34	33|34
	LOS	-|-	-|-	-|-	-|-	A|A	A|A	A|A	A|A
Center Road/Access #4 [2]	Delay (s/veh)	0.1|0.1	0.2|0.3	0.2|0.2	0.2|0.2	0.1|0.2	0.2|0.3	0.3|0.4	0.4|0.6
	Travel Time (s)	5.9|8.2	6.1|8.3	5.9|8.2	6.1|8.2	6.2|8.2	6.3|8.2	6.4|8.4	6.5|8.5
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|33	35|33	36|33	35|33	34|33	34|33	33|32	33|32
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Bernard Street [3]	Delay (s/veh)	0.1|0.2	0.2|0.3	0.1|0.2	0.2|0.3	0.1|0.3	0.2|0.5	0.3|0.9	0.7|1.2
	Travel Time (s)	7.9|22.4	8.1|22.4	8.1|22.3	8.1|22.5	7.8|22.4	8.1|22.6	8.1|23.3	8.5|23.4
	Distance (mi)	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	34|36	33|36	33|36	33|36	34|36	33|35	33|35	32|34
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A
Total	Delay (s/veh)	2.0|2.5	3.1|3.2	2.0|2.3	3.1|3.2	2.3|3.0	3.8|3.7	3.0|4.7	4.2|5.5
	Travel Time (s)	51.5|63.8	53.0|64.5	51.6|63.7	53.0|64.7	50.9|64.4	53.5|64.9	51.8|66.4	53.9|67.0
	Distance (mi)	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6	0.5|0.6
	Arterial Speed	34|34	33|34	34|34	33|33	34|34	33|33	34|33	33|32
	LOS	A|A	A|A	A|A	A|A	A|A	A|A	A|A	A|A

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Table 15: Bernard Street – Arterial Results (Northbound|Southbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
E Whitaker Mill Road [3]	Delay (s/veh)	-|6.4	-|6.6	-|6.3	-|6.9	-|6.3	-|8.5	-|6.9	-|11.2
	Travel Time (s)	-|15.0	-|13.3	-|15.2	-|13.6	-|14.3	-|16.5	-|14.2	-|19.3
	Distance (mi)	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1	-|0.1
	Arterial Speed	-|20	-|18	-|16	-|17	-|17	-|14	-|19	-|12
	LOS	-|C	-|D	-|D	-|D	-|D	-|E	-|C	-|E
- [15]	Delay (s/veh)	0.2|0.0	0.1|0.0	0.1|0.1	0.2|0.1	-|-	-|-	-|-	-|-
	Travel Time (s)	10.6|6.6	10.1|6.7	10.2|6.8	10.3|6.8	-|-	-|-	-|-	-|-
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	22|35	24|34	23|34	23|34	-|-	-|-	-|-	-|-
	LOS	C|A	B|A	C|A	C|A	-|-	-|-	-|-	-|-
- [17]	Delay (s/veh)	0.0|3.0	0.0|2.8	0.0|3.0	0.0|3.0	-|-	-|-	-|-	-|-
	Travel Time (s)	6.7|11.6	6.7|11.3	6.7|11.5	6.8|11.6	-|-	-|-	-|-	-|-
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	-|-	-|-	-|-	-|-
	Arterial Speed	35|26	34|27	34|26	34|26	-|-	-|-	-|-	-|-
	LOS	A|B	A|B	A|B	A|B	-|-	-|-	-|-	-|-
Access #3 [7]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.2|0.1	0.2|0.2	0.3|0.1	0.3|0.2
	Travel Time (s)	-|-	-|-	-|-	-|-	10.0|6.5	10.1|6.6	9.9|6.4	10.1|6.7
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	24|36	24|35	24|36	24|35
	LOS	-|-	-|-	-|-	-|-	B|A	B|A	B|A	B|A
Access #2 [6]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.2|2.6	0.2|1.7	0.2|2.4	0.2|1.7
	Travel Time (s)	-|-	-|-	-|-	-|-	6.8|10.3	6.5|7.8	6.6|9.9	6.4|7.7
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	34|29	36|39	31|35	36|35
	LOS	-|-	-|-	-|-	-|-	A|A	A|A	A|A	A|A
Mills Street [4]	Delay (s/veh)	2.3|6.4	4.2|6.6	2.4|6.4	4.0|6.7	3.3|6.6	4.5|6.7	3.1|6.7	4.5|6.9
	Travel Time (s)	8.3|15.0	11.3|14.0	8.5|13.8	11.1|14.1	10.0|14.1	11.8|14.2	9.4|14.2	11.8|14.5
	Distance (mi)	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	36|16	27|20	35|20	27|20	30|20	25|19	32|19	26|19
	LOS	A|D	A|C	A|C	B|C	A|C	B|C	A|C	B|C
Total	Delay (s/veh)	2.4|16.0	4.4|16.1	2.5|15.8	4.2|16.7	3.8|15.6	4.9|17.1	3.6|16.1	4.9|20.0
	Travel Time (s)	25.6|47.2	28.1|45.3	25.4|47.4	28.2|46.1	26.9|45.2	28.4|45.1	26.0|45.1	28.2|48.2
	Distance (mi)	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3	0.2|0.3
	Arterial Speed	30|22	27|23	30|22	27|23	29|23	27|23	30|23	27|22
	LOS	A|C	B|C	A|C	B|C	A|C	B|C	A|C	B|C

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Table 16: Mills Street – Arterial Results (Eastbound|Westbound)

Cross Street [Node #]	MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
		AM	PM	AM	PM	AM	PM	AM	PM
Access#1 [5]	Delay (s/veh)	-|-	-|-	-|-	-|-	0.0|1.9	0.0|3.3	0.0|2.5	0.0|2.9
	Travel Time (s)	-|-	-|-	-|-	-|-	7.2|7.2	7.6|9.8	8.7|8.0	7.2|9.2
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	38|35	36|26	29|31	38|27
	LOS	-|-	-|-	-|-	-|-	A|A	A|B	A|A	A|B
Bernard Street [4]	Delay (s/veh)	-|-	-|-	-|-	-|-	3.4|5.2	5.5|7.0	3.2|6.0	6.3|7.1
	Travel Time (s)	-|-	-|-	-|-	-|-	9.2|16.9	11.9|20.4	8.7|18.3	13.7|22.0
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.1	0.1|0.1	0.1|0.1	0.1|0.1
	Arterial Speed	-|-	-|-	-|-	-|-	28|29	21|24	29|27	18|27
	LOS	-|-	-|-	-|-	-|-	B|A	C|B	A|B	D|B
Total	Delay (s/veh)	-|-	-|-	-|-	-|-	3.5|7.2	5.5|10.3	3.2|8.5	6.4|9.9
	Travel Time (s)	-|-	-|-	-|-	-|-	16.4|24.1	19.6|30.2	16.5|26.4	20.9|31.2
	Distance (mi)	-|-	-|-	-|-	-|-	0.1|0.2	0.1|0.2	0.1|0.2	0.1|0.2
	Arterial Speed	-|-	-|-	-|-	-|-	32|31	27|25	32|28	25|24
	LOS	-|-	-|-	-|-	-|-	A|A	B|B	A|B	B|B

Table 17: Network Results

MOE	Existing (2020)		Background (2023)		Build (2023)		Build (2023) with Road Diet	
	AM	PM	AM	PM	AM	PM	AM	PM
Vehicles Entered	622	887	651	918	786	1124	787	1121
Vehicles Exited	624	885	653	917	784	1131	788	1126
Total Delay (hr)	0.8	1.5	0.8	1.5	1.1	2.1	1.3	2.5
Delay/Vehicle (sec/veh)	4.4	6.0	4.4	6.0	4.9	6.6	5.9	7.8
Total Stops	254	452	260	475	350	633	349	621
Stops/Vehicle	0.40	0.50	0.39	0.51	0.44	0.55	0.44	0.54
Fuel Used (gal)	11.1	16.4	11.6	16.8	13.4	20.0	13.6	20.2
HC Emissions (g)	254	255	253	267	256	322	290	332
CO Emissions (g)	5575	6783	5622	7061	6121	8872	6761	9019
NOx Emissions (g)	774	812	780	844	797	1018	880	1042

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Appendices

A. Figures

B. Count Data

C. Signal Plans and Timings

D. Crash Data

E. Existing (2020) Analyses

F. Background (2023) Analyses

G. Build (2023) Analyses

H. Build (2023) with Road Diet Analyses

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Appendix A
Figures

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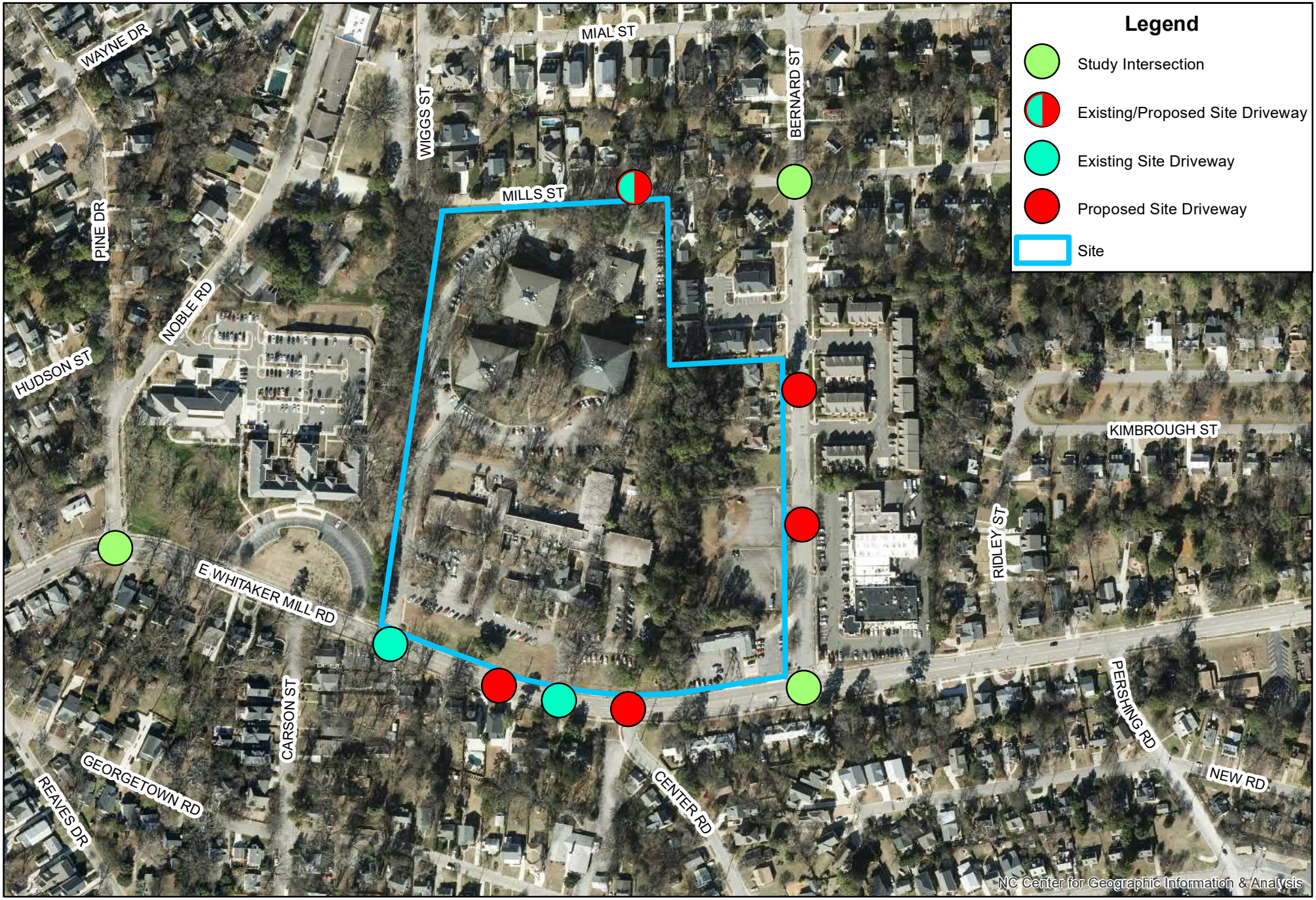

0 0.05 0.1 Miles

Figure 1: Vicinity Map

Oaks at Mayview

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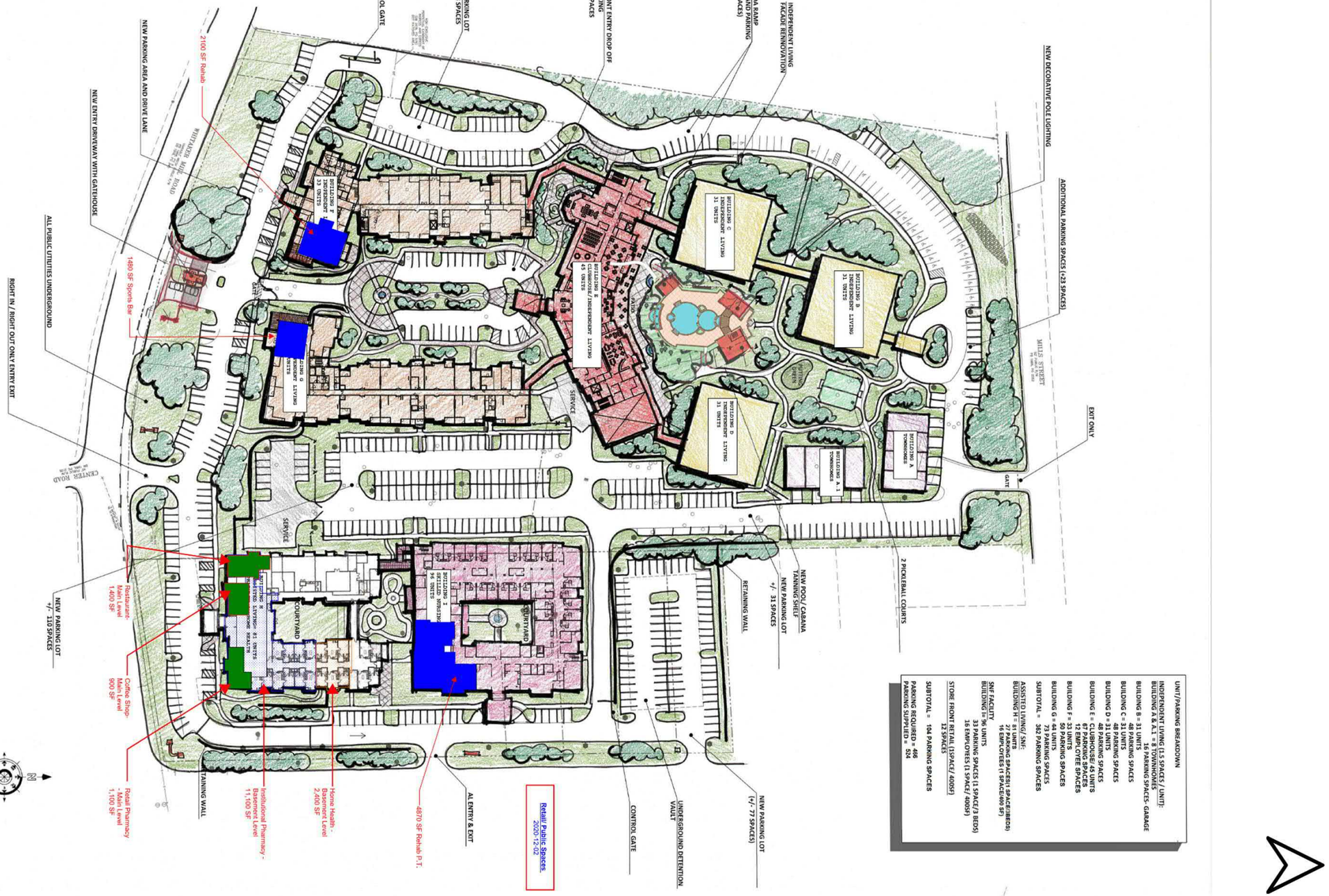

Oaks at Mayview
Raleigh, NC

Figure 2
Site Plan

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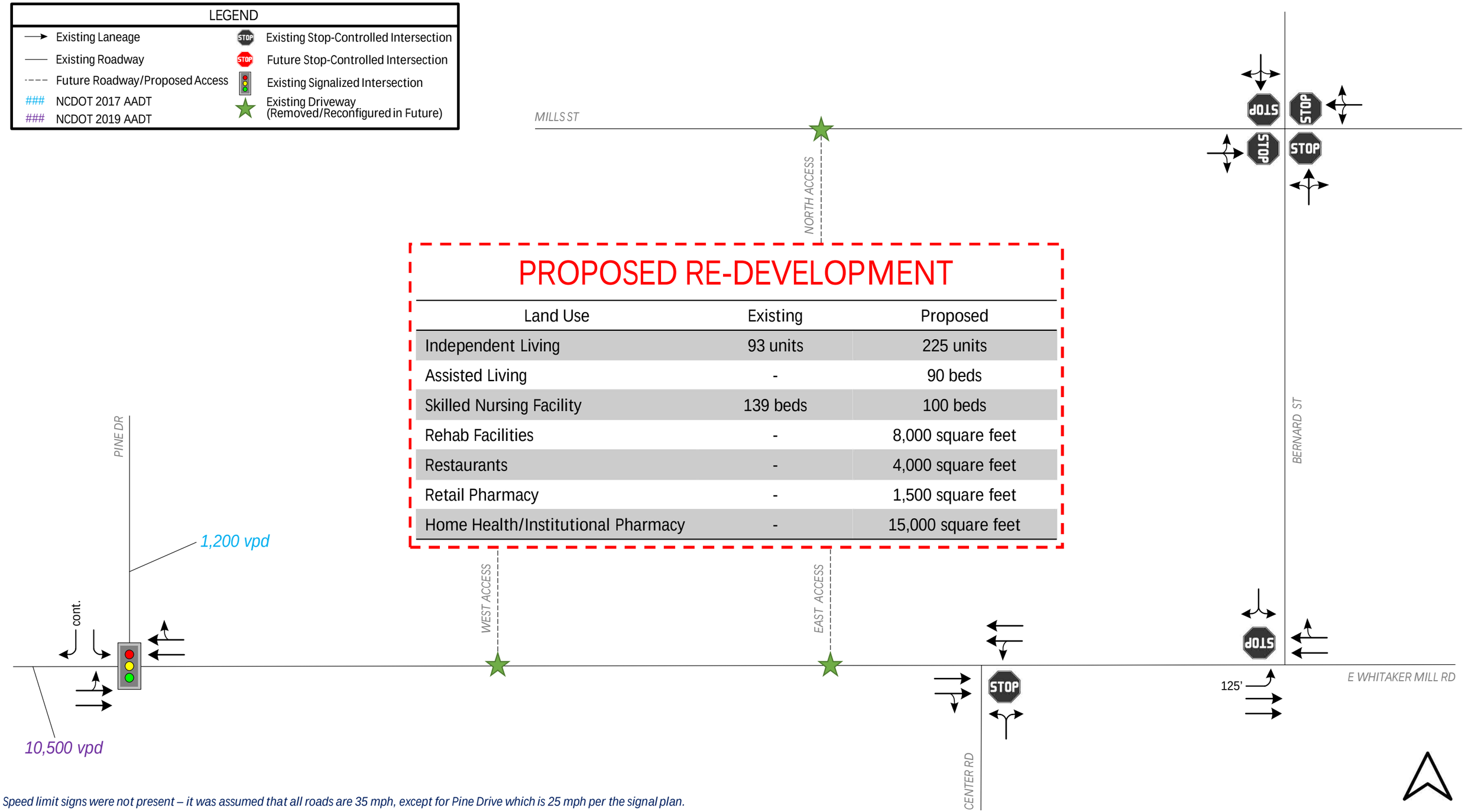

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Speed limit signs were not present – it was assumed that all roads are 35 mph, except for Pine Drive which is 25 mph per the signal plan.

Oaks at Mayview
Raleigh, NC

Figure 3
Existing (2020) Laneage

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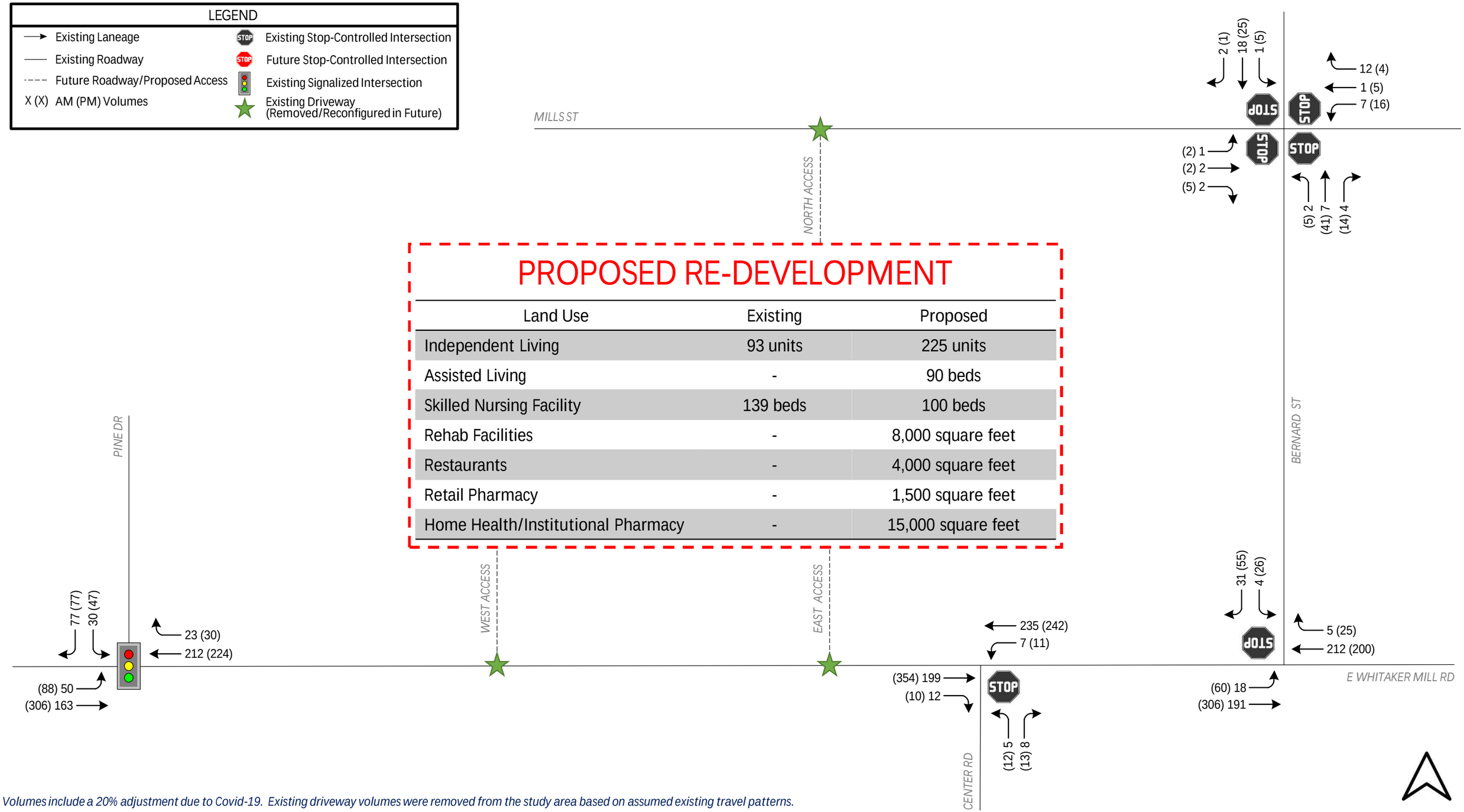

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Volumes include a 20% adjustment due to Covid-19. Existing driveway volumes were removed from the study area based on assumed existing travel patterns.

Oaks at Mayview
Raleigh, NC

Figure 4
Existing (2020) Peak Hour Volumes

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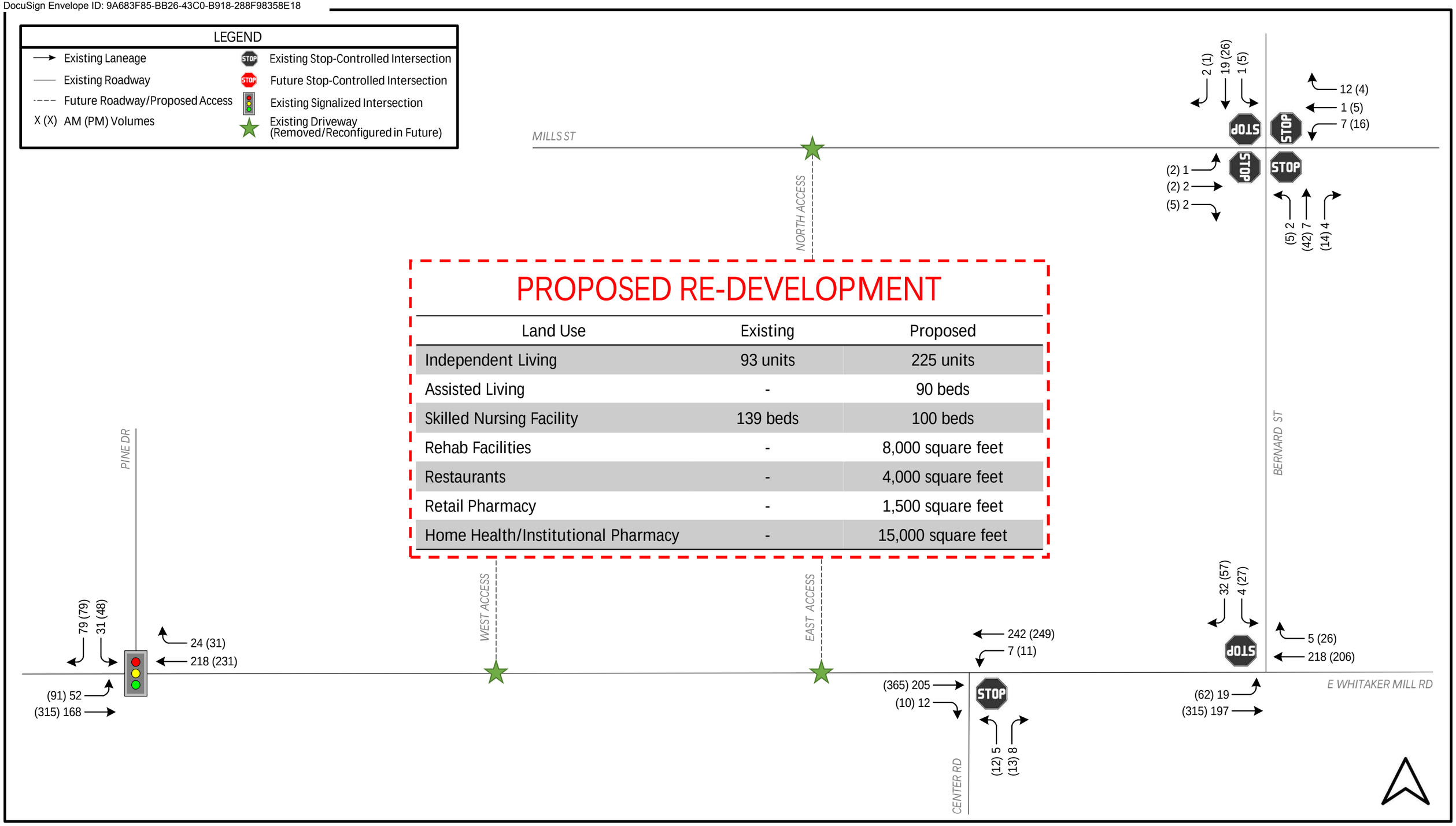

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
Raleigh, NC

Figure 5
Background (2023) Peak Hour Volumes

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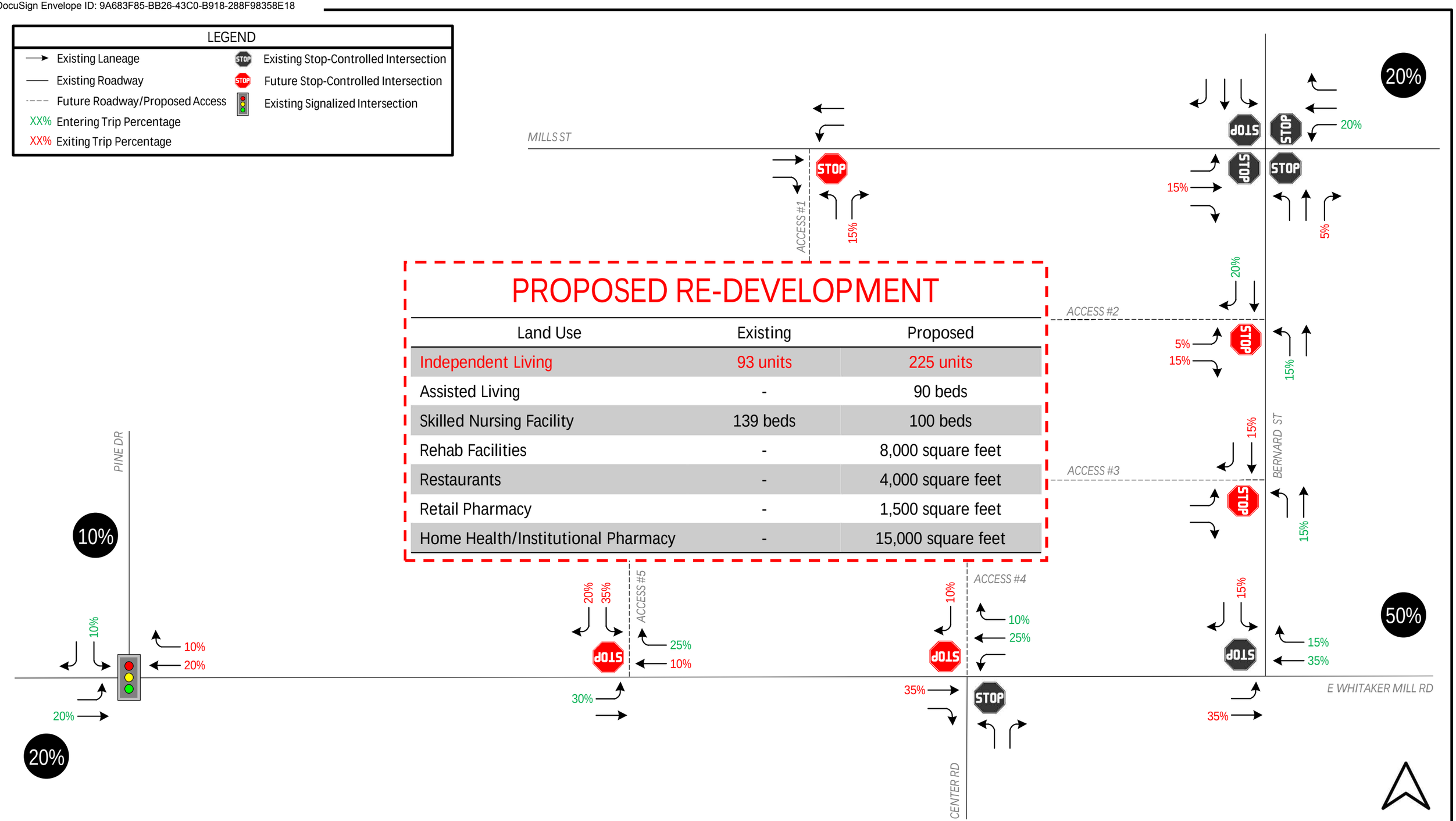

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
Raleigh, NC

Figure 6
Trip Distribution Percentages – Independent Living

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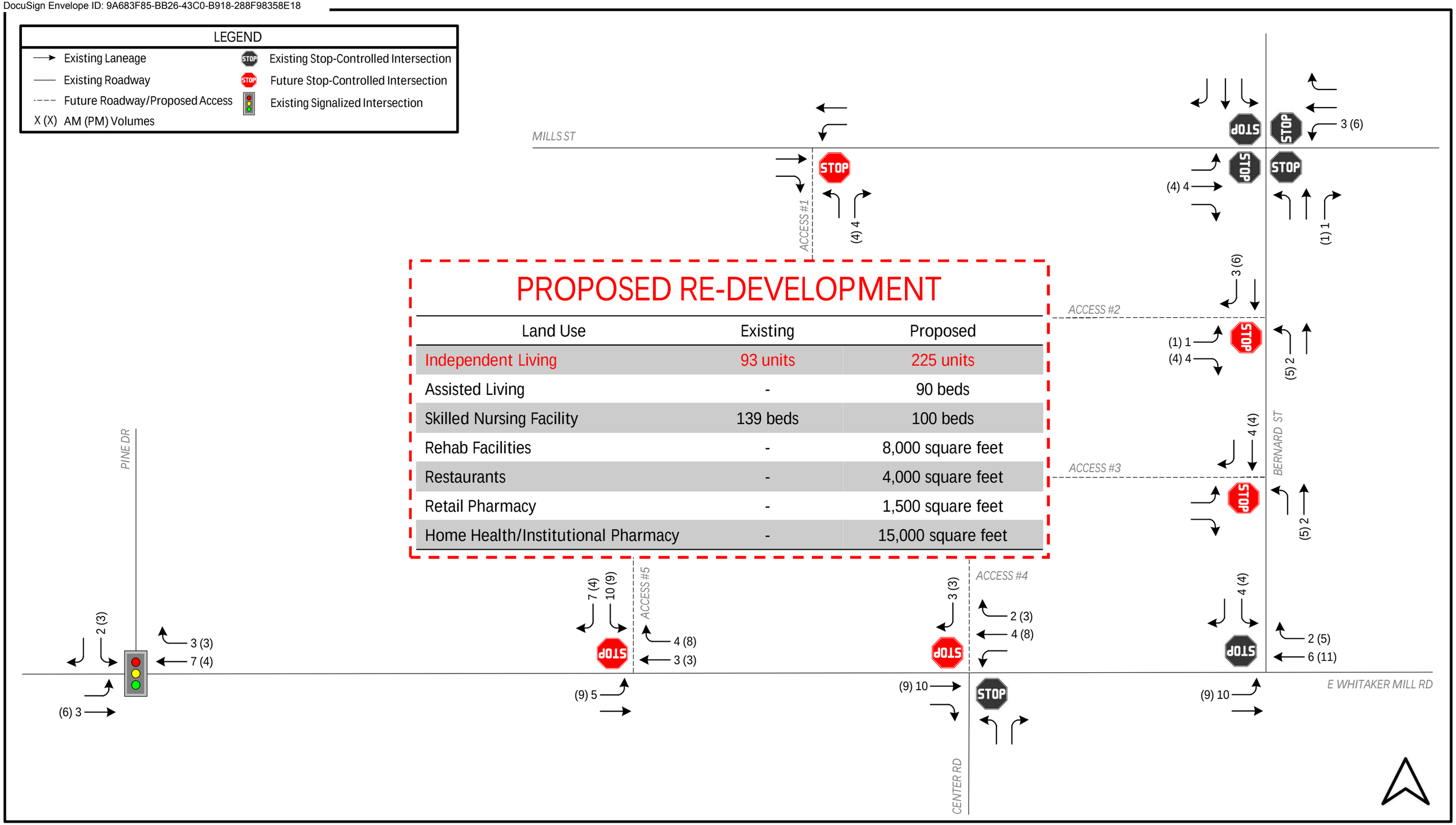

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
Raleigh, NC

Figure 7
Site Trips – Independent Living

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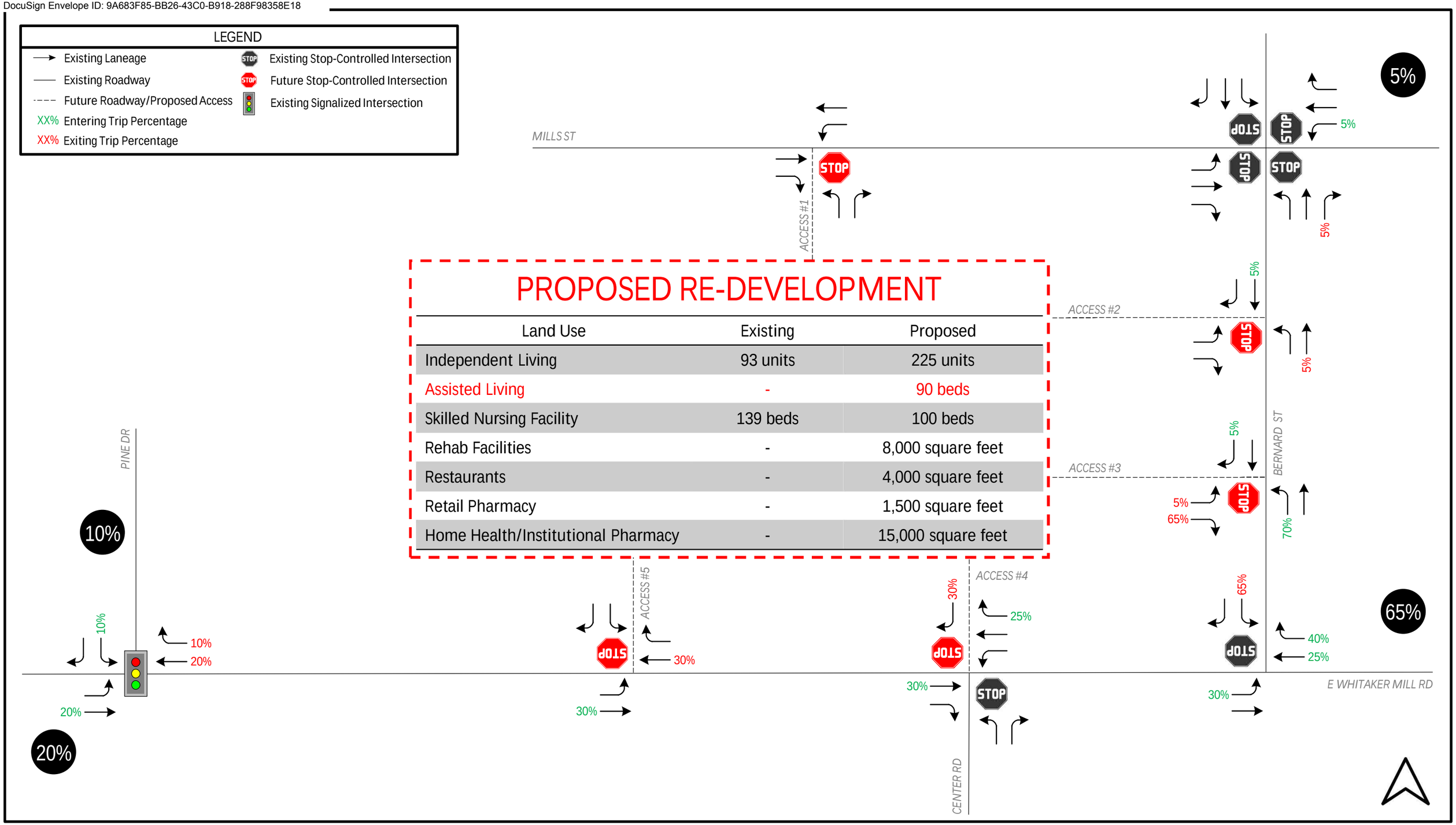

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 8
Trip Distribution Percentages – Assisted Living

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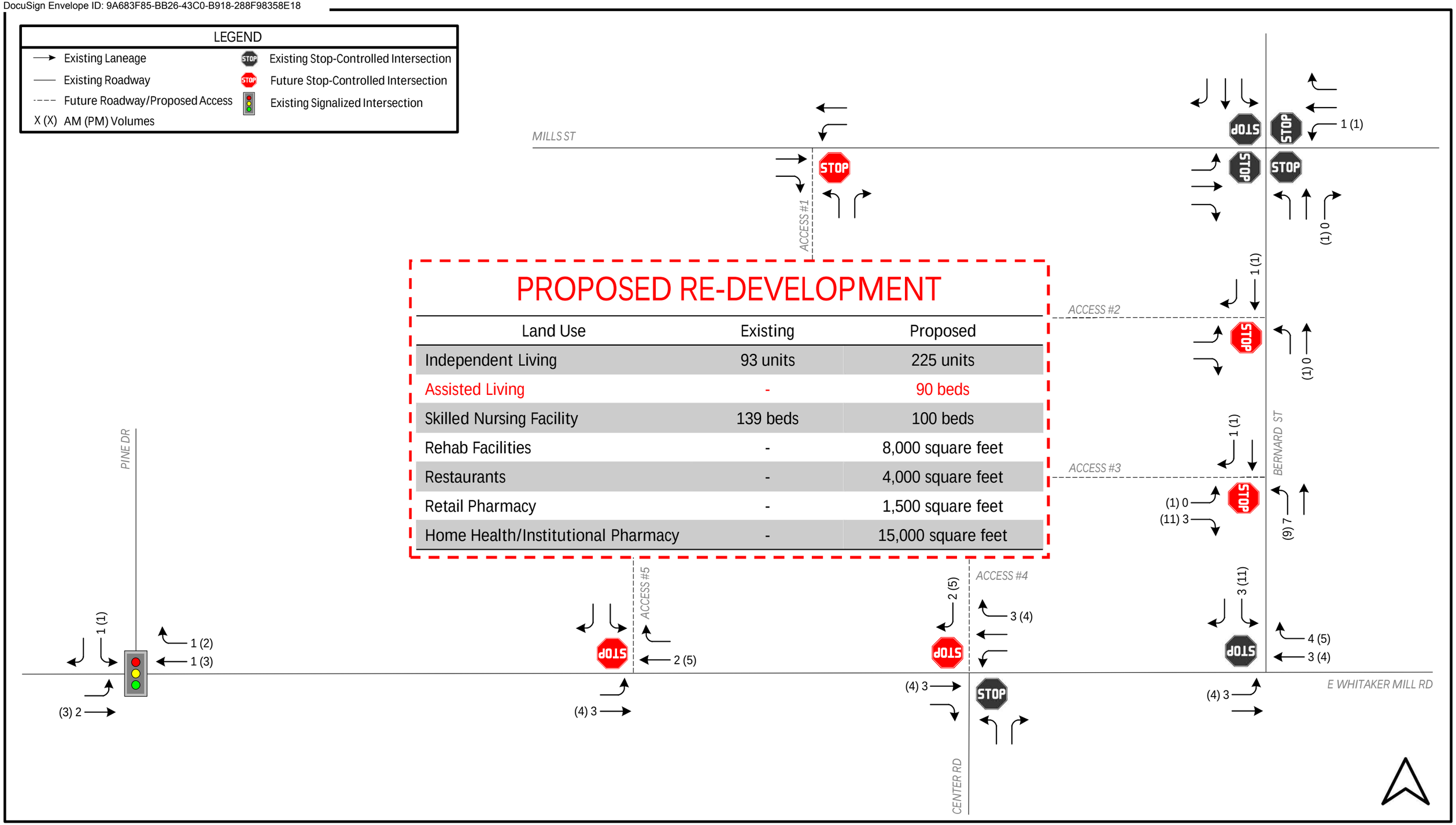

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 9
Site Trips – Assisted Living

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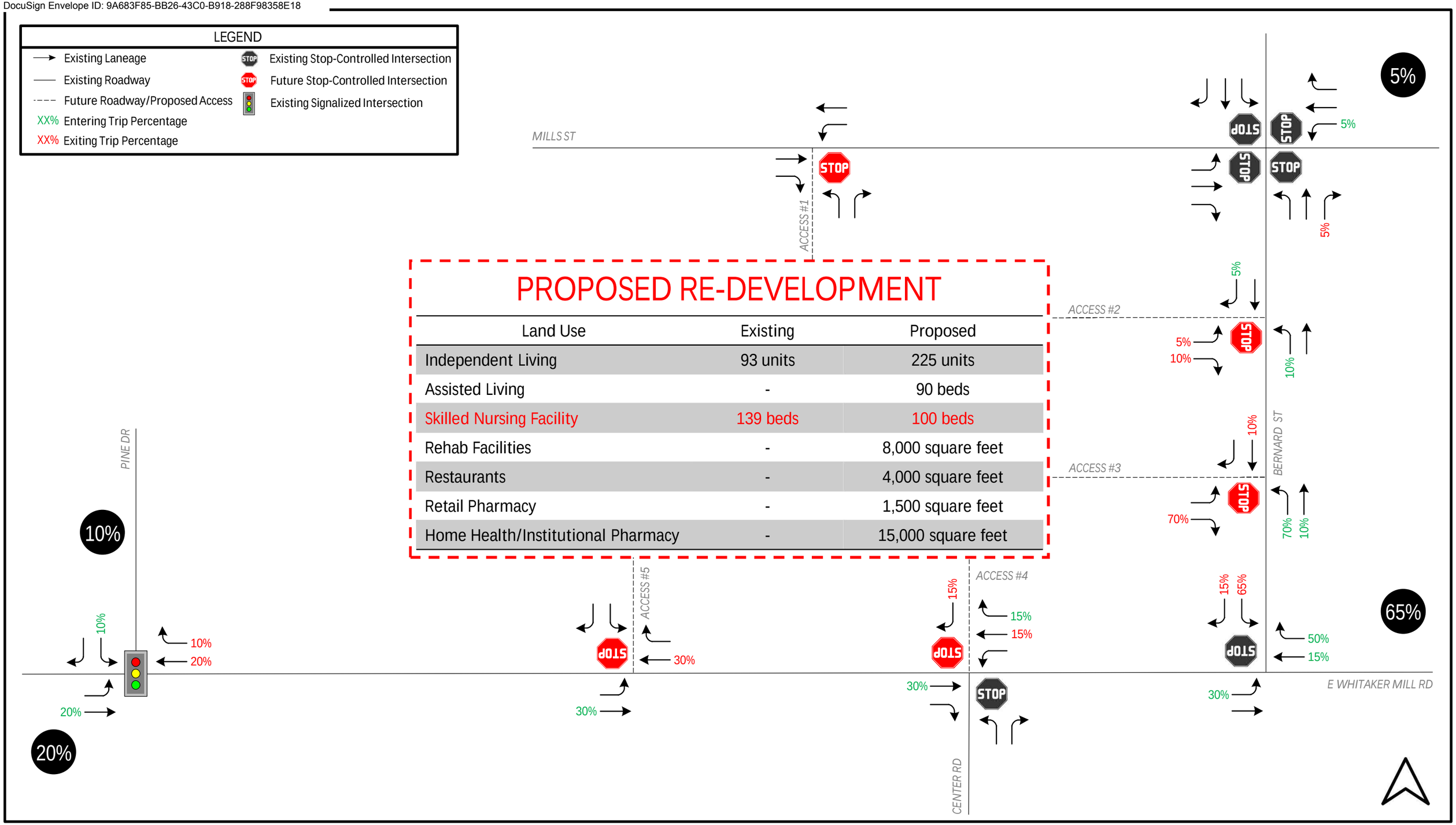

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 10
Trip Distribution Percentages – Skilled Nursing Facility

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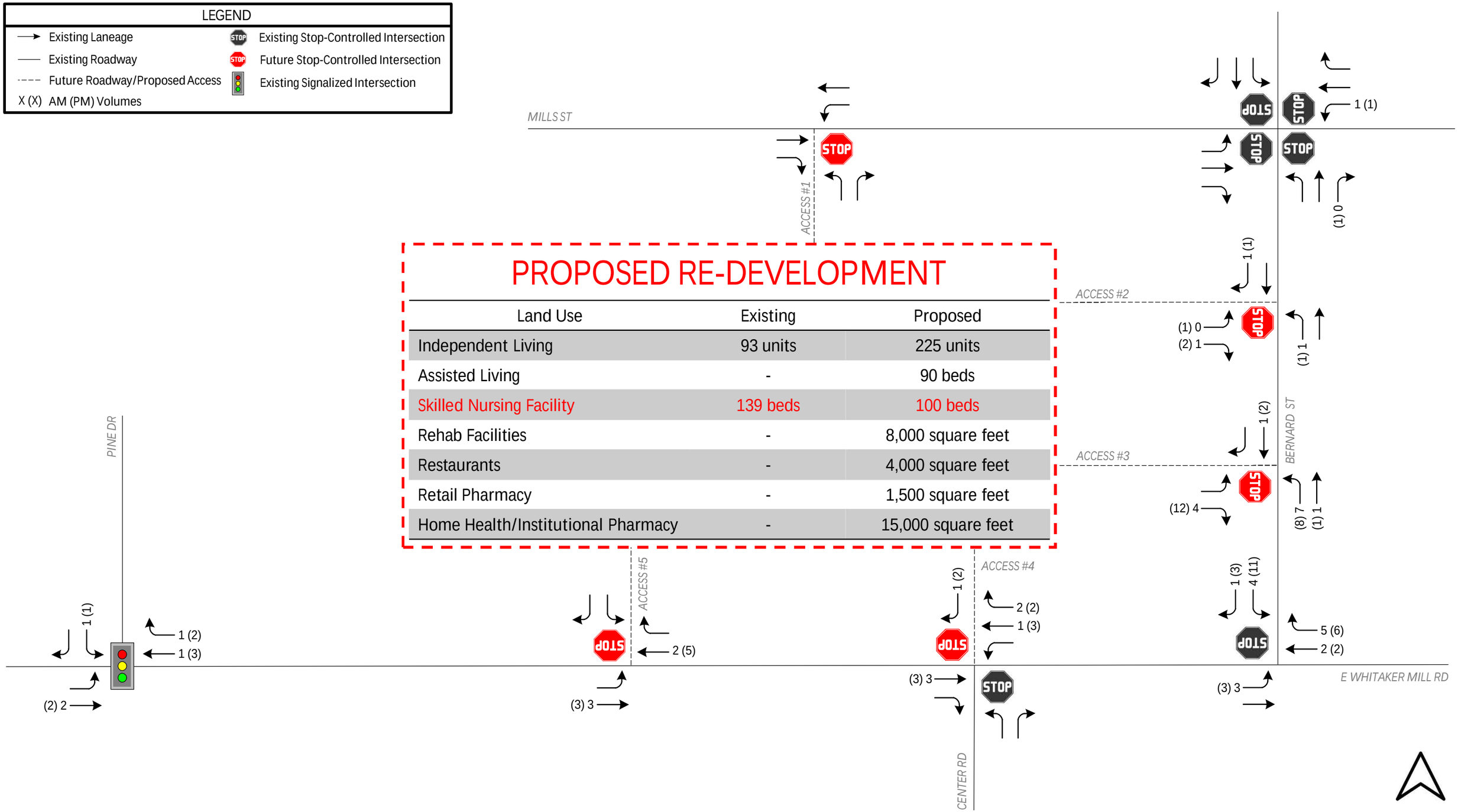

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 11
Site Trips – Skilled Nursing Facility

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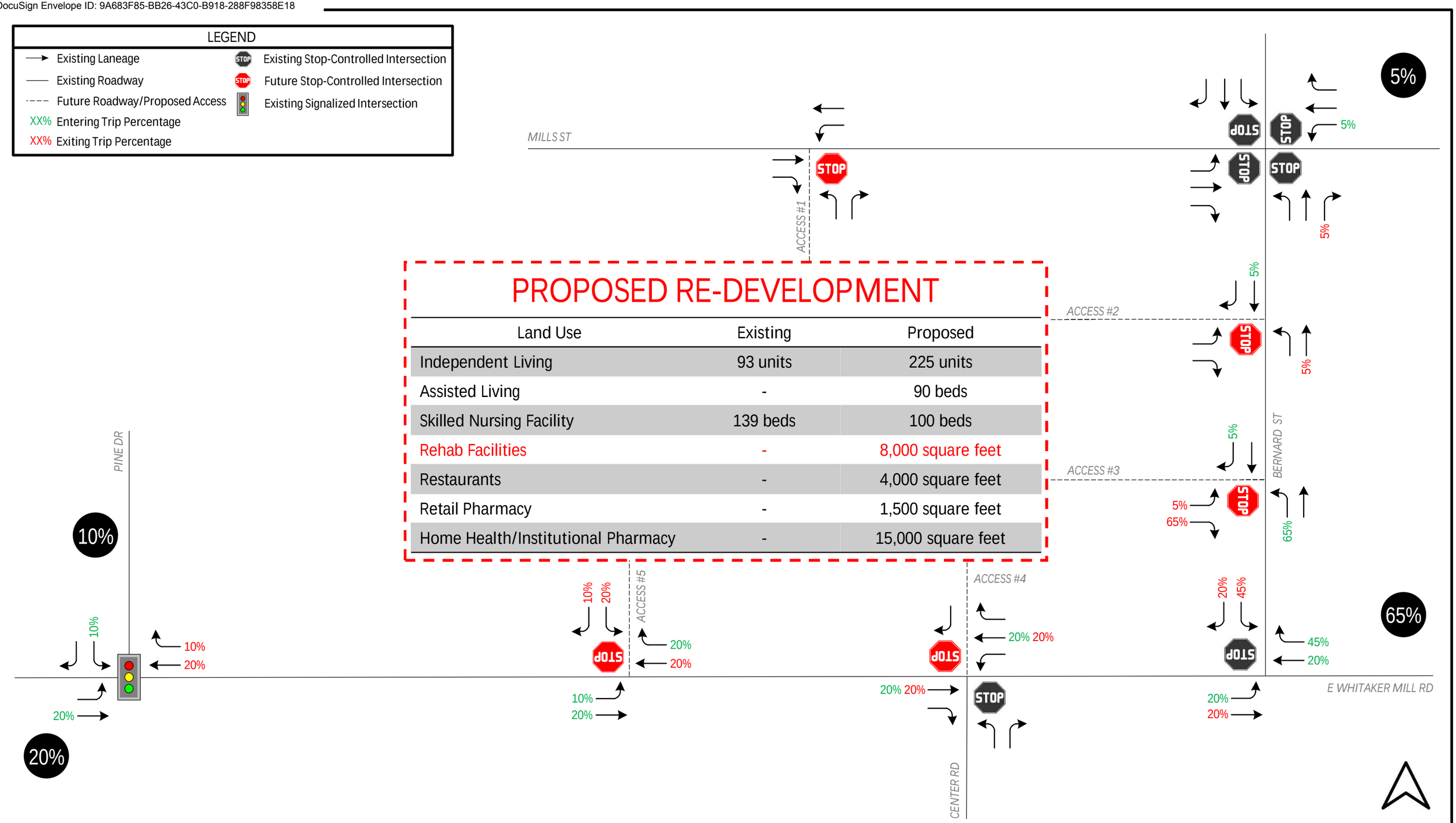

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 12
Trip Distribution Percentages – Rehab Facilities

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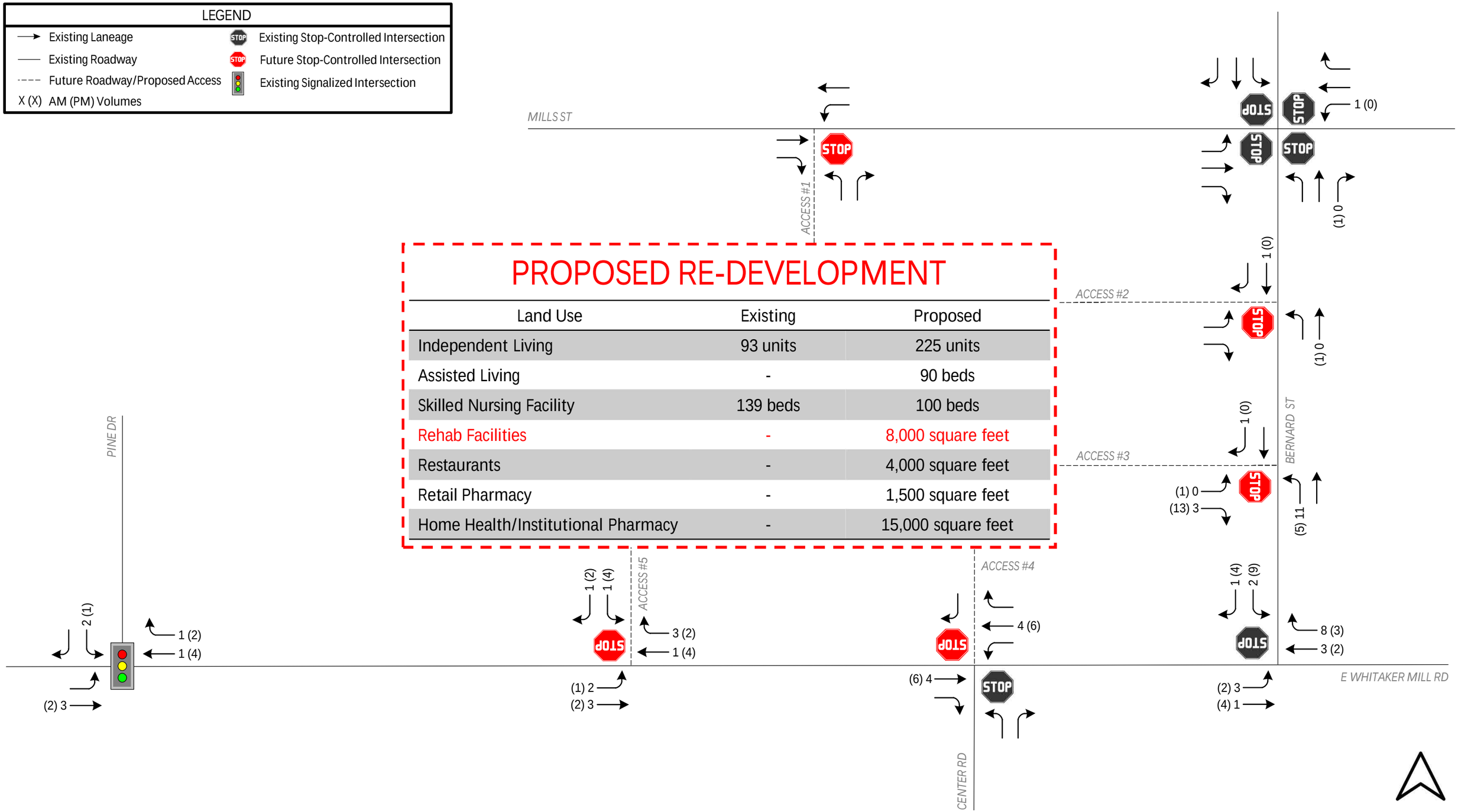

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 13
Site Trips – Rehab Facilities

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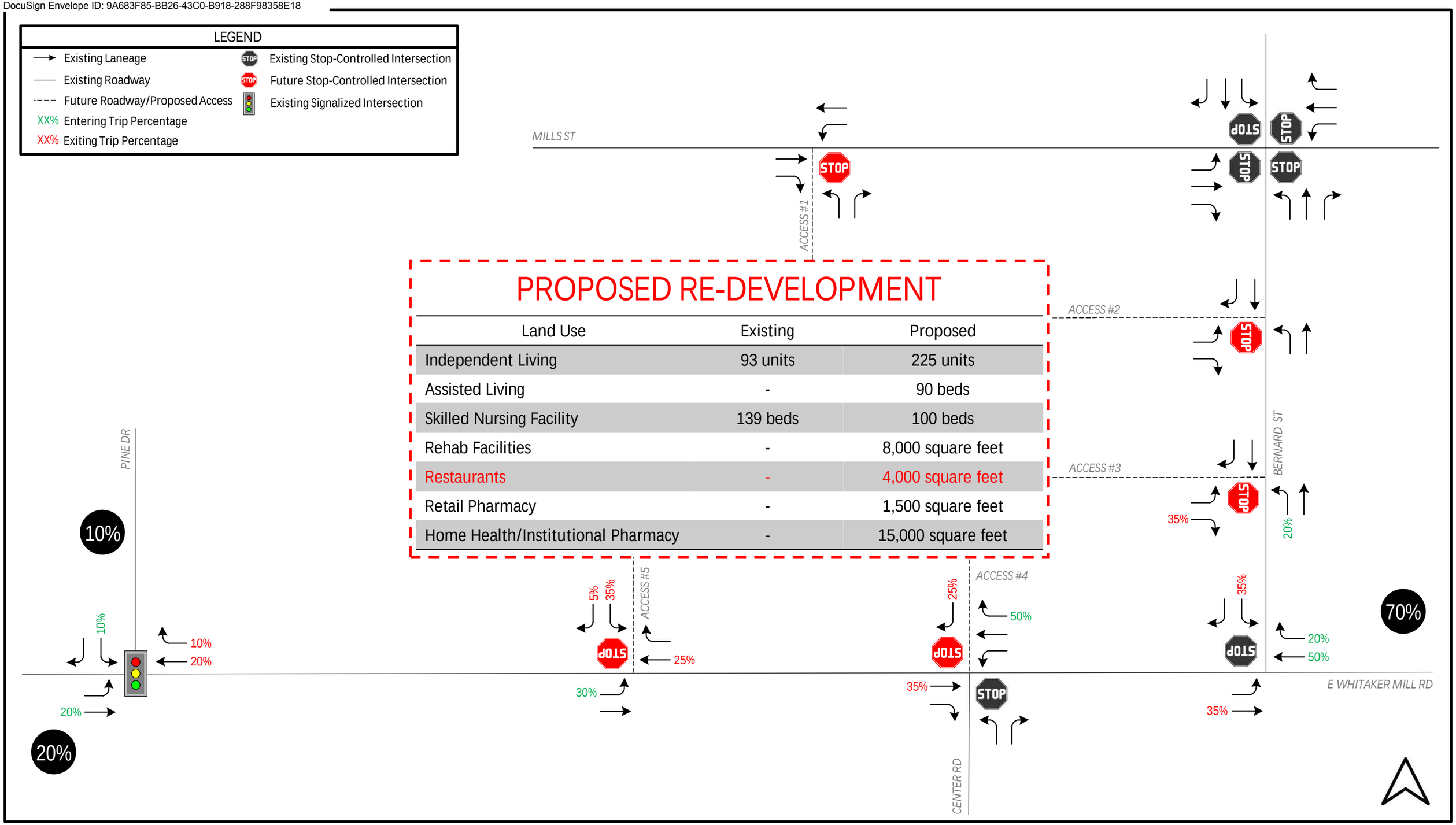

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 14
Trip Distribution Percentages – Restaurants (Non-Pass-By)

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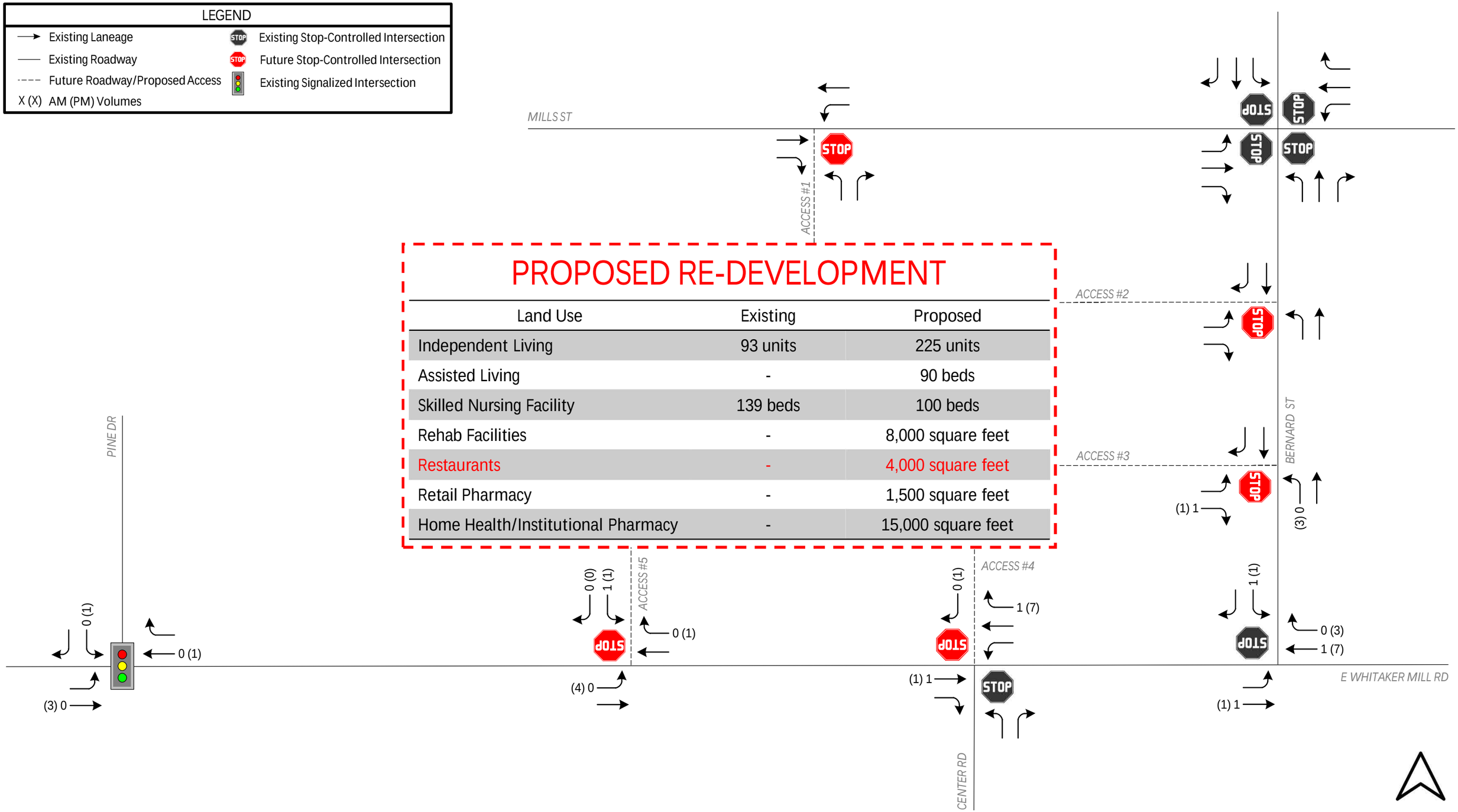

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 15
Site Trips – Restaurants (Non-Pass-By)

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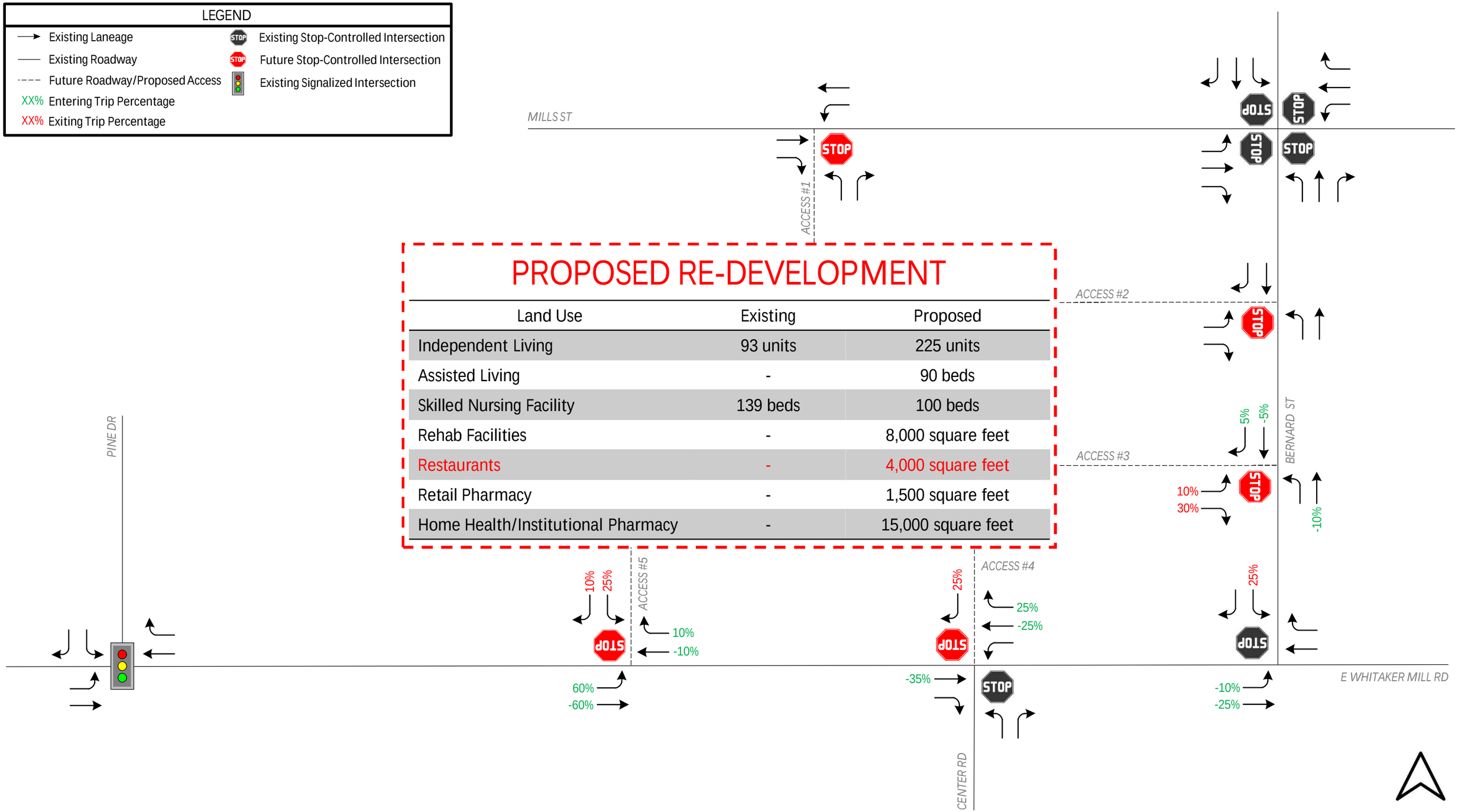

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 16
Trip Distribution Percentages – Restaurants (Pass-By)

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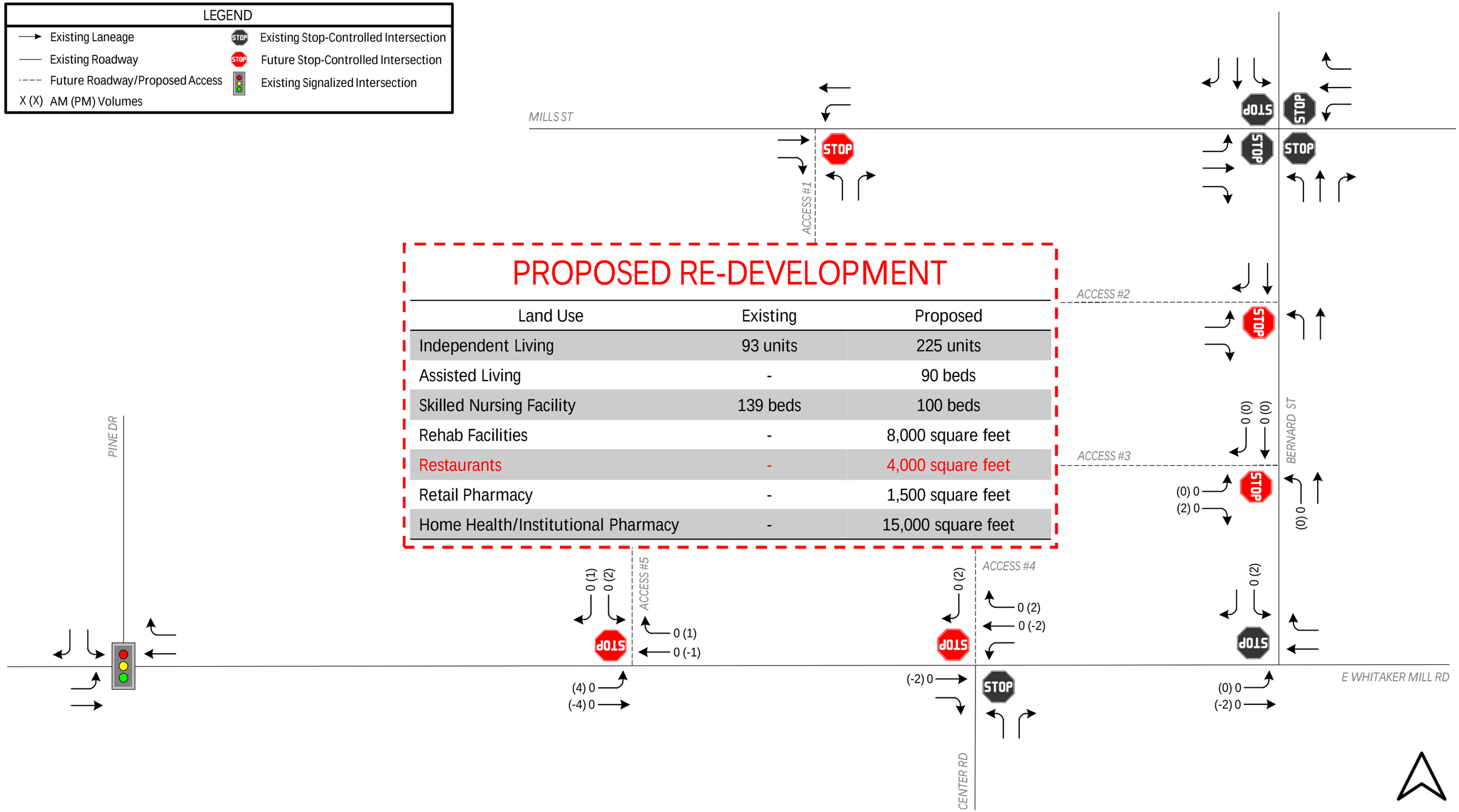

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Raleigh, NC

Figure 17
Site Trips – Restaurants (Pass-By)

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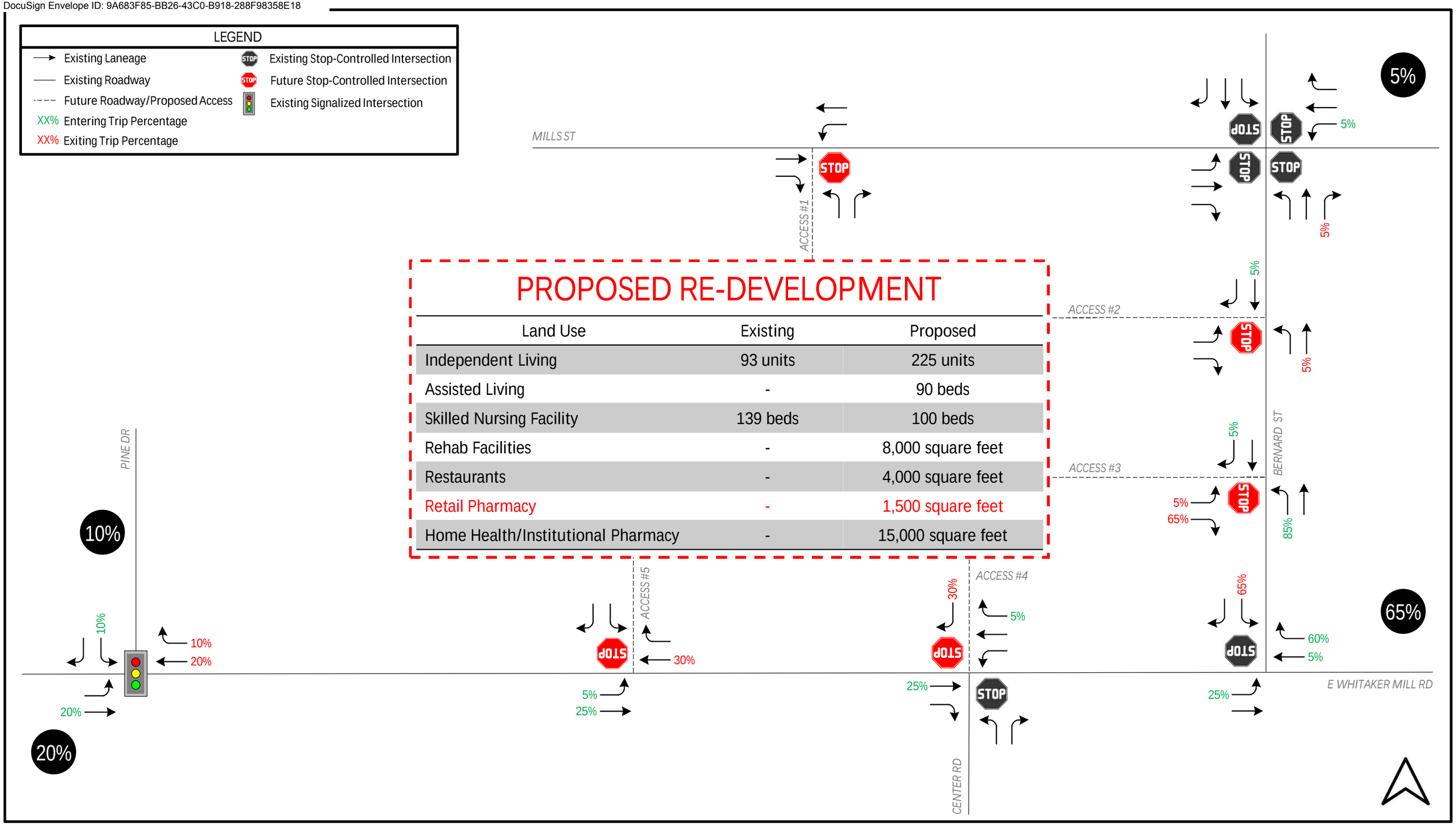

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 18
Trip Distribution Percentages – Retail Pharmacy (Non-Pass-By)

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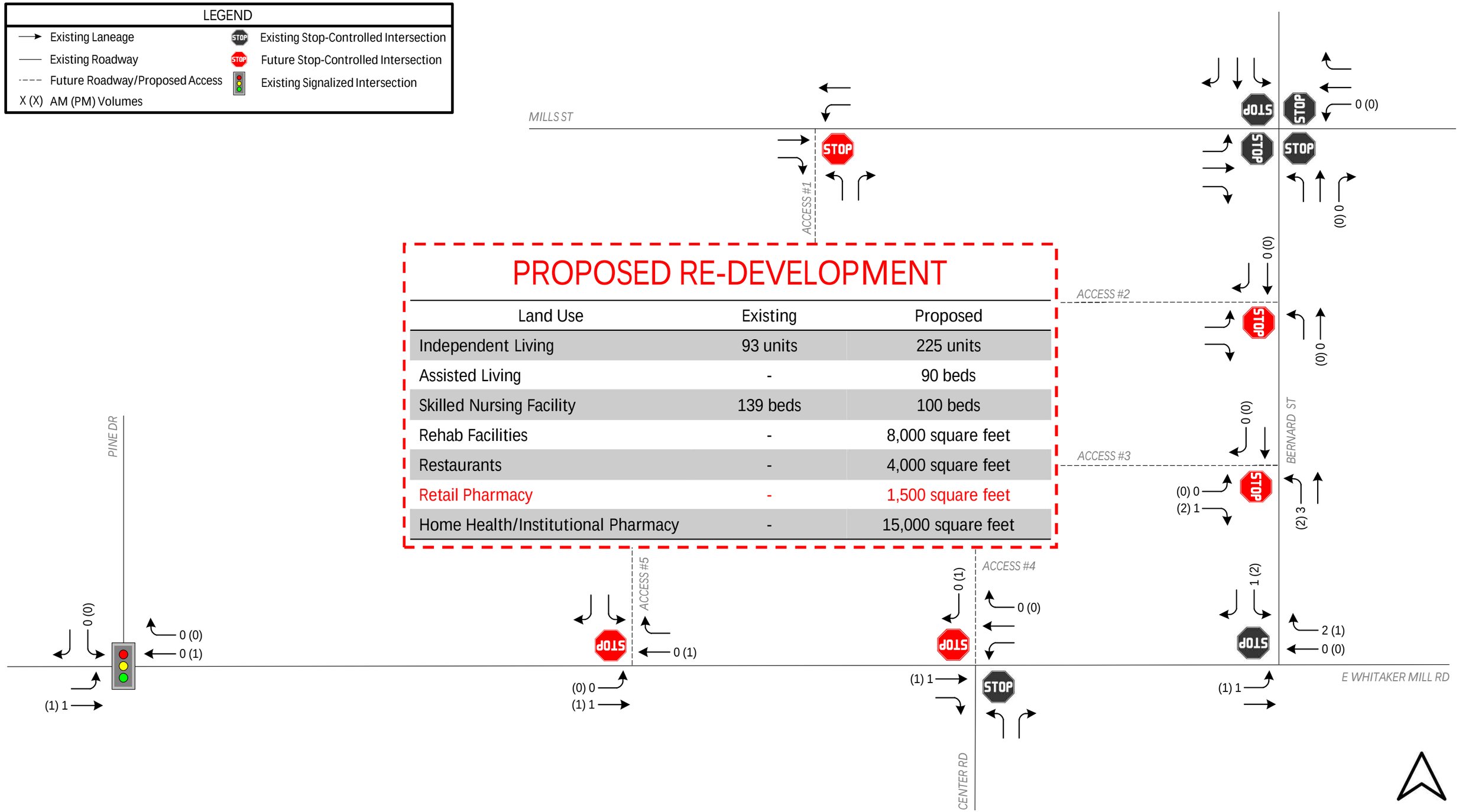

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 19
Site Trips – Retail Pharmacy (Non-Pass-By)

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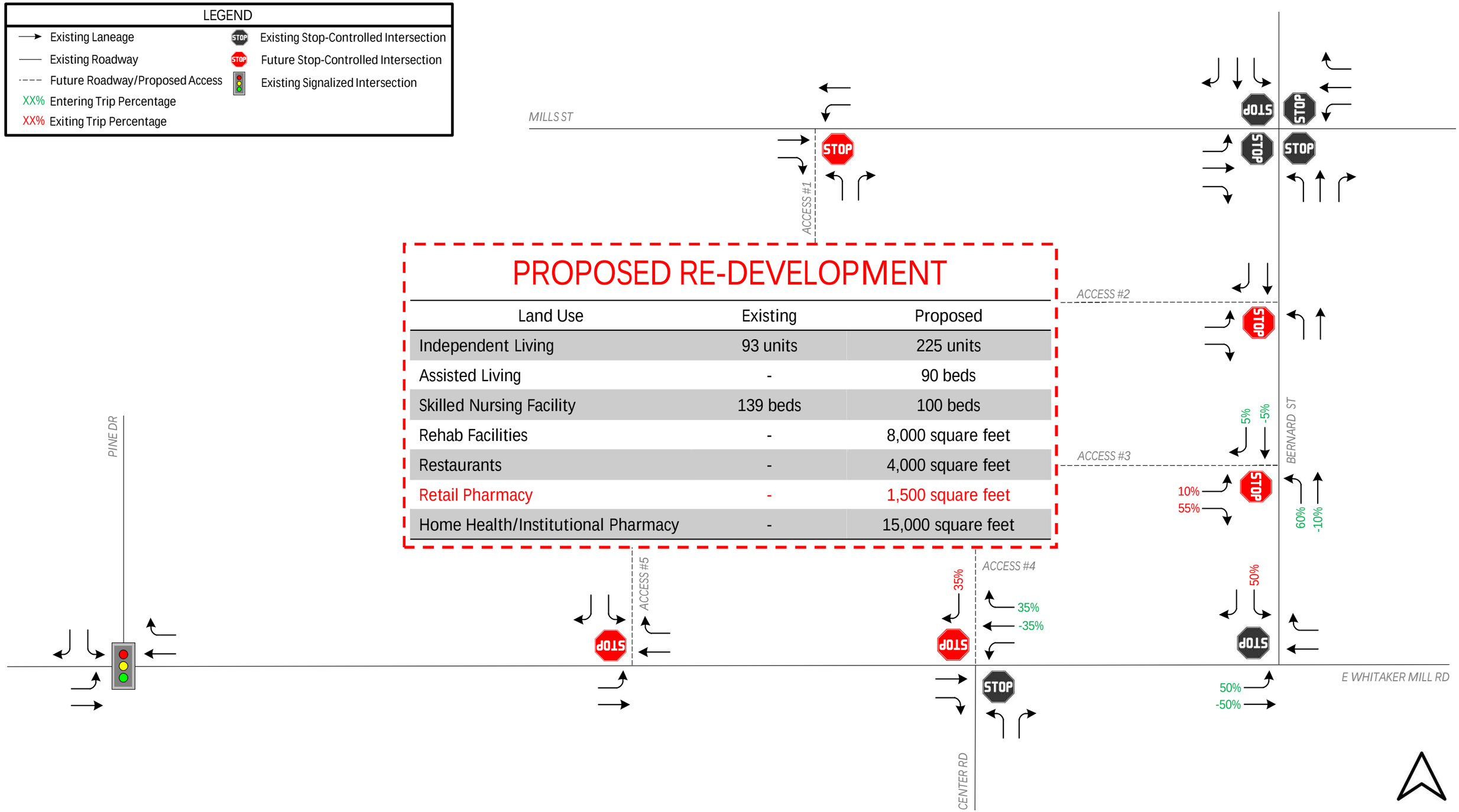

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
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Figure 20
Trip Distribution Percentages – Retail Pharmacy (Pass-By)

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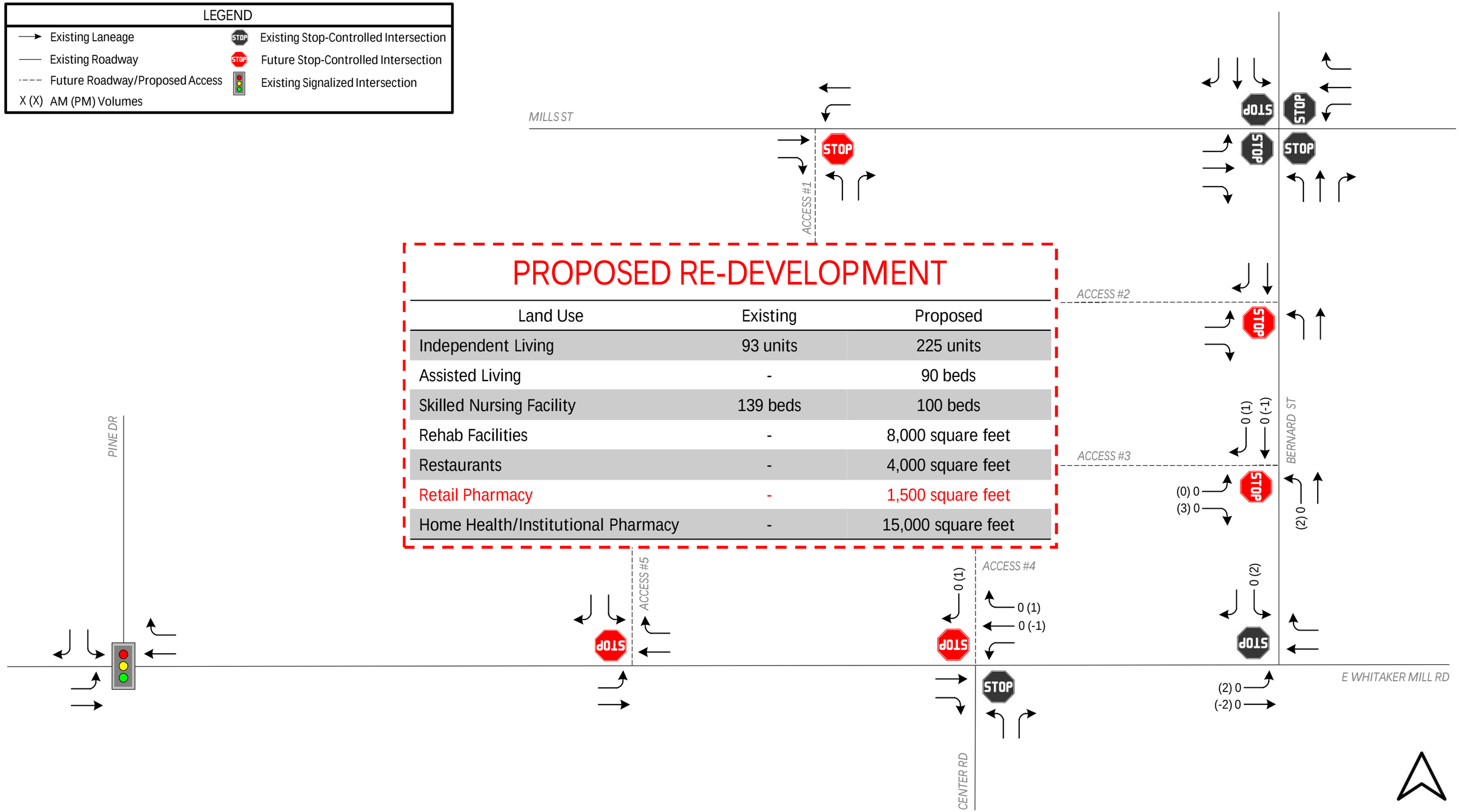

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Raleigh, NC

Figure 21
Site Trips – Retail Pharmacy (Pass-By)

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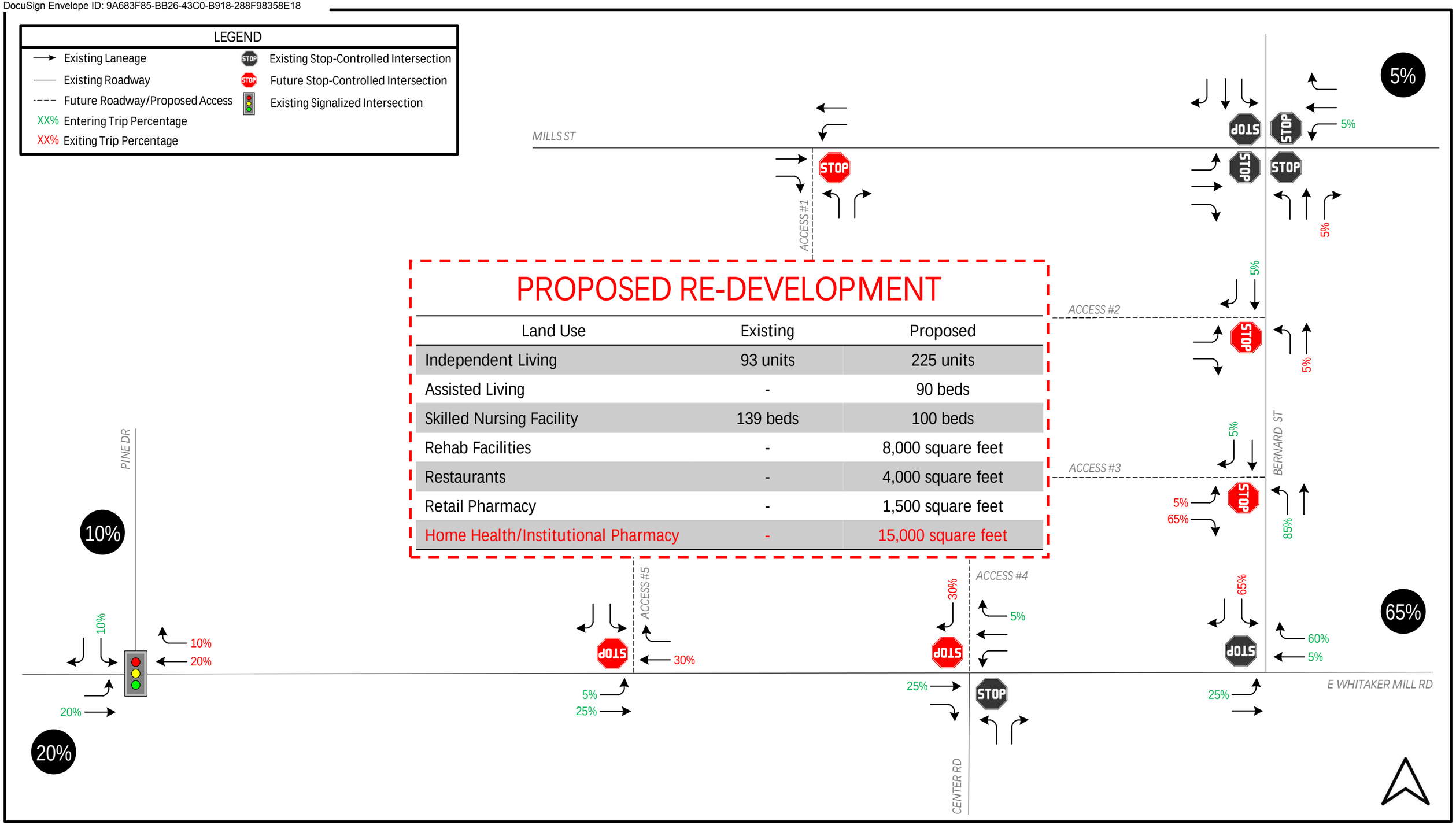

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 22
Trip Distribution Percentages – Home Health/Institutional Pharmacy

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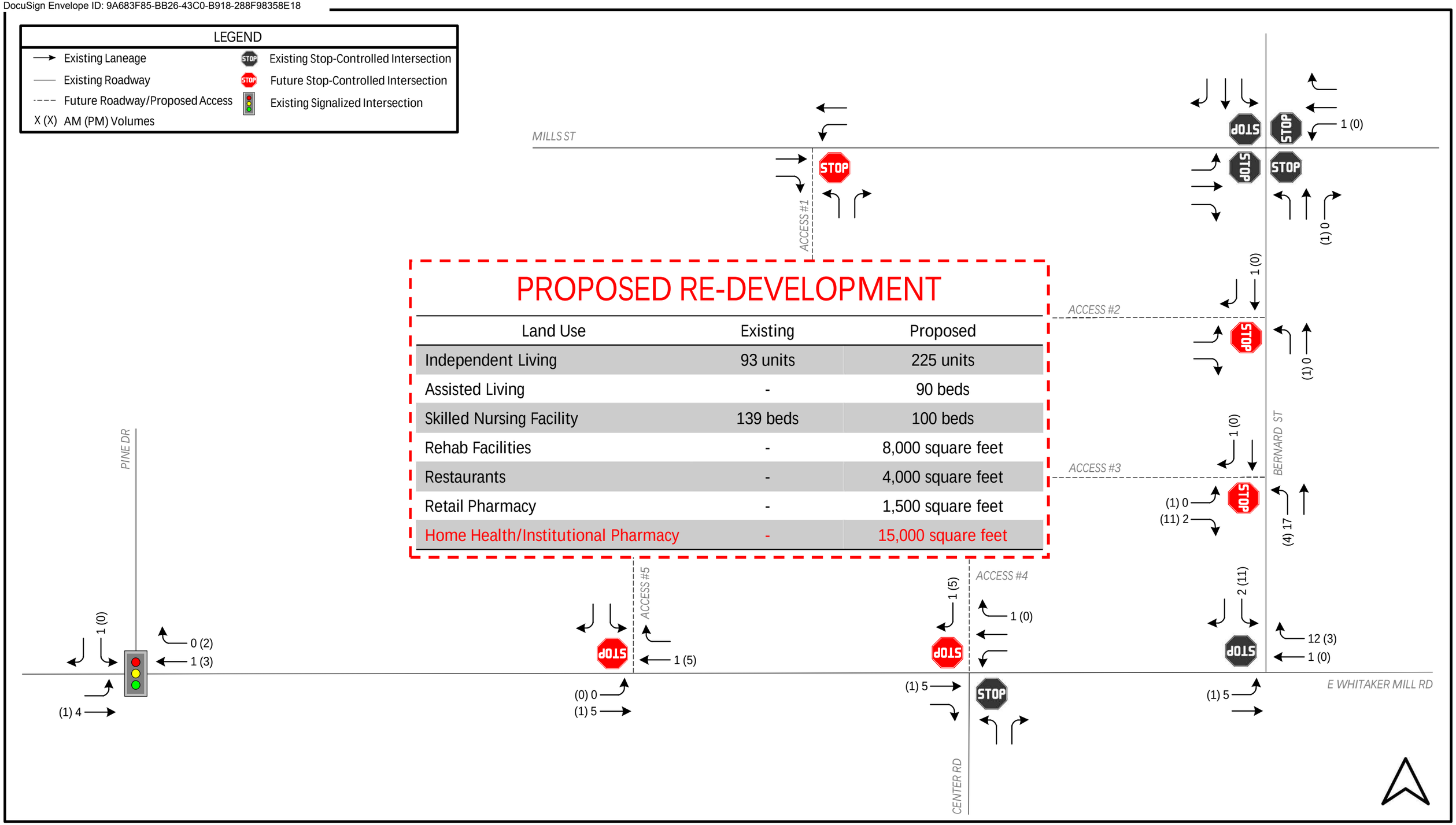

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 23
Site Trips – Home Health/Institutional Pharmacy

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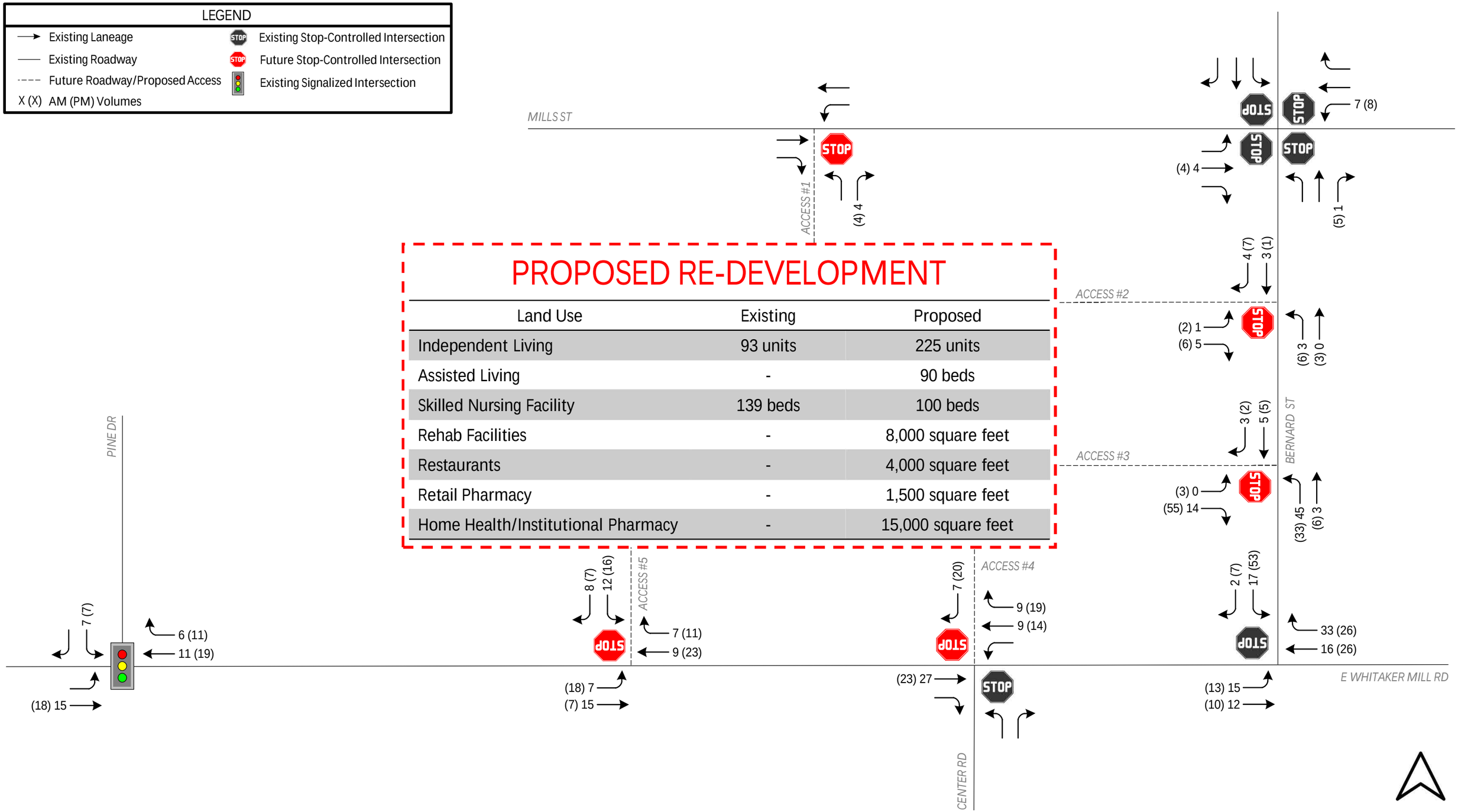

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

Oaks at Mayview
Raleigh, NC

Figure 24
Total Site Trips

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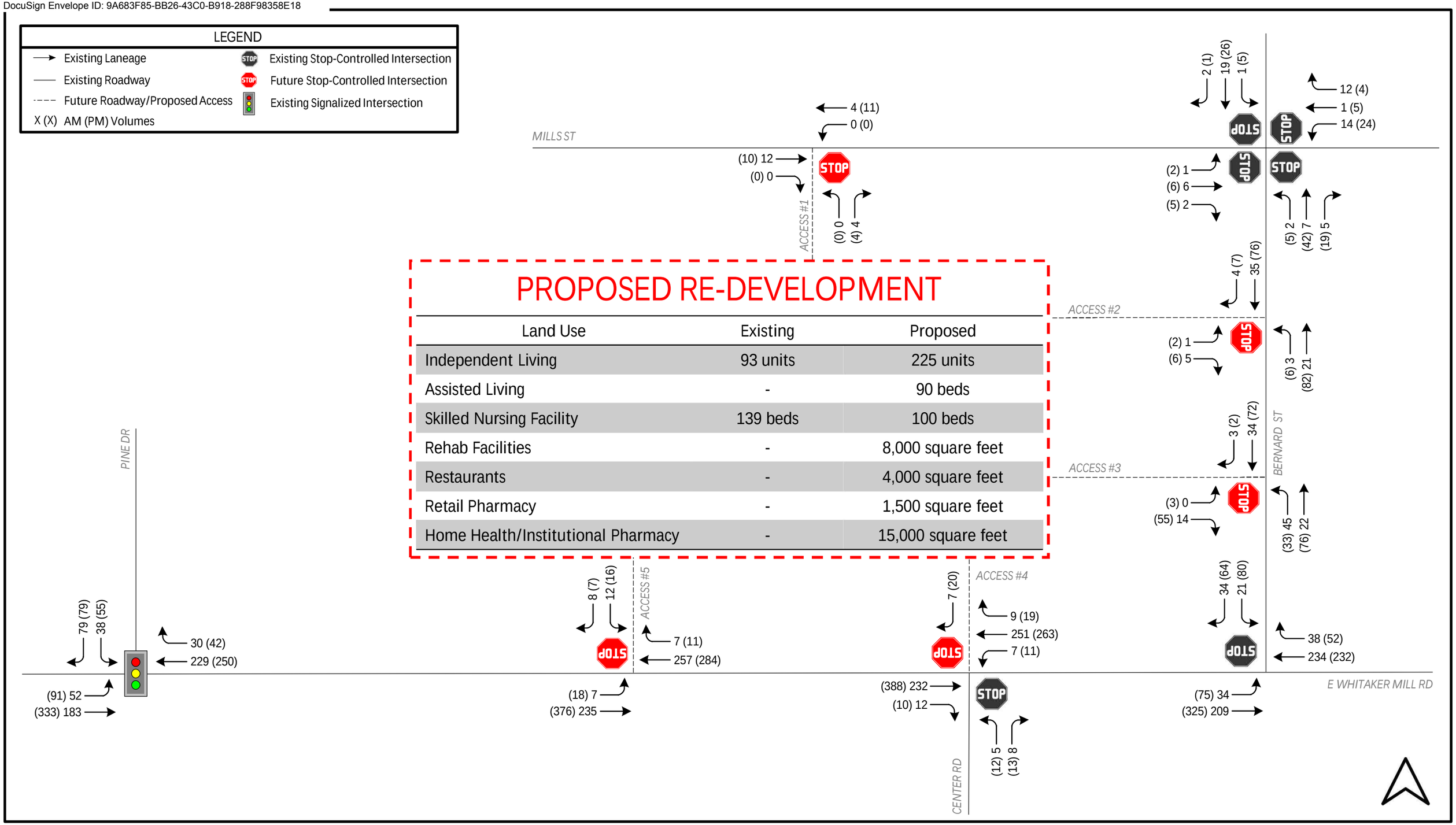

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 25
Build (2023) Peak Hour Volumes

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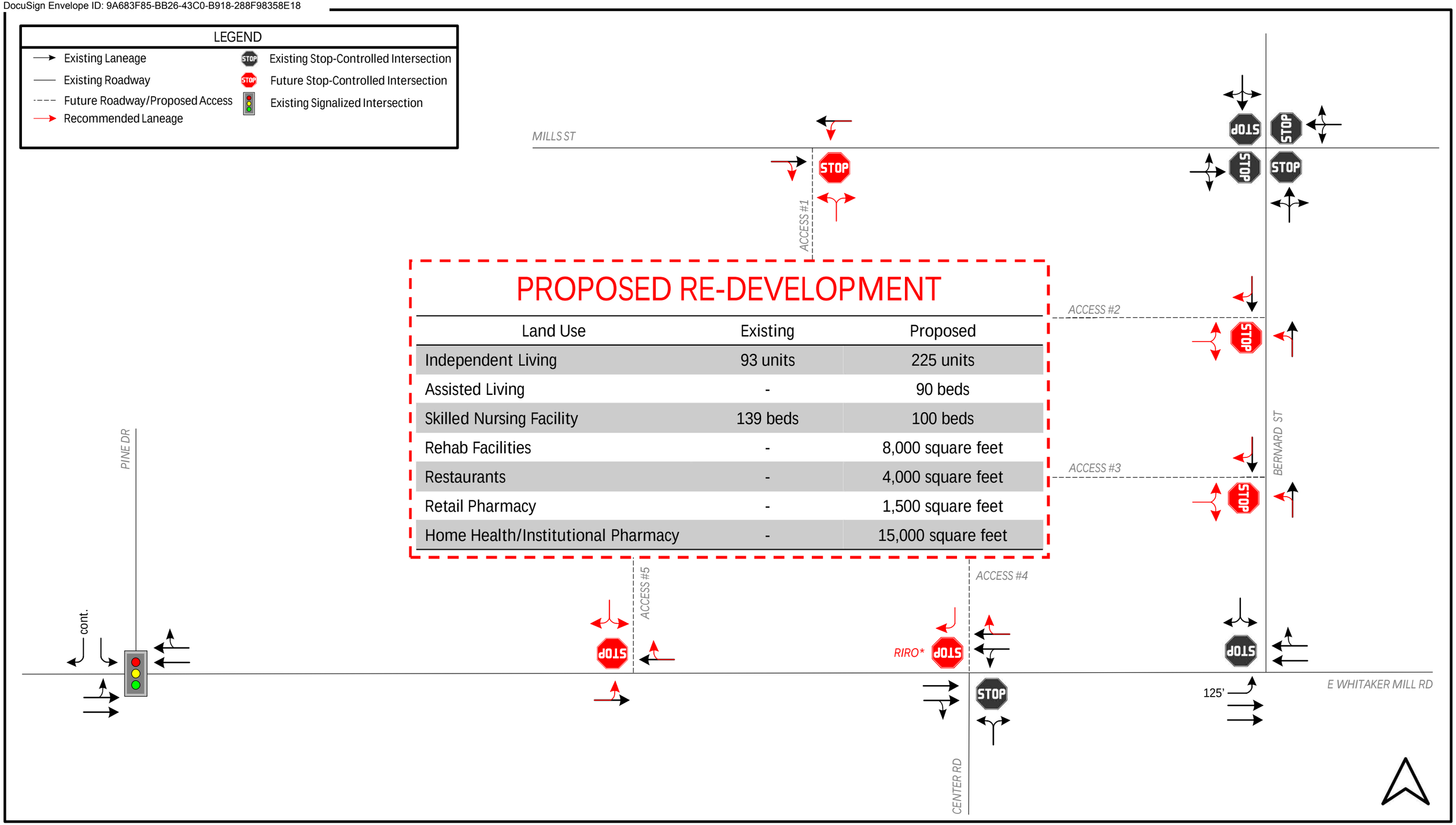

PROPOSED RE-DEVELOPMENT

Land Use	Existing	Proposed
Independent Living	93 units	225 units
Assisted Living	-	90 beds
Skilled Nursing Facility	139 beds	100 beds
Rehab Facilities	-	8,000 square feet
Restaurants	-	4,000 square feet
Retail Pharmacy	-	1,500 square feet
Home Health/Institutional Pharmacy	-	15,000 square feet

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Figure 26
Recommended (2023) Laneage

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Appendix B
Count Data

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

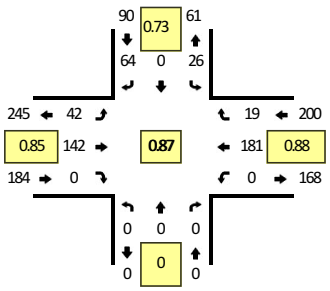
Type of peak hour being reported: Intersection Peak

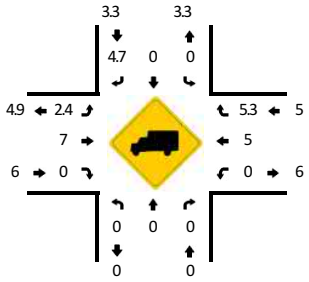
Method for determining peak hour: Total Entering Volume

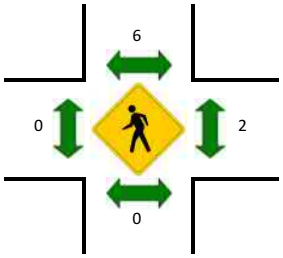
LOCATION: Pine Dr -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

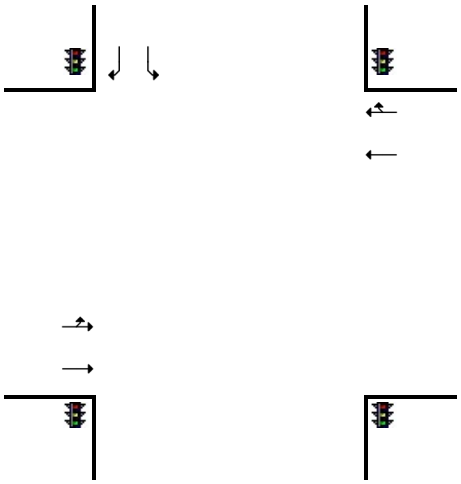
QC JOB #: 15286301
DATE: Wed, Nov 4 2020

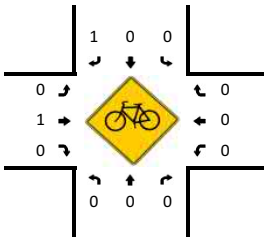
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

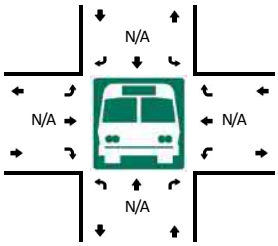


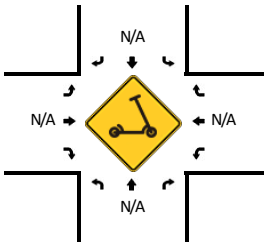












15-Min Count Period Beginning At	Pine Dr (Northbound)				Pine Dr (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	8	0	3	20	0	0	0	12	3	0	48	
7:15 AM	0	0	0	0	4	0	6	0	8	25	0	0	0	30	4	0	77	
7:30 AM	0	0	0	0	2	0	8	0	6	22	0	0	0	29	3	0	70	
7:45 AM	0	0	0	0	5	0	8	0	11	36	0	0	0	31	3	0	94	289
8:00 AM	0	0	0	0	9	0	22	0	8	34	0	0	0	44	5	0	122	363
8:15 AM	0	0	0	0	5	0	17	0	8	36	0	0	0	37	2	0	105	391
8:30 AM	0	0	0	0	3	0	9	0	12	32	0	0	0	50	5	0	111	432
8:45 AM	0	0	0	0	9	0	16	0	14	40	0	0	0	50	7	0	136	474

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	36	0	64	0	56	160	0	0	0	200	28	0	544
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	8	4		28
Buses																	
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	4		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

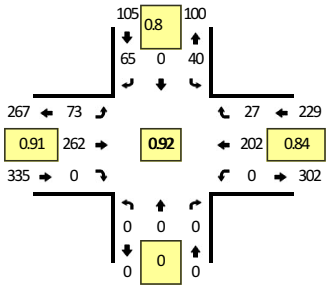
Type of peak hour being reported: Intersection Peak

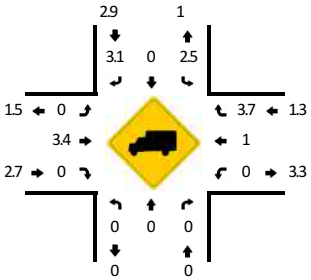
Method for determining peak hour: Total Entering Volume

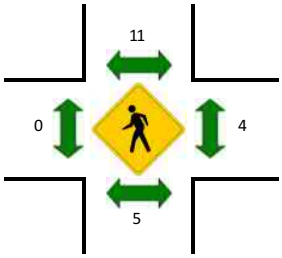
LOCATION: Pine Dr -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

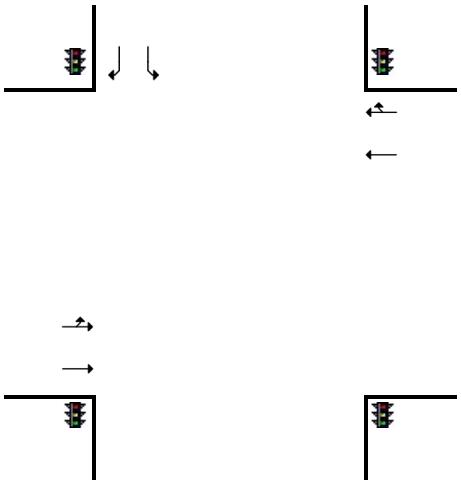
QC JOB #: 15286302
DATE: Wed, Nov 4 2020

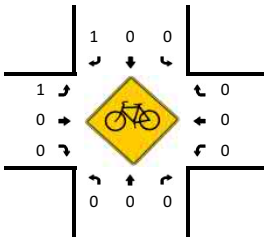
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

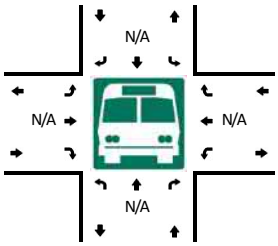


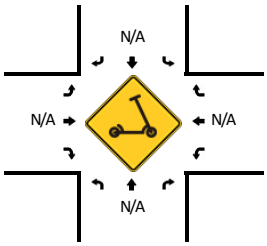












15-Min Count Period Beginning At	Pine Dr (Northbound)				Pine Dr (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	6	0	15	0	21	68	0	0	0	61	7	0	178	
4:15 PM	0	0	0	0	14	0	19	0	16	76	0	0	0	50	7	0	182	
4:30 PM	0	0	0	0	8	0	13	0	17	73	0	0	0	49	10	0	170	
4:45 PM	0	0	0	0	12	0	18	0	19	45	0	0	0	42	3	0	139	669
5:00 PM	0	0	0	0	10	0	17	0	11	58	0	0	0	50	6	0	152	643
5:15 PM	0	0	0	0	3	0	19	0	19	62	0	0	0	50	6	0	159	620
5:30 PM	0	0	0	0	6	0	13	0	14	52	0	0	0	57	5	0	147	597
5:45 PM	0	0	0	0	3	0	15	0	13	59	0	0	0	42	5	0	137	595

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	56	0	76	0	64	304	0	0	0	200	28	0	728
Heavy Trucks	0	0	0		4	0	0		0	12	0		0	0	0		16
Buses																	
Pedestrians		4				8				0				4			16
Bicycles	0	0	0		0	0	4		4	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

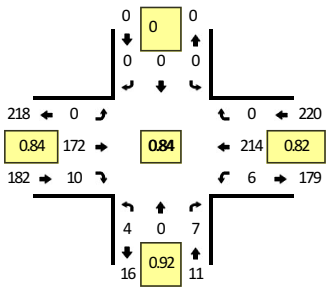
Type of peak hour being reported: Intersection Peak

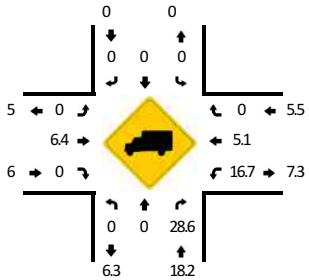
Method for determining peak hour: Total Entering Volume

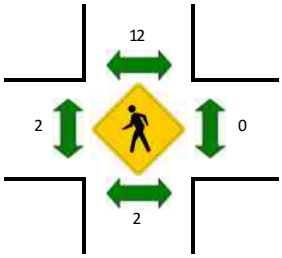
LOCATION: Center Rd -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

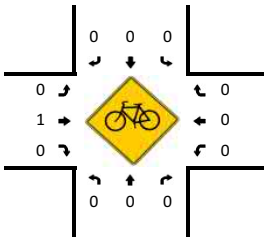
QC JOB #: 15286303
DATE: Wed, Nov 4 2020

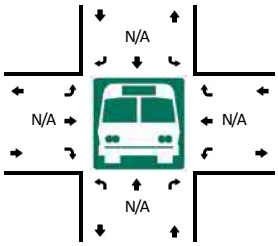
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

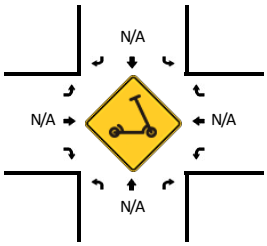












15-Min Count Period Beginning At	Center Rd (Northbound)				Center Rd (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	0	0	0	0	0	22	1	0	1	23	0	0	48	
7:15 AM	3	0	1	0	0	0	0	0	0	30	1	0	1	38	0	0	74	
7:30 AM	4	0	0	0	0	0	0	0	0	27	0	0	2	36	0	0	69	
7:45 AM	5	0	2	0	0	0	0	0	0	52	4	0	0	36	0	0	99	290
8:00 AM	1	0	2	0	0	0	0	0	0	41	4	0	1	48	0	0	97	339
8:15 AM	1	0	2	0	0	0	0	0	0	38	5	0	3	41	0	0	90	355
8:30 AM	0	0	3	0	0	0	0	0	0	40	0	0	1	59	0	0	103	389
8:45 AM	2	0	0	0	0	0	0	0	0	53	1	0	1	66	0	0	123	413

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	0	0	0	0	0	212	4	0	4	264	0	0	492
Heavy Trucks	0	0	0		0	0	0		0	16	0		4	8	0		28
Buses																	
Pedestrians		0				20				0				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

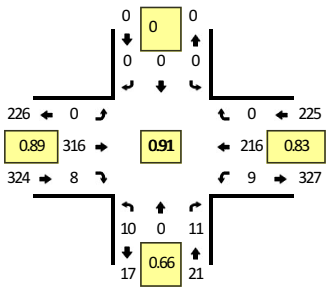
Type of peak hour being reported: Intersection Peak

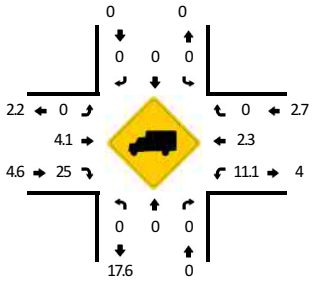
Method for determining peak hour: Total Entering Volume

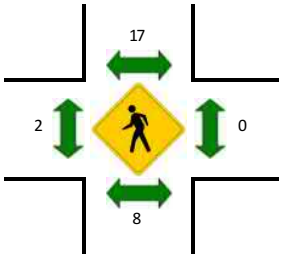
LOCATION: Center Rd -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

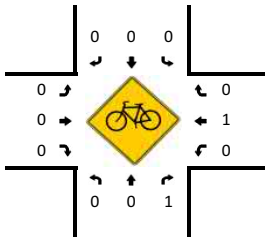
QC JOB #: 15286304
DATE: Wed, Nov 4 2020

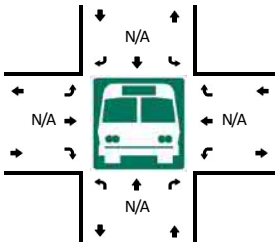
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

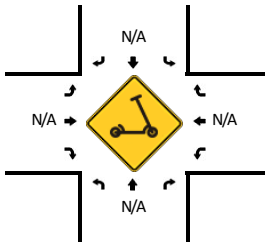












15-Min Count Period Beginning At	Center Rd (Northbound)				Center Rd (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	2	0	0	0	0	0	0	80	2	0	2	66	0	0	156	
4:15 PM	2	0	1	0	0	0	0	0	0	88	3	0	1	51	0	0	146	
4:30 PM	2	0	2	0	0	0	0	0	0	82	3	0	4	53	0	0	146	
4:45 PM	2	0	6	0	0	0	0	0	0	66	0	0	2	46	0	0	122	570
5:00 PM	3	0	3	0	0	0	0	0	0	66	3	0	0	58	0	0	133	547
5:15 PM	4	0	5	0	0	0	0	0	0	68	0	0	1	48	0	0	126	527
5:30 PM	1	0	4	0	0	0	0	0	0	58	2	0	1	60	0	0	126	507
5:45 PM	0	0	0	0	0	0	0	0	0	62	2	0	1	50	0	0	115	500

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	8	0	0	0	0	0	0	320	8	0	8	264	0	0	624
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	12	0		32
Buses																	
Pedestrians		12				16				4				0			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

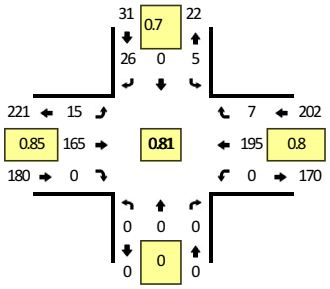
Type of peak hour being reported: Intersection Peak

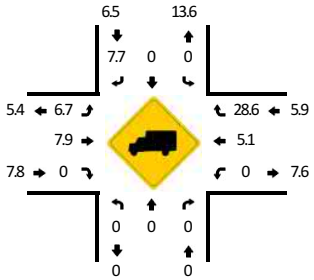
Method for determining peak hour: Total Entering Volume

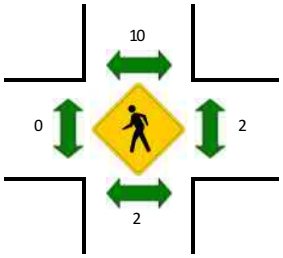
LOCATION: Bernard St -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

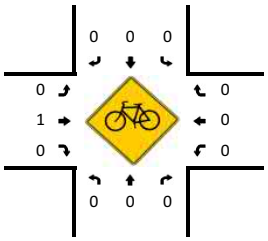
QC JOB #: 15286305
DATE: Wed, Nov 4 2020

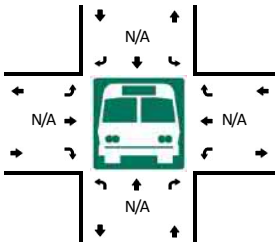
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

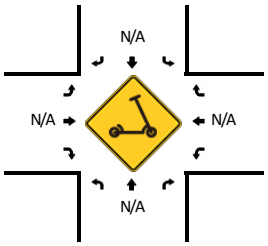












15-Min Count Period Beginning At	Bernard St (Northbound)				Bernard St (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	4	0	1	21	0	0	0	20	1	0	48	
7:15 AM	0	0	0	0	0	0	5	0	2	29	0	0	0	34	0	0	70	
7:30 AM	0	0	0	0	0	0	4	0	3	25	0	0	0	34	1	0	67	
7:45 AM	0	0	0	0	2	0	8	0	2	51	0	0	0	29	0	0	92	277
8:00 AM	0	0	0	0	0	0	9	0	6	38	0	0	0	40	0	0	93	322
8:15 AM	0	0	0	0	0	0	3	0	1	38	0	0	0	41	1	0	84	336
8:30 AM	0	0	0	0	3	0	5	0	4	40	0	0	0	55	2	0	109	378
8:45 AM	0	0	0	0	2	0	9	0	4	49	0	0	0	59	4	0	127	413

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	0	36	0	16	196	0	0	0	236	16	0	508
Heavy Trucks	0	0	0		0	0	4		0	20	0		0	8	4		36
Buses																	
Pedestrians		0				16				0				8			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

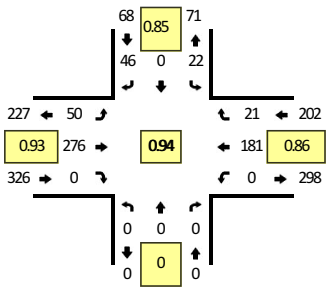
Type of peak hour being reported: Intersection Peak

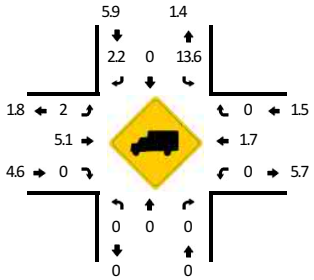
Method for determining peak hour: Total Entering Volume

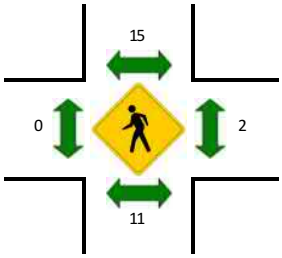
LOCATION: Bernard St -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

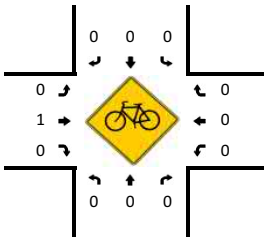
QC JOB #: 15286306
DATE: Wed, Nov 4 2020

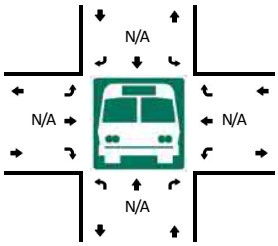
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

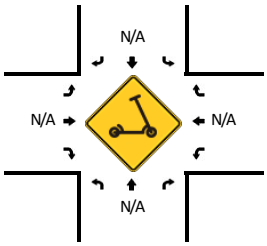












15-Min Count Period Beginning At	Bernard St (Northbound)				Bernard St (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	4	0	14	0	17	64	0	0	0	55	4	0	158	
4:15 PM	0	0	0	0	9	0	11	0	11	77	0	0	0	42	6	0	156	
4:30 PM	0	0	0	0	2	0	8	0	10	76	0	0	0	49	5	0	150	
4:45 PM	0	0	0	0	7	0	13	0	12	59	0	0	0	35	6	0	132	596
5:00 PM	0	0	0	0	4	0	14	0	8	63	0	0	0	44	6	0	139	577
5:15 PM	0	0	0	0	2	0	6	0	9	62	0	0	0	43	8	0	130	551
5:30 PM	0	0	0	0	5	0	16	0	13	53	0	0	0	46	6	0	139	540
5:45 PM	0	0	0	0	4	0	8	0	13	46	0	0	0	43	6	0	120	528

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	16	0	56	0	68	256	0	0	0	220	16	0	632
Heavy Trucks	0	0	0		0	0	4		0	20	0		0	8	0		32
Buses																	
Pedestrians		12				4				0				0			16
Bicycles	0	0	0		0	0	0		0	4	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

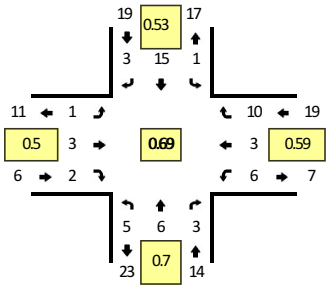
Type of peak hour being reported: Intersection Peak

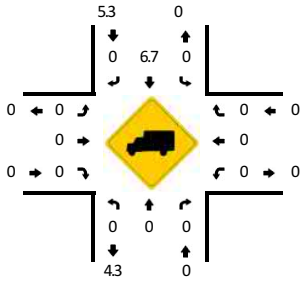
Method for determining peak hour: Total Entering Volume

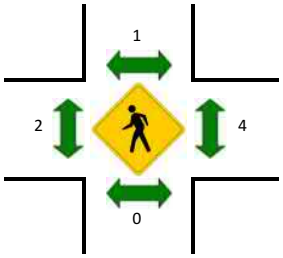
LOCATION: Bernard St -- Mills St
CITY/STATE: Raleigh, NC

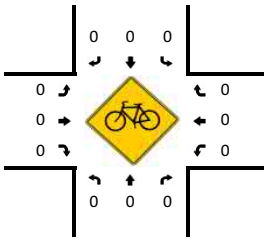
QC JOB #: 15286307
DATE: Wed, Nov 4 2020

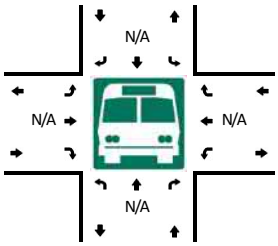
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

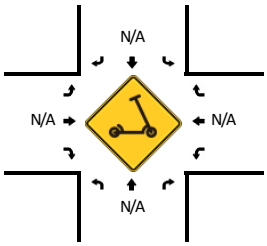












15-Min Count Period Beginning At	Bernard St (Northbound)				Bernard St (Southbound)				Mills St (Eastbound)				Mills St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	1	0	0	2	0	0	0	1	0	0	0	1	0	0	6	
7:15 AM	0	0	2	0	1	1	0	0	0	0	2	0	2	0	2	0	10	
7:30 AM	0	2	0	0	0	1	0	0	0	0	2	0	1	1	1	0	8	
7:45 AM	0	1	1	0	0	5	1	0	0	3	1	0	0	1	1	0	14	38
8:00 AM	2	1	0	0	0	3	0	0	0	2	0	0	3	1	1	0	13	45
8:15 AM	0	1	1	0	0	1	1	0	1	1	1	0	0	1	1	0	9	44
8:30 AM	1	3	1	0	0	4	1	0	0	0	1	0	1	1	2	0	15	51
8:45 AM	2	1	1	0	1	7	1	0	0	0	0	0	2	0	6	0	21	58

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	4	4	0	4	28	4	0	0	0	0	0	8	0	24	0	84
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				8			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

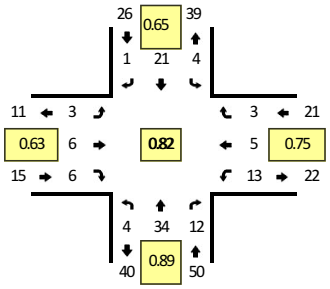
Type of peak hour being reported: Intersection Peak

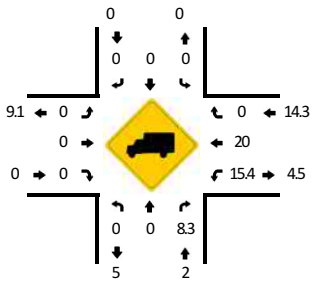
Method for determining peak hour: Total Entering Volume

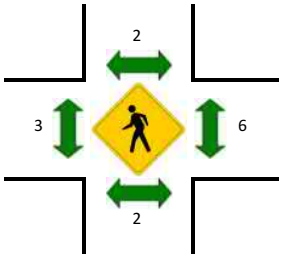
LOCATION: Bernard St -- Mills St
CITY/STATE: Raleigh, NC

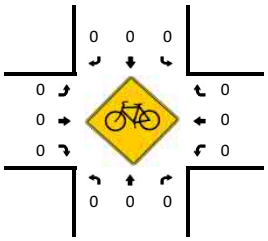
QC JOB #: 15286308
DATE: Wed, Nov 4 2020

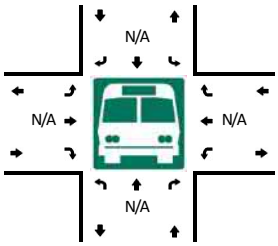
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

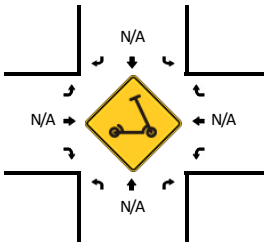












15-Min Count Period Beginning At	Bernard St (Northbound)				Bernard St (Southbound)				Mills St (Eastbound)				Mills St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	3	3	0	0	7	0	0	0	0	2	0	2	0	0	0	17	
4:15 PM	4	5	4	0	0	5	0	0	0	1	2	0	4	0	1	0	26	
4:30 PM	1	4	0	0	3	1	0	0	0	2	0	0	2	0	1	0	14	
4:45 PM	1	8	3	0	2	5	0	0	1	1	0	1	1	2	1	0	26	83
5:00 PM	1	7	3	0	1	8	1	0	0	3	3	0	6	1	0	0	34	100
5:15 PM	1	10	3	0	1	1	0	0	1	1	2	0	3	1	0	0	24	98
5:30 PM	1	9	3	0	0	7	0	0	0	1	1	0	3	1	2	0	28	112
5:45 PM	0	8	6	0	0	2	0	0	1	0	1	0	2	3	1	1	25	111

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	28	12	0	4	32	4	0	0	12	12	0	24	4	0	0	136
Heavy Trucks	0	0	0		0	0	0		0	0	0		4	0	0		4
Buses																	
Pedestrians		4				8				4				4			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

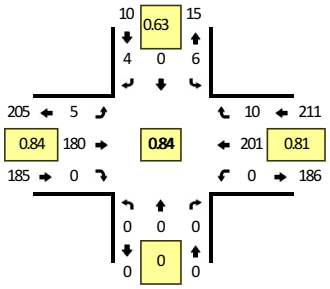
Type of peak hour being reported: Intersection Peak

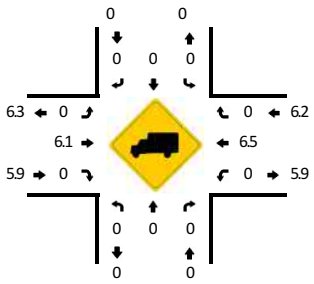
Method for determining peak hour: Total Entering Volume

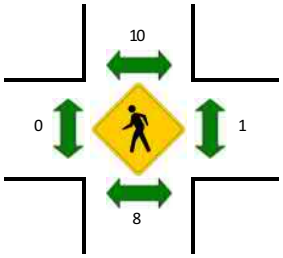
LOCATION: The Oaks at Mayview Western Entrance -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

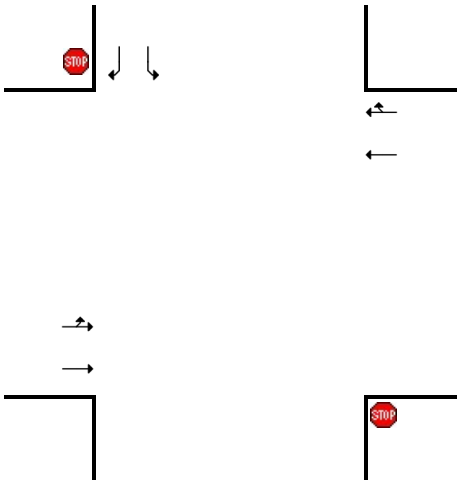
QC JOB #: 15286309
DATE: Wed, Nov 4 2020

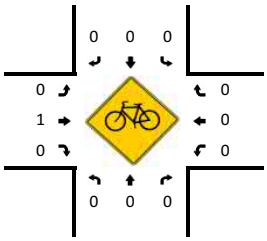
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

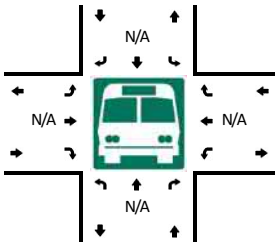


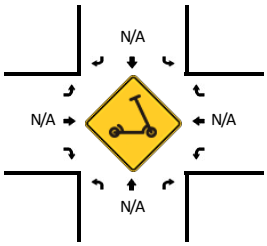












15-Min Count Period Beginning At	The Oaks at Mayview Western Entrance (Northbound)				The Oaks at Mayview Western Entrance (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	1	0	0	0	1	22	0	0	0	17	5	0	46	
7:15 AM	0	0	0	0	3	0	2	0	1	28	0	0	0	32	4	0	70	
7:30 AM	0	0	0	0	1	0	0	0	1	26	0	0	0	35	3	0	66	
7:45 AM	0	0	0	0	5	0	1	0	1	50	0	0	0	36	2	0	95	277
8:00 AM	0	0	0	0	2	0	2	0	2	46	0	0	0	46	3	0	101	332
8:15 AM	0	0	0	0	1	0	1	0	1	42	0	0	0	37	3	0	85	347
8:30 AM	0	0	0	0	3	0	0	0	2	37	0	0	0	55	2	0	99	380
8:45 AM	0	0	0	0	0	0	1	0	0	55	0	0	0	63	2	0	121	406

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	4	0	0	220	0	0	0	252	8	0	484
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	8	0		24
Buses																	
Pedestrians		4				12				0				4			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

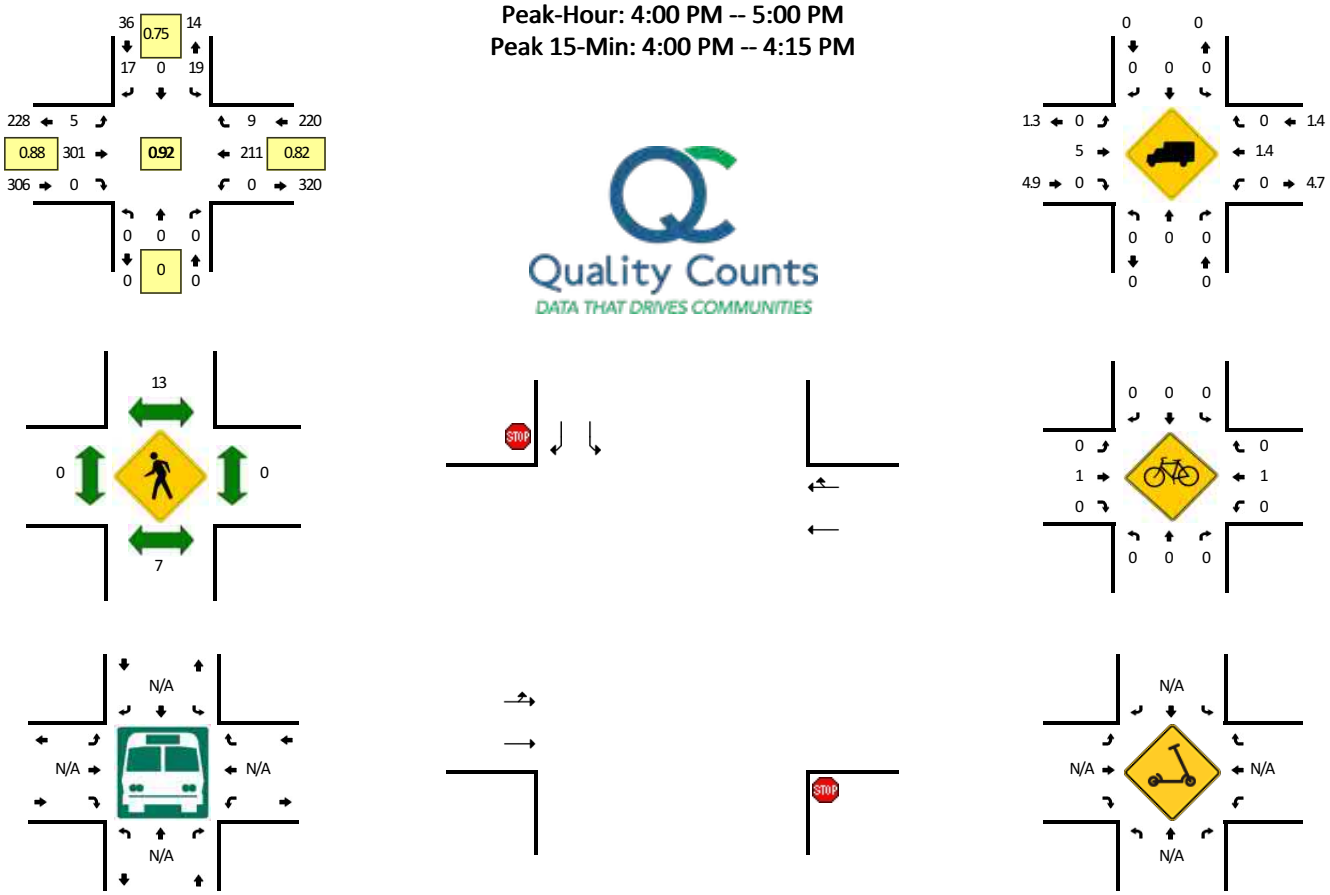
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: The Oaks at Mayview Western Entrance -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

QC JOB #: 15286310
DATE: Wed, Nov 4 2020

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM



15-Min Count Period Beginning At	The Oaks at Mayview Western Entrance (Northbound)				The Oaks at Mayview Western Entrance (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	4	0	6	0	1	75	0	0	0	64	3	0	153	
4:15 PM	0	0	0	0	5	0	2	0	2	85	0	0	0	53	1	0	148	
4:30 PM	0	0	0	0	4	0	8	0	1	82	0	0	0	51	2	0	148	
4:45 PM	0	0	0	0	6	0	1	0	1	59	0	0	0	43	3	0	113	562
5:00 PM	0	0	0	0	2	0	2	0	0	69	0	0	0	56	0	0	129	538
5:15 PM	0	0	0	0	4	0	2	0	2	65	0	0	0	54	0	0	127	517
5:30 PM	0	0	0	0	1	0	3	0	0	58	0	0	0	60	0	0	122	491
5:45 PM	0	0	0	0	1	0	0	0	1	63	0	0	0	49	0	0	114	492

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	16	0	24	0	4	300	0	0	0	256	12	0	612
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	12	0		32
Buses																	
Pedestrians		8				12				0				0			20
Bicycles	0	0	0		0	0	0		0	4	0		0	0	0		4
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

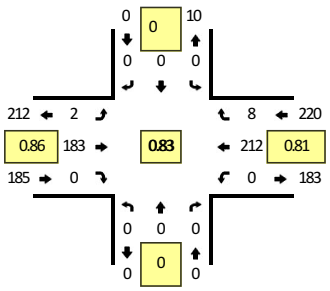
Type of peak hour being reported: Intersection Peak

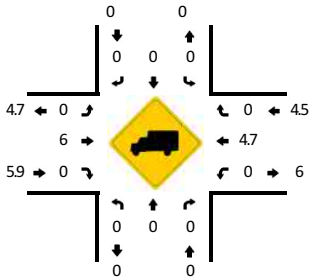
Method for determining peak hour: Total Entering Volume

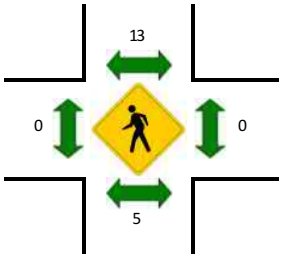
LOCATION: The Oaks at Mayview Eastern Entrance -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

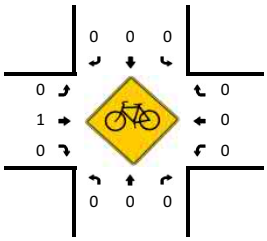
QC JOB #: 15286311
DATE: Wed, Nov 4 2020

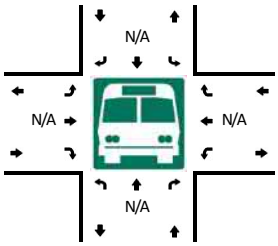
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

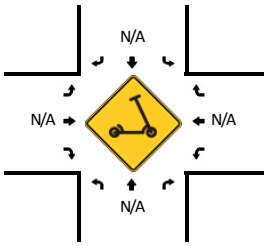












15-Min Count Period Beginning At	The Oaks at Mayview Eastern Entrance (Northbound)				The Oaks at Mayview Eastern Entrance (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	1	23	0	0	0	23	1	0	48	
7:15 AM	0	0	0	0	0	0	0	0	0	31	0	0	0	35	6	0	72	
7:30 AM	0	0	0	0	0	0	0	0	0	27	0	0	0	37	3	0	67	
7:45 AM	0	0	0	0	0	0	0	0	0	56	0	0	0	37	4	0	97	284
8:00 AM	0	0	0	0	0	0	0	0	2	45	0	0	0	49	0	0	96	332
8:15 AM	0	0	0	0	0	0	0	0	0	44	0	0	0	42	2	0	88	348
8:30 AM	0	0	0	0	0	0	0	0	0	40	0	0	0	57	2	0	99	380
8:45 AM	0	0	0	0	0	0	0	0	0	54	0	0	0	64	4	0	122	405

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	216	0	0	0	256	16	0	488
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	8	0		24
Buses																	
Pedestrians		4				16				0				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

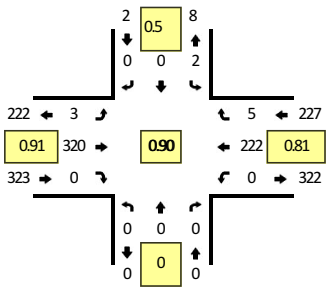
Type of peak hour being reported: Intersection Peak

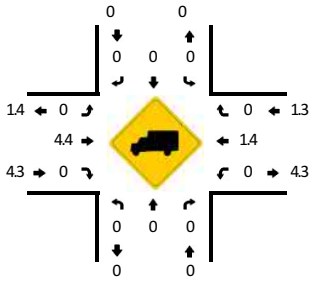
Method for determining peak hour: Total Entering Volume

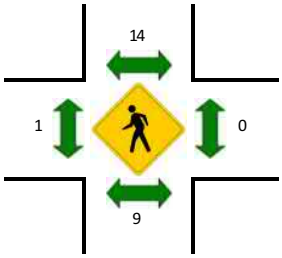
LOCATION: The Oaks at Mayview Eastern Entrance -- Whitaker Mill Rd
CITY/STATE: Raleigh, NC

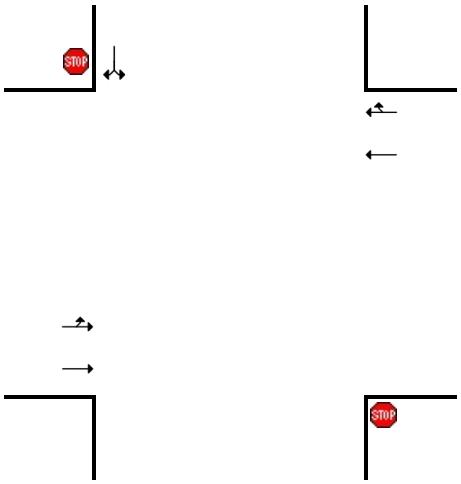
QC JOB #: 15286312
DATE: Wed, Nov 4 2020

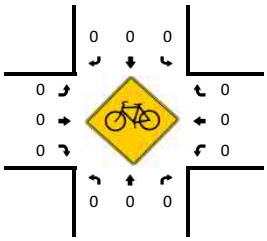
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

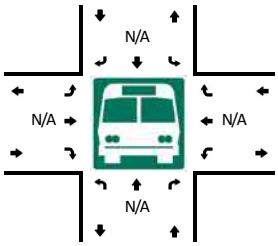


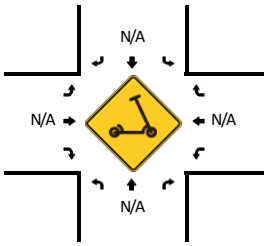












15-Min Count Period Beginning At	The Oaks at Mayview Eastern Entrance (Northbound)				The Oaks at Mayview Eastern Entrance (Southbound)				Whitaker Mill Rd (Eastbound)				Whitaker Mill Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	1	0	0	0	1	81	0	0	0	68	2	0	153	
4:15 PM	0	0	0	0	1	0	0	0	0	89	0	0	0	53	1	0	144	
4:30 PM	0	0	0	0	0	0	0	0	1	85	0	0	0	54	1	0	141	
4:45 PM	0	0	0	0	0	0	0	0	1	65	0	0	0	47	1	0	114	552
5:00 PM	0	0	0	0	0	0	0	0	0	69	0	0	0	60	0	0	129	528
5:15 PM	0	0	0	0	0	0	0	0	1	68	0	0	0	52	1	0	122	506
5:30 PM	0	0	0	0	1	0	0	0	0	59	0	0	0	60	1	0	121	486
5:45 PM	0	0	0	0	1	0	0	0	0	63	0	0	0	49	0	0	113	485

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	0	0	4	324	0	0	0	272	8	0	612
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	12	0		32
Buses																	
Pedestrians		16				12				0				0			28
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

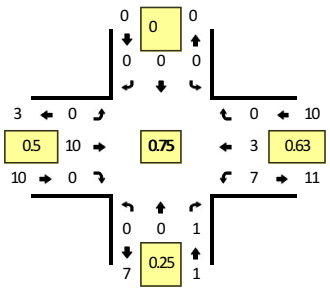
Type of peak hour being reported: Intersection Peak

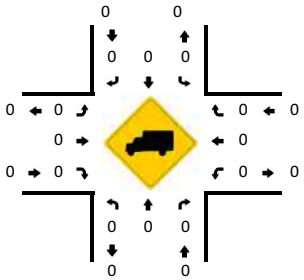
Method for determining peak hour: Total Entering Volume

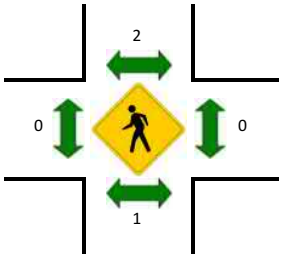
LOCATION: The Oaks at Mayview Northern Entrance -- Mills St
CITY/STATE: Raleigh, NC

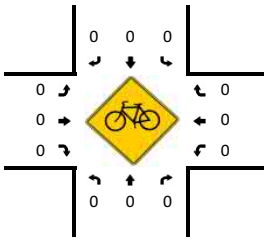
QC JOB #: 15286313
DATE: Wed, Nov 4 2020

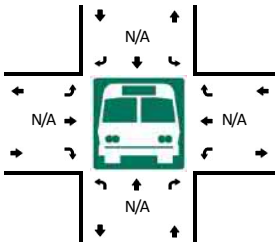
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

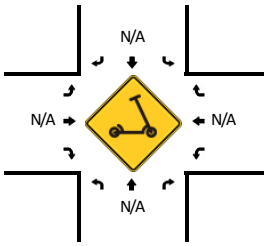












15-Min Count Period Beginning At	The Oaks at Mayview Northern Entrance (Northbound)				The Oaks at Mayview Northern Entrance (Southbound)				Mills St (Eastbound)				Mills St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0	0	4	
7:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	1	1	0	0	7	14
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	0	3	1	0	0	6	18
8:15 AM	0	0	1	0	0	0	0	0	0	1	0	0	2	0	0	0	4	21
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	4	21
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	3	17

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	20	0	0	4	4	0	0	28
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

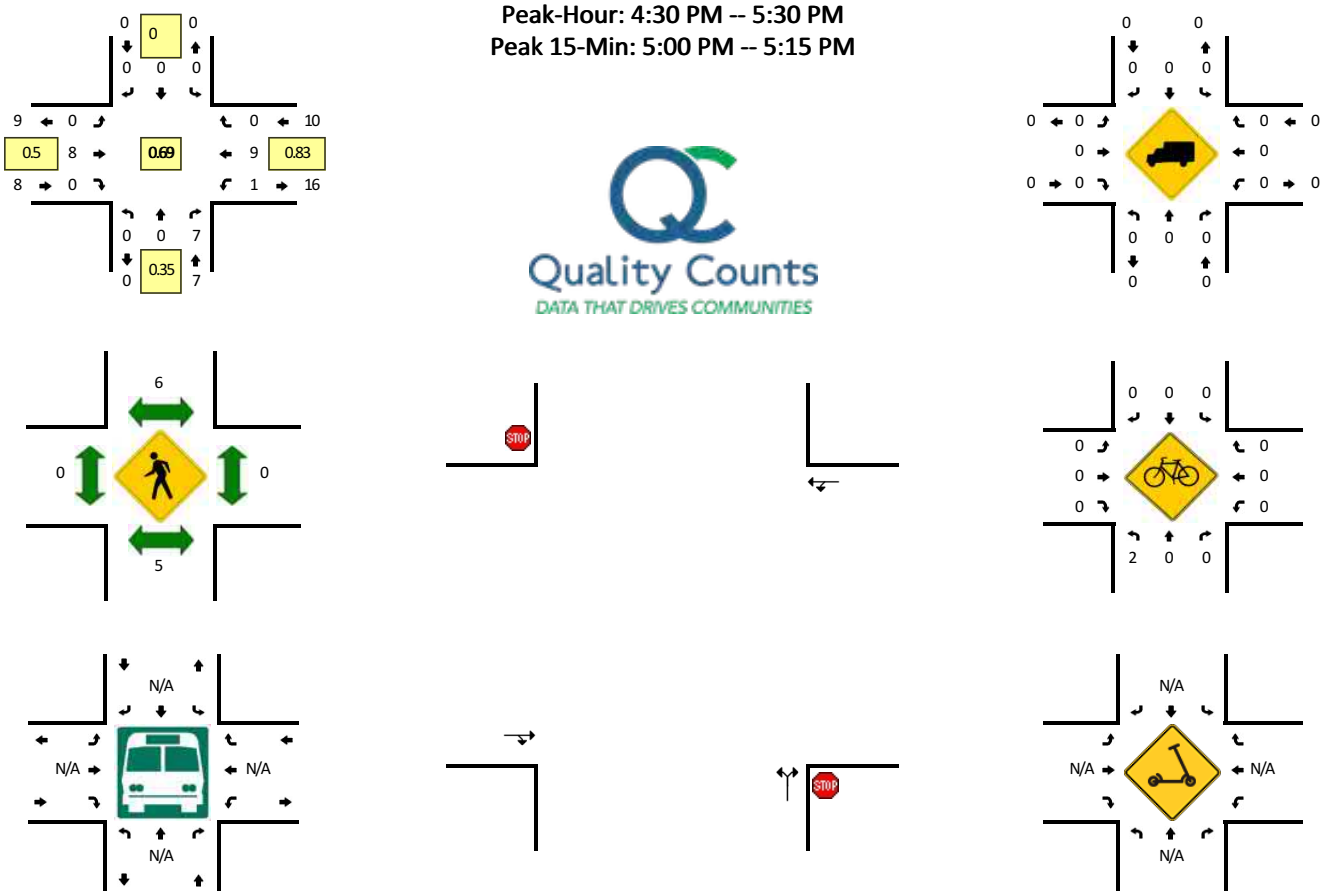
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: The Oaks at Mayview Northern Entrance -- Mills St
CITY/STATE: Raleigh, NC

QC JOB #: 15286314
DATE: Wed, Nov 4 2020

Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM



15-Min Count Period Beginning At	The Oaks at Mayview Northern Entrance (Northbound)				The Oaks at Mayview Northern Entrance (Southbound)				Mills St (Eastbound)				Mills St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	
4:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0	0	5	
4:30 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	5	
4:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0	1	5	17
5:00 PM	0	0	5	0	0	0	0	0	0	1	0	0	0	3	0	0	9	24
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	6	25
5:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4	24
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	24

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	0	0	0	0	0	4	0	0	0	12	0	0	36
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		8				12				0				0			20
Bicycles	8	0	0		0	0	0		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 11/11/2020 12:05 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

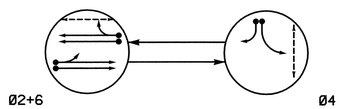
DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Appendix C
Signal Plans and Timings

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

PROJECT REFERENCE NO.	SHEET NO.
TR 2006-C	Sig. 3-338

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

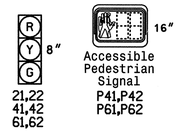
TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4	FLASH
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
P41,P42	DW	W	DRK
P61,P62	W	DW	DRK

W - Walk
DW - Don't Walk
DRK - Dark

SIGNAL FACE I.D.

All Heads L.E.D.



LOOP & DETECTOR UNIT INSTALLATION CHART

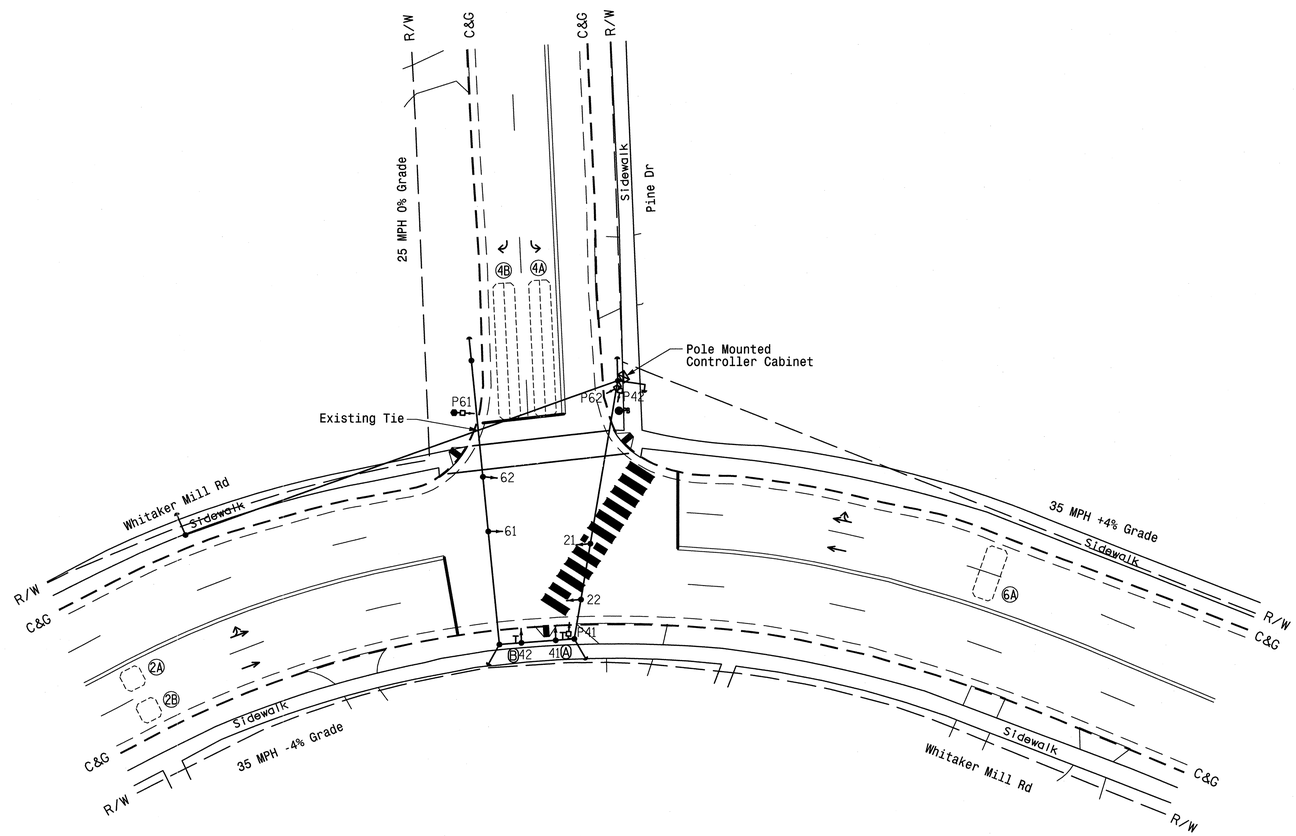
SE-PAC 2070 CONTROLLER WITH 170 CABINET

INDUCTIVE LOOPS						DETECTOR PROGRAMMING														
							TIMING		OPERATION MODE										STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 T CALL	3 STOP A	4 STOP B	5 PASSER LEFT	6 PASSER THROUGH	7 AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING
2A	6X6	EXIST	85	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2B	6X6	EXIST	85	-	X	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4A	6X40	EXIST	0	-	X	4	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4B	6X40	EXIST	0	-	X	4	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A	6X15	EXIST	90	-	X	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-

2 Phase
Fully Actuated
(Raleigh City Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Reposition existing signal heads numbered 22, 41, & 61. Reposition existing sign Ⓐ.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Install accessible pedestrian signal equipment.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	Wheelchair Ramp	
N/A	Pedestrian Pedestal	
N/A	Pedestrian Push Button Pedestal	PB
N/A	Left Arrow "ONLY" Sign (R3-5L)	Ⓐ
N/A	Right Arrow "ONLY" Sign (R3-5R)	Ⓑ

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6
Min Green *	10	7	10
Passage Gap *	3.0	2.0	3.0
Maximum Green *	35	30	35
Yellow Change	4.1	3.0	3.6
Red Clear	1.0	1.6	1.1
Walk *	-	5	5
Pedestrian Clear	-	13	10
Added Initial *	-	-	-
Maximum Initial *	-	-	-
Time Before Reduction *	-	-	-
Time To Reduce *	-	-	-
Minimum Gap	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-
Simultaneous Gap	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

Signal Upgrade

Prepared for: CITY OF RALEIGH NORTH CAROLINA
Public Works Department

Pine Dr
at
Whitaker Mill Rd

Division 05 Wake County Raleigh

PLAN DATE:	August 2007	REVIEWED BY:	S.T. Franklin
PREPARED BY:	P.M. Ward	REVIEWED BY:	N.M. Rodevick

SCALE 0 20 1"=20'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA M. RODEVICK
SIGNATURE
DATE 8-23-10
SIG. INVENTORY NO. 362

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Tommy Pate

From:	Smith, Devin <Devin.Smith@raleighnc.gov>
Sent:	Monday, November 23, 2020 12:30 PM
To:	Tommy Pate
Cc:	Jefferson, Chris; Slentz, Mark; Aryal, Nirajan; TrafficEngineering
Subject:	Re: TIA Data Needs Request - Signal Plans/Timings, Crash Data, MMLOS
Attachments:	PINE-WHITAKER MILL-20100823-g1.pdf

Tommy,

Here is the signal plan for the intersection you requested. It runs both an AM and PM peak cycle length of 60 seconds with 37 seconds allotted for Phase 2+6 and 23 seconds for Phase 4 with an offset of 44 seconds. It operates in 'free run' all other times of the day and all weekend.

Devin Smith

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Appendix D
Crash Data

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: WAKE **City:** All and Rural
Date: 11/1/2015 **to** 10/31/2020 **Study:** OAKSATMAYVIEWTIA
Location: Intersection of East Whitaker Mill Road at Bernard Street

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
OAKSATMAYVIEWTIA				76.8	8.4	10000	

Request Date	Courier Service	Phone No.	Ext.	Fax No.

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
WAKE	92	5	All and Rural		150	11/1/2015	10/31/2020	5.00

Location Text	Requestor
Intersection of East Whitaker Mill Road at Bernard Street	

Fiche Roads

Name	Code
WHITAKER	50032707
WHITAKER MILL	50032706
BERNARD	50002426

Intersection Road Combinations

Name	Code	Code	Name
WHITAKER MILL	50032706	50002426	BERNARD

All data presented in this report comes explicitly from the Traffic Engineering Accident Analysis System based upon various input criteria provided by the report's creator. The onus is strictly upon the user of this report to exercise due diligence in interpreting and further representing this data.

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Appendix E
Existing (2020) Analyses

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	50	163	212	23	30	77
Future Volume (vph)	50	163	212	23	30	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	1.00		1.00	
Frt			0.985			0.850
Flt Protected		0.988			0.950	
Satd. Flow (prot)	0	3432	3308	0	1752	1568
Flt Permitted		0.849			0.950	
Satd. Flow (perm)	0	2943	3308	0	1749	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			26			86
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	6			6	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	5%	5%	3%	3%
Adj. Flow (vph)	56	181	236	26	33	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	237	262	0	33	86
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.5	46.5		6.8	6.8
Actuated g/C Ratio		0.78	0.78		0.11	0.11
v/c Ratio		0.10	0.10		0.17	0.34
Control Delay		2.6	2.3		26.0	10.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.6	2.3		26.0	10.8
LOS		A	A		C	B
Approach Delay		2.6	2.3		15.0	
Approach LOS		A	A		B	
Queue Length 50th (ft)		10	10		11	0
Queue Length 95th (ft)		19	19		32	34
Internal Link Dist (ft)		333	803		644	
Turn Bay Length (ft)						250
Base Capacity (vph)		2280	2569		525	530
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.10	0.10		0.06	0.16

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.34
Intersection Signal Delay: 4.9 Intersection LOS: A
Intersection Capacity Utilization 39.2% ICU Level of Service A
Analysis Period (min) 15

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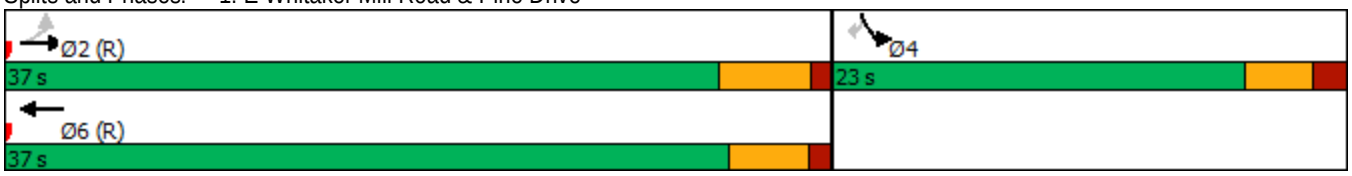
Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	199	12	7	235	5	8
Future Volume (vph)	199	12	7	235	5	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.919	
Flt Protected				0.999	0.980	
Satd. Flow (prot)	3378	0	0	3402	1450	0
Flt Permitted				0.999	0.980	
Satd. Flow (perm)	3378	0	0	3402	1450	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	311			394	574	
Travel Time (s)	6.1			7.7	11.2	
Confl. Peds. (#/hr)		2	2		2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	18%	18%
Adj. Flow (vph)	221	13	8	261	6	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	234	0	0	269	15	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			8	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.6%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	199	12	7	235	5	8
Future Vol, veh/h	199	12	7	235	5	8
Conflicting Peds, #/hr	0	2	2	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	18	18
Mvmt Flow	221	13	8	261	6	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	236	0	379	119
Stage 1	-	-	-	-	230	-
Stage 2	-	-	-	-	149	-
Critical Hdwy	-	-	4.22	-	7.16	7.26
Critical Hdwy Stg 1	-	-	-	-	6.16	-
Critical Hdwy Stg 2	-	-	-	-	6.16	-
Follow-up Hdwy	-	-	2.26	-	3.68	3.48
Pot Cap-1 Maneuver	-	-	1300	-	555	861
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	817	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1298	-	549	859
Mov Cap-2 Maneuver	-	-	-	-	549	-
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	810	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	706	-	-	1298	-
HCM Lane V/C Ratio	0.02	-	-	0.006	-
HCM Control Delay (s)	10.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	191	212	5	4	31
Future Volume (vph)	18	191	212	5	4	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.879	
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1671	3343	3392	0	1553	0
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1671	3343	3392	0	1553	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	10			10	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	6%	6%	7%	7%
Adj. Flow (vph)	20	212	236	6	4	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	212	242	0	38	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	191	212	5	4	31
Future Vol, veh/h	18	191	212	5	4	31
Conflicting Peds, #/hr	10	0	0	10	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	6	6	7	7
Mvmt Flow	20	212	236	6	4	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	252	0	-	0	397	131
Stage 1	-	-	-	-	249	-
Stage 2	-	-	-	-	148	-
Critical Hdwy	4.26	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.28	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	1268	-	-	-	567	879
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1256	-	-	-	547	871
Mov Cap-2 Maneuver	-	-	-	-	547	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1256	-	-	-	816
HCM Lane V/C Ratio	0.016	-	-	-	0.048
HCM Control Delay (s)	7.9	-	-	-	9.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	2	7	1	12	2	7	4	1	18	2
Future Volume (vph)	1	2	2	7	1	12	2	7	4	1	18	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.920			0.961			0.988	
Flt Protected		0.990			0.982			0.993			0.998	
Satd. Flow (prot)	0	1745	0	0	1683	0	0	1778	0	0	1784	0
Flt Permitted		0.990			0.982			0.993			0.998	
Satd. Flow (perm)	0	1745	0	0	1683	0	0	1778	0	0	1784	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	1					1	2		4	4		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	1	2	2	8	1	13	2	8	4	1	20	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	22	0	0	14	0	0	23	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	2	7	1	12	2	7	4	1	18	2
Future Vol, veh/h	1	2	2	7	1	12	2	7	4	1	18	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	1	2	2	8	1	13	2	8	4	1	20	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	6.8	6.9	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	20%	35%	5%
Vol Thru, %	54%	40%	5%	86%
Vol Right, %	31%	40%	60%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	5	20	21
LT Vol	2	1	7	1
Through Vol	7	2	1	18
RT Vol	4	2	12	2
Lane Flow Rate	14	6	22	23
Geometry Grp	1	1	1	1
Degree of Util (X)	0.015	0.006	0.023	0.026
Departure Headway (Hd)	3.847	3.817	3.715	3.997
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	933	939	966	899
Service Time	1.859	1.833	1.729	2.007
HCM Lane V/C Ratio	0.015	0.006	0.023	0.026
HCM Control Delay	6.9	6.9	6.8	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	88	306	224	30	47	77
Future Volume (vph)	88	306	224	30	47	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	1.00		1.00	
Frt			0.982			0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	3536	3389	0	1752	1568
Flt Permitted		0.822			0.950	
Satd. Flow (perm)	0	2929	3389	0	1745	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			33			86
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	11			11	4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%
Adj. Flow (vph)	98	340	249	33	52	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	438	282	0	52	86
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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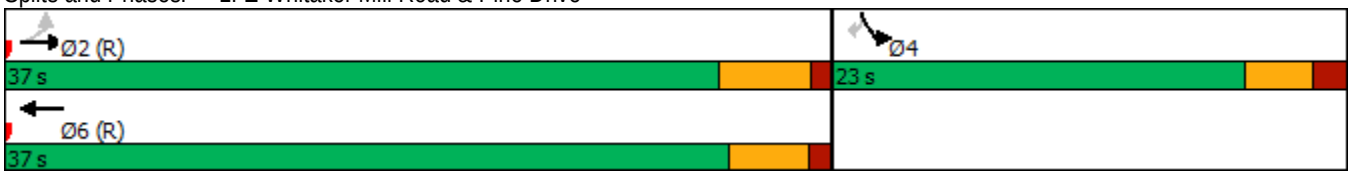
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.4	46.4		6.9	6.9
Actuated g/C Ratio		0.77	0.77		0.12	0.12
v/c Ratio		0.19	0.11		0.26	0.33
Control Delay		2.9	2.3		27.4	10.6
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.9	2.3		27.4	10.6
LOS		A	A		C	B
Approach Delay		2.9	2.3		16.9	
Approach LOS		A	A		B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	354	10	11	242	12	13
Future Volume (vph)	354	10	11	242	12	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.996				0.930	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	3424	0	0	3498	1691	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	3424	0	0	3498	1691	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	311			394	574	
Travel Time (s)	6.1			7.7	11.2	
Confl. Peds. (#/hr)		8	8		2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	3%	3%	2%	2%
Adj. Flow (vph)	393	11	12	269	13	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	404	0	0	281	27	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			8	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	354	10	11	242	12	13
Future Vol, veh/h	354	10	11	242	12	13
Conflicting Peds, #/hr	0	8	8	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	3	3	2	2
Mvmt Flow	393	11	12	269	13	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	412	0	568	210
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	161	-
Critical Hdwy	-	-	4.16	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.23	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1136	-	453	796
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1127	-	443	790
Mov Cap-2 Maneuver	-	-	-	-	443	-
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	838	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	574	-	-	1127	-
HCM Lane V/C Ratio	0.048	-	-	0.011	-
HCM Control Delay (s)	11.6	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	60	306	200	25	26	55
Future Volume (vph)	60	306	200	25	26	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.983		0.908	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1719	3438	3479	0	1602	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1719	3438	3479	0	1602	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	15			15	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	2%	2%	6%	6%
Adj. Flow (vph)	67	340	222	28	29	61
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	340	250	0	90	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 27.3%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	306	200	25	26	55
Future Vol, veh/h	60	306	200	25	26	55
Conflicting Peds, #/hr	15	0	0	15	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	2	2	6	6
Mvmt Flow	67	340	222	28	29	61

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	265	0	-	0	557	140
Stage 1	-	-	-	-	251	-
Stage 2	-	-	-	-	306	-
Critical Hdwy	4.2	-	-	-	6.92	7.02
Critical Hdwy Stg 1	-	-	-	-	5.92	-
Critical Hdwy Stg 2	-	-	-	-	5.92	-
Follow-up Hdwy	2.25	-	-	-	3.56	3.36
Pot Cap-1 Maneuver	1274	-	-	-	451	870
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1256	-	-	-	415	858
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1256	-	-	-	639
HCM Lane V/C Ratio	0.053	-	-	-	0.141
HCM Control Delay (s)	8	-	-	-	11.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	5	16	5	4	5	41	14	5	25	1
Future Volume (vph)	2	2	5	16	5	4	5	41	14	5	25	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.919			0.981			0.968			0.996	
Flt Protected		0.990			0.969			0.996			0.992	
Satd. Flow (prot)	0	1695	0	0	1584	0	0	1796	0	0	1840	0
Flt Permitted		0.990			0.969			0.996			0.992	
Satd. Flow (perm)	0	1695	0	0	1584	0	0	1796	0	0	1840	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	2		2	2		2	3		6	6		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	14%	14%	14%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	2	6	18	6	4	6	46	16	6	28	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	28	0	0	68	0	0	35	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	5	16	5	4	5	41	14	5	25	1
Future Vol, veh/h	2	2	5	16	5	4	5	41	14	5	25	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	14	14	14	2	2	2	2	2	2
Mvmt Flow	2	2	6	18	6	4	6	46	16	6	28	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	7.6	7.2	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	22%	64%	16%
Vol Thru, %	68%	22%	20%	81%
Vol Right, %	23%	56%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	9	25	31
LT Vol	5	2	16	5
Through Vol	41	2	5	25
RT Vol	14	5	4	1
Lane Flow Rate	67	10	28	34
Geometry Grp	1	1	1	1
Degree of Util (X)	0.072	0.011	0.034	0.039
Departure Headway (Hd)	3.903	3.842	4.353	4.063
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	917	926	819	879
Service Time	1.932	1.89	2.396	2.096
HCM Lane V/C Ratio	0.073	0.011	0.034	0.039
HCM Control Delay	7.2	6.9	7.6	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.1

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	663	639	629	636	637	598	608
Vehs Exited	664	637	628	632	642	601	606
Starting Vehs	13	9	14	13	15	14	7
Ending Vehs	12	11	15	17	10	11	9
Denied Entry Before	0	0	1	0	0	0	0
Denied Entry After	0	1	0	0	0	0	0
Travel Distance (mi)	383	374	356	370	372	348	345
Travel Time (hr)	12.8	12.4	11.8	12.3	12.3	11.5	11.4
Total Delay (hr)	1.0	0.8	0.9	0.9	0.8	0.8	0.8
Total Stops	251	240	277	273	257	228	244
Fuel Used (gal)	11.9	11.3	11.3	11.4	11.3	10.9	10.8

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	624	594	610	622
Vehs Exited	618	593	611	624
Starting Vehs	9	9	10	9
Ending Vehs	15	10	9	8
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	358	340	357	360
Travel Time (hr)	12.1	11.2	11.9	12.0
Total Delay (hr)	1.0	0.8	0.9	0.9
Total Stops	283	244	231	254
Fuel Used (gal)	11.3	10.4	11.0	11.1

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	173	149	160	164	144	128	154
Vehs Exited	176	141	167	167	144	132	147
Starting Vehs	13	9	14	13	15	14	7
Ending Vehs	10	17	7	10	15	10	14
Denied Entry Before	0	0	1	0	0	0	0
Denied Entry After	1	0	0	0	0	0	0
Travel Distance (mi)	98	86	90	98	89	76	87
Travel Time (hr)	3.3	2.9	3.0	3.3	3.0	2.5	2.9
Total Delay (hr)	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Total Stops	68	63	75	79	76	51	68
Fuel Used (gal)	3.0	2.7	2.9	3.0	2.8	2.4	2.8

Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	149	157	140	154
Vehs Exited	143	154	139	150
Starting Vehs	9	9	10	9
Ending Vehs	15	12	11	9
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	81	87	84	88
Travel Time (hr)	2.8	2.9	2.8	2.9
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Stops	66	68	60	66
Fuel Used (gal)	2.6	2.8	2.5	2.8

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Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	178	182	168	164	158	167	161
Vehs Exited	172	184	163	164	163	162	160
Starting Vehs	10	17	7	10	15	10	14
Ending Vehs	16	15	12	10	10	15	15
Denied Entry Before	1	0	0	0	0	0	0
Denied Entry After	0	0	0	1	0	0	0
Travel Distance (mi)	102	108	92	92	89	94	88
Travel Time (hr)	3.4	3.5	3.0	3.1	3.0	3.1	3.0
Total Delay (hr)	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Total Stops	57	65	61	67	63	60	70
Fuel Used (gal)	3.1	3.3	2.8	2.9	2.7	2.9	2.8

Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	174	157	163	166
Vehs Exited	173	156	160	166
Starting Vehs	15	12	11	9
Ending Vehs	16	13	14	13
Denied Entry Before	0	0	0	0
Denied Entry After	1	0	0	0
Travel Distance (mi)	100	91	95	95
Travel Time (hr)	3.4	2.9	3.2	3.2
Total Delay (hr)	0.3	0.2	0.2	0.2
Total Stops	85	54	59	63
Fuel Used (gal)	3.2	2.7	2.9	2.9

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Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	155	170	133	152	159	153	141
Vehs Exited	165	174	135	154	154	157	143
Starting Vehs	16	15	12	10	10	15	15
Ending Vehs	6	11	10	8	15	11	13
Denied Entry Before	0	0	0	1	0	0	0
Denied Entry After	0	0	1	0	0	0	0
Travel Distance (mi)	92	96	77	90	93	90	80
Travel Time (hr)	3.1	3.2	2.5	2.9	3.0	3.0	2.6
Total Delay (hr)	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Total Stops	67	57	56	58	48	57	50
Fuel Used (gal)	2.9	2.8	2.5	2.7	2.7	2.8	2.5

Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	154	133	143	150
Vehs Exited	155	136	150	153
Starting Vehs	16	13	14	13
Ending Vehs	15	10	7	10
Denied Entry Before	1	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	91	77	85	87
Travel Time (hr)	3.1	2.6	2.8	2.9
Total Delay (hr)	0.3	0.2	0.2	0.2
Total Stops	73	56	57	58
Fuel Used (gal)	2.8	2.4	2.6	2.7

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Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	157	138	168	156	176	150	152
Vehs Exited	151	138	163	147	181	150	156
Starting Vehs	6	11	10	8	15	11	13
Ending Vehs	12	11	15	17	10	11	9
Denied Entry Before	0	0	1	0	0	0	0
Denied Entry After	0	1	0	0	0	0	0
Travel Distance (mi)	91	83	97	90	101	89	89
Travel Time (hr)	3.0	2.8	3.3	3.0	3.4	3.0	2.9
Total Delay (hr)	0.2	0.2	0.3	0.2	0.2	0.2	0.2
Total Stops	59	55	85	69	70	60	56
Fuel Used (gal)	2.8	2.5	3.1	2.8	3.1	2.8	2.7

Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	147	147	164	156
Vehs Exited	147	147	162	155
Starting Vehs	15	10	7	10
Ending Vehs	15	10	9	8
Denied Entry Before	0	1	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	85	84	94	90
Travel Time (hr)	2.8	2.8	3.1	3.0
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Stops	59	66	55	67
Fuel Used (gal)	2.7	2.6	2.9	2.8

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	4.0	0.6
Total Delay (hr)	0.0	0.1	0.1	0.0	0.2	0.1	0.5
Total Del/Veh (s)	3.5	1.2	1.3	0.4	21.2	4.5	2.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.3
Stop Del/Veh (s)	1.7	0.5	0.4	0.4	19.6	3.9	2.0
Total Stops	15	14	15	3	27	70	144
Stop/Veh	0.33	0.08	0.07	0.14	0.93	0.92	0.26
Travel Dist (mi)	3.5	13.0	36.1	3.5	3.7	9.8	69.6
Travel Time (hr)	0.2	0.4	1.1	0.1	0.3	0.6	2.8
Avg Speed (mph)	20	30	32	29	11	18	26
Fuel Used (gal)	0.1	0.4	1.0	0.1	0.1	0.3	1.9
Fuel Eff. (mpg)	47.8	36.8	37.1	45.8	26.6	32.1	36.3
HC Emissions (g)	1	8	20	1	1	3	34
CO Emissions (g)	21	161	352	14	24	68	640
NOx Emissions (g)	3	25	64	3	3	9	106
Vehicles Entered	46	169	219	21	28	75	558
Vehicles Exited	46	169	219	21	28	75	558
Hourly Exit Rate	46	169	219	21	28	75	558
Input Volume	50	163	217	23	30	77	560
% of Volume	92	104	101	91	93	97	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1461
Occupancy (veh)	0	0	1	0	0	1	3

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2: Center Road & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.1	1.9	0.2	5.6	1.8	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.1	0.4	0.0	4.1	2.0	0.1
Total Stops	0	0	1	0	5	9	15
Stop/Veh	0.00	0.00	0.17	0.00	1.00	1.00	0.03
Travel Dist (mi)	11.2	0.7	0.5	18.2	0.5	0.9	32.0
Travel Time (hr)	0.3	0.0	0.0	0.6	0.0	0.0	1.0
Avg Speed (mph)	34	22	22	32	20	23	31
Fuel Used (gal)	0.3	0.0	0.0	0.6	0.0	0.0	1.0
Fuel Eff. (mpg)	33.3	73.0	41.1	29.3	48.7	47.8	31.7
HC Emissions (g)	8	0	0	15	0	1	25
CO Emissions (g)	174	3	2	361	3	18	561
NOx Emissions (g)	25	0	0	46	0	3	75
Vehicles Entered	202	13	6	236	5	9	471
Vehicles Exited	202	13	6	236	5	9	471
Hourly Exit Rate	202	13	6	236	5	9	471
Input Volume	199	12	7	236	5	8	468
% of Volume	101	106	83	100	95	109	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1908
Occupancy (veh)	0	0	0	1	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.3	0.1	0.2	0.1	6.4	2.0	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.8	0.0	0.0	0.0	5.1	2.2	0.2
Total Stops	4	0	0	0	3	31	38
Stop/Veh	0.22	0.00	0.00	0.00	1.00	1.00	0.08
Travel Dist (mi)	1.4	15.0	45.1	1.1	0.2	1.7	64.4
Travel Time (hr)	0.1	0.4	1.3	0.0	0.0	0.1	2.0
Avg Speed (mph)	22	33	34	30	14	18	33
Fuel Used (gal)	0.0	0.5	1.3	0.0	0.0	0.0	1.8
Fuel Eff. (mpg)	43.7	32.5	35.7	44.6	52.8	55.2	35.5
HC Emissions (g)	1	20	30	0	0	0	51
CO Emissions (g)	14	397	569	2	0	5	989
NOx Emissions (g)	2	55	91	0	0	1	149
Vehicles Entered	18	198	211	5	3	31	466
Vehicles Exited	18	198	211	5	3	31	466
Hourly Exit Rate	18	198	211	5	3	31	466
Input Volume	18	193	212	5	4	31	463
% of Volume	101	103	100	95	75	100	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1899
Occupancy (veh)	0	0	1	0	0	0	2

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	8.3	1.4	3.8	8.2	2.0	2.9	2.3	1.5	3.5	6.6	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.5	3.0	1.7	2.3	2.9	2.0	1.8	0.9	1.8	2.2	2.4	2.0
Total Stops	1	1	3	7	1	12	2	7	3	1	17	2
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.37	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.0	0.1	0.2	0.9	0.2	1.6	0.1	1.1	0.2	0.0	1.2	0.1
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Avg Speed (mph)	20	19	21	24	23	25	21	25	22	18	18	21
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	60.7	65.5	56.2	45.3	43.6	41.2	53.5	46.1	51.8	39.0	56.6	43.6
HC Emissions (g)	0	0	0	0	0	0	0	0	0	0	0	0
CO Emissions (g)	0	0	0	3	1	7	0	8	0	0	5	1
NOx Emissions (g)	0	0	0	0	0	1	0	1	0	0	0	0
Vehicles Entered	1	1	3	7	1	12	2	19	3	1	17	2
Vehicles Exited	1	1	3	7	1	12	2	18	3	1	17	2
Hourly Exit Rate	1	1	3	7	1	12	2	18	3	1	17	2
Input Volume	1	2	2	7	1	12	2	17	4	1	18	2
% of Volume	100	50	150	97	100	98	100	106	75	100	96	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.1
Total Del/Veh (s)	3.6
Stop Delay (hr)	0.0
Stop Del/Veh (s)	1.8
Total Stops	57
Stop/Veh	0.84
Travel Dist (mi)	5.9
Travel Time (hr)	0.3
Avg Speed (mph)	23
Fuel Used (gal)	0.1
Fuel Eff. (mpg)	46.9
HC Emissions (g)	1
CO Emissions (g)	26
NOx Emissions (g)	3
Vehicles Entered	69
Vehicles Exited	68
Hourly Exit Rate	68
Input Volume	69
% of Volume	98
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	
Occupancy (veh)	0

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.6
Total Delay (hr)	0.8
Total Del/Veh (s)	4.4
Stop Delay (hr)	0.4
Stop Del/Veh (s)	2.4
Total Stops	254
Stop/Veh	0.40
Travel Dist (mi)	360.2
Travel Time (hr)	12.0
Avg Speed (mph)	30
Fuel Used (gal)	11.1
Fuel Eff. (mpg)	32.3
HC Emissions (g)	254
CO Emissions (g)	5575
NOx Emissions (g)	774
Vehicles Entered	622
Vehicles Exited	624
Hourly Exit Rate	624
Input Volume	3214
% of Volume	19
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1467
Occupancy (veh)	12

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.1	10.6	0.1	36
Pine Drive	1	1.2	9.2	0.1	31
	13	0.4	17.8	0.2	34
Center Road	2	0.1	5.9	0.1	36
Bernard Street	3	0.1	7.9	0.1	34
Total		2.0	51.5	0.5	34

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.2	22.4	0.2	36
Center Road	2	0.2	8.2	0.1	33
	13	0.1	6.2	0.1	34
Pine Drive	1	1.3	18.3	0.2	33
	12	0.6	8.7	0.1	32
Total		2.5	63.8	0.6	34

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	15	0.2	10.6	0.1	22
	17	0.0	6.7	0.1	35
Mills Street	4	2.3	8.3	0.1	36
Total		2.4	25.6	0.2	30

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.6	14.0	0.1	20
	17	3.0	11.6	0.1	26
	15	0.0	6.6	0.1	35
E Whitaker Mill Road	3	6.4	15.0	0.1	16
Total		16.0	47.2	0.3	22

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	75	32	80	34	62	65
Average Queue (ft)	21	3	13	3	23	33
95th Queue (ft)	58	19	50	18	54	55
Link Distance (ft)	349	349	827	827	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road & E Whitaker Mill Road

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	5	17	57
Average Queue (ft)	0	1	12
95th Queue (ft)	4	8	41
Link Distance (ft)	253	350	526
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	EB	WB	SB
Directions Served	L	T	T	LR
Maximum Queue (ft)	35	8	6	55
Average Queue (ft)	4	0	0	20
95th Queue (ft)	21	6	5	45
Link Distance (ft)		350	1126	270
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	31	30	47
Average Queue (ft)	4	15	8	16
95th Queue (ft)	20	38	30	42
Link Distance (ft)	313	694	383	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	127.6	7.6	128.0
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	63	61	63
Cycles @ Minimum (%)	0	30	0
Cycles Maxed Out (%)	37	0	37
Cycles with Peds (%)	0	0	7

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	895	846	886	880	894	899	868
Vehs Exited	883	839	894	886	888	904	861
Starting Vehs	12	12	22	12	12	20	14
Ending Vehs	24	19	14	6	18	15	21
Denied Entry Before	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	511	497	510	514	521	522	500
Travel Time (hr)	17.7	16.8	17.5	17.6	17.9	17.9	17.0
Total Delay (hr)	1.7	1.4	1.6	1.6	1.8	1.6	1.5
Total Stops	459	414	444	461	479	463	431
Fuel Used (gal)	16.4	15.5	16.3	16.3	16.7	16.5	16.1

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	954	906	835	887
Vehs Exited	955	906	838	885
Starting Vehs	15	16	18	12
Ending Vehs	14	16	15	13
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	554	530	486	515
Travel Time (hr)	19.0	18.3	16.6	17.6
Total Delay (hr)	1.9	1.8	1.5	1.6
Total Stops	492	470	416	452
Fuel Used (gal)	17.8	16.9	15.2	16.4

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	211	212	211	221	188	221	196
Vehs Exited	204	205	214	211	187	220	196
Starting Vehs	12	12	22	12	12	20	14
Ending Vehs	19	19	19	22	13	21	14
Denied Entry Before	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	1	0	1
Travel Distance (mi)	118	122	122	127	108	129	117
Travel Time (hr)	4.1	4.2	4.2	4.3	3.7	4.4	3.9
Total Delay (hr)	0.4	0.4	0.4	0.4	0.3	0.4	0.3
Total Stops	113	100	94	120	99	124	88
Fuel Used (gal)	3.8	3.7	3.9	4.1	3.5	4.1	3.7

Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	254	222	177	211
Vehs Exited	249	222	187	212
Starting Vehs	15	16	18	12
Ending Vehs	20	16	8	14
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	143	128	108	122
Travel Time (hr)	4.8	4.4	3.6	4.2
Total Delay (hr)	0.4	0.4	0.3	0.4
Total Stops	104	118	85	101
Fuel Used (gal)	4.4	4.1	3.4	3.9

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Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	267	246	235	239	251	249	241
Vehs Exited	268	242	240	250	239	252	228
Starting Vehs	19	19	19	22	13	21	14
Ending Vehs	18	23	14	11	25	18	27
Denied Entry Before	0	0	0	0	1	0	1
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	153	147	136	145	141	147	131
Travel Time (hr)	5.5	5.0	4.7	4.9	4.9	5.0	4.5
Total Delay (hr)	0.6	0.5	0.4	0.4	0.5	0.5	0.5
Total Stops	161	141	138	117	132	120	136
Fuel Used (gal)	5.0	4.7	4.4	4.5	4.4	4.6	4.2

Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	250	258	259	249
Vehs Exited	247	249	245	246
Starting Vehs	20	16	8	14
Ending Vehs	23	25	22	17
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	145	146	144	144
Travel Time (hr)	5.1	5.2	5.1	5.0
Total Delay (hr)	0.5	0.6	0.5	0.5
Total Stops	147	137	134	135
Fuel Used (gal)	4.8	4.7	4.6	4.6

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Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	212	191	203	200	218	226	213
Vehs Exited	221	195	203	192	227	228	228
Starting Vehs	18	23	14	11	25	18	27
Ending Vehs	9	19	14	19	16	16	12
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	2	0	0
Travel Distance (mi)	123	113	117	113	134	128	130
Travel Time (hr)	4.2	3.8	4.0	3.8	4.7	4.4	4.4
Total Delay (hr)	0.3	0.3	0.3	0.4	0.5	0.4	0.4
Total Stops	89	93	94	102	128	120	102
Fuel Used (gal)	3.9	3.5	3.7	3.6	4.4	4.1	4.2

Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	230	224	208	213
Vehs Exited	235	232	216	217
Starting Vehs	23	25	22	17
Ending Vehs	18	17	14	10
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	140	133	127	126
Travel Time (hr)	4.8	4.5	4.2	4.3
Total Delay (hr)	0.5	0.4	0.3	0.4
Total Stops	129	122	94	106
Fuel Used (gal)	4.5	4.3	3.8	4.0

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Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	205	197	237	220	237	203	218
Vehs Exited	190	197	237	233	235	204	209
Starting Vehs	9	19	14	19	16	16	12
Ending Vehs	24	19	14	6	18	15	21
Denied Entry Before	0	0	0	0	2	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	117	115	135	129	138	118	121
Travel Time (hr)	3.9	3.8	4.6	4.5	4.7	4.0	4.1
Total Delay (hr)	0.3	0.3	0.4	0.4	0.4	0.3	0.4
Total Stops	96	80	118	122	120	99	105
Fuel Used (gal)	3.7	3.5	4.4	4.1	4.4	3.7	3.9

Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	220	202	191	213
Vehs Exited	224	203	190	211
Starting Vehs	18	17	14	10
Ending Vehs	14	16	15	13
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	127	122	108	123
Travel Time (hr)	4.3	4.2	3.8	4.2
Total Delay (hr)	0.4	0.4	0.4	0.4
Total Stops	112	93	103	105
Fuel Used (gal)	4.0	3.9	3.4	3.9

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	4.0	0.4
Total Delay (hr)	0.1	0.2	0.1	0.0	0.3	0.1	0.8
Total Del/Veh (s)	4.4	1.9	1.8	0.7	21.9	4.4	3.6
Stop Delay (hr)	0.1	0.1	0.0	0.0	0.3	0.1	0.5
Stop Del/Veh (s)	2.3	0.8	0.7	0.5	20.1	3.7	2.4
Total Stops	33	34	22	5	42	71	207
Stop/Veh	0.37	0.11	0.10	0.15	0.89	0.87	0.26
Travel Dist (mi)	6.8	23.7	36.9	5.6	6.1	10.6	89.5
Travel Time (hr)	0.4	0.8	1.2	0.2	0.5	0.7	3.8
Avg Speed (mph)	19	28	31	28	11	19	24
Fuel Used (gal)	0.1	0.7	1.0	0.1	0.2	0.3	2.5
Fuel Eff. (mpg)	46.7	36.0	37.0	44.8	25.8	31.7	35.9
HC Emissions (g)	1	9	11	2	1	4	29
CO Emissions (g)	31	233	231	40	38	85	659
NOx Emissions (g)	4	30	38	7	4	11	95
Vehicles Entered	89	308	224	34	47	81	783
Vehicles Exited	89	308	223	33	47	81	781
Hourly Exit Rate	89	308	223	33	47	81	781
Input Volume	88	306	226	30	47	77	774
% of Volume	101	101	99	110	101	105	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1072
Occupancy (veh)	0	1	1	0	1	1	4

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2: Center Road & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.2	0.1	2.6	0.3	7.1	2.6	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.9	0.1	5.5	2.7	0.2
Total Stops	0	0	3	0	13	13	29
Stop/Veh	0.00	0.00	0.27	0.00	1.00	1.00	0.04
Travel Dist (mi)	20.3	0.7	0.8	18.7	1.3	1.3	43.0
Travel Time (hr)	0.6	0.0	0.0	0.6	0.1	0.1	1.4
Avg Speed (mph)	34	22	20	30	18	22	30
Fuel Used (gal)	0.6	0.0	0.0	0.7	0.0	0.0	1.4
Fuel Eff. (mpg)	36.5	73.3	32.8	25.2	40.9	41.8	30.9
HC Emissions (g)	11	0	0	16	0	0	27
CO Emissions (g)	204	3	7	465	6	6	690
NOx Emissions (g)	33	0	1	47	1	1	82
Vehicles Entered	352	11	11	245	13	13	645
Vehicles Exited	352	11	11	245	13	13	645
Hourly Exit Rate	352	11	11	245	13	13	645
Input Volume	354	10	11	244	12	13	645
% of Volume	99	107	98	100	106	98	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1368
Occupancy (veh)	1	0	0	1	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	2.6	0.2	0.3	0.2	6.6	2.7	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.9	0.0	0.0	0.0	5.0	2.6	0.5
Total Stops	15	0	1	0	21	55	92
Stop/Veh	0.26	0.00	0.00	0.00	0.95	1.00	0.14
Travel Dist (mi)	4.4	23.7	43.0	5.7	1.0	2.5	80.3
Travel Time (hr)	0.2	0.7	1.3	0.2	0.1	0.2	2.6
Avg Speed (mph)	22	33	34	30	12	15	31
Fuel Used (gal)	0.1	0.7	1.2	0.1	0.0	0.1	2.2
Fuel Eff. (mpg)	41.9	33.7	35.5	41.8	44.9	50.3	36.0
HC Emissions (g)	1	16	15	1	0	1	33
CO Emissions (g)	34	335	355	22	4	13	763
NOx Emissions (g)	4	47	49	3	0	2	105
Vehicles Entered	58	308	201	27	22	55	671
Vehicles Exited	58	308	201	26	21	55	669
Hourly Exit Rate	58	308	201	26	21	55	669
Input Volume	60	308	200	25	26	55	674
% of Volume	96	100	100	104	81	100	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1432
Occupancy (veh)	0	1	1	0	0	0	3

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.8	7.2	1.8	3.8	7.3	2.2	3.9	4.2	2.2	3.7	6.6	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.7	2.8	2.0	2.3	2.7	2.1	2.1	1.6	2.2	2.2	2.5	1.6
Total Stops	2	2	5	14	6	5	5	41	13	4	25	2
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.61	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.1	0.2	0.3	1.8	0.8	0.6	0.4	4.6	1.1	0.3	1.8	0.1
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0
Avg Speed (mph)	19	18	21	24	23	24	20	22	21	19	18	21
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	58.6	62.0	55.4	43.7	41.7	38.8	57.0	52.2	51.2	47.6	54.1	50.2
HC Emissions (g)	0	0	0	2	1	1	0	1	0	0	0	0
CO Emissions (g)	0	0	0	28	17	16	0	18	2	2	5	1
NOx Emissions (g)	0	0	0	4	2	2	0	3	0	0	0	0
Vehicles Entered	2	2	5	13	6	5	5	66	13	4	25	2
Vehicles Exited	2	2	5	14	6	5	5	67	13	4	25	2
Hourly Exit Rate	2	2	5	14	6	5	5	67	13	4	25	2
Input Volume	2	2	5	16	5	4	5	66	14	5	25	1
% of Volume	100	100	95	89	114	125	95	101	95	76	100	200
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.2
Total Del/Veh (s)	4.3
Stop Delay (hr)	0.1
Stop Del/Veh (s)	2.0
Total Stops	124
Stop/Veh	0.83
Travel Dist (mi)	12.0
Travel Time (hr)	0.6
Avg Speed (mph)	21
Fuel Used (gal)	0.2
Fuel Eff. (mpg)	49.5
HC Emissions (g)	5
CO Emissions (g)	89
NOx Emissions (g)	13
Vehicles Entered	148
Vehicles Exited	150
Hourly Exit Rate	150
Input Volume	151
% of Volume	100
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	3322
Occupancy (veh)	1

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.6
Total Delay (hr)	1.5
Total Del/Veh (s)	6.0
Stop Delay (hr)	0.8
Stop Del/Veh (s)	3.1
Total Stops	452
Stop/Veh	0.50
Travel Dist (mi)	514.6
Travel Time (hr)	17.6
Avg Speed (mph)	29
Fuel Used (gal)	16.4
Fuel Eff. (mpg)	31.5
HC Emissions (g)	255
CO Emissions (g)	6783
NOx Emissions (g)	812
Vehicles Entered	887
Vehicles Exited	885
Hourly Exit Rate	885
Input Volume	4683
% of Volume	19
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	994
Occupancy (veh)	17

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.3	10.9	0.1	36
Pine Drive	1	1.9	9.8	0.1	29
	13	0.6	18.0	0.2	33
Center Road	2	0.2	6.1	0.1	35
Bernard Street	3	0.2	8.1	0.1	33
Total		3.1	53.0	0.5	33

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.3	22.4	0.2	36
Center Road	2	0.3	8.3	0.1	33
	13	0.1	6.2	0.1	34
Pine Drive	1	1.8	18.8	0.2	32
	12	0.7	8.8	0.1	32
Total		3.2	64.5	0.6	34

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	15	0.1	10.1	0.1	24
	17	0.0	6.7	0.1	34
Mills Street	4	4.2	11.3	0.1	27
Total		4.4	28.1	0.2	27

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.6	14.0	0.1	20
	17	2.8	11.3	0.1	27
	15	0.0	6.7	0.1	34
E Whitaker Mill Road	3	6.6	13.3	0.1	18
Total		16.1	45.3	0.3	23

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	84	53	76	50	75	70
Average Queue (ft)	36	12	17	6	34	31
95th Queue (ft)	73	41	54	28	67	58
Link Distance (ft)	349	349	827	827	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road & E Whitaker Mill Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (ft)	11	8	30	36
Average Queue (ft)	0	0	3	16
95th Queue (ft)	6	2	18	40
Link Distance (ft)	253	253	350	526
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	50	14	8	75
Average Queue (ft)	12	1	0	31
95th Queue (ft)	39	9	6	56
Link Distance (ft)		1126	1126	270
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	66	47	42
Average Queue (ft)	7	20	25	19
95th Queue (ft)	28	54	45	44
Link Distance (ft)	313	694	383	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	85.4	8.2	85.8
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	45	45	45
Cycles @ Minimum (%)	0	36	0
Cycles Maxed Out (%)	55	0	55
Cycles with Peds (%)	0	0	11

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Existing (2020)\E Whitaker Mill - AM - EB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Existing (2020) - AM - EB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	23	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.57	4	4	0	6	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.54	4	4	9	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	4550	213	4	35	40	None	No	N/A
2 (to Center Road)	1200	4500	211	4	35	40	None	No	N/A
3 (to Bernard Street)	400	4460	209	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	237	4298	0.149	10.23	B	0.00	15.51	D
2 (to Center Road)	234	5334	0.077	6.41	A	0.00	29.39	A
3 (to Bernard Street)	232	4511	0.095	8.07	A	0.00	16.16	D

Arterial Length	0.4205	Weighted g/C	0.46	FFS Delay	35.86	Threshold Delay	0.00	Auto Speed	21.43	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.12	C	N/A	N/A				1.93	A	0.00	F
2 (to Center Road)	3.32	C	N/A	N/A				2.16	B	0.00	F
3 (to Bernard Street)	3.05	C	N/A	N/A				1.90	A	0.00	F
	Bicycle LOS	3.23	C			Pedestrian LOS	2.06	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Existing (2020)\E Whitaker Mill - AM - WB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Existing (2020) - AM - WB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	10	No	None	N/A	N/A	N/A	No
Center Road	0	0.56	4	4	3	0	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.58	4	4	0	2	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	5536	289	4	35	40	None	No	N/A
2 (to Center Road)	1200	5073	242	4	35	40	None	No	N/A
3 (to Bernard Street)	400	4728	222	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	321	5341	0.162	10.26	B	0.00	15.49	D
2 (to Center Road)	269	4285	0.112	7.05	A	0.00	28.74	A
3 (to Bernard Street)	247	5631	0.076	5.91	A	0.00	18.18	C

Arterial Length	0.4205	Weighted g/C	0.47	FFS Delay	34.38	Threshold Delay	0.00	Auto Speed	21.89	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.37	C	N/A	N/A				1.98	A	0.00	F
2 (to Center Road)	3.44	C	N/A	N/A				2.18	B	0.00	F
3 (to Bernard Street)	3.10	C	N/A	N/A				1.90	A	0.00	F
Bicycle LOS	3.36	C			Pedestrian LOS	2.09	B			Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Existing (2020)\E Whitaker Mill - PM - EB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Existing (2020) - PM - EB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	22	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.44	4	4	0	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.416964696261	4	4	16	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	7680	394	4	35	40	None	No	N/A
2 (to Center Road)	1200	6855	364	4	35	40	None	No	N/A
3 (to Bernard Street)	400	6559	366	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	0	0						
2 (to Center Road)	0	0						
3 (to Bernard Street)	0	0						

Arterial Length	Weighted g/C	FFS Delay	Threshold Delay	Auto Speed	Auto LOS
0.4205					

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)											
2 (to Center Road)											
3 (to Bernard Street)											

Bicycle LOS	Pedestrian LOS	Bus LOS

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
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ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Existing (2020)\E Whitaker Mill - PM - WB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Existing (2020) - PM - WB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	12	No	None	N/A	N/A	N/A	No
Center Road	0	0.52	4	4	4	0	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.56238184	4	4	0	11	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6430	301	4	35	40	None	No	N/A
2 (to Center Road)	1200	5400	253	4	35	40	None	No	N/A
3 (to Bernard Street)	400	4800	225	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	334	5334	0.169	10.29	B	0.00	15.46	D
2 (to Center Road)	281	4285	0.126	9.36	A	0.00	26.68	B
3 (to Bernard Street)	250	5595	0.079	6.80	A	0.00	17.28	C

Arterial Length	0.4205	Weighted g/C	0.46	FFS Delay	37.62	Threshold Delay	0.00	Auto Speed	20.91	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.41	C	N/A	N/A				1.98	A	0.00	F
2 (to Center Road)	3.48	C	N/A	N/A				2.18	B	0.00	F
3 (to Bernard Street)	3.11	C	N/A	N/A				1.91	A	0.00	F
	Bicycle LOS	3.40	C				Pedestrian LOS	2.09	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

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Appendix F
Background (2023) Analyses

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	168	218	24	31	79
Future Volume (vph)	52	168	218	24	31	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	1.00		1.00	
Frt			0.985			0.850
Flt Protected		0.988			0.950	
Satd. Flow (prot)	0	3432	3308	0	1752	1568
Flt Permitted		0.846			0.950	
Satd. Flow (perm)	0	2933	3308	0	1749	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			27			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	6			6	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	5%	5%	3%	3%
Adj. Flow (vph)	58	187	242	27	34	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	245	269	0	34	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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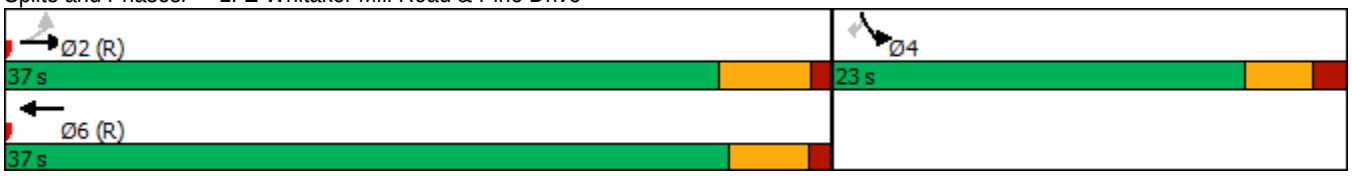
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.5	46.5		6.8	6.8
Actuated g/C Ratio		0.78	0.78		0.11	0.11
v/c Ratio		0.11	0.10		0.17	0.35
Control Delay		2.6	2.3		26.1	10.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.6	2.3		26.1	10.8
LOS		A	A		C	B
Approach Delay		2.6	2.3		15.1	
Approach LOS		A	A		B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 39.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	205	12	7	242	5	8
Future Volume (vph)	205	12	7	242	5	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.919	
Flt Protected				0.999	0.980	
Satd. Flow (prot)	3378	0	0	3402	1450	0
Flt Permitted				0.999	0.980	
Satd. Flow (perm)	3378	0	0	3402	1450	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	311			394	574	
Travel Time (s)	6.1			7.7	11.2	
Confl. Peds. (#/hr)		2	2		2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	18%	18%
Adj. Flow (vph)	228	13	8	269	6	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	241	0	0	277	15	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			8	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.7%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	205	12	7	242	5	8
Future Vol, veh/h	205	12	7	242	5	8
Conflicting Peds, #/hr	0	2	2	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	18	18
Mvmt Flow	228	13	8	269	6	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	243	0	390	123
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.22	-	7.16	7.26
Critical Hdwy Stg 1	-	-	-	-	6.16	-
Critical Hdwy Stg 2	-	-	-	-	6.16	-
Follow-up Hdwy	-	-	2.26	-	3.68	3.48
Pot Cap-1 Maneuver	-	-	1292	-	546	856
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	813	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1290	-	540	854
Mov Cap-2 Maneuver	-	-	-	-	540	-
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	806	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	698	-	-	1290	-
HCM Lane V/C Ratio	0.021	-	-	0.006	-
HCM Control Delay (s)	10.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	19	197	218	5	4	32
Future Volume (vph)	19	197	218	5	4	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.996		0.878	
Flt Protected	0.950				0.995	
Satd. Flow (prot)	1671	3343	3392	0	1551	0
Flt Permitted	0.950				0.995	
Satd. Flow (perm)	1671	3343	3392	0	1551	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	10			10	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	6%	6%	7%	7%
Adj. Flow (vph)	21	219	242	6	4	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	219	248	0	40	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.9%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	19	197	218	5	4	32
Future Vol, veh/h	19	197	218	5	4	32
Conflicting Peds, #/hr	10	0	0	10	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	6	6	7	7
Mvmt Flow	21	219	242	6	4	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	258	0	-	0	409	134
Stage 1	-	-	-	-	255	-
Stage 2	-	-	-	-	154	-
Critical Hdwy	4.26	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.28	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	1261	-	-	-	558	875
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	843	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1249	-	-	-	537	867
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	835	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1249	-	-	-	812
HCM Lane V/C Ratio	0.017	-	-	-	0.049
HCM Control Delay (s)	7.9	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	2	2	7	1	12	2	7	4	1	19	2
Future Volume (vph)	1	2	2	7	1	12	2	7	4	1	19	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.920			0.961			0.989	
Flt Protected		0.990			0.982			0.993			0.998	
Satd. Flow (prot)	0	1745	0	0	1683	0	0	1778	0	0	1786	0
Flt Permitted		0.990			0.982			0.993			0.998	
Satd. Flow (perm)	0	1745	0	0	1683	0	0	1778	0	0	1786	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	1					1	2		4	4		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	1	2	2	8	1	13	2	8	4	1	21	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	5	0	0	22	0	0	14	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.9%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	2	2	7	1	12	2	7	4	1	19	2
Future Vol, veh/h	1	2	2	7	1	12	2	7	4	1	19	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	1	2	2	8	1	13	2	8	4	1	21	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	6.8	6.9	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	20%	35%	5%
Vol Thru, %	54%	40%	5%	86%
Vol Right, %	31%	40%	60%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	5	20	22
LT Vol	2	1	7	1
Through Vol	7	2	1	19
RT Vol	4	2	12	2
Lane Flow Rate	14	6	22	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.015	0.006	0.023	0.027
Departure Headway (Hd)	3.848	3.819	3.716	3.999
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	933	939	965	898
Service Time	1.86	1.835	1.731	2.009
HCM Lane V/C Ratio	0.015	0.006	0.023	0.027
HCM Control Delay	6.9	6.9	6.8	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	315	231	31	48	79
Future Volume (vph)	91	315	231	31	48	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	1.00		1.00	
Frt			0.982			0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	3536	3389	0	1752	1568
Flt Permitted		0.818			0.950	
Satd. Flow (perm)	0	2915	3389	0	1745	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			34			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	11			11	4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%
Adj. Flow (vph)	101	350	257	34	53	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	451	291	0	53	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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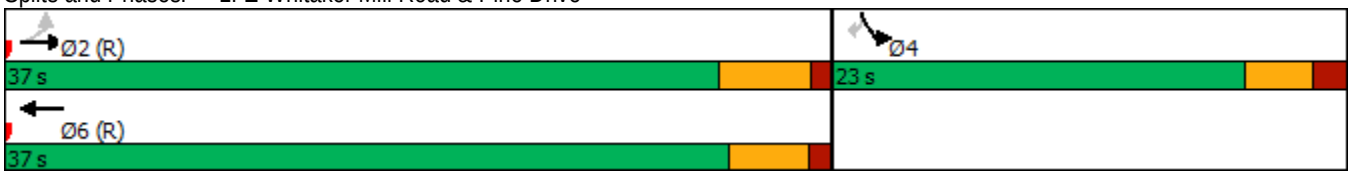
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.3	46.3		7.0	7.0
Actuated g/C Ratio		0.77	0.77		0.12	0.12
v/c Ratio		0.20	0.11		0.26	0.34
Control Delay		2.9	2.4		27.4	10.5
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.9	2.4		27.4	10.5
LOS		A	A		C	B
Approach Delay		2.9	2.4		16.9	
Approach LOS		A	A		B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 42.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	365	10	11	249	12	13
Future Volume (vph)	365	10	11	249	12	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.996				0.930	
Flt Protected				0.998	0.976	
Satd. Flow (prot)	3424	0	0	3498	1691	0
Flt Permitted				0.998	0.976	
Satd. Flow (perm)	3424	0	0	3498	1691	0
Link Speed (mph)	35			35	35	
Link Distance (ft)	311			394	574	
Travel Time (s)	6.1			7.7	11.2	
Confl. Peds. (#/hr)		8	8		2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	3%	3%	2%	2%
Adj. Flow (vph)	406	11	12	277	13	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	417	0	0	289	27	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			8	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.0%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	365	10	11	249	12	13
Future Vol, veh/h	365	10	11	249	12	13
Conflicting Peds, #/hr	0	8	8	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	3	3	2	2
Mvmt Flow	406	11	12	277	13	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	425	0	585	217
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	-	-	4.16	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.23	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1124	-	442	787
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1115	-	432	781
Mov Cap-2 Maneuver	-	-	-	-	432	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	563	-	-	1115	-
HCM Lane V/C Ratio	0.049	-	-	0.011	-
HCM Control Delay (s)	11.7	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	62	315	206	26	27	57
Future Volume (vph)	62	315	206	26	27	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.983		0.909	
Flt Protected	0.950				0.984	
Satd. Flow (prot)	1719	3438	3479	0	1603	0
Flt Permitted	0.950				0.984	
Satd. Flow (perm)	1719	3438	3479	0	1603	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	15			15	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	2%	2%	6%	6%
Adj. Flow (vph)	69	350	229	29	30	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	350	258	0	93	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 27.7%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	315	206	26	27	57
Future Vol, veh/h	62	315	206	26	27	57
Conflicting Peds, #/hr	15	0	0	15	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	2	2	6	6
Mvmt Flow	69	350	229	29	30	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	574	144
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	315	-
Critical Hdwy	4.2	-	-	-	6.92	7.02
Critical Hdwy Stg 1	-	-	-	-	5.92	-
Critical Hdwy Stg 2	-	-	-	-	5.92	-
Follow-up Hdwy	2.25	-	-	-	3.56	3.36
Pot Cap-1 Maneuver	1266	-	-	-	440	865
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1248	-	-	-	404	853
Mov Cap-2 Maneuver	-	-	-	-	404	-
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1248	-	-	-	628
HCM Lane V/C Ratio	0.055	-	-	-	0.149
HCM Control Delay (s)	8.1	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.5

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	5	16	5	4	5	42	14	5	26	1
Future Volume (vph)	2	2	5	16	5	4	5	42	14	5	26	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.919			0.981			0.969			0.996	
Flt Protected		0.990			0.969			0.996			0.992	
Satd. Flow (prot)	0	1695	0	0	1584	0	0	1798	0	0	1840	0
Flt Permitted		0.990			0.969			0.996			0.992	
Satd. Flow (perm)	0	1695	0	0	1584	0	0	1798	0	0	1840	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	2		2	2		2	3		6	6		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	14%	14%	14%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	2	6	18	6	4	6	47	16	6	29	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	28	0	0	69	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.4%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	5	16	5	4	5	42	14	5	26	1
Future Vol, veh/h	2	2	5	16	5	4	5	42	14	5	26	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	14	14	14	2	2	2	2	2	2
Mvmt Flow	2	2	6	18	6	4	6	47	16	6	29	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	6.9	7.6	7.2	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	22%	64%	16%
Vol Thru, %	69%	22%	20%	81%
Vol Right, %	23%	56%	16%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	9	25	32
LT Vol	5	2	16	5
Through Vol	42	2	5	26
RT Vol	14	5	4	1
Lane Flow Rate	68	10	28	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0.011	0.034	0.04
Departure Headway (Hd)	3.906	3.845	4.357	4.064
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	916	924	818	879
Service Time	1.935	1.896	2.402	2.098
HCM Lane V/C Ratio	0.074	0.011	0.034	0.041
HCM Control Delay	7.2	6.9	7.6	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.1

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	683	631	683	667	713	613	626
Vehs Exited	690	635	687	664	704	609	623
Starting Vehs	15	16	14	10	8	6	6
Ending Vehs	8	12	10	13	17	10	9
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	395	361	394	390	412	353	357
Travel Time (hr)	13.1	12.1	13.1	12.8	13.9	11.8	12.0
Total Delay (hr)	0.8	0.9	0.9	0.8	1.1	0.8	0.9
Total Stops	257	242	281	257	303	248	274
Fuel Used (gal)	12.1	11.2	12.4	11.9	12.7	10.9	11.2

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	631	633	662	651
Vehs Exited	625	630	661	653
Starting Vehs	10	9	10	7
Ending Vehs	16	12	11	10
Denied Entry Before	0	0	1	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	357	365	384	377
Travel Time (hr)	12.0	12.3	12.7	12.6
Total Delay (hr)	0.9	1.0	0.9	0.9
Total Stops	252	238	263	260
Fuel Used (gal)	11.0	11.3	11.7	11.6

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	188	161	161	175	151	158	147
Vehs Exited	187	162	165	172	144	152	143
Starting Vehs	15	16	14	10	8	6	6
Ending Vehs	16	15	10	13	15	12	10
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	107	95	98	99	89	90	84
Travel Time (hr)	3.5	3.2	3.2	3.2	3.0	3.1	2.8
Total Delay (hr)	0.2	0.2	0.2	0.2	0.3	0.3	0.2
Total Stops	64	58	60	67	87	80	53
Fuel Used (gal)	3.2	3.0	3.0	3.1	2.8	2.8	2.6

Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	149	176	158	161
Vehs Exited	147	165	160	160
Starting Vehs	10	9	10	7
Ending Vehs	12	20	8	11
Denied Entry Before	0	0	1	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	84	98	96	94
Travel Time (hr)	2.8	3.4	3.1	3.1
Total Delay (hr)	0.2	0.3	0.2	0.2
Total Stops	49	73	57	62
Fuel Used (gal)	2.6	3.1	2.9	2.9

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Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	182	175	176	180	209	174	174
Vehs Exited	186	176	174	184	207	171	169
Starting Vehs	16	15	10	13	15	12	10
Ending Vehs	12	14	12	9	17	15	15
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	1
Travel Distance (mi)	108	97	100	102	119	98	98
Travel Time (hr)	3.7	3.3	3.4	3.4	4.1	3.3	3.3
Total Delay (hr)	0.3	0.3	0.2	0.2	0.4	0.2	0.3
Total Stops	89	60	70	68	77	61	85
Fuel Used (gal)	3.4	3.0	3.1	3.2	3.7	3.0	3.2

Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	187	154	187	181
Vehs Exited	181	166	176	179
Starting Vehs	12	20	8	11
Ending Vehs	18	8	19	12
Denied Entry Before	0	1	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	105	92	100	102
Travel Time (hr)	3.6	3.1	3.4	3.5
Total Delay (hr)	0.3	0.2	0.3	0.3
Total Stops	80	60	81	73
Fuel Used (gal)	3.3	2.8	3.1	3.2

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Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	163	140	167	156	165	153	143
Vehs Exited	161	141	160	154	162	161	145
Starting Vehs	12	14	12	9	17	15	15
Ending Vehs	14	13	19	11	20	7	13
Denied Entry Before	0	0	0	0	0	0	1
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	94	76	89	95	93	89	82
Travel Time (hr)	3.1	2.6	2.9	3.0	3.1	2.9	2.8
Total Delay (hr)	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Total Stops	47	56	62	58	63	53	59
Fuel Used (gal)	2.8	2.3	2.7	2.8	2.8	2.7	2.5

Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	147	153	154	152
Vehs Exited	153	145	161	154
Starting Vehs	18	8	19	12
Ending Vehs	12	16	12	11
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	85	86	89	88
Travel Time (hr)	2.9	2.8	3.0	2.9
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Stops	54	58	63	56
Fuel Used (gal)	2.6	2.6	2.7	2.7

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Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	150	155	179	156	188	128	162
Vehs Exited	156	156	188	154	191	125	166
Starting Vehs	14	13	19	11	20	7	13
Ending Vehs	8	12	10	13	17	10	9
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	86	92	106	93	110	76	94
Travel Time (hr)	2.8	3.1	3.6	3.1	3.7	2.5	3.1
Total Delay (hr)	0.2	0.2	0.3	0.2	0.3	0.2	0.2
Total Stops	57	68	89	64	76	54	77
Fuel Used (gal)	2.7	2.9	3.4	2.8	3.4	2.3	2.9

Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	148	150	163	158
Vehs Exited	144	154	164	160
Starting Vehs	12	16	12	11
Ending Vehs	16	12	11	10
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	82	89	99	93
Travel Time (hr)	2.8	2.9	3.2	3.1
Total Delay (hr)	0.2	0.2	0.2	0.2
Total Stops	69	47	62	66
Fuel Used (gal)	2.6	2.7	3.0	2.9

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.4	4.0	0.6
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.5
Total Del/Veh (s)	3.6	1.2	1.2	0.5	20.4	4.5	2.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.3
Stop Del/Veh (s)	1.8	0.5	0.3	0.4	18.8	3.9	1.9
Total Stops	16	12	12	2	27	78	147
Stop/Veh	0.31	0.07	0.05	0.09	0.90	0.93	0.25
Travel Dist (mi)	4.0	13.1	38.0	3.8	3.7	10.9	73.6
Travel Time (hr)	0.2	0.4	1.2	0.1	0.3	0.7	3.0
Avg Speed (mph)	20	30	32	29	11	18	26
Fuel Used (gal)	0.1	0.4	1.0	0.1	0.1	0.3	2.0
Fuel Eff. (mpg)	47.6	36.1	37.4	45.0	26.9	32.1	36.3
HC Emissions (g)	1	9	20	1	1	3	35
CO Emissions (g)	23	177	350	17	22	77	666
NOx Emissions (g)	3	26	64	3	3	10	109
Vehicles Entered	52	171	230	23	29	84	589
Vehicles Exited	52	171	230	23	29	84	589
Hourly Exit Rate	52	171	230	23	29	84	589
Input Volume	52	168	223	24	31	79	578
% of Volume	100	102	103	96	94	106	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1382
Occupancy (veh)	0	0	1	0	0	1	3

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2: Center Road & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.2	0.0	1.7	0.2	6.9	2.0	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.2	0.0	5.4	2.2	0.1
Total Stops	0	0	1	0	4	8	13
Stop/Veh	0.00	0.00	0.17	0.00	1.00	1.00	0.03
Travel Dist (mi)	11.4	0.7	0.5	19.2	0.4	0.8	33.0
Travel Time (hr)	0.3	0.0	0.0	0.6	0.0	0.0	1.1
Avg Speed (mph)	34	22	23	32	19	23	31
Fuel Used (gal)	0.3	0.0	0.0	0.7	0.0	0.0	1.0
Fuel Eff. (mpg)	33.5	72.7	42.0	29.5	45.6	43.4	31.7
HC Emissions (g)	8	0	0	17	0	1	26
CO Emissions (g)	173	2	3	389	3	17	587
NOx Emissions (g)	25	0	0	50	0	3	79
Vehicles Entered	205	12	6	250	4	8	485
Vehicles Exited	205	12	6	250	4	8	485
Hourly Exit Rate	205	12	6	250	4	8	485
Input Volume	205	12	7	243	5	8	481
% of Volume	100	98	83	103	76	97	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1846
Occupancy (veh)	0	0	0	1	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.1	0.1	0.2	0.0	6.3	2.2	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.5	0.0	0.0	0.0	4.8	2.3	0.2
Total Stops	3	0	0	0	4	33	40
Stop/Veh	0.16	0.00	0.00	0.00	1.00	1.00	0.08
Travel Dist (mi)	1.5	15.1	47.5	1.1	0.2	1.8	67.2
Travel Time (hr)	0.1	0.5	1.4	0.0	0.0	0.1	2.1
Avg Speed (mph)	22	33	34	30	15	17	33
Fuel Used (gal)	0.0	0.5	1.3	0.0	0.0	0.0	1.9
Fuel Eff. (mpg)	43.3	32.9	35.9	42.0	53.3	54.8	35.7
HC Emissions (g)	1	17	30	0	0	1	49
CO Emissions (g)	12	340	586	3	0	8	950
NOx Emissions (g)	2	49	93	0	0	1	145
Vehicles Entered	19	198	223	5	4	33	482
Vehicles Exited	19	198	222	5	4	33	481
Hourly Exit Rate	19	198	222	5	4	33	481
Input Volume	19	198	218	5	4	32	476
% of Volume	101	100	102	95	100	102	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1813
Occupancy (veh)	0	0	1	0	0	0	2

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		6.7	1.8	3.7	8.8	2.0	3.9	2.4	1.5	2.1	6.4	2.2
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		2.6	2.0	2.1	3.2	1.9	2.4	0.9	1.8	1.3	2.5	2.4
Total Stops	0	2	2	9	1	12	1	7	4	1	19	2
Stop/Veh		1.00	1.00	1.00	1.00	1.00	1.00	0.35	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.0	0.1	0.1	1.1	0.2	1.6	0.1	1.2	0.3	0.0	1.3	0.2
Travel Time (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Avg Speed (mph)	20	18	20	24	23	25	21	25	22	20	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	73.6	64.0	55.0	45.4	41.1	41.9	52.4	46.8	50.7	52.2	52.2	45.2
HC Emissions (g)	0	0	0	0	0	0	0	0	0	0	1	0
CO Emissions (g)	0	0	0	5	1	5	0	5	0	0	13	1
NOx Emissions (g)	0	0	0	0	0	1	0	1	0	0	1	0
Vehicles Entered	0	2	2	9	1	12	1	20	4	1	18	2
Vehicles Exited	0	2	2	9	1	12	1	20	4	1	19	2
Hourly Exit Rate	0	2	2	9	1	12	1	20	4	1	19	2
Input Volume	1	2	2	7	1	12	2	18	4	1	19	2
% of Volume	0	100	100	124	100	98	50	111	100	100	101	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.1
Total Del/Veh (s)	3.7
Stop Delay (hr)	0.0
Stop Del/Veh (s)	1.9
Total Stops	60
Stop/Veh	0.82
Travel Dist (mi)	6.3
Travel Time (hr)	0.3
Avg Speed (mph)	22
Fuel Used (gal)	0.1
Fuel Eff. (mpg)	46.7
HC Emissions (g)	1
CO Emissions (g)	31
NOx Emissions (g)	4
Vehicles Entered	72
Vehicles Exited	73
Hourly Exit Rate	73
Input Volume	71
% of Volume	102
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	
Occupancy (veh)	0

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.7
Total Delay (hr)	0.8
Total Del/Veh (s)	4.4
Stop Delay (hr)	0.4
Stop Del/Veh (s)	2.4
Total Stops	260
Stop/Veh	0.39
Travel Dist (mi)	376.7
Travel Time (hr)	12.6
Avg Speed (mph)	30
Fuel Used (gal)	11.6
Fuel Eff. (mpg)	32.4
HC Emissions (g)	253
CO Emissions (g)	5622
NOx Emissions (g)	780
Vehicles Entered	651
Vehicles Exited	653
Hourly Exit Rate	653
Input Volume	3310
% of Volume	20
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1397
Occupancy (veh)	12

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.2	10.7	0.1	36
Pine Drive	1	1.2	9.2	0.1	31
	13	0.4	17.8	0.2	34
Center Road	2	0.2	5.9	0.1	36
Bernard Street	3	0.1	8.1	0.1	33
Total		2.0	51.6	0.5	34

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.2	22.3	0.2	36
Center Road	2	0.2	8.2	0.1	33
	13	0.1	6.2	0.1	34
Pine Drive	1	1.2	18.3	0.2	33
	12	0.6	8.7	0.1	32
Total		2.3	63.7	0.6	34

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	15	0.1	10.2	0.1	23
	17	0.0	6.7	0.1	34
Mills Street	4	2.4	8.5	0.1	35
Total		2.5	25.4	0.2	30

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.4	13.8	0.1	20
	17	3.0	11.5	0.1	26
	15	0.1	6.8	0.1	34
E Whitaker Mill Road	3	6.3	15.2	0.1	16
Total		15.8	47.4	0.3	22

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	75	39	58	38	72	68
Average Queue (ft)	19	2	11	2	24	33
95th Queue (ft)	53	18	40	18	56	57
Link Distance (ft)	349	349	827	827	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road & E Whitaker Mill Road

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	LT	T	LR
Maximum Queue (ft)	3	3	12	6	56
Average Queue (ft)	0	0	1	0	11
95th Queue (ft)	3	3	7	4	39
Link Distance (ft)	253	253	350	350	526
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	EB	WB	SB
Directions Served	L	T	T	LR
Maximum Queue (ft)	37	6	3	64
Average Queue (ft)	4	0	0	21
95th Queue (ft)	21	4	3	50
Link Distance (ft)		350	1126	270
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	30	31	30	52
Average Queue (ft)	4	15	10	15
95th Queue (ft)	20	38	32	44
Link Distance (ft)	313	694	383	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	117.9	7.9	118.3
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	61	61	61
Cycles @ Minimum (%)	0	29	0
Cycles Maxed Out (%)	39	0	39
Cycles with Peds (%)	0	0	7

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	907	883	900	938	939	945	860
Vehs Exited	909	895	898	945	938	949	852
Starting Vehs	17	22	16	19	15	16	11
Ending Vehs	15	10	18	12	16	12	19
Denied Entry Before	0	1	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	524	517	512	545	548	547	499
Travel Time (hr)	17.7	17.6	17.6	18.5	18.8	19.0	17.1
Total Delay (hr)	1.5	1.5	1.6	1.6	1.7	2.0	1.5
Total Stops	444	461	447	468	483	522	463
Fuel Used (gal)	16.4	16.2	16.3	17.2	17.4	17.7	15.8

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	937	923	936	918
Vehs Exited	936	924	931	917
Starting Vehs	17	18	16	15
Ending Vehs	18	17	21	11
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	544	532	535	530
Travel Time (hr)	18.8	18.1	18.6	18.2
Total Delay (hr)	1.8	1.7	1.9	1.7
Total Stops	518	429	505	475
Fuel Used (gal)	17.6	16.8	17.1	16.8

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	211	204	213	223	207	216	208
Vehs Exited	214	210	214	231	202	213	198
Starting Vehs	17	22	16	19	15	16	11
Ending Vehs	14	16	15	11	20	19	21
Denied Entry Before	0	1	0	0	1	0	0
Denied Entry After	0	0	0	0	1	0	0
Travel Distance (mi)	123	123	121	133	119	121	121
Travel Time (hr)	4.2	4.1	4.2	4.5	4.0	4.2	4.1
Total Delay (hr)	0.4	0.3	0.4	0.4	0.4	0.4	0.3
Total Stops	108	94	113	115	98	117	98
Fuel Used (gal)	3.9	3.8	3.9	4.2	3.7	3.8	3.7

Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	230	237	233	218
Vehs Exited	227	235	228	217
Starting Vehs	17	18	16	15
Ending Vehs	20	20	21	15
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	133	137	134	127
Travel Time (hr)	4.6	4.6	4.7	4.3
Total Delay (hr)	0.5	0.4	0.5	0.4
Total Stops	116	105	126	108
Fuel Used (gal)	4.2	4.3	4.3	4.0

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Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	274	238	237	256	261	275	226
Vehs Exited	270	233	239	236	259	267	227
Starting Vehs	14	16	15	11	20	19	21
Ending Vehs	18	21	13	31	22	27	20
Denied Entry Before	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	157	133	133	138	148	160	129
Travel Time (hr)	5.3	4.5	4.6	4.7	5.0	5.7	4.6
Total Delay (hr)	0.5	0.4	0.5	0.4	0.4	0.7	0.5
Total Stops	124	112	130	127	123	166	129
Fuel Used (gal)	4.9	4.1	4.3	4.4	4.7	5.3	4.2

Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	264	248	246	253
Vehs Exited	255	249	237	245
Starting Vehs	20	20	21	15
Ending Vehs	29	19	30	20
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	151	143	139	143
Travel Time (hr)	5.3	4.9	4.8	5.0
Total Delay (hr)	0.6	0.5	0.5	0.5
Total Stops	164	132	135	134
Fuel Used (gal)	4.9	4.5	4.5	4.6

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Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	205	227	223	225	226	233	205
Vehs Exited	204	237	220	242	230	249	211
Starting Vehs	18	21	13	31	22	27	20
Ending Vehs	19	11	16	14	18	11	14
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	119	136	129	137	137	133	122
Travel Time (hr)	4.1	4.7	4.4	4.6	4.7	4.6	4.2
Total Delay (hr)	0.4	0.5	0.4	0.4	0.4	0.4	0.4
Total Stops	115	142	103	117	131	132	116
Fuel Used (gal)	3.8	4.4	4.1	4.3	4.4	4.4	3.9

Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	236	215	212	220
Vehs Exited	247	210	230	228
Starting Vehs	29	19	30	20
Ending Vehs	18	24	12	13
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	144	125	128	131
Travel Time (hr)	5.0	4.2	4.5	4.5
Total Delay (hr)	0.4	0.3	0.5	0.4
Total Stops	136	90	126	121
Fuel Used (gal)	4.6	3.9	4.1	4.2

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Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	217	214	227	234	245	221	221
Vehs Exited	221	215	225	236	247	220	216
Starting Vehs	19	11	16	14	18	11	14
Ending Vehs	15	10	18	12	16	12	19
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	124	124	129	137	145	132	127
Travel Time (hr)	4.1	4.2	4.4	4.6	5.0	4.5	4.3
Total Delay (hr)	0.3	0.4	0.3	0.4	0.5	0.4	0.3
Total Stops	97	113	101	109	131	107	120
Fuel Used (gal)	3.9	3.9	4.1	4.2	4.6	4.3	4.0

Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	207	223	245	225
Vehs Exited	207	230	236	226
Starting Vehs	18	24	12	13
Ending Vehs	18	17	21	11
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	116	127	134	129
Travel Time (hr)	4.0	4.4	4.6	4.4
Total Delay (hr)	0.4	0.5	0.4	0.4
Total Stops	102	102	118	106
Fuel Used (gal)	3.8	4.1	4.2	4.1

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	3.9	0.4
Total Delay (hr)	0.1	0.2	0.1	0.0	0.3	0.1	0.8
Total Del/Veh (s)	4.4	1.8	1.8	0.6	21.5	4.5	3.5
Stop Delay (hr)	0.1	0.1	0.0	0.0	0.3	0.1	0.5
Stop Del/Veh (s)	2.3	0.7	0.7	0.6	19.7	3.9	2.3
Total Stops	37	34	24	5	40	74	214
Stop/Veh	0.39	0.11	0.10	0.17	0.87	0.90	0.27
Travel Dist (mi)	7.2	24.4	38.7	4.8	5.9	10.6	91.6
Travel Time (hr)	0.4	0.9	1.2	0.2	0.5	0.7	3.8
Avg Speed (mph)	19	28	31	28	11	18	24
Fuel Used (gal)	0.2	0.7	1.0	0.1	0.2	0.3	2.6
Fuel Eff. (mpg)	46.7	35.6	37.2	45.8	25.5	31.4	35.9
HC Emissions (g)	1	9	10	1	1	3	26
CO Emissions (g)	32	227	220	23	40	77	620
NOx Emissions (g)	4	28	36	4	5	10	87
Vehicles Entered	94	318	234	29	46	82	803
Vehicles Exited	94	318	234	29	45	82	802
Hourly Exit Rate	94	318	234	29	45	82	802
Input Volume	91	315	233	31	48	79	796
% of Volume	103	101	101	94	94	104	101
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1052
Occupancy (veh)	0	1	1	0	1	1	4

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2: Center Road & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.2	0.0	2.9	0.3	7.2	2.5	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.3	0.1	5.7	2.7	0.2
Total Stops	0	0	4	0	13	14	31
Stop/Veh	0.00	0.00	0.40	0.00	1.00	1.00	0.05
Travel Dist (mi)	20.9	0.6	0.7	19.1	1.3	1.4	44.0
Travel Time (hr)	0.6	0.0	0.0	0.6	0.1	0.1	1.5
Avg Speed (mph)	34	22	20	30	18	22	30
Fuel Used (gal)	0.6	0.0	0.0	0.8	0.0	0.0	1.4
Fuel Eff. (mpg)	35.7	72.6	34.0	25.3	42.2	44.5	30.7
HC Emissions (g)	13	0	0	14	0	0	27
CO Emissions (g)	248	3	6	444	6	5	711
NOx Emissions (g)	37	0	1	43	1	1	82
Vehicles Entered	365	10	10	250	13	13	661
Vehicles Exited	366	10	10	251	13	14	664
Hourly Exit Rate	366	10	10	251	13	14	664
Input Volume	365	10	11	252	12	13	663
% of Volume	100	98	89	100	106	106	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1336
Occupancy (veh)	1	0	0	1	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Total Del/Veh (s)	2.5	0.2	0.3	0.3	6.9	2.7	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.8	0.0	0.0	0.1	5.3	2.6	0.5
Total Stops	14	0	0	0	29	59	102
Stop/Veh	0.23	0.00	0.00	0.00	1.00	1.00	0.15
Travel Dist (mi)	4.6	24.7	43.0	5.7	1.3	2.7	82.0
Travel Time (hr)	0.2	0.7	1.3	0.2	0.1	0.2	2.7
Avg Speed (mph)	21	33	34	30	12	15	30
Fuel Used (gal)	0.1	0.7	1.2	0.1	0.0	0.1	2.3
Fuel Eff. (mpg)	40.4	33.4	35.7	40.9	43.7	49.2	36.0
HC Emissions (g)	2	19	11	3	0	1	35
CO Emissions (g)	39	403	304	51	8	13	818
NOx Emissions (g)	5	54	40	8	1	2	109
Vehicles Entered	59	320	201	27	29	59	695
Vehicles Exited	59	320	201	27	29	59	695
Hourly Exit Rate	59	320	201	27	29	59	695
Input Volume	62	316	206	26	27	57	694
% of Volume	95	101	98	104	107	104	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1386
Occupancy (veh)	0	1	1	0	0	0	3

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
Total Del/Veh (s)	3.3	7.5	1.9	3.9	7.3	1.8	3.7	4.0	2.1	3.8	6.7	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.1	2.9	2.1	2.3	2.7	1.9	2.2	1.5	2.1	2.2	2.5	1.6
Total Stops	2	1	6	15	5	6	5	41	12	5	28	2
Stop/Veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.59	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.1	0.1	0.4	1.9	0.7	0.8	0.4	4.7	1.0	0.3	2.0	0.1
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0
Avg Speed (mph)	19	18	20	24	23	25	20	22	21	19	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	62.1	59.5	52.9	43.3	45.1	42.3	52.3	50.8	51.6	44.8	54.3	42.9
HC Emissions (g)	0	0	0	2	1	2	0	1	0	0	1	0
CO Emissions (g)	0	0	1	37	11	28	1	25	2	2	11	1
NOx Emissions (g)	0	0	0	5	2	5	0	4	0	0	1	0
Vehicles Entered	2	1	6	15	5	6	5	69	12	5	28	2
Vehicles Exited	2	1	6	15	5	6	5	69	12	5	28	2
Hourly Exit Rate	2	1	6	15	5	6	5	69	12	5	28	2
Input Volume	2	2	5	16	5	4	5	69	14	5	26	1
% of Volume	100	50	114	95	95	150	95	100	87	95	108	200
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.2
Total Del/Veh (s)	4.2
Stop Delay (hr)	0.1
Stop Del/Veh (s)	1.9
Total Stops	128
Stop/Veh	0.82
Travel Dist (mi)	12.5
Travel Time (hr)	0.6
Avg Speed (mph)	21
Fuel Used (gal)	0.3
Fuel Eff. (mpg)	49.1
HC Emissions (g)	7
CO Emissions (g)	119
NOx Emissions (g)	18
Vehicles Entered	156
Vehicles Exited	156
Hourly Exit Rate	156
Input Volume	155
% of Volume	101
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	3206
Occupancy (veh)	1

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.5
Total Delay (hr)	1.5
Total Del/Veh (s)	6.0
Stop Delay (hr)	0.8
Stop Del/Veh (s)	3.1
Total Stops	475
Stop/Veh	0.51
Travel Dist (mi)	530.2
Travel Time (hr)	18.2
Avg Speed (mph)	29
Fuel Used (gal)	16.8
Fuel Eff. (mpg)	31.5
HC Emissions (g)	267
CO Emissions (g)	7061
NOx Emissions (g)	844
Vehicles Entered	918
Vehicles Exited	917
Hourly Exit Rate	917
Input Volume	4815
% of Volume	19
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	964
Occupancy (veh)	18

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.3	10.9	0.1	36
Pine Drive	1	1.8	9.8	0.1	29
	13	0.6	18.0	0.2	33
Center Road	2	0.2	6.1	0.1	35
Bernard Street	3	0.2	8.1	0.1	33
Total		3.1	53.0	0.5	33

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.3	22.5	0.2	36
Center Road	2	0.2	8.2	0.1	33
	13	0.1	6.2	0.1	34
Pine Drive	1	1.8	18.9	0.2	32
	12	0.7	8.8	0.1	32
Total		3.2	64.7	0.6	33

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	15	0.2	10.3	0.1	23
	17	0.0	6.8	0.1	34
Mills Street	4	4.0	11.1	0.1	27
Total		4.2	28.2	0.2	27

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.7	14.1	0.1	20
	17	3.0	11.6	0.1	26
	15	0.1	6.8	0.1	34
E Whitaker Mill Road	3	6.9	13.6	0.1	17
Total		16.7	46.1	0.3	23

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	90	66	87	32	73	65
Average Queue (ft)	35	11	19	5	31	33
95th Queue (ft)	74	43	60	23	63	56
Link Distance (ft)	349	349	827	827	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road & E Whitaker Mill Road

Movement	EB	EB	WB	NB
Directions Served	T	TR	LT	LR
Maximum Queue (ft)	3	3	35	36
Average Queue (ft)	0	0	4	17
95th Queue (ft)	3	0	20	40
Link Distance (ft)	253	253	350	526
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	50	6	10	83
Average Queue (ft)	12	0	0	34
95th Queue (ft)	39	4	6	61
Link Distance (ft)		350	1126	270
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	33	71	45	56
Average Queue (ft)	7	22	25	22
95th Queue (ft)	28	57	45	49
Link Distance (ft)	313	694	383	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	88.0	8.0	91.2
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	45	46	46
Cycles @ Minimum (%)	0	36	0
Cycles Maxed Out (%)	55	0	54
Cycles with Peds (%)	0	0	15

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\No-Build (2023)\E Whitaker Mill - AM - EB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - AM - EB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	23	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.56238184	4	4	0	5	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.5254396765	4	4	11	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	4870	228	4	35	40	None	No	N/A
2 (to Center Road)	1200	4800	231	4	35	40	None	No	N/A
3 (to Bernard Street)	400	4800	230	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	253	4299	0.159	10.28	B	0.00	15.47	D
2 (to Center Road)	257	5338	0.086	6.82	A	0.00	28.97	A
3 (to Bernard Street)	256	4511	0.108	8.95	A	0.00	15.45	D

Arterial Length	0.4205	Weighted g/C	0.46	FFS Delay	37.21	Threshold Delay	0.00	Auto Speed	21.03	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.17	C	N/A	N/A				1.94	A	0.00	F
2 (to Center Road)	3.40	C	N/A	N/A				2.17	B	0.00	F
3 (to Bernard Street)	3.13	C	N/A	N/A				1.91	A	0.00	F
	Bicycle LOS	3.30	C				Pedestrian LOS	2.08	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\No-Build (2023)\E Whitaker Mill - AM - WB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - AM - WB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	10	No	None	N/A	N/A	N/A	No
Center Road	0	0.5322119089	4	4	3	0	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.560022382484	4	4	0	2	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	5789	297	4	35	40	None	No	N/A
2 (to Center Road)	1200	5220	249	4	35	40	None	No	N/A
3 (to Bernard Street)	400	4858	228	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	330	5341	0.167	10.28	B	0.00	15.47	D
2 (to Center Road)	277	4285	0.121	8.62	A	0.00	27.30	B
3 (to Bernard Street)	253	5631	0.080	6.93	A	0.00	17.17	C

Arterial Length	0.4205	Weighted g/C	0.46	FFS Delay	37.00	Threshold Delay	0.00	Auto Speed	21.09	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.40	C	N/A	N/A				1.98	A	0.00	F
2 (to Center Road)	3.46	C	N/A	N/A				2.18	B	0.00	F
3 (to Bernard Street)	3.12	C	N/A	N/A				1.91	A	0.00	F
Bicycle LOS	3.39	C			Pedestrian LOS			2.09	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\No-Build (2023)\E Whitaker Mill - PM - EB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - PM - EB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	22	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.427393420564	4	4	0	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.402741299216	4	4	16	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	7914	406	4	35	40	None	No	N/A
2 (to Center Road)	1200	7062	375	4	35	40	None	No	N/A
3 (to Bernard Street)	400	6756	377	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	451	4310	0.283	10.95	B	0.00	15.01	D
2 (to Center Road)	417	5345	0.182	15.92	B	0.00	22.14	B
3 (to Bernard Street)	419	4511	0.231	18.25	B	0.00	10.59	E

Arterial Length	0.4205	Weighted g/C	0.39	FFS Delay	56.37	Threshold Delay	0.00	Auto Speed	16.61	Auto LOS	D

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.72	D	N/A	N/A				2.05	B	0.00	F
2 (to Center Road)	3.89	D	N/A	N/A				2.26	B	0.00	F
3 (to Bernard Street)	3.57	D	N/A	N/A				2.00	B	0.00	F
	Bicycle LOS	3.80	D			Pedestrian LOS	2.17	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	12/7/2020 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\No-Build (2023)\E Whitaker Mill - PM - WB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - PM - WB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	14	No	None	N/A	N/A	N/A	No
Center Road	0	0.492339154	4	4	4	4	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.5263327269	4	4	0	15	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6800	320	2	35	40	None	No	N/A
2 (to Center Road)	1200	5900	278	2	35	40	None	No	N/A
3 (to Bernard Street)	400	5570	261	2	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	0	0						
2 (to Center Road)	0	0						
3 (to Bernard Street)	0	0						

Arterial Length	Weighted g/C	FFS Delay	Threshold Delay	Auto Speed	Auto LOS
0.4200					

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)											
2 (to Center Road)											
3 (to Bernard Street)											

Bicycle LOS	Pedestrian LOS	Bus LOS

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

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Appendix G
Build (2023) Analyses

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	183	229	30	38	79
Future Volume (vph)	52	183	229	30	38	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	1.00		1.00	
Frt			0.983			0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	3436	3300	0	1752	1568
Flt Permitted		0.848			0.950	
Satd. Flow (perm)	0	2940	3300	0	1749	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			33			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	6			6	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	5%	5%	3%	3%
Adj. Flow (vph)	58	203	254	33	42	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	261	287	0	42	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.5	46.5		6.8	6.8
Actuated g/C Ratio		0.78	0.78		0.11	0.11
v/c Ratio		0.11	0.11		0.21	0.35
Control Delay		2.6	2.3		26.8	10.8
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		2.6	2.3		26.8	10.8
LOS		A	A		C	B
Approach Delay		2.6	2.3		16.0	
Approach LOS		A	A		B	
Queue Length 50th (ft)		11	10		14	0
Queue Length 95th (ft)		21	20		39	34
Internal Link Dist (ft)		333	803		644	
Turn Bay Length (ft)						250
Base Capacity (vph)		2278	2565		525	532
Starvation Cap Reductn		0	0		0	0
Spillback Cap Reductn		0	0		0	0
Storage Cap Reductn		0	0		0	0
Reduced v/c Ratio		0.11	0.11		0.08	0.17

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.35
Intersection Signal Delay: 5.0 Intersection LOS: A
Intersection Capacity Utilization 39.2% ICU Level of Service A
Analysis Period (min) 15

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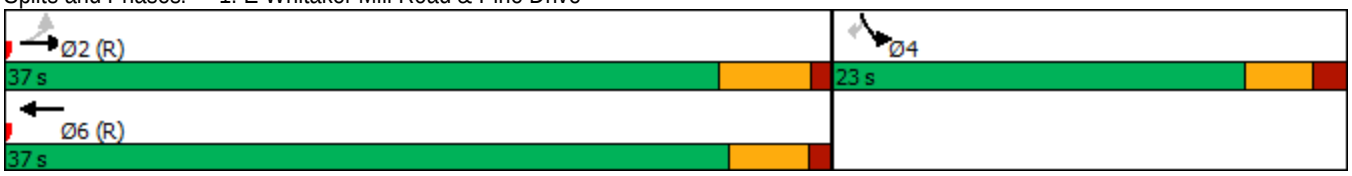
Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	12	7	251	9	5	0	8	0	0	7
Future Volume (vph)	0	232	12	7	251	9	5	0	8	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.993			0.995			0.919				0.865
Flt Protected					0.999			0.980				
Satd. Flow (prot)	0	3382	0	0	3385	0	0	1450	0	0	0	1611
Flt Permitted					0.999			0.980				
Satd. Flow (perm)	0	3382	0	0	3385	0	0	1450	0	0	0	1611
Link Speed (mph)		35			35			35			10	
Link Distance (ft)		311			394			574			357	
Travel Time (s)		6.1			7.7			11.2			24.3	
Confl. Peds. (#/hr)			2	2			2					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	18%	18%	18%	2%	2%	2%
Adj. Flow (vph)	0	258	13	8	279	10	6	0	9	0	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	0	297	0	0	15	0	0	0	8
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			8			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.1%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	232	12	7	251	9	5	0	8	0	0	7
Future Vol, veh/h	0	232	12	7	251	9	5	0	8	0	0	7
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	18	18	18	2	2	2
Mvmt Flow	0	258	13	8	279	10	6	0	9	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	273	0	0	425	572	138	-	-	147
Stage 1	-	-	-	-	-	-	267	267	-	-	-	-
Stage 2	-	-	-	-	-	-	158	305	-	-	-	-
Critical Hdwy	-	-	-	4.22	-	-	7.86	6.86	7.26	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.86	5.86	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.86	5.86	-	-	-	-
Follow-up Hdwy	-	-	-	2.26	-	-	3.68	4.18	3.48	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	1259	-	-	477	396	837	0	0	873
Stage 1	0	-	-	-	-	-	672	649	-	0	0	-
Stage 2	0	-	-	-	-	-	784	623	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1257	-	-	468	392	835	-	-	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	468	392	-	-	-	-
Stage 1	-	-	-	-	-	-	672	648	-	-	-	-
Stage 2	-	-	-	-	-	-	769	618	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	10.7	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	642	-	-	1257	-	-	871
HCM Lane V/C Ratio	0.022	-	-	0.006	-	-	0.009
HCM Control Delay (s)	10.7	-	-	7.9	0	-	9.2
HCM Lane LOS	B	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	34	209	234	38	21	34
Future Volume (vph)	34	209	234	38	21	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.979		0.916	
Flt Protected	0.950				0.981	
Satd. Flow (prot)	1671	3343	3334	0	1596	0
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	1671	3343	3334	0	1596	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	10			10	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	6%	6%	7%	7%
Adj. Flow (vph)	38	232	260	42	23	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	232	302	0	61	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 26.1%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	209	234	38	21	34
Future Vol, veh/h	34	209	234	38	21	34
Conflicting Peds, #/hr	10	0	0	10	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	6	6	7	7
Mvmt Flow	38	232	260	42	23	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	312	0	-	0	485	161
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	194	-
Critical Hdwy	4.26	-	-	-	6.94	7.04
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.28	-	-	-	3.57	3.37
Pot Cap-1 Maneuver	1203	-	-	-	499	840
Stage 1	-	-	-	-	718	-
Stage 2	-	-	-	-	805	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1192	-	-	-	474	832
Mov Cap-2 Maneuver	-	-	-	-	474	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	797	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1192	-	-	-	646
HCM Lane V/C Ratio	0.032	-	-	-	0.095
HCM Control Delay (s)	8.1	-	-	-	11.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	6	2	14	1	12	2	7	5	1	19	2
Future Volume (vph)	1	6	2	14	1	12	2	7	5	1	19	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.941			0.949			0.989	
Flt Protected		0.995			0.974			0.994			0.998	
Satd. Flow (prot)	0	1803	0	0	1707	0	0	1757	0	0	1786	0
Flt Permitted		0.995			0.974			0.994			0.998	
Satd. Flow (perm)	0	1803	0	0	1707	0	0	1757	0	0	1786	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	1					1	2		4	4		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	1	7	2	16	1	13	2	8	6	1	21	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	30	0	0	16	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	6	2	14	1	12	2	7	5	1	19	2
Future Vol, veh/h	1	6	2	14	1	12	2	7	5	1	19	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	1	7	2	16	1	13	2	8	6	1	21	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	7	6.9	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	11%	52%	5%
Vol Thru, %	50%	67%	4%	86%
Vol Right, %	36%	22%	44%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	9	27	22
LT Vol	2	1	14	1
Through Vol	7	6	1	19
RT Vol	5	2	12	2
Lane Flow Rate	16	10	30	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.017	0.011	0.032	0.027
Departure Headway (Hd)	3.837	3.916	3.849	4.022
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	934	915	931	892
Service Time	1.855	1.936	1.866	2.038
HCM Lane V/C Ratio	0.017	0.011	0.032	0.027
HCM Control Delay	6.9	7	7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	12	0	0	4	0	3
Future Volume (vph)	12	0	0	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1611	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1611	0
Link Speed (mph)	35			35	10	
Link Distance (ft)	401			370	290	
Travel Time (s)	7.8			7.2	19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	0	0	4	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	4	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	0	0	4	0	3
Future Vol, veh/h	12	0	0	4	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	0	0	4	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	13	0	17	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1606	-	1001	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1019	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	1001	1067
Mov Cap-2 Maneuver	-	-	-	-	1001	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1019	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1067	-	-	1606	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	3	21	35	4
Future Volume (vph)	1	5	3	21	35	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884				0.987	
Flt Protected	0.993			0.994		
Satd. Flow (prot)	1635	0	0	1852	1786	0
Flt Permitted	0.993			0.994		
Satd. Flow (perm)	1635	0	0	1852	1786	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	348			339	440	
Travel Time (s)	23.7			6.6	8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%
Adj. Flow (vph)	1	6	3	23	39	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	26	43	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.6%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	3	21	35	4
Future Vol, veh/h	1	5	3	21	35	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	1	6	3	23	39	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	70	41	43	0	-	0
Stage 1	41	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	934	1030	1566	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	932	1030	1566	-	-	-
Mov Cap-2 Maneuver	932	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1566	-	1012	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	45	22	34	3
Future Volume (vph)	0	14	45	22	34	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.990	
Flt Protected				0.967		
Satd. Flow (prot)	1611	0	0	1801	1791	0
Flt Permitted				0.967		
Satd. Flow (perm)	1611	0	0	1801	1791	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	353			348	339	
Travel Time (s)	24.1			6.8	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%
Adj. Flow (vph)	0	16	50	24	38	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	74	41	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	45	22	34	3
Future Vol, veh/h	0	14	45	22	34	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	0	16	50	24	38	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	164	40	41	0	-	0
Stage 1	40	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	827	1031	1568	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	801	1031	1568	-	-	-
Mov Cap-2 Maneuver	801	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1568	-	1031	-	-
HCM Lane V/C Ratio	0.032	-	0.015	-	-
HCM Control Delay (s)	7.4	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	235	257	7	12	8
Future Volume (vph)	7	235	257	7	12	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.996		0.945	
Flt Protected		0.999			0.971	
Satd. Flow (prot)	0	3402	3392	0	1709	0
Flt Permitted		0.999			0.971	
Satd. Flow (perm)	0	3402	3392	0	1709	0
Link Speed (mph)		35	35		10	
Link Distance (ft)		883	311		335	
Travel Time (s)		17.2	6.1		22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	8	261	286	8	13	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	269	294	0	22	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 21.6%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	235	257	7	12	8
Future Vol, veh/h	7	235	257	7	12	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	8	261	286	8	13	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	294	0	-	0	437	147
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	147	-
Critical Hdwy	4.22	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.26	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1236	-	-	-	548	873
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1236	-	-	-	544	873
Mov Cap-2 Maneuver	-	-	-	-	544	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	865	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	641
HCM Lane V/C Ratio	0.006	-	-	-	0.035
HCM Control Delay (s)	7.9	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	333	250	42	55	79
Future Volume (vph)	91	333	250	42	55	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	0			0	0	250
Storage Lanes	0			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor		1.00	0.99		1.00	
Frt			0.978			0.850
Flt Protected		0.989			0.950	
Satd. Flow (prot)	0	3536	3372	0	1752	1568
Flt Permitted		0.814			0.950	
Satd. Flow (perm)	0	2901	3372	0	1745	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			47			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	11			11	4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%
Adj. Flow (vph)	101	370	278	47	61	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	471	325	0	61	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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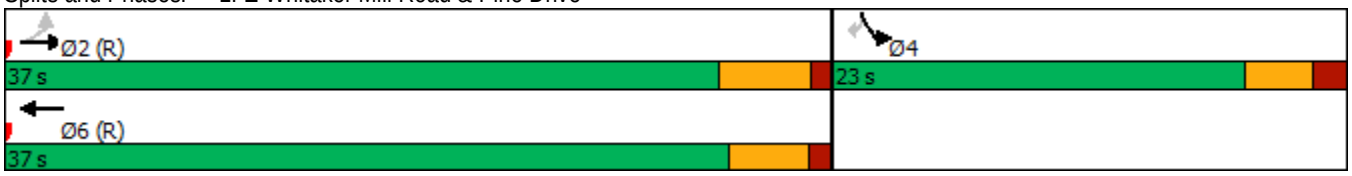
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)		-0.1	0.3		0.4	0.4
Total Lost Time (s)		5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)		46.2	46.2		7.1	7.1
Actuated g/C Ratio		0.77	0.77		0.12	0.12
v/c Ratio		0.21	0.12		0.29	0.33
Control Delay		3.0	2.4		27.7	10.3
Queue Delay		0.0	0.0		0.0	0.0
Total Delay		3.0	2.4		27.7	10.3
LOS		A	A		C	B
Approach Delay		3.0	2.4		17.5	
Approach LOS		A	A		B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	388	10	11	263	19	12	0	13	0	0	20
Future Volume (vph)	0	388	10	11	263	19	12	0	13	0	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.996			0.990			0.930				0.865
Flt Protected					0.998			0.976				
Satd. Flow (prot)	0	3424	0	0	3463	0	0	1691	0	0	0	1611
Flt Permitted					0.998			0.976				
Satd. Flow (perm)	0	3424	0	0	3463	0	0	1691	0	0	0	1611
Link Speed (mph)		35			35			35			10	
Link Distance (ft)		311			394			574			357	
Travel Time (s)		6.1			7.7			11.2			24.3	
Confl. Peds. (#/hr)			8	8			2					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	431	11	12	292	21	13	0	14	0	0	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	442	0	0	325	0	0	27	0	0	0	22
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			8			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 26.0%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	388	10	11	263	19	12	0	13	0	0	20
Future Vol, veh/h	0	388	10	11	263	19	12	0	13	0	0	20
Conflicting Peds, #/hr	0	0	8	8	0	0	2	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	3	3	3	2	2	2	2	2	2
Mvmt Flow	0	431	11	12	292	21	13	0	14	0	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	450	0	0	617	782	229	-	-	159
Stage 1	-	-	-	-	-	-	445	445	-	-	-	-
Stage 2	-	-	-	-	-	-	172	337	-	-	-	-
Critical Hdwy	-	-	-	4.16	-	-	7.54	6.54	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	-	-	-
Follow-up Hdwy	-	-	-	2.23	-	-	3.52	4.02	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	1100	-	-	374	324	774	0	0	858
Stage 1	0	-	-	-	-	-	562	573	-	0	0	-
Stage 2	0	-	-	-	-	-	813	640	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1092	-	-	357	317	768	-	-	856
Mov Cap-2 Maneuver	-	-	-	-	-	-	357	317	-	-	-	-
Stage 1	-	-	-	-	-	-	562	568	-	-	-	-
Stage 2	-	-	-	-	-	-	780	632	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	12.7	9.3
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	495	-	-	1092	-	-	856
HCM Lane V/C Ratio	0.056	-	-	0.011	-	-	0.026
HCM Control Delay (s)	12.7	-	-	8.3	0	-	9.3
HCM Lane LOS	B	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	325	232	52	80	64
Future Volume (vph)	75	325	232	52	80	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt			0.972		0.940	
Flt Protected	0.950				0.973	
Satd. Flow (prot)	1719	3438	3440	0	1639	0
Flt Permitted	0.950				0.973	
Satd. Flow (perm)	1719	3438	3440	0	1639	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	15			15	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	2%	2%	6%	6%
Adj. Flow (vph)	83	361	258	58	89	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	361	316	0	160	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	10		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.8%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	325	232	52	80	64
Future Vol, veh/h	75	325	232	52	80	64
Conflicting Peds, #/hr	15	0	0	15	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	2	2	6	6
Mvmt Flow	83	361	258	58	89	71

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	331	0	-	0	651	173
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.2	-	-	-	6.92	7.02
Critical Hdwy Stg 1	-	-	-	-	5.92	-
Critical Hdwy Stg 2	-	-	-	-	5.92	-
Follow-up Hdwy	2.25	-	-	-	3.56	3.36
Pot Cap-1 Maneuver	1204	-	-	-	392	828
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1187	-	-	-	354	816
Mov Cap-2 Maneuver	-	-	-	-	354	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	665	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1187	-	-	-	473
HCM Lane V/C Ratio	0.07	-	-	-	0.338
HCM Control Delay (s)	8.3	-	-	-	16.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	6	5	24	5	4	5	42	19	5	26	1
Future Volume (vph)	2	6	5	24	5	4	5	42	19	5	26	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.985			0.962			0.996	
Flt Protected		0.993			0.965			0.996			0.992	
Satd. Flow (prot)	0	1750	0	0	1584	0	0	1785	0	0	1840	0
Flt Permitted		0.993			0.965			0.996			0.992	
Satd. Flow (perm)	0	1750	0	0	1584	0	0	1785	0	0	1840	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	2		2	2		2	3		6	6		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	14%	14%	14%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	7	6	27	6	4	6	47	21	6	29	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	37	0	0	74	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	6	5	24	5	4	5	42	19	5	26	1
Future Vol, veh/h	2	6	5	24	5	4	5	42	19	5	26	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	14	14	14	2	2	2	2	2	2
Mvmt Flow	2	7	6	27	6	4	6	47	21	6	29	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.1	7.7	7.3	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	15%	73%	16%
Vol Thru, %	64%	46%	15%	81%
Vol Right, %	29%	38%	12%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	13	33	32
LT Vol	5	2	24	5
Through Vol	42	6	5	26
RT Vol	19	5	4	1
Lane Flow Rate	73	14	37	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.016	0.045	0.04
Departure Headway (Hd)	3.893	3.951	4.411	4.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	917	899	808	871
Service Time	1.93	2.005	2.457	2.134
HCM Lane V/C Ratio	0.08	0.016	0.046	0.041
HCM Control Delay	7.3	7.1	7.7	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0	0.1	0.1

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	10	0	0	11	0	4
Future Volume (vph)	10	0	0	11	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1863	0	0	1667	1611	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1667	1611	0
Link Speed (mph)	35			35	10	
Link Distance (ft)	401			370	290	
Travel Time (s)	7.8			7.2	19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	14%	14%	2%	2%
Adj. Flow (vph)	11	0	0	12	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	12	4	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	0	11	0	4
Future Vol, veh/h	10	0	0	11	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	14	14	2	2
Mvmt Flow	11	0	0	12	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	23	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.24	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.326	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1533	-	993	1070
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1533	-	993	1070
Mov Cap-2 Maneuver	-	-	-	-	993	-
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1070	-	-	1533	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	6	6	82	76	7
Future Volume (vph)	2	6	6	82	76	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.988	
Flt Protected	0.989			0.996		
Satd. Flow (prot)	1649	0	0	1855	1771	0
Flt Permitted	0.989			0.996		
Satd. Flow (perm)	1649	0	0	1855	1771	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	348			339	440	
Travel Time (s)	23.7			6.6	8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Adj. Flow (vph)	2	7	7	91	84	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	98	92	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	6	82	76	7
Future Vol, veh/h	2	6	6	82	76	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	2	7	7	91	84	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	193	88	92	0	-	0
Stage 1	88	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	796	970	1503	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	792	970	1503	-	-	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	919	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	918	-	-
HCM Lane V/C Ratio	0.004	-	0.01	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	55	33	76	72	2
Future Volume (vph)	3	55	33	76	72	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871				0.997	
Flt Protected	0.998			0.985		
Satd. Flow (prot)	1619	0	0	1835	1787	0
Flt Permitted	0.998			0.985		
Satd. Flow (perm)	1619	0	0	1835	1787	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	353			348	339	
Travel Time (s)	24.1			6.8	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Adj. Flow (vph)	3	61	37	84	80	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	121	82	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.7%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	55	33	76	72	2
Future Vol, veh/h	3	55	33	76	72	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	3	61	37	84	80	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	239	81	82	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	749	979	1515	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	730	979	1515	-	-	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	962	-	-
HCM Lane V/C Ratio	0.024	-	0.067	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	376	284	11	16	7
Future Volume (vph)	18	376	284	11	16	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.995		0.958	
Flt Protected		0.998			0.967	
Satd. Flow (prot)	0	3431	3487	0	1726	0
Flt Permitted		0.998			0.967	
Satd. Flow (perm)	0	3431	3487	0	1726	0
Link Speed (mph)		35	35		10	
Link Distance (ft)		883	311		335	
Travel Time (s)		17.2	6.1		22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	3%	3%	2%	2%
Adj. Flow (vph)	20	418	316	12	18	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	438	328	0	26	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.4%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	376	284	11	16	7
Future Vol, veh/h	18	376	284	11	16	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	3	3	2	2
Mvmt Flow	20	418	316	12	18	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	328	0	-	0	571	164
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	249	-
Critical Hdwy	4.2	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.25	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1207	-	-	-	451	852
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1207	-	-	-	441	852
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	769	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1207	-	-	-	517
HCM Lane V/C Ratio	0.017	-	-	-	0.049
HCM Control Delay (s)	8	0.1	-	-	12.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	779	792	797	796	791	790	821
Vehs Exited	774	792	793	784	788	798	823
Starting Vehs	12	12	10	9	9	15	11
Ending Vehs	17	12	14	21	12	7	9
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	415	417	419	424	427	425	444
Travel Time (hr)	14.9	15.0	15.1	15.0	15.0	15.1	15.9
Total Delay (hr)	1.2	1.4	1.3	1.2	1.2	1.2	1.4
Total Stops	347	386	344	339	361	366	374
Fuel Used (gal)	13.0	13.6	13.5	13.4	13.7	13.5	14.4

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	756	766	762	786
Vehs Exited	762	753	768	784
Starting Vehs	19	11	20	8
Ending Vehs	13	24	14	10
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	404	415	403	419
Travel Time (hr)	14.5	14.6	14.3	14.9
Total Delay (hr)	1.2	1.1	1.0	1.2
Total Stops	332	349	311	350
Fuel Used (gal)	12.9	13.3	12.9	13.4

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	181	182	190	207	206	169	212
Vehs Exited	184	185	186	200	200	173	209
Starting Vehs	12	12	10	9	9	15	11
Ending Vehs	9	9	14	16	15	11	14
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	100	94	96	108	109	98	110
Travel Time (hr)	3.6	3.4	3.6	3.8	3.9	3.4	4.0
Total Delay (hr)	0.3	0.3	0.3	0.3	0.3	0.2	0.4
Total Stops	80	92	100	87	85	77	103
Fuel Used (gal)	3.2	3.1	3.2	3.4	3.5	3.0	3.6

Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	177	198	189	189
Vehs Exited	184	193	192	191
Starting Vehs	19	11	20	8
Ending Vehs	12	16	17	9
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	94	108	103	102
Travel Time (hr)	3.4	3.8	3.7	3.7
Total Delay (hr)	0.3	0.3	0.3	0.3
Total Stops	66	107	80	84
Fuel Used (gal)	3.0	3.6	3.3	3.3

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Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	217	200	201	200	214	222	209
Vehs Exited	202	194	198	199	205	221	202
Starting Vehs	9	9	14	16	15	11	14
Ending Vehs	24	15	17	17	24	12	21
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0	0
Travel Distance (mi)	109	109	103	106	115	115	110
Travel Time (hr)	3.9	3.9	3.7	3.8	4.1	4.1	4.0
Total Delay (hr)	0.3	0.4	0.3	0.4	0.3	0.4	0.4
Total Stops	104	87	87	88	102	100	96
Fuel Used (gal)	3.3	3.6	3.3	3.4	3.6	3.6	3.6

Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	210	218	216	211
Vehs Exited	199	215	217	205
Starting Vehs	12	16	17	9
Ending Vehs	23	19	16	14
Denied Entry Before	0	0	0	0
Denied Entry After	1	0	1	0
Travel Distance (mi)	112	120	107	110
Travel Time (hr)	4.0	4.1	3.8	3.9
Total Delay (hr)	0.3	0.3	0.2	0.3
Total Stops	84	97	84	92
Fuel Used (gal)	3.6	3.8	3.4	3.5

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Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	188	214	187	181	177	226	183
Vehs Exited	200	215	188	185	182	224	194
Starting Vehs	24	15	17	17	24	12	21
Ending Vehs	12	14	16	13	19	14	10
Denied Entry Before	0	1	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	107	111	100	102	99	116	105
Travel Time (hr)	3.8	4.0	3.7	3.6	3.5	4.3	3.7
Total Delay (hr)	0.4	0.4	0.3	0.3	0.3	0.4	0.3
Total Stops	79	112	83	83	87	123	77
Fuel Used (gal)	3.4	3.5	3.3	3.2	3.2	3.8	3.4

Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	190	178	166	187
Vehs Exited	198	183	165	194
Starting Vehs	23	19	16	14
Ending Vehs	15	14	17	12
Denied Entry Before	1	0	1	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	106	99	88	103
Travel Time (hr)	3.9	3.5	3.1	3.7
Total Delay (hr)	0.3	0.3	0.2	0.3
Total Stops	84	82	67	87
Fuel Used (gal)	3.3	3.1	2.8	3.3

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Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	193	196	219	208	194	173	217
Vehs Exited	188	198	221	200	201	180	218
Starting Vehs	12	14	16	13	19	14	10
Ending Vehs	17	12	14	21	12	7	9
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	100	103	120	109	103	95	120
Travel Time (hr)	3.5	3.7	4.2	3.8	3.6	3.4	4.2
Total Delay (hr)	0.2	0.3	0.3	0.2	0.2	0.2	0.3
Total Stops	84	95	74	81	87	66	98
Fuel Used (gal)	3.1	3.4	3.7	3.4	3.4	3.1	3.8

Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	179	172	191	193
Vehs Exited	181	162	194	195
Starting Vehs	15	14	17	12
Ending Vehs	13	24	14	10
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	92	89	104	103
Travel Time (hr)	3.3	3.2	3.7	3.7
Total Delay (hr)	0.3	0.2	0.3	0.3
Total Stops	98	63	80	82
Fuel Used (gal)	3.0	2.8	3.4	3.3

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	4.0	0.6
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.6
Total Del/Veh (s)	3.7	1.5	1.7	0.5	22.4	4.4	3.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.4
Stop Del/Veh (s)	1.9	0.6	0.6	0.4	20.8	3.8	2.4
Total Stops	18	16	21	3	35	76	169
Stop/Veh	0.35	0.09	0.09	0.11	0.90	0.92	0.28
Travel Dist (mi)	3.9	14.2	37.3	4.6	4.9	10.7	75.6
Travel Time (hr)	0.2	0.5	1.2	0.2	0.5	0.7	3.2
Avg Speed (mph)	20	29	31	28	11	19	25
Fuel Used (gal)	0.1	0.4	1.0	0.1	0.2	0.3	2.1
Fuel Eff. (mpg)	48.3	36.5	35.6	42.7	25.8	32.1	35.2
HC Emissions (g)	1	8	18	1	1	3	32
CO Emissions (g)	26	162	354	26	29	73	670
NOx Emissions (g)	4	23	59	4	3	9	102
Vehicles Entered	51	184	226	27	38	82	608
Vehicles Exited	51	184	226	27	38	82	608
Hourly Exit Rate	51	184	226	27	38	82	608
Input Volume	52	183	235	30	38	79	617
% of Volume	98	101	96	90	99	104	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1288
Occupancy (veh)	0	0	1	0	0	1	3

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2: Center Road/Access #4 & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.1	0.1	2.3	0.2	0.2	5.5	2.2	0.0	0.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.8	0.0	0.1	3.8	2.4	0.0	0.1
Total Stops	0	0	2	0	0	4	12	0	18
Stop/Veh	0.00	0.00	0.29	0.00	0.00	1.00	1.00	0.00	0.03
Travel Dist (mi)	13.9	0.8	0.5	18.7	0.8	0.4	1.1	0.3	36.7
Travel Time (hr)	0.4	0.0	0.0	0.6	0.0	0.0	0.1	0.0	1.2
Avg Speed (mph)	33	22	21	31	23	21	23	10	30
Fuel Used (gal)	0.4	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.2
Fuel Eff. (mpg)	33.0	66.3	37.2	28.3	40.5	43.4	44.3	21.7	31.1
HC Emissions (g)	7	0	0	15	0	0	1	0	25
CO Emissions (g)	167	4	4	387	11	7	21	1	601
NOx Emissions (g)	24	0	0	47	1	1	3	0	77
Vehicles Entered	236	14	7	243	10	4	12	6	532
Vehicles Exited	235	14	7	243	10	4	12	6	531
Hourly Exit Rate	235	14	7	243	10	4	12	6	531
Input Volume	235	12	7	252	9	5	8	7	536
% of Volume	100	114	97	97	108	76	145	83	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0
Density (ft/veh)									1854
Occupancy (veh)	0	0	0	1	0	0	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.1	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.5	0.1	0.3	0.3	6.2	2.6	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.9	0.0	0.0	0.0	4.6	2.6	0.4
Total Stops	9	0	0	0	21	36	66
Stop/Veh	0.26	0.00	0.00	0.00	1.00	1.00	0.12
Travel Dist (mi)	2.6	15.8	48.1	7.9	1.2	2.1	77.6
Travel Time (hr)	0.1	0.5	1.4	0.3	0.1	0.1	2.5
Avg Speed (mph)	21	33	34	30	13	16	31
Fuel Used (gal)	0.1	0.5	1.4	0.2	0.0	0.1	2.2
Fuel Eff. (mpg)	43.7	33.1	35.1	40.8	33.5	36.0	35.4
HC Emissions (g)	2	15	28	5	0	1	50
CO Emissions (g)	34	296	571	90	9	19	1019
NOx Emissions (g)	5	42	86	13	1	2	149
Vehicles Entered	35	212	226	37	21	36	567
Vehicles Exited	35	213	225	37	21	36	567
Hourly Exit Rate	35	213	225	37	21	36	567
Input Volume	34	211	234	38	21	34	572
% of Volume	102	101	96	97	101	105	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1490
Occupancy (veh)	0	0	1	0	0	0	2

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.6	2.1	3.9	5.2	2.1	4.3	3.3	1.9	3.2	6.6	1.6
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		1.4	2.3	2.3	1.9	2.0	2.5	1.3	2.2	1.9	2.5	1.7
Total Stops	0	7	2	12	1	12	1	7	4	1	20	3
Stop/Veh		0.58	1.00	1.00	1.00	1.00	1.00	0.50	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.0	0.7	0.1	1.6	0.1	1.6	0.1	0.9	0.4	0.1	1.4	0.2
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Avg Speed (mph)	17	20	19	24	22	25	20	23	22	19	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	49.4	34.2	42.1	41.9	33.5	40.6	46.2	47.4	49.4	48.6	54.6	44.2
HC Emissions (g)	0	0	0	0	0	0	0	0	0	0	0	0
CO Emissions (g)	0	6	1	7	1	7	0	2	1	0	5	1
NOx Emissions (g)	0	0	0	1	0	1	0	0	0	0	0	0
Vehicles Entered	0	12	2	12	1	12	1	14	4	1	20	3
Vehicles Exited	0	12	2	12	1	12	1	14	4	1	20	2
Hourly Exit Rate	0	12	2	12	1	12	1	14	4	1	20	2
Input Volume	1	12	2	14	1	12	2	14	5	1	19	2
% of Volume	0	98	100	87	100	98	50	97	76	100	107	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.1
Total Del/Veh (s)	4.0
Stop Delay (hr)	0.0
Stop Del/Veh (s)	2.0
Total Stops	70
Stop/Veh	0.86
Travel Dist (mi)	7.2
Travel Time (hr)	0.3
Avg Speed (mph)	22
Fuel Used (gal)	0.2
Fuel Eff. (mpg)	43.6
HC Emissions (g)	1
CO Emissions (g)	32
NOx Emissions (g)	3
Vehicles Entered	82
Vehicles Exited	81
Hourly Exit Rate	81
Input Volume	86
% of Volume	94
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	
Occupancy (veh)	0

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5: Access #1 & Mills Street Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	0.8	1.6	0.4
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.2	2.5	0.4
Total Stops	0	0	1	1
Stop/Veh	0.00	0.00	0.33	0.05
Travel Dist (mi)	0.8	0.3	0.1	1.2
Travel Time (hr)	0.0	0.0	0.0	0.1
Avg Speed (mph)	35	22	9	24
Fuel Used (gal)	0.0	0.0	0.0	0.1
Fuel Eff. (mpg)	35.8	11.0	21.5	23.0
HC Emissions (g)	0	0	0	0
CO Emissions (g)	5	16	1	22
NOx Emissions (g)	1	1	0	1
Vehicles Entered	12	4	3	19
Vehicles Exited	12	4	3	19
Hourly Exit Rate	12	4	3	19
Input Volume	12	5	3	20
% of Volume	98	80	100	94
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Density (ft/veh)				
Occupancy (veh)	0	0	0	0

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6: Bernard Street & Access #2 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		1.6	1.5	0.2	1.9	1.5	1.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		2.4	0.2	0.0	0.2	0.2	0.4
Total Stops	0	3	0	0	0	0	3
Stop/Veh		0.43	0.00	0.00	0.00	0.00	0.04
Travel Dist (mi)	0.0	0.4	0.2	1.2	2.7	0.3	4.8
Travel Time (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Avg Speed (mph)	9	9	22	33	25	20	23
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Fuel Eff. (mpg)	31.3	21.3	43.6	31.0	13.5	19.5	17.4
HC Emissions (g)	0	0	0	0	5	0	5
CO Emissions (g)	0	1	1	11	191	10	214
NOx Emissions (g)	0	0	0	1	14	1	16
Vehicles Entered	0	7	4	19	34	4	68
Vehicles Exited	0	7	4	19	34	4	68
Hourly Exit Rate	0	7	4	19	34	4	68
Input Volume	1	5	3	21	35	4	69
% of Volume	0	133	133	92	96	100	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							
Occupancy (veh)	0	0	0	0	0	0	0

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7: Bernard Street & Access #3 Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.7	1.8	0.4	0.1	0.0	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.6	0.1	0.1	0.0	0.0	0.4
Total Stops	7	2	0	0	0	9
Stop/Veh	0.50	0.05	0.00	0.00	0.00	0.07
Travel Dist (mi)	0.9	2.7	1.6	2.3	0.2	7.6
Travel Time (hr)	0.1	0.2	0.1	0.1	0.0	0.4
Avg Speed (mph)	9	16	20	31	22	18
Fuel Used (gal)	0.0	0.1	0.1	0.1	0.0	0.4
Fuel Eff. (mpg)	21.4	18.5	11.9	26.9	47.5	18.7
HC Emissions (g)	0	2	5	2	0	9
CO Emissions (g)	3	69	155	59	1	287
NOx Emissions (g)	0	6	14	6	0	28
Vehicles Entered	14	43	28	38	3	126
Vehicles Exited	14	43	29	38	3	127
Hourly Exit Rate	14	43	29	38	3	127
Input Volume	14	45	28	38	3	127
% of Volume	102	96	105	101	100	100
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Density (ft/veh)						
Occupancy (veh)	0	0	0	0	0	0

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8: E Whitaker Mill Road & Access #5 Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.7	0.5	0.2	0.1	3.7	1.5	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.7	0.1	0.1	0.1	4.5	2.3	0.3
Total Stops	1	0	2	0	7	4	14
Stop/Veh	0.17	0.00	0.01	0.00	0.54	0.50	0.03
Travel Dist (mi)	1.0	38.2	14.3	0.4	0.7	0.4	55.2
Travel Time (hr)	0.0	1.2	0.4	0.0	0.1	0.0	1.8
Avg Speed (mph)	26	33	33	21	8	9	31
Fuel Used (gal)	0.0	1.3	0.4	0.0	0.0	0.0	1.8
Fuel Eff. (mpg)	34.2	30.4	32.0	60.4	20.4	21.1	30.7
HC Emissions (g)	0	25	10	0	0	0	35
CO Emissions (g)	10	621	215	1	3	2	851
NOx Emissions (g)	1	79	30	0	0	0	111
Vehicles Entered	6	237	247	8	13	8	519
Vehicles Exited	6	237	247	8	13	8	519
Hourly Exit Rate	6	237	247	8	13	8	519
Input Volume	7	235	258	7	12	8	528
% of Volume	83	101	96	110	106	97	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1513
Occupancy (veh)	0	1	0	0	0	0	2

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.6
Total Delay (hr)	1.1
Total Del/Veh (s)	4.9
Stop Delay (hr)	0.6
Stop Del/Veh (s)	2.8
Total Stops	350
Stop/Veh	0.44
Travel Dist (mi)	419.1
Travel Time (hr)	14.9
Avg Speed (mph)	28
Fuel Used (gal)	13.4
Fuel Eff. (mpg)	31.2
HC Emissions (g)	256
CO Emissions (g)	6121
NOx Emissions (g)	797
Vehicles Entered	786
Vehicles Exited	784
Hourly Exit Rate	784
Input Volume	3852
% of Volume	20
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1272
Occupancy (veh)	15

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.2	10.6	0.1	36
Pine Drive	1	1.5	9.4	0.1	30
Access #5	8	0.5	16.9	0.2	36
Center Road	2	0.1	6.2	0.1	34
Bernard Street	3	0.1	7.8	0.1	34
Total		2.3	50.9	0.5	34

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.3	22.4	0.2	36
Access #4	2	0.2	8.2	0.1	33
Access #5	8	0.1	6.1	0.1	35
Pine Drive	1	1.6	18.8	0.2	32
	12	0.7	8.8	0.1	32
Total		3.0	64.4	0.6	34

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #3	7	0.2	10.0	0.1	24
Access #2	6	0.2	6.8	0.1	34
Mills Street	4	3.3	10.0	0.1	30
Total		3.8	26.9	0.2	29

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.6	14.1	0.1	20
Access #2	6	2.6	10.3	0.1	29
Access #3	7	0.1	6.5	0.1	36
E Whitaker Mill Road	3	6.3	14.3	0.1	17
Total		15.6	45.2	0.3	23

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Arterial Level of Service: EB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #1	5	0.0	7.2	0.1	38
Bernard Street	4	3.4	9.2	0.1	28
Total		3.5	16.4	0.1	32

Arterial Level of Service: WB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	4	5.2	16.9	0.1	29
Access #1	5	1.9	7.2	0.1	35
Total		7.2	24.1	0.2	31

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	76	47	83	31	72	67
Average Queue (ft)	22	5	17	3	29	33
95th Queue (ft)	58	26	56	17	61	57
Link Distance (ft)	349	349	830	830	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road/Access #4 & E Whitaker Mill Road

Movement	EB	WB	NB
Directions Served	T	LT	LTR
Maximum Queue (ft)	3	30	59
Average Queue (ft)	0	2	14
95th Queue (ft)	3	14	44
Link Distance (ft)	255	344	525
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	WB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	56	6	3	67
Average Queue (ft)	8	0	0	29
95th Queue (ft)	33	4	3	53
Link Distance (ft)		1126	1126	275
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	31	32	51
Average Queue (ft)	9	16	10	18
95th Queue (ft)	31	40	32	45
Link Distance (ft)	319	694	377	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access #1 & Mills Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	28
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	261
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Bernard Street & Access #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	34	12
Average Queue (ft)	6	1
95th Queue (ft)	26	8
Link Distance (ft)	319	283
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 7: Bernard Street & Access #3

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	36	30
Average Queue (ft)	12	2
95th Queue (ft)	38	14
Link Distance (ft)	324	275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: E Whitaker Mill Road & Access #5

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	21	33
Average Queue (ft)	1	16
95th Queue (ft)	10	41
Link Distance (ft)	830	294
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	98.3	7.8	98.7
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	51	51	51
Cycles @ Minimum (%)	0	35	0
Cycles Maxed Out (%)	49	0	49
Cycles with Peds (%)	0	0	7

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1151	1121	1153	1049	1091	1135	1175
Vehs Exited	1151	1117	1159	1057	1103	1140	1170
Starting Vehs	22	12	24	24	22	26	25
Ending Vehs	22	16	18	16	10	21	30
Denied Entry Before	0	0	0	1	0	0	0
Denied Entry After	0	0	0	0	0	0	1
Travel Distance (mi)	614	602	616	554	577	606	621
Travel Time (hr)	22.7	22.2	22.8	20.2	21.5	22.2	22.9
Total Delay (hr)	2.3	2.2	2.3	1.9	2.3	2.1	2.2
Total Stops	659	640	655	564	659	598	635
Fuel Used (gal)	20.6	19.8	20.5	18.2	19.3	20.1	20.7

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1157	1067	1166	1124
Vehs Exited	1163	1072	1162	1131
Starting Vehs	23	22	19	17
Ending Vehs	17	17	23	14
Denied Entry Before	1	0	1	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	628	558	626	600
Travel Time (hr)	23.1	20.5	23.4	22.1
Total Delay (hr)	2.4	2.1	2.5	2.2
Total Stops	657	604	687	633
Fuel Used (gal)	20.6	18.7	21.2	20.0

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	283	263	309	271	273	271	263
Vehs Exited	281	255	305	277	266	274	269
Starting Vehs	22	12	24	24	22	26	25
Ending Vehs	24	20	28	18	29	23	19
Denied Entry Before	0	0	0	1	0	0	0
Denied Entry After	0	0	0	1	0	0	0
Travel Distance (mi)	151	132	169	141	145	148	139
Travel Time (hr)	5.5	4.9	6.2	5.2	5.4	5.4	5.1
Total Delay (hr)	0.5	0.4	0.7	0.6	0.6	0.5	0.5
Total Stops	144	138	180	153	165	133	131
Fuel Used (gal)	5.0	4.4	5.7	4.6	4.8	4.8	4.6

Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	288	237	259	272
Vehs Exited	295	241	258	270
Starting Vehs	23	22	19	17
Ending Vehs	16	18	20	17
Denied Entry Before	1	0	1	0
Denied Entry After	0	0	1	0
Travel Distance (mi)	158	122	143	145
Travel Time (hr)	5.8	4.6	5.2	5.3
Total Delay (hr)	0.5	0.5	0.4	0.5
Total Stops	150	142	128	145
Fuel Used (gal)	5.3	4.1	4.6	4.8

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Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	315	324	293	274	300	326	328
Vehs Exited	313	312	294	276	305	321	317
Starting Vehs	24	20	28	18	29	23	19
Ending Vehs	26	32	27	16	24	28	30
Denied Entry Before	0	0	0	1	0	0	0
Denied Entry After	0	0	0	0	1	0	0
Travel Distance (mi)	165	178	156	144	157	173	170
Travel Time (hr)	6.2	6.5	5.8	5.2	5.8	6.3	6.3
Total Delay (hr)	0.7	0.7	0.6	0.5	0.6	0.7	0.6
Total Stops	199	186	163	138	180	176	177
Fuel Used (gal)	5.7	5.8	5.1	4.7	5.2	5.8	5.7

Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	298	310	333	306
Vehs Exited	286	305	313	304
Starting Vehs	16	18	20	17
Ending Vehs	28	23	40	24
Denied Entry Before	0	0	1	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	158	166	169	164
Travel Time (hr)	5.9	6.0	6.5	6.1
Total Delay (hr)	0.7	0.6	0.8	0.6
Total Stops	165	180	197	172
Fuel Used (gal)	5.1	5.6	5.8	5.4

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Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	284	281	275	264	250	274	271
Vehs Exited	284	290	283	262	255	286	282
Starting Vehs	26	32	27	16	24	28	30
Ending Vehs	26	23	19	18	19	16	19
Denied Entry Before	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	153	156	144	142	128	147	150
Travel Time (hr)	5.5	5.8	5.4	5.1	4.8	5.4	5.5
Total Delay (hr)	0.5	0.6	0.5	0.5	0.5	0.5	0.5
Total Stops	143	170	153	144	147	150	150
Fuel Used (gal)	5.0	5.2	4.9	4.7	4.4	4.9	4.9

Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	281	259	295	271
Vehs Exited	278	264	315	277
Starting Vehs	28	23	40	24
Ending Vehs	31	18	20	16
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	153	137	166	148
Travel Time (hr)	5.6	5.0	6.1	5.4
Total Delay (hr)	0.6	0.5	0.7	0.5
Total Stops	162	143	186	152
Fuel Used (gal)	5.0	4.6	5.7	4.9

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Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	269	253	276	240	268	264	313
Vehs Exited	273	260	277	242	277	259	302
Starting Vehs	26	23	19	18	19	16	19
Ending Vehs	22	16	18	16	10	21	30
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	1
Travel Distance (mi)	144	136	146	126	147	138	163
Travel Time (hr)	5.4	5.0	5.4	4.6	5.5	5.1	6.0
Total Delay (hr)	0.6	0.5	0.5	0.4	0.6	0.4	0.6
Total Stops	173	146	159	129	167	139	177
Fuel Used (gal)	4.9	4.5	4.8	4.2	5.0	4.5	5.6

Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	290	261	279	273
Vehs Exited	304	262	276	273
Starting Vehs	31	18	20	16
Ending Vehs	17	17	23	14
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	159	134	148	144
Travel Time (hr)	5.8	4.9	5.6	5.3
Total Delay (hr)	0.7	0.5	0.6	0.5
Total Stops	180	139	176	157
Fuel Used (gal)	5.3	4.4	5.1	4.8

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	3.9	0.4
Total Delay (hr)	0.1	0.2	0.1	0.0	0.3	0.1	0.9
Total Del/Veh (s)	4.9	2.3	2.0	0.7	20.8	4.5	3.8
Stop Delay (hr)	0.1	0.1	0.1	0.0	0.3	0.1	0.6
Stop Del/Veh (s)	2.7	0.9	0.8	0.5	19.0	3.8	2.5
Total Stops	38	44	28	7	46	72	235
Stop/Veh	0.41	0.13	0.11	0.15	0.87	0.88	0.28
Travel Dist (mi)	7.0	25.2	40.3	7.5	6.8	10.5	97.5
Travel Time (hr)	0.4	0.9	1.3	0.3	0.6	0.7	4.1
Avg Speed (mph)	18	27	31	28	11	19	24
Fuel Used (gal)	0.2	0.7	1.1	0.2	0.3	0.3	2.8
Fuel Eff. (mpg)	45.6	35.6	35.7	42.6	26.0	31.3	35.2
HC Emissions (g)	1	10	13	2	2	4	31
CO Emissions (g)	32	249	303	42	48	89	763
NOx Emissions (g)	4	31	44	6	6	11	102
Vehicles Entered	92	329	242	45	52	81	841
Vehicles Exited	92	329	243	45	52	81	842
Hourly Exit Rate	92	329	243	45	52	81	842
Input Volume	91	333	252	42	55	79	852
% of Volume	101	99	96	108	95	103	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							971
Occupancy (veh)	0	1	1	0	1	1	4

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2: Center Road/Access #4 & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.2	0.2	3.3	0.3	0.2	7.3	2.8	0.1	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.1	1.6	0.1	0.1	5.6	2.8	0.0	0.2
Total Stops	0	0	3	1	0	12	12	0	28
Stop/Veh	0.00	0.00	0.38	0.00	0.00	1.00	1.00	0.00	0.04
Travel Dist (mi)	22.2	0.7	0.6	20.0	1.6	1.2	1.2	1.0	48.6
Travel Time (hr)	0.7	0.0	0.0	0.7	0.1	0.1	0.1	0.1	1.7
Avg Speed (mph)	33	22	19	30	22	18	22	10	28
Fuel Used (gal)	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.7
Fuel Eff. (mpg)	32.3	55.9	32.2	25.1	34.4	40.6	40.9	21.8	29.1
HC Emissions (g)	14	0	0	13	1	0	0	0	29
CO Emissions (g)	322	4	6	446	36	7	6	3	831
NOx Emissions (g)	43	0	1	42	4	1	1	0	91
Vehicles Entered	379	12	8	264	21	12	12	18	726
Vehicles Exited	379	12	8	264	21	12	12	18	726
Hourly Exit Rate	379	12	8	264	21	12	12	18	726
Input Volume	388	10	11	267	19	12	13	20	741
% of Volume	98	117	71	99	112	98	91	91	98
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0
Density (ft/veh)									1324
Occupancy (veh)	1	0	0	1	0	0	0	0	2

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total Delay (hr)	0.1	0.0	0.0	0.0	0.2	0.1	0.4
Total Del/Veh (s)	3.0	0.2	0.5	0.5	8.7	4.1	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.2
Stop Del/Veh (s)	1.2	0.0	0.0	0.0	6.9	3.7	1.1
Total Stops	22	1	0	1	81	61	166
Stop/Veh	0.30	0.00	0.00	0.02	1.00	1.00	0.20
Travel Dist (mi)	5.5	24.0	49.2	12.4	4.7	3.5	99.2
Travel Time (hr)	0.3	0.7	1.4	0.4	0.4	0.3	3.5
Avg Speed (mph)	21	33	34	30	11	14	28
Fuel Used (gal)	0.1	0.7	1.4	0.3	0.2	0.1	2.9
Fuel Eff. (mpg)	41.6	33.0	35.1	40.4	26.1	28.4	34.6
HC Emissions (g)	2	16	15	3	2	1	40
CO Emissions (g)	52	368	404	82	66	39	1011
NOx Emissions (g)	7	49	50	10	7	4	128
Vehicles Entered	74	319	230	58	81	61	823
Vehicles Exited	73	319	230	58	81	61	822
Hourly Exit Rate	73	319	230	58	81	61	822
Input Volume	75	328	232	52	80	64	830
% of Volume	98	97	99	112	101	95	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1053
Occupancy (veh)	0	1	1	0	0	0	4

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	5.5	2.5	4.0	7.0	2.6	4.6	4.5	2.1	4.3	6.7	1.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.0	2.2	2.6	2.3	2.5	2.5	2.7	1.7	2.0	2.5	2.5	1.6
Total Stops	2	6	4	23	6	5	5	41	21	5	25	2
Stop/Veh	1.00	0.86	1.00	1.00	1.00	1.00	1.00	0.65	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.1	0.4	0.3	3.0	0.8	0.7	0.4	4.4	1.7	0.3	1.8	0.1
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0
Avg Speed (mph)	18	17	18	24	23	25	19	21	21	18	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	41.6	36.5	39.3	41.7	38.2	43.4	51.3	48.3	48.8	44.2	53.8	37.4
HC Emissions (g)	0	0	0	2	2	1	0	1	0	0	0	0
CO Emissions (g)	1	4	2	37	34	21	1	26	6	2	10	1
NOx Emissions (g)	0	0	0	5	5	3	0	3	1	0	1	0
Vehicles Entered	2	7	4	23	6	5	5	62	21	5	25	2
Vehicles Exited	2	7	4	23	6	5	5	63	21	5	25	2
Hourly Exit Rate	2	7	4	23	6	5	5	63	21	5	25	2
Input Volume	2	7	5	24	5	4	5	60	19	5	26	1
% of Volume	100	100	76	96	114	125	95	105	112	95	96	200
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.2
Total Del/Veh (s)	4.4
Stop Delay (hr)	0.1
Stop Del/Veh (s)	2.1
Total Stops	145
Stop/Veh	0.86
Travel Dist (mi)	14.0
Travel Time (hr)	0.7
Avg Speed (mph)	21
Fuel Used (gal)	0.3
Fuel Eff. (mpg)	45.6
HC Emissions (g)	7
CO Emissions (g)	144
NOx Emissions (g)	19
Vehicles Entered	167
Vehicles Exited	168
Hourly Exit Rate	168
Input Volume	164
% of Volume	103
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	2783
Occupancy (veh)	1

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5: Access #1 & Mills Street Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	1.9	1.8	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.3	2.8	0.5
Total Stops	0	0	1	1
Stop/Veh	0.00	0.00	0.33	0.04
Travel Dist (mi)	0.7	0.9	0.2	1.7
Travel Time (hr)	0.0	0.0	0.0	0.1
Avg Speed (mph)	35	23	9	22
Fuel Used (gal)	0.0	0.1	0.0	0.1
Fuel Eff. (mpg)	35.5	11.6	22.3	16.8
HC Emissions (g)	0	5	0	5
CO Emissions (g)	4	120	1	124
NOx Emissions (g)	0	13	0	13
Vehicles Entered	9	14	3	26
Vehicles Exited	9	14	3	26
Hourly Exit Rate	9	14	3	26
Input Volume	10	12	4	27
% of Volume	88	112	75	97
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Density (ft/veh)				
Occupancy (veh)	0	0	0	0

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6: Bernard Street & Access #2 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.3	1.6	1.7	0.2	1.4	1.0	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.2	2.5	0.3	0.0	0.2	0.2	0.2
Total Stops	1	4	0	0	0	0	5
Stop/Veh	0.50	0.50	0.00	0.00	0.00	0.00	0.03
Travel Dist (mi)	0.1	0.5	0.4	5.2	4.9	0.4	11.5
Travel Time (hr)	0.0	0.1	0.0	0.2	0.2	0.0	0.5
Avg Speed (mph)	9	9	21	33	26	20	25
Fuel Used (gal)	0.0	0.0	0.0	0.2	0.4	0.0	0.6
Fuel Eff. (mpg)	21.0	22.2	42.5	29.4	13.4	22.7	19.3
HC Emissions (g)	0	0	0	3	11	0	13
CO Emissions (g)	0	2	2	83	380	12	480
NOx Emissions (g)	0	0	0	8	31	1	40
Vehicles Entered	2	8	7	86	74	6	183
Vehicles Exited	2	8	7	86	74	6	183
Hourly Exit Rate	2	8	7	86	74	6	183
Input Volume	2	6	6	82	76	7	180
% of Volume	100	128	112	105	98	83	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							
Occupancy (veh)	0	0	0	0	0	0	0

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7: Bernard Street & Access #3 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.3	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	3.2	1.9	2.0	0.4	0.2	0.0	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	4.3	2.8	0.3	0.1	0.0	0.0	0.7
Total Stops	1	26	2	0	0	0	29
Stop/Veh	0.50	0.46	0.06	0.00	0.00	0.00	0.11
Travel Dist (mi)	0.1	3.4	1.9	5.7	4.8	0.1	16.2
Travel Time (hr)	0.0	0.4	0.1	0.3	0.2	0.0	0.9
Avg Speed (mph)	9	9	16	21	32	22	17
Fuel Used (gal)	0.0	0.2	0.1	0.5	0.2	0.0	0.9
Fuel Eff. (mpg)	18.5	20.8	18.2	12.0	31.9	51.0	17.8
HC Emissions (g)	0	1	1	10	3	0	15
CO Emissions (g)	1	23	49	424	78	0	574
NOx Emissions (g)	0	3	5	30	10	0	47
Vehicles Entered	2	56	31	100	80	2	271
Vehicles Exited	2	56	31	100	80	2	271
Hourly Exit Rate	2	56	31	100	80	2	271
Input Volume	3	55	33	94	80	2	267
% of Volume	67	102	93	107	100	100	102
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1032
Occupancy (veh)	0	0	0	0	0	0	1

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8: E Whitaker Mill Road & Access #5 Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Total Del/Veh (s)	3.5	0.9	0.4	0.5	4.6	2.0	0.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	1.0	0.1	0.3	0.4	5.4	3.0	0.3
Total Stops	4	0	8	0	8	4	24
Stop/Veh	0.22	0.00	0.03	0.00	0.50	0.50	0.03
Travel Dist (mi)	3.1	61.8	16.1	0.8	0.9	0.5	83.1
Travel Time (hr)	0.1	1.9	0.5	0.0	0.1	0.1	2.8
Avg Speed (mph)	26	32	31	21	8	9	30
Fuel Used (gal)	0.1	2.1	0.6	0.0	0.0	0.0	2.9
Fuel Eff. (mpg)	30.5	29.5	28.1	45.4	19.8	21.2	29.2
HC Emissions (g)	1	37	8	0	0	0	46
CO Emissions (g)	40	1001	256	4	3	2	1307
NOx Emissions (g)	4	119	26	0	0	0	149
Vehicles Entered	18	370	276	13	16	8	701
Vehicles Exited	18	371	276	13	15	8	701
Hourly Exit Rate	18	371	276	13	15	8	701
Input Volume	18	378	284	11	16	7	714
% of Volume	101	98	97	116	95	110	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							987
Occupancy (veh)	0	2	1	0	0	0	3

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Total Network Performance

Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.5
Total Delay (hr)	2.1
Total Del/Veh (s)	6.6
Stop Delay (hr)	1.1
Stop Del/Veh (s)	3.6
Total Stops	633
Stop/Veh	0.55
Travel Dist (mi)	600.3
Travel Time (hr)	22.1
Avg Speed (mph)	27
Fuel Used (gal)	20.0
Fuel Eff. (mpg)	30.1
HC Emissions (g)	322
CO Emissions (g)	8872
NOx Emissions (g)	1018
Vehicles Entered	1124
Vehicles Exited	1131
Hourly Exit Rate	1131
Input Volume	5602
% of Volume	20
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	857
Occupancy (veh)	22

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.3	10.9	0.1	35
Pine Drive	1	2.3	10.2	0.1	28
Access #5	8	0.8	18.0	0.2	33
Center Road	2	0.2	6.3	0.1	34
Bernard Street	3	0.2	8.1	0.1	33
Total		3.8	53.5	0.5	33

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.5	22.6	0.2	35
Access #4	2	0.3	8.2	0.1	33
Access #5	8	0.1	6.2	0.1	34
Pine Drive	1	2.0	19.2	0.2	31
	12	0.8	8.8	0.1	32
Total		3.7	64.9	0.6	33

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #3	7	0.2	10.1	0.1	24
Access #2	6	0.2	6.5	0.1	36
Mills Street	4	4.5	11.8	0.1	25
Total		4.9	28.4	0.2	27

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.7	14.2	0.1	19
Access #2	6	1.7	7.8	0.1	39
Access #3	7	0.2	6.6	0.1	35
E Whitaker Mill Road	3	8.5	16.5	0.1	14
Total		17.1	45.1	0.3	23

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Arterial Level of Service: EB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #1	5	0.0	7.6	0.1	36
Bernard Street	4	5.5	11.9	0.1	21
Total		5.5	19.6	0.1	27

Arterial Level of Service: WB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	4	7.0	20.4	0.1	24
Access #1	5	3.3	9.8	0.1	26
Total		10.3	30.2	0.2	25

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	WB	SB	SB
Directions Served	LT	T	T	TR	L	R
Maximum Queue (ft)	104	63	73	44	78	75
Average Queue (ft)	41	11	21	7	36	33
95th Queue (ft)	86	43	61	28	68	60
Link Distance (ft)	349	349	830	830	685	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						250
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 2: Center Road/Access #4 & E Whitaker Mill Road

Movement	EB	WB	WB	NB	SB
Directions Served	TR	LT	TR	LTR	R
Maximum Queue (ft)	3	35	5	38	14
Average Queue (ft)	0	3	0	16	0
95th Queue (ft)	3	18	4	39	7
Link Distance (ft)	255	344	344	525	313
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	TR	LR
Maximum Queue (ft)	60	8	12	8	14	91
Average Queue (ft)	17	0	0	0	1	45
95th Queue (ft)	48	6	6	5	7	76
Link Distance (ft)		344	344	1126	1126	275
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	125					
Storage Blk Time (%)						
Queuing Penalty (veh)						

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	69	53	54
Average Queue (ft)	10	25	27	21
95th Queue (ft)	33	58	46	49
Link Distance (ft)	319	694	377	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access #1 & Mills Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	19
Link Distance (ft)	261
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Bernard Street & Access #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	33	12
Average Queue (ft)	8	1
95th Queue (ft)	31	7
Link Distance (ft)	319	283
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 7: Bernard Street & Access #3

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	65	35
Average Queue (ft)	29	2
95th Queue (ft)	53	15
Link Distance (ft)	324	275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: E Whitaker Mill Road & Access #5

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	40	41
Average Queue (ft)	4	18
95th Queue (ft)	23	44
Link Distance (ft)	830	294
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	82.7	8.2	83.1
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	42	41	42
Cycles @ Minimum (%)	0	38	0
Cycles Maxed Out (%)	58	0	58
Cycles with Peds (%)	0	0	16

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023)\E Whitaker Mill - AM - WB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - AM - WB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	12	No	None	N/A	N/A	N/A	No
Center Road	0	0.508685428104	4	4	3	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.52472136	4	4	0	14	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6033	308	4	35	40	None	No	N/A
2 (to Center Road)	1200	5678	267	4	35	40	None	No	N/A
3 (to Bernard Street)	400	5600	272	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	342	5335	0.173	10.31	B	0.00	15.45	D
2 (to Center Road)	297	4276	0.136	10.09	B	0.00	26.08	B
3 (to Bernard Street)	302	5584	0.103	8.96	A	0.00	15.45	D

Arterial Length	0.4205	Weighted g/C	0.44	FFS Delay	40.55	Threshold Delay	0.00	Auto Speed	20.10	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.43	C	N/A	N/A				1.99	A	0.00	F
2 (to Center Road)	3.53	D	N/A	N/A				2.19	B	0.00	F
3 (to Bernard Street)	3.26	C	N/A	N/A				1.94	A	0.00	F
	Bicycle LOS	3.46	C				Pedestrian LOS	2.10	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023)\E Whitaker Mill - PM - EB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - PM - EB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	21	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.375352471604	4	4	0	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.3292525965	4	4	19	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	8367	424	4	35	40	None	No	N/A
2 (to Center Road)	1200	7678	398	4	35	40	None	No	N/A
3 (to Bernard Street)	400	7600	400	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	471	4311	0.295	11.02	B	0.00	14.96	D
2 (to Center Road)	442	5345	0.220	20.36	C	0.00	19.86	C
3 (to Bernard Street)	444	4511	0.299	25.23	C	0.00	8.57	F

Arterial Length	0.4205	Weighted g/C	0.35	FFS Delay	67.88	Threshold Delay	0.00	Auto Speed	14.74	Auto LOS	D

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.77	D	N/A	N/A				2.06	B	0.00	F
2 (to Center Road)	3.96	D	N/A	N/A				2.27	B	0.00	F
3 (to Bernard Street)	3.63	D	N/A	N/A				2.02	B	0.00	F
	Bicycle LOS	3.86	D				Pedestrian LOS	2.18	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023)\E Whitaker Mill - PM - WB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - PM - WB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	0	14	No	None	N/A	N/A	N/A	No
Center Road	0	0.416853744	4	4	4	6	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.48923604	4	4	0	18	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	8367	329	4	35	40	None	No	N/A
2 (to Center Road)	1200	7000	293	4	35	40	None	No	N/A
3 (to Bernard Street)	400	6200	293	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	366	5329	0.185	10.37	B	0.00	15.41	D
2 (to Center Road)	326	4267	0.183	16.78	B	0.00	21.67	C
3 (to Bernard Street)	326	5568	0.120	11.21	B	0.00	13.90	D

Arterial Length	0.4205	Weighted g/C	0.41	FFS Delay	49.55	Threshold Delay	0.00	Auto Speed	17.95	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.50	C	N/A	N/A				2.00	B	0.00	F
2 (to Center Road)	3.62	D	N/A	N/A				2.21	B	0.00	F
3 (to Bernard Street)	3.33	C	N/A	N/A				1.95	A	0.00	F
	Bicycle LOS	3.54	D			Pedestrian LOS	2.12	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023)\E Whitaker Mill - AM - EB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - AM - EB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	4	22	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.554001	4	4	0	5	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.509956314	4	4	14	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6033	235	4	35	40	None	No	N/A
2 (to Center Road)	1200	5000	244	4	35	40	None	No	N/A
3 (to Bernard Street)	400	5000	243	4	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	261	4299	0.164	10.31	B	0.00	15.45	D
2 (to Center Road)	271	5338	0.092	7.28	A	0.00	28.52	A
3 (to Bernard Street)	270	4511	0.117	9.92	A	0.00	14.75	D

Arterial Length	0.4205	Weighted g/C	0.45	FFS Delay	38.67	Threshold Delay	0.00	Auto Speed	20.61	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.20	C	N/A	N/A				1.94	A	0.00	F
2 (to Center Road)	3.45	C	N/A	N/A				2.18	B	0.00	F
3 (to Bernard Street)	3.17	C	N/A	N/A				1.92	A	0.00	F
	Bicycle LOS	3.34	C				Pedestrian LOS	2.08	B	Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

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Appendix H
Build (2023) with Road Diet Analyses

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	183	229	30	38	79
Future Volume (vph)	52	183	229	30	38	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	200			0	0	250
Storage Lanes	1			0	1	1
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		1.00		1.00	
Frt			0.984			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1737	1828	1739	0	1752	1568
Flt Permitted	0.584				0.950	
Satd. Flow (perm)	1059	1828	1739	0	1747	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			17			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	6			6	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	5%	5%	3%	3%
Adj. Flow (vph)	58	203	254	33	42	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	203	287	0	42	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)	0.0	-0.1	0.3		0.4	0.4
Total Lost Time (s)	5.1	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)	46.4	46.5	46.5		6.8	6.8
Actuated g/C Ratio	0.77	0.78	0.78		0.11	0.11
v/c Ratio	0.07	0.14	0.21		0.21	0.35
Control Delay	2.9	2.9	3.0		26.8	10.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	2.9	2.9	3.0		26.8	10.8
LOS	A	A	A		C	B
Approach Delay		2.9	3.0		16.0	
Approach LOS		A	A		B	
Queue Length 50th (ft)	5	17	24		14	0
Queue Length 95th (ft)	13	35	47		39	34
Internal Link Dist (ft)		333	803		644	
Turn Bay Length (ft)	200					250
Base Capacity (vph)	819	1416	1351		525	532
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.07	0.14	0.21		0.08	0.17

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 40.7%	ICU Level of Service A
Analysis Period (min) 15	

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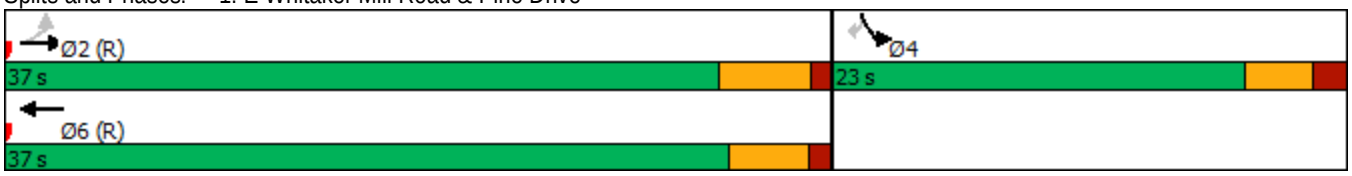
Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	232	12	7	251	9	5	0	8	0	0	7
Future Volume (vph)	0	232	12	7	251	9	5	0	8	0	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.994			0.995			0.919				0.865
Flt Protected				0.950				0.980				
Satd. Flow (prot)	0	1782	0	1703	1783	0	0	1450	0	0	0	1611
Flt Permitted				0.950				0.980				
Satd. Flow (perm)	0	1782	0	1703	1783	0	0	1450	0	0	0	1611
Link Speed (mph)		35			35			35			10	
Link Distance (ft)		311			394			574			357	
Travel Time (s)		6.1			7.7			11.2			24.3	
Confl. Peds. (#/hr)			2	2			2					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	18%	18%	18%	2%	2%	2%
Adj. Flow (vph)	0	258	13	8	279	10	6	0	9	0	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	271	0	8	289	0	0	15	0	0	0	8
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 30.4%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	232	12	7	251	9	5	0	8	0	0	7
Future Vol, veh/h	0	232	12	7	251	9	5	0	8	0	0	7
Conflicting Peds, #/hr	0	0	2	2	0	0	2	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	100	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	6	6	18	18	18	2	2	2
Mvmt Flow	0	258	13	8	279	10	6	0	9	0	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	273	0	0	569	572	267	-	-	286
Stage 1	-	-	-	-	-	-	267	267	-	-	-	-
Stage 2	-	-	-	-	-	-	302	305	-	-	-	-
Critical Hdwy	-	-	-	4.16	-	-	7.28	6.68	6.38	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.28	5.68	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.28	5.68	-	-	-	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.662	4.162	3.462	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	1267	-	-	410	409	735	0	0	753
Stage 1	0	-	-	-	-	-	705	660	-	0	0	-
Stage 2	0	-	-	-	-	-	674	634	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1265	-	-	402	406	734	-	-	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	495	479	-	-	-	-
Stage 1	-	-	-	-	-	-	705	659	-	-	-	-
Stage 2	-	-	-	-	-	-	662	630	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	11	9.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	619	-	-	1265	-	-	752
HCM Lane V/C Ratio	0.023	-	-	0.006	-	-	0.01
HCM Control Delay (s)	11	-	-	7.9	-	-	9.8
HCM Lane LOS	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	34	209	234	38	21	34
Future Volume (vph)	34	209	234	38	21	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.981		0.916	
Flt Protected	0.950				0.981	
Satd. Flow (prot)	1671	1759	1758	0	1596	0
Flt Permitted	0.950				0.981	
Satd. Flow (perm)	1671	1759	1758	0	1596	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	10			10	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	6%	6%	7%	7%
Adj. Flow (vph)	38	232	260	42	23	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	232	302	0	61	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 31.4%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	209	234	38	21	34
Future Vol, veh/h	34	209	234	38	21	34
Conflicting Peds, #/hr	10	0	0	10	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	6	6	7	7
Mvmt Flow	38	232	260	42	23	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	312	0	-	0	601	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	310	-
Critical Hdwy	4.18	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.272	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	1215	-	-	-	455	736
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1203	-	-	-	432	729
Mov Cap-2 Maneuver	-	-	-	-	526	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	726	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1203	-	-	-	635
HCM Lane V/C Ratio	0.031	-	-	-	0.096
HCM Control Delay (s)	8.1	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	6	2	14	1	12	2	7	5	1	19	2
Future Volume (vph)	1	6	2	14	1	12	2	7	5	1	19	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.973			0.941			0.949			0.989	
Flt Protected		0.995			0.974			0.994			0.998	
Satd. Flow (prot)	0	1803	0	0	1707	0	0	1757	0	0	1786	0
Flt Permitted		0.995			0.974			0.994			0.998	
Satd. Flow (perm)	0	1803	0	0	1707	0	0	1757	0	0	1786	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	1					1	2		4	4		2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	1	7	2	16	1	13	2	8	6	1	21	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	0	30	0	0	16	0	0	24	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.5%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	6	2	14	1	12	2	7	5	1	19	2
Future Vol, veh/h	1	6	2	14	1	12	2	7	5	1	19	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	5	5	5
Mvmt Flow	1	7	2	16	1	13	2	8	6	1	21	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7	7	6.9	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	11%	52%	5%
Vol Thru, %	50%	67%	4%	86%
Vol Right, %	36%	22%	44%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	9	27	22
LT Vol	2	1	14	1
Through Vol	7	6	1	19
RT Vol	5	2	12	2
Lane Flow Rate	16	10	30	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.017	0.011	0.032	0.027
Departure Headway (Hd)	3.837	3.916	3.849	4.022
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	934	915	931	892
Service Time	1.855	1.936	1.866	2.038
HCM Lane V/C Ratio	0.017	0.011	0.032	0.027
HCM Control Delay	6.9	7	7	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.1

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	12	0	0	4	0	3
Future Volume (vph)	12	0	0	4	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1611	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1611	0
Link Speed (mph)	35			35	10	
Link Distance (ft)	401			370	290	
Travel Time (s)	7.8			7.2	19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	0	0	4	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	0	4	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	12	0	0	4	0	3
Future Vol, veh/h	12	0	0	4	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	0	0	4	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	13	0	17	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	4	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1606	-	1001	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1019	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	1001	1067
Mov Cap-2 Maneuver	-	-	-	-	1001	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1019	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1067	-	-	1606	-
HCM Lane V/C Ratio	0.003	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	5	3	21	35	4
Future Volume (vph)	1	5	3	21	35	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.884				0.987	
Flt Protected	0.993			0.994		
Satd. Flow (prot)	1635	0	0	1852	1786	0
Flt Permitted	0.993			0.994		
Satd. Flow (perm)	1635	0	0	1852	1786	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	348			339	440	
Travel Time (s)	23.7			6.6	8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%
Adj. Flow (vph)	1	6	3	23	39	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	7	0	0	26	43	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.6%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	3	21	35	4
Future Vol, veh/h	1	5	3	21	35	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	1	6	3	23	39	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	70	41	43	0	-	0
Stage 1	41	-	-	-	-	-
Stage 2	29	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	934	1030	1566	-	-	-
Stage 1	981	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	932	1030	1566	-	-	-
Mov Cap-2 Maneuver	932	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1566	-	1012	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	45	22	34	3
Future Volume (vph)	0	14	45	22	34	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.865				0.990	
Flt Protected				0.967		
Satd. Flow (prot)	1611	0	0	1801	1791	0
Flt Permitted				0.967		
Satd. Flow (perm)	1611	0	0	1801	1791	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	353			348	339	
Travel Time (s)	24.1			6.8	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	5%	5%
Adj. Flow (vph)	0	16	50	24	38	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	0	74	41	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	45	22	34	3
Future Vol, veh/h	0	14	45	22	34	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	5	5
Mvmt Flow	0	16	50	24	38	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	164	40	41	0	-	0
Stage 1	40	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	827	1031	1568	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	801	1031	1568	-	-	-
Mov Cap-2 Maneuver	801	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	902	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1568	-	1031	-	-
HCM Lane V/C Ratio	0.032	-	0.015	-	-
HCM Control Delay (s)	7.4	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	7	235	257	7	12	8
Future Volume (vph)	7	235	257	7	12	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.945	
Flt Protected	0.950				0.971	
Satd. Flow (prot)	1703	1792	1785	0	1709	0
Flt Permitted	0.950				0.971	
Satd. Flow (perm)	1703	1792	1785	0	1709	0
Link Speed (mph)		35	35		10	
Link Distance (ft)		883	311		335	
Travel Time (s)		17.2	6.1		22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	2%	2%
Adj. Flow (vph)	8	261	286	8	13	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	261	294	0	22	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	235	257	7	12	8
Future Vol, veh/h	7	235	257	7	12	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	8	261	286	8	13	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	294	0	-	0	567	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	277	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1245	-	-	-	485	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	770	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1245	-	-	-	482	749
Mov Cap-2 Maneuver	-	-	-	-	568	-
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	770	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	629
HCM Lane V/C Ratio	0.006	-	-	-	0.035
HCM Control Delay (s)	7.9	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	91	333	250	42	55	79
Future Volume (vph)	91	333	250	42	55	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Grade (%)		-4%	4%		0%	
Storage Length (ft)	200			0	0	250
Storage Lanes	1			0	1	1
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99		0.99		0.99	
Frt			0.980			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	1882	1778	0	1752	1568
Flt Permitted	0.564				0.950	
Satd. Flow (perm)	1047	1882	1778	0	1741	1568
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			22			88
Link Speed (mph)		35	35		25	
Link Distance (ft)		413	883		724	
Travel Time (s)		8.0	17.2		19.7	
Confl. Peds. (#/hr)	11			11	4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%
Adj. Flow (vph)	101	370	278	47	61	88
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	370	325	0	61	88
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	0.97	0.97	1.03	1.03	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	1	1		1	1
Detector Template	Left					
Leading Detector (ft)	20	91	105		40	40
Trailing Detector (ft)	0	85	90		0	0
Detector 1 Position(ft)	0	85	90		0	0
Detector 1 Size(ft)	20	6	15		40	40
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		3.0	15.0
Turn Type	Perm	NA	NA		Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2					4
Detector Phase	2	2	6		4	4

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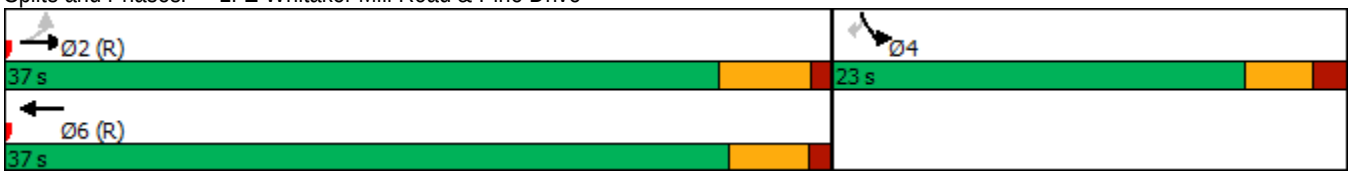
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0		7.0	7.0
Minimum Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (s)	37.0	37.0	37.0		23.0	23.0
Total Split (%)	61.7%	61.7%	61.7%		38.3%	38.3%
Maximum Green (s)	31.9	31.9	32.3		18.4	18.4
Yellow Time (s)	4.1	4.1	3.6		3.0	3.0
All-Red Time (s)	1.0	1.0	1.1		1.6	1.6
Lost Time Adjust (s)	0.0	-0.1	0.3		0.4	0.4
Total Lost Time (s)	5.1	5.0	5.0		5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		2.0	2.0
Recall Mode	C-Min	C-Min	C-Min		None	None
Walk Time (s)			5.0		5.0	5.0
Flash Dont Walk (s)			10.0		13.0	13.0
Pedestrian Calls (#/hr)			0		0	0
Act Effct Green (s)	46.1	46.2	46.2		7.1	7.1
Actuated g/C Ratio	0.77	0.77	0.77		0.12	0.12
v/c Ratio	0.13	0.26	0.24		0.29	0.33
Control Delay	3.4	3.5	3.2		27.7	10.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	3.4	3.5	3.2		27.7	10.3
LOS	A	A	A		C	B
Approach Delay		3.4	3.2		17.5	
Approach LOS		A	A		B	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 44 (73%), Referenced to phase 2:EBTL and 6:WBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 42.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: E Whitaker Mill Road & Pine Drive



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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	388	10	11	263	19	12	0	13	0	0	20
Future Volume (vph)	0	388	10	11	263	19	12	0	13	0	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Taper Length (ft)	25			100			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.997			0.990			0.930				0.865
Flt Protected				0.950				0.976				
Satd. Flow (prot)	0	1804	0	1752	1826	0	0	1691	0	0	0	1611
Flt Permitted				0.950				0.976				
Satd. Flow (perm)	0	1804	0	1752	1826	0	0	1691	0	0	0	1611
Link Speed (mph)		35			35			35			10	
Link Distance (ft)		311			394			574			357	
Travel Time (s)		6.1			7.7			11.2			24.3	
Confl. Peds. (#/hr)			8	8			2					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	0	431	11	12	292	21	13	0	14	0	0	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	442	0	12	313	0	0	27	0	0	0	22
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 31.7%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	388	10	11	263	19	12	0	13	0	0	20
Future Vol, veh/h	0	388	10	11	263	19	12	0	13	0	0	20
Conflicting Peds, #/hr	0	0	8	8	0	0	2	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	100	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	5	5	5	3	3	3	2	2	2	2	2	2
Mvmt Flow	0	431	11	12	292	21	13	0	14	0	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	450	0	0	774	782	445	-	-	305
Stage 1	-	-	-	-	-	-	445	445	-	-	-	-
Stage 2	-	-	-	-	-	-	329	337	-	-	-	-
Critical Hdwy	-	-	-	4.13	-	-	7.12	6.52	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	-	-	-	2.227	-	-	3.518	4.018	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	1105	-	-	316	326	613	0	0	735
Stage 1	0	-	-	-	-	-	592	575	-	0	0	-
Stage 2	0	-	-	-	-	-	684	641	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	1097	-	-	301	320	608	-	-	734
Mov Cap-2 Maneuver	-	-	-	-	-	-	421	419	-	-	-	-
Stage 1	-	-	-	-	-	-	592	570	-	-	-	-
Stage 2	-	-	-	-	-	-	655	634	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.3	12.6	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	501	-	-	1097	-	-	734
HCM Lane V/C Ratio	0.055	-	-	0.011	-	-	0.03
HCM Control Delay (s)	12.6	-	-	8.3	-	-	10.1
HCM Lane LOS	B	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.1

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	75	325	232	52	80	64
Future Volume (vph)	75	325	232	52	80	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.975		0.940	
Flt Protected	0.950				0.973	
Satd. Flow (prot)	1719	1810	1816	0	1639	0
Flt Permitted	0.950				0.973	
Satd. Flow (perm)	1719	1810	1816	0	1639	0
Link Speed (mph)		35	35		35	
Link Distance (ft)		394	1169		348	
Travel Time (s)		7.7	22.8		6.8	
Confl. Peds. (#/hr)	15			15	2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	2%	2%	6%	6%
Adj. Flow (vph)	83	361	258	58	89	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	83	361	316	0	160	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		-4	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	75	325	232	52	80	64
Future Vol, veh/h	75	325	232	52	80	64
Conflicting Peds, #/hr	15	0	0	15	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	125	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	2	2	6	6
Mvmt Flow	83	361	258	58	89	71

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	331	0	-	0	831	302
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	529	-
Critical Hdwy	4.15	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.245	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1212	-	-	-	334	728
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1195	-	-	-	302	718
Mov Cap-2 Maneuver	-	-	-	-	420	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1195	-	-	-	515
HCM Lane V/C Ratio	0.07	-	-	-	0.311
HCM Control Delay (s)	8.2	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.3

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	6	5	24	5	4	5	42	19	5	26	1
Future Volume (vph)	2	6	5	24	5	4	5	42	19	5	26	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946			0.985			0.962			0.996	
Flt Protected		0.993			0.965			0.996			0.992	
Satd. Flow (prot)	0	1750	0	0	1584	0	0	1785	0	0	1840	0
Flt Permitted		0.993			0.965			0.996			0.992	
Satd. Flow (perm)	0	1750	0	0	1584	0	0	1785	0	0	1840	0
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		370			723			440			401	
Travel Time (s)		7.2			14.1			8.6			7.8	
Confl. Peds. (#/hr)	2		2	2		2	3		6	6		3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	14%	14%	14%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	2	7	6	27	6	4	6	47	21	6	29	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	37	0	0	74	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	6	5	24	5	4	5	42	19	5	26	1
Future Vol, veh/h	2	6	5	24	5	4	5	42	19	5	26	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	14	14	14	2	2	2	2	2	2
Mvmt Flow	2	7	6	27	6	4	6	47	21	6	29	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.1	7.7	7.3	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	15%	73%	16%
Vol Thru, %	64%	46%	15%	81%
Vol Right, %	29%	38%	12%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	13	33	32
LT Vol	5	2	24	5
Through Vol	42	6	5	26
RT Vol	19	5	4	1
Lane Flow Rate	73	14	37	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.016	0.045	0.04
Departure Headway (Hd)	3.893	3.951	4.411	4.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	917	899	808	871
Service Time	1.93	2.005	2.457	2.134
HCM Lane V/C Ratio	0.08	0.016	0.046	0.041
HCM Control Delay	7.3	7.1	7.7	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0	0.1	0.1

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	10	0	0	11	0	4
Future Volume (vph)	10	0	0	11	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected						
Satd. Flow (prot)	1863	0	0	1667	1611	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1667	1611	0
Link Speed (mph)	35			35	10	
Link Distance (ft)	401			370	290	
Travel Time (s)	7.8			7.2	19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	14%	14%	2%	2%
Adj. Flow (vph)	11	0	0	12	0	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	11	0	0	12	4	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	10	0	0	11	0	4
Future Vol, veh/h	10	0	0	11	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	14	14	2	2
Mvmt Flow	11	0	0	12	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	23	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.24	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.326	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1533	-	993	1070
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1533	-	993	1070
Mov Cap-2 Maneuver	-	-	-	-	993	-
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1070	-	-	1533	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.4	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	2	6	6	82	76	7
Future Volume (vph)	2	6	6	82	76	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.895				0.988	
Flt Protected	0.989			0.996		
Satd. Flow (prot)	1649	0	0	1855	1771	0
Flt Permitted	0.989			0.996		
Satd. Flow (perm)	1649	0	0	1855	1771	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	348			339	440	
Travel Time (s)	23.7			6.6	8.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Adj. Flow (vph)	2	7	7	91	84	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	9	0	0	98	92	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.3%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	6	82	76	7
Future Vol, veh/h	2	6	6	82	76	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	2	7	7	91	84	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	193	88	92	0	-	0
Stage 1	88	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	796	970	1503	-	-	-
Stage 1	935	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	792	970	1503	-	-	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	919	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1503	-	918	-	-
HCM Lane V/C Ratio	0.004	-	0.01	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	55	33	76	72	2
Future Volume (vph)	3	55	33	76	72	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.871				0.997	
Flt Protected	0.998			0.985		
Satd. Flow (prot)	1619	0	0	1835	1787	0
Flt Permitted	0.998			0.985		
Satd. Flow (perm)	1619	0	0	1835	1787	0
Link Speed (mph)	10			35	35	
Link Distance (ft)	353			348	339	
Travel Time (s)	24.1			6.8	6.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	6%	6%
Adj. Flow (vph)	3	61	37	84	80	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	64	0	0	121	82	0
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.7%	ICU Level of Service A
Analysis Period (min) 15	

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Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	55	33	76	72	2
Future Vol, veh/h	3	55	33	76	72	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	6	6
Mvmt Flow	3	61	37	84	80	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	239	81	82	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	749	979	1515	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	730	979	1515	-	-	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	871	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	2.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1515	-	962	-	-
HCM Lane V/C Ratio	0.024	-	0.067	-	-
HCM Control Delay (s)	7.4	0	9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	18	376	284	11	16	7
Future Volume (vph)	18	376	284	11	16	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	100				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.958	
Flt Protected	0.950				0.967	
Satd. Flow (prot)	1719	1810	1835	0	1726	0
Flt Permitted	0.950				0.967	
Satd. Flow (perm)	1719	1810	1835	0	1726	0
Link Speed (mph)		35	35		10	
Link Distance (ft)		883	311		335	
Travel Time (s)		17.2	6.1		22.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	3%	3%	2%	2%
Adj. Flow (vph)	20	418	316	12	18	8
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	418	328	0	26	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.8%		ICU Level of Service A	
Analysis Period (min) 15			

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Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	376	284	11	16	7
Future Vol, veh/h	18	376	284	11	16	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	5	5	3	3	2	2
Mvmt Flow	20	418	316	12	18	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	328	0	-	0	780	322
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	4.15	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.245	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1215	-	-	-	364	719
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	637	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1215	-	-	-	358	719
Mov Cap-2 Maneuver	-	-	-	-	471	-
Stage 1	-	-	-	-	723	-
Stage 2	-	-	-	-	637	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1215	-	-	-	526
HCM Lane V/C Ratio	0.016	-	-	-	0.049
HCM Control Delay (s)	8	-	-	-	12.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	6:50	6:50	6:50	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	790	795	810	792	784	824	828
Vehs Exited	789	799	799	788	792	823	840
Starting Vehs	16	18	6	16	18	20	21
Ending Vehs	17	14	17	20	10	21	9
Denied Entry Before	0	0	0	0	0	1	0
Denied Entry After	0	0	0	0	0	1	0
Travel Distance (mi)	415	418	426	420	430	444	455
Travel Time (hr)	15.1	15.5	15.5	15.3	15.5	16.1	16.4
Total Delay (hr)	1.5	1.6	1.4	1.5	1.4	1.6	1.6
Total Stops	332	398	346	368	349	370	344
Fuel Used (gal)	13.5	13.8	13.8	13.7	13.7	14.1	14.6

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	6:50	6:50	6:50	6:50
End Time	8:00	8:00	8:00	8:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	789	747	703	787
Vehs Exited	789	740	711	788
Starting Vehs	13	13	21	12
Ending Vehs	13	20	13	11
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	420	400	380	421
Travel Time (hr)	15.2	14.3	13.6	15.3
Total Delay (hr)	1.5	1.2	1.2	1.4
Total Stops	393	284	308	349
Fuel Used (gal)	13.6	12.7	12.1	13.6

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	194	181	199	189	198	189	221
Vehs Exited	197	191	191	186	197	195	225
Starting Vehs	16	18	6	16	18	20	21
Ending Vehs	13	8	14	19	19	14	17
Denied Entry Before	0	0	0	0	0	1	0
Denied Entry After	1	0	0	0	0	0	0
Travel Distance (mi)	104	96	105	97	107	104	122
Travel Time (hr)	3.8	3.6	3.9	3.5	3.9	3.7	4.5
Total Delay (hr)	0.3	0.4	0.4	0.3	0.3	0.3	0.5
Total Stops	71	93	87	85	88	82	93
Fuel Used (gal)	3.3	3.2	3.4	3.2	3.5	3.3	4.0

Interval #1 Information Grow

Start Time	7:00
End Time	7:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	191	171	166	189
Vehs Exited	190	173	177	193
Starting Vehs	13	13	21	12
Ending Vehs	14	11	10	10
Denied Entry Before	0	0	0	0
Denied Entry After	1	0	0	0
Travel Distance (mi)	105	94	95	103
Travel Time (hr)	3.7	3.3	3.4	3.7
Total Delay (hr)	0.3	0.2	0.3	0.3
Total Stops	79	65	74	81
Fuel Used (gal)	3.3	3.0	3.1	3.3

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Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	231	214	211	222	204	237	210
Vehs Exited	224	206	208	224	202	239	215
Starting Vehs	13	8	14	19	19	14	17
Ending Vehs	20	16	17	17	21	12	12
Denied Entry Before	1	0	0	0	0	0	0
Denied Entry After	1	0	0	0	0	0	0
Travel Distance (mi)	119	113	107	119	109	129	112
Travel Time (hr)	4.4	4.2	3.9	4.3	4.0	4.7	4.0
Total Delay (hr)	0.5	0.4	0.3	0.4	0.4	0.5	0.4
Total Stops	101	106	90	102	94	116	87
Fuel Used (gal)	3.9	3.8	3.5	3.8	3.4	4.2	3.5

Interval #2 Information Peak

Start Time	7:15
End Time	7:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	201	218	192	215
Vehs Exited	204	217	184	214
Starting Vehs	14	11	10	10
Ending Vehs	11	12	18	10
Denied Entry Before	1	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	106	113	101	113
Travel Time (hr)	3.9	4.2	3.6	4.1
Total Delay (hr)	0.4	0.4	0.3	0.4
Total Stops	105	90	84	96
Fuel Used (gal)	3.5	3.7	3.2	3.7

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Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	192	188	189	175	191	210	190
Vehs Exited	196	186	194	184	198	212	188
Starting Vehs	20	16	17	17	21	12	12
Ending Vehs	16	18	12	8	14	10	14
Denied Entry Before	1	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	97	98	101	96	107	113	104
Travel Time (hr)	3.6	3.6	3.7	3.5	3.8	4.1	3.7
Total Delay (hr)	0.3	0.4	0.3	0.4	0.4	0.4	0.4
Total Stops	80	99	80	84	83	94	78
Fuel Used (gal)	3.2	3.1	3.3	3.1	3.4	3.6	3.3

Interval #3 Information Stabilize

Start Time	7:30
End Time	7:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	211	176	172	186
Vehs Exited	206	173	175	190
Starting Vehs	11	12	18	10
Ending Vehs	16	15	15	10
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	115	94	92	102
Travel Time (hr)	4.1	3.3	3.3	3.7
Total Delay (hr)	0.4	0.3	0.3	0.3
Total Stops	98	70	68	83
Fuel Used (gal)	3.7	2.9	2.9	3.3

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Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	173	212	211	206	191	188	207
Vehs Exited	172	216	206	194	195	177	212
Starting Vehs	16	18	12	8	14	10	14
Ending Vehs	17	14	17	20	10	21	9
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	1	0
Travel Distance (mi)	94	111	113	108	108	98	118
Travel Time (hr)	3.4	4.0	4.1	3.9	3.8	3.5	4.1
Total Delay (hr)	0.3	0.4	0.4	0.4	0.3	0.3	0.4
Total Stops	80	100	89	97	84	78	86
Fuel Used (gal)	3.0	3.6	3.6	3.5	3.4	3.0	3.8

Interval #4 Information Recover

Start Time	7:45
End Time	8:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	186	182	173	191
Vehs Exited	189	177	175	191
Starting Vehs	16	15	15	10
Ending Vehs	13	20	13	11
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	94	98	92	103
Travel Time (hr)	3.5	3.5	3.3	3.7
Total Delay (hr)	0.4	0.2	0.3	0.3
Total Stops	111	59	82	87
Fuel Used (gal)	3.2	3.1	3.0	3.3

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.3	4.0	0.5
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.6
Total Del/Veh (s)	4.2	1.4	2.3	1.4	21.4	5.2	3.8
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.4
Stop Del/Veh (s)	2.5	0.6	0.8	0.7	19.7	4.6	2.6
Total Stops	21	17	24	5	36	71	174
Stop/Veh	0.39	0.09	0.10	0.17	0.90	0.90	0.28
Travel Dist (mi)	4.1	13.8	37.8	5.0	5.2	10.3	76.1
Travel Time (hr)	0.2	0.5	1.2	0.2	0.5	0.7	3.2
Avg Speed (mph)	19	29	30	27	11	18	24
Fuel Used (gal)	0.1	0.4	1.0	0.1	0.2	0.3	2.2
Fuel Eff. (mpg)	45.3	37.1	36.1	42.3	26.2	31.2	35.4
HC Emissions (g)	1	8	21	2	1	4	36
CO Emissions (g)	24	150	402	40	28	84	728
NOx Emissions (g)	3	25	65	6	3	11	112
Vehicles Entered	54	180	229	30	40	78	611
Vehicles Exited	54	180	229	30	39	78	610
Hourly Exit Rate	54	180	229	30	39	78	610
Input Volume	52	183	235	30	38	79	617
% of Volume	104	98	97	100	102	99	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							959
Occupancy (veh)	0	0	1	0	0	1	3

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2: Center Road/Access #4 & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.4	0.1	2.4	0.4	0.2	5.9	2.5	0.1	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	0.7	0.1	0.1	4.5	2.7	0.0	0.1
Total Stops	0	0	2	0	0	4	9	0	15
Stop/Veh	0.00	0.00	0.33	0.00	0.00	1.00	1.00	0.00	0.03
Travel Dist (mi)	13.7	0.9	0.5	19.0	0.8	0.4	0.9	0.4	36.6
Travel Time (hr)	0.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.3
Avg Speed (mph)	32	22	21	31	23	20	22	10	29
Fuel Used (gal)	0.4	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.2
Fuel Eff. (mpg)	32.7	66.5	34.1	27.3	40.4	44.5	43.3	22.7	30.2
HC Emissions (g)	8	0	0	19	1	0	1	0	30
CO Emissions (g)	178	4	4	479	17	7	13	1	703
NOx Emissions (g)	25	0	0	57	2	1	2	0	88
Vehicles Entered	234	15	6	249	11	4	9	8	536
Vehicles Exited	233	15	6	249	10	4	9	8	534
Hourly Exit Rate	233	15	6	249	10	4	9	8	534
Input Volume	235	12	7	252	9	5	8	7	536
% of Volume	99	122	83	99	108	76	109	110	100
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0
Density (ft/veh)									1524
Occupancy (veh)	0	0	0	1	0	0	0	0	1

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.2	0.3	0.0	0.0	0.1
Total Delay (hr)	0.0	0.0	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	2.7	0.4	0.9	0.6	6.8	3.2	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	0.9	0.0	0.0	0.0	5.3	3.2	0.4
Total Stops	9	0	0	0	20	35	64
Stop/Veh	0.26	0.00	0.00	0.00	1.00	1.00	0.11
Travel Dist (mi)	2.6	15.7	49.3	8.3	1.2	2.0	79.2
Travel Time (hr)	0.1	0.5	1.5	0.3	0.1	0.1	2.6
Avg Speed (mph)	21	33	33	29	13	15	30
Fuel Used (gal)	0.1	0.5	1.4	0.2	0.0	0.1	2.3
Fuel Eff. (mpg)	40.6	31.7	35.0	40.5	30.2	34.8	34.8
HC Emissions (g)	2	16	32	4	1	1	55
CO Emissions (g)	36	344	647	90	14	23	1154
NOx Emissions (g)	5	46	95	13	1	2	163
Vehicles Entered	35	210	230	39	20	35	569
Vehicles Exited	35	210	231	39	20	35	570
Hourly Exit Rate	35	210	231	39	20	35	570
Input Volume	34	211	234	38	21	34	572
% of Volume	102	100	99	102	96	102	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							846
Occupancy (veh)	0	0	1	0	0	0	3

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		3.2	1.7	3.7	6.0	2.0	3.3	3.1	1.8	2.5	6.7	2.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		1.3	1.7	2.1	2.2	2.1	2.1	1.1	2.0	1.6	2.5	2.2
Total Stops	0	6	2	14	1	11	2	6	5	1	17	2
Stop/Veh		0.50	1.00	1.00	1.00	1.00	1.00	0.43	1.00	1.00	1.00	1.00
Travel Dist (mi)	0.0	0.7	0.1	1.8	0.1	1.5	0.2	0.9	0.4	0.0	1.2	0.2
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Avg Speed (mph)	18	20	17	24	24	25	21	23	21	19	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	50.9	32.3	32.6	42.9	46.9	44.3	50.2	44.5	48.6	50.8	54.8	45.6
HC Emissions (g)	0	0	0	0	0	0	0	0	0	0	0	0
CO Emissions (g)	0	6	1	8	0	5	1	3	1	0	7	1
NOx Emissions (g)	0	0	0	1	0	1	0	0	0	0	1	0
Vehicles Entered	0	12	2	14	1	11	2	14	5	1	17	2
Vehicles Exited	0	12	2	14	1	11	2	13	5	1	17	2
Hourly Exit Rate	0	12	2	14	1	11	2	13	5	1	17	2
Input Volume	1	12	2	14	1	12	2	14	5	1	19	2
% of Volume	0	98	100	102	100	90	100	90	95	100	91	100
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.1
Total Delay (hr)	0.1
Total Del/Veh (s)	3.8
Stop Delay (hr)	0.0
Stop Del/Veh (s)	1.9
Total Stops	67
Stop/Veh	0.84
Travel Dist (mi)	7.0
Travel Time (hr)	0.3
Avg Speed (mph)	22
Fuel Used (gal)	0.2
Fuel Eff. (mpg)	44.1
HC Emissions (g)	1
CO Emissions (g)	34
NOx Emissions (g)	3
Vehicles Entered	81
Vehicles Exited	80
Hourly Exit Rate	80
Input Volume	86
% of Volume	93
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	
Occupancy (veh)	0

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5: Access #1 & Mills Street Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	0.9	1.7	0.5
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.2	2.6	0.5
Total Stops	0	0	2	2
Stop/Veh	0.00	0.00	0.67	0.11
Travel Dist (mi)	0.7	0.3	0.2	1.2
Travel Time (hr)	0.0	0.0	0.0	0.1
Avg Speed (mph)	34	22	9	23
Fuel Used (gal)	0.0	0.0	0.0	0.1
Fuel Eff. (mpg)	34.8	10.7	21.6	20.7
HC Emissions (g)	0	0	0	0
CO Emissions (g)	4	21	1	26
NOx Emissions (g)	0	1	0	2
Vehicles Entered	10	5	3	18
Vehicles Exited	10	5	3	18
Hourly Exit Rate	10	5	3	18
Input Volume	12	5	3	20
% of Volume	82	100	100	89
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Density (ft/veh)				
Occupancy (veh)	0	0	0	0

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6: Bernard Street & Access #2 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)		0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)		1.6	1.6	0.2	1.8	1.4	1.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)		2.5	0.1	0.0	0.2	0.2	0.4
Total Stops	0	3	0	0	0	0	3
Stop/Veh		0.43	0.00	0.00	0.00	0.00	0.05
Travel Dist (mi)	0.0	0.4	0.2	1.2	2.5	0.4	4.6
Travel Time (hr)	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Avg Speed (mph)	9	9	21	33	25	20	23
Fuel Used (gal)	0.0	0.0	0.0	0.0	0.2	0.0	0.3
Fuel Eff. (mpg)	24.9	22.7	39.3	29.8	13.9	18.4	17.8
HC Emissions (g)	0	0	0	0	6	0	6
CO Emissions (g)	0	1	1	13	197	12	225
NOx Emissions (g)	0	0	0	1	16	1	18
Vehicles Entered	0	7	3	20	32	4	66
Vehicles Exited	0	7	3	20	32	4	66
Hourly Exit Rate	0	7	3	20	32	4	66
Input Volume	1	5	3	21	35	4	69
% of Volume	0	133	100	96	91	100	95
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							
Occupancy (veh)	0	0	0	0	0	0	0

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7: Bernard Street & Access #3 Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	1.7	1.8	0.4	0.2	0.1	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	2.6	0.1	0.1	0.0	0.0	0.3
Total Stops	7	2	0	0	0	9
Stop/Veh	0.50	0.04	0.00	0.00	0.00	0.07
Travel Dist (mi)	0.9	2.8	1.6	2.2	0.2	7.6
Travel Time (hr)	0.1	0.2	0.1	0.1	0.0	0.4
Avg Speed (mph)	9	17	20	30	22	18
Fuel Used (gal)	0.0	0.2	0.1	0.1	0.0	0.4
Fuel Eff. (mpg)	21.1	18.3	12.0	27.5	48.1	18.6
HC Emissions (g)	0	1	6	2	0	10
CO Emissions (g)	3	66	173	57	1	300
NOx Emissions (g)	0	6	17	7	0	30
Vehicles Entered	14	45	29	36	3	127
Vehicles Exited	14	45	29	36	3	127
Hourly Exit Rate	14	45	29	36	3	127
Input Volume	14	45	28	38	3	127
% of Volume	102	101	105	96	100	100
Denied Entry Before	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0
Density (ft/veh)						
Occupancy (veh)	0	0	0	0	0	0

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8: E Whitaker Mill Road & Access #5 Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.5	0.0	0.0	0.0	0.1	0.1	0.0
Total Delay (hr)	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.7	0.8	0.4	0.3	3.9	2.2	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.7	0.1	0.2	0.3	4.8	3.1	0.3
Total Stops	1	0	4	0	6	4	15
Stop/Veh	0.17	0.00	0.02	0.00	0.43	0.50	0.03
Travel Dist (mi)	0.9	37.9	14.5	0.5	0.8	0.4	55.1
Travel Time (hr)	0.0	1.2	0.5	0.0	0.1	0.0	1.8
Avg Speed (mph)	26	32	32	21	8	9	30
Fuel Used (gal)	0.0	1.2	0.5	0.0	0.0	0.0	1.8
Fuel Eff. (mpg)	35.8	30.4	31.9	54.1	20.2	21.8	30.7
HC Emissions (g)	0	27	11	0	0	0	38
CO Emissions (g)	6	614	243	2	3	2	869
NOx Emissions (g)	1	83	34	0	0	0	118
Vehicles Entered	6	234	252	9	14	8	523
Vehicles Exited	6	235	252	9	14	8	524
Hourly Exit Rate	6	235	252	9	14	8	524
Input Volume	7	235	258	7	12	8	528
% of Volume	83	100	98	124	114	97	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1268
Occupancy (veh)	0	1	0	0	0	0	2

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Total Network Performance

Denied Delay (hr)	0.1
Denied Del/Veh (s)	0.6
Total Delay (hr)	1.3
Total Del/Veh (s)	5.9
Stop Delay (hr)	0.7
Stop Del/Veh (s)	3.0
Total Stops	349
Stop/Veh	0.44
Travel Dist (mi)	420.7
Travel Time (hr)	15.3
Avg Speed (mph)	28
Fuel Used (gal)	13.6
Fuel Eff. (mpg)	31.0
HC Emissions (g)	290
CO Emissions (g)	6761
NOx Emissions (g)	880
Vehicles Entered	787
Vehicles Exited	788
Hourly Exit Rate	788
Input Volume	3852
% of Volume	20
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	1011
Occupancy (veh)	15

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.2	10.7	0.1	36
Pine Drive	1	1.4	9.4	0.1	30
Access #5	8	0.7	17.3	0.2	35
Center Road	2	0.3	6.4	0.1	33
Bernard Street	3	0.3	8.1	0.1	33
Total		3.0	51.8	0.5	34

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	0.9	23.3	0.2	35
Access #4	2	0.4	8.4	0.1	32
Access #5	8	0.3	6.3	0.1	34
Pine Drive	1	2.3	19.5	0.2	31
	12	0.8	8.9	0.1	32
Total		4.7	66.4	0.6	33

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #3	7	0.3	9.9	0.1	24
Access #2	6	0.2	6.6	0.1	35
Mills Street	4	3.1	9.4	0.1	32
Total		3.6	26.0	0.2	30

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.7	14.2	0.1	19
Access #2	6	2.4	9.9	0.1	31
Access #3	7	0.1	6.4	0.1	36
E Whitaker Mill Road	3	6.9	14.6	0.1	16
Total		16.1	45.1	0.3	23

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Arterial Level of Service: EB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #1	5	0.0	7.7	0.1	36
Bernard Street	4	3.2	8.7	0.1	29
Total		3.2	16.5	0.1	32

Arterial Level of Service: WB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	4	6.0	18.3	0.1	27
Access #1	5	2.5	8.0	0.1	31
Total		8.5	26.4	0.2	28

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	55	74	95	63	71
Average Queue (ft)	17	15	23	29	34
95th Queue (ft)	48	52	68	59	59
Link Distance (ft)		348	830	691	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				250
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Center Road/Access #4 & E Whitaker Mill Road

Movement	EB	WB	WB	NB	SB
Directions Served	TR	L	TR	LTR	R
Maximum Queue (ft)	14	21	7	54	4
Average Queue (ft)	1	1	0	11	0
95th Queue (ft)	11	11	5	38	4
Link Distance (ft)	253		345	535	323
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	49	12	71
Average Queue (ft)	8	0	28
95th Queue (ft)	31	5	54
Link Distance (ft)		1127	286
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	125		
Storage Blk Time (%)			
Queuing Penalty (veh)			

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	36	34	46
Average Queue (ft)	7	17	10	16
95th Queue (ft)	28	41	33	44
Link Distance (ft)	319	694	377	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access #1 & Mills Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	19
Link Distance (ft)	261
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Bernard Street & Access #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	33	5
Average Queue (ft)	6	0
95th Queue (ft)	26	6
Link Distance (ft)	319	283
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 7: Bernard Street & Access #3

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	34	30
Average Queue (ft)	12	2
95th Queue (ft)	38	14
Link Distance (ft)	324	286
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: E Whitaker Mill Road & Access #5

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	21	45
Average Queue (ft)	1	17
95th Queue (ft)	12	43
Link Distance (ft)		300
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	94.1	7.9	94.5
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	48	50	48
Cycles @ Minimum (%)	0	36	0
Cycles Maxed Out (%)	52	0	52
Cycles with Peds (%)	0	0	9

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

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Summary of All Intervals

Run Number	1	10	2	3	4	5	6
Start Time	4:50	4:50	4:50	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70	70	70	70
Time Recorded (min)	60	60	60	60	60	60	60
# of Intervals	5	5	5	5	5	5	5
# of Recorded Intervals	4	4	4	4	4	4	4
Vehs Entered	1096	1135	1159	1124	1073	1105	1131
Vehs Exited	1097	1135	1168	1129	1074	1117	1132
Starting Vehs	27	16	27	24	20	22	20
Ending Vehs	26	16	18	19	19	10	19
Denied Entry Before	0	0	1	1	0	0	0
Denied Entry After	0	1	0	0	0	0	0
Travel Distance (mi)	591	609	626	596	574	590	613
Travel Time (hr)	22.1	22.6	23.3	22.2	21.7	22.3	22.9
Total Delay (hr)	2.5	2.6	2.7	2.4	2.5	2.7	2.8
Total Stops	608	628	620	627	606	656	624
Fuel Used (gal)	20.0	20.3	20.9	20.0	19.4	20.2	20.7

Summary of All Intervals

Run Number	7	8	9	Avg
Start Time	4:50	4:50	4:50	4:50
End Time	6:00	6:00	6:00	6:00
Total Time (min)	70	70	70	70
Time Recorded (min)	60	60	60	60
# of Intervals	5	5	5	5
# of Recorded Intervals	4	4	4	4
Vehs Entered	1168	1092	1127	1121
Vehs Exited	1188	1088	1129	1126
Starting Vehs	36	16	22	19
Ending Vehs	16	20	20	15
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	625	576	604	600
Travel Time (hr)	23.8	21.3	22.7	22.5
Total Delay (hr)	3.1	2.3	2.8	2.6
Total Stops	667	540	653	621
Fuel Used (gal)	21.2	19.1	20.4	20.2

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10

No data recorded this interval.

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Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	263	278	307	282	248	254	264
Vehs Exited	263	283	305	291	244	256	269
Starting Vehs	27	16	27	24	20	22	20
Ending Vehs	27	11	29	15	24	20	15
Denied Entry Before	0	0	1	1	0	0	0
Denied Entry After	1	0	0	0	0	0	0
Travel Distance (mi)	141	149	168	153	131	137	145
Travel Time (hr)	5.2	5.5	6.1	5.7	5.0	5.1	5.3
Total Delay (hr)	0.5	0.6	0.7	0.6	0.6	0.5	0.6
Total Stops	139	155	158	165	144	151	124
Fuel Used (gal)	4.7	4.9	5.6	5.1	4.4	4.6	4.8

Interval #1 Information Grow

Start Time	5:00
End Time	5:15
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	282	249	262	267
Vehs Exited	294	246	264	273
Starting Vehs	36	16	22	19
Ending Vehs	24	19	20	14
Denied Entry Before	0	0	0	0
Denied Entry After	1	0	0	0
Travel Distance (mi)	151	134	145	145
Travel Time (hr)	5.8	5.0	5.3	5.4
Total Delay (hr)	0.8	0.6	0.6	0.6
Total Stops	159	139	148	146
Fuel Used (gal)	5.2	4.5	4.7	4.9

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Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	327	331	296	304	300	308	299
Vehs Exited	327	318	299	297	303	301	289
Starting Vehs	27	11	29	15	24	20	15
Ending Vehs	27	24	26	22	21	27	25
Denied Entry Before	1	0	0	0	0	0	0
Denied Entry After	0	1	0	1	0	0	0
Travel Distance (mi)	176	180	162	160	166	158	160
Travel Time (hr)	6.7	6.8	6.1	6.0	6.2	6.2	6.1
Total Delay (hr)	0.8	0.8	0.8	0.7	0.7	0.9	0.8
Total Stops	182	166	162	170	169	195	191
Fuel Used (gal)	6.0	5.9	5.4	5.4	5.5	5.6	5.5

Interval #2 Information Peak

Start Time	5:15
End Time	5:30
Total Time (min)	15

Volumes adjusted by PHF.

Run Number	7	8	9	Avg
Vehs Entered	319	319	315	311
Vehs Exited	311	321	297	307
Starting Vehs	24	19	20	14
Ending Vehs	32	17	38	25
Denied Entry Before	1	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	175	170	161	167
Travel Time (hr)	6.7	6.3	6.2	6.3
Total Delay (hr)	1.0	0.7	0.8	0.8
Total Stops	186	161	178	176
Fuel Used (gal)	5.9	5.7	5.6	5.7

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Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	237	273	287	270	251	274	270
Vehs Exited	246	277	292	272	251	277	271
Starting Vehs	27	24	26	22	21	27	25
Ending Vehs	18	20	21	20	21	24	24
Denied Entry Before	0	1	0	1	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Travel Distance (mi)	135	150	150	140	132	147	146
Travel Time (hr)	5.1	5.5	5.6	5.2	5.0	5.5	5.5
Total Delay (hr)	0.6	0.7	0.6	0.5	0.6	0.7	0.7
Total Stops	138	167	138	147	141	166	143
Fuel Used (gal)	4.6	5.1	5.0	4.6	4.6	5.0	4.8

Interval #3 Information Stabilize

Start Time	5:30
End Time	5:45
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	270	255	285	269
Vehs Exited	275	254	305	271
Starting Vehs	32	17	38	25
Ending Vehs	27	18	18	14
Denied Entry Before	0	1	0	0
Denied Entry After	0	0	0	0
Travel Distance (mi)	141	135	157	143
Travel Time (hr)	5.3	4.9	5.9	5.3
Total Delay (hr)	0.6	0.5	0.7	0.6
Total Stops	157	118	163	147
Fuel Used (gal)	4.7	4.4	5.3	4.8

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Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	1	10	2	3	4	5	6
Vehs Entered	269	253	269	268	274	269	298
Vehs Exited	261	257	272	269	276	283	303
Starting Vehs	18	20	21	20	21	24	24
Ending Vehs	26	16	18	19	19	10	19
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	1	0	0	0	0	0
Travel Distance (mi)	139	130	147	143	145	148	161
Travel Time (hr)	5.2	4.8	5.5	5.4	5.4	5.5	6.0
Total Delay (hr)	0.6	0.5	0.7	0.6	0.6	0.6	0.7
Total Stops	149	140	162	145	152	144	166
Fuel Used (gal)	4.7	4.3	4.9	4.8	4.9	5.0	5.5

Interval #4 Information Recover

Start Time	5:45
End Time	6:00
Total Time (min)	15

Volumes adjusted by Anti PHF.

Run Number	7	8	9	Avg
Vehs Entered	297	269	265	270
Vehs Exited	308	267	263	275
Starting Vehs	27	18	18	14
Ending Vehs	16	20	20	15
Denied Entry Before	0	0	0	0
Denied Entry After	0	1	0	0
Travel Distance (mi)	158	137	142	145
Travel Time (hr)	5.9	5.1	5.4	5.4
Total Delay (hr)	0.7	0.5	0.6	0.6
Total Stops	165	122	164	148
Fuel Used (gal)	5.4	4.5	4.8	4.9

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1: E Whitaker Mill Road & Pine Drive Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.4	3.9	0.4
Total Delay (hr)	0.1	0.2	0.2	0.0	0.3	0.1	0.9
Total Del/Veh (s)	5.6	1.7	2.6	1.3	21.6	5.4	4.0
Stop Delay (hr)	0.1	0.1	0.1	0.0	0.3	0.1	0.6
Stop Del/Veh (s)	3.5	0.7	0.8	0.6	19.7	4.8	2.6
Total Stops	44	32	27	7	48	75	233
Stop/Veh	0.48	0.10	0.11	0.16	0.89	0.89	0.27
Travel Dist (mi)	7.0	25.3	41.0	7.2	7.1	10.8	98.4
Travel Time (hr)	0.4	0.9	1.4	0.3	0.6	0.7	4.3
Avg Speed (mph)	18	28	30	27	11	18	24
Fuel Used (gal)	0.2	0.7	1.2	0.2	0.3	0.4	2.8
Fuel Eff. (mpg)	41.8	36.5	35.6	41.6	26.0	30.9	35.0
HC Emissions (g)	2	10	12	2	2	4	32
CO Emissions (g)	42	200	305	35	59	93	734
NOx Emissions (g)	5	31	43	5	7	12	103
Vehicles Entered	92	330	247	43	54	83	849
Vehicles Exited	92	330	247	44	54	82	849
Hourly Exit Rate	92	330	247	44	54	82	849
Input Volume	91	333	252	42	55	79	852
% of Volume	101	99	98	105	98	104	100
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							724
Occupancy (veh)	0	1	1	0	1	1	4

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2: Center Road/Access #4 & E Whitaker Mill Road Performance by movement

Movement	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	0.5	0.1	3.0	0.6	0.3	7.4	3.7	0.1	0.7
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.0	1.3	0.1	0.1	5.8	3.9	0.1	0.2
Total Stops	0	0	4	0	0	11	13	0	28
Stop/Veh	0.00	0.00	0.40	0.00	0.00	1.00	1.00	0.00	0.04
Travel Dist (mi)	22.4	0.6	0.7	20.0	1.3	1.1	1.3	1.1	48.6
Travel Time (hr)	0.7	0.0	0.0	0.7	0.1	0.1	0.1	0.1	1.8
Avg Speed (mph)	32	22	19	29	22	18	21	10	28
Fuel Used (gal)	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.1	1.7
Fuel Eff. (mpg)	33.0	67.6	28.4	23.6	35.2	39.7	42.4	21.5	28.4
HC Emissions (g)	13	0	0	16	2	0	0	0	32
CO Emissions (g)	277	5	9	535	42	6	5	4	883
NOx Emissions (g)	41	1	1	51	5	0	1	0	99
Vehicles Entered	386	10	10	264	17	11	13	19	730
Vehicles Exited	385	10	10	265	17	11	13	19	730
Hourly Exit Rate	385	10	10	265	17	11	13	19	730
Input Volume	388	10	11	267	19	12	13	20	741
% of Volume	99	98	89	99	91	90	98	96	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0
Density (ft/veh)									1085
Occupancy (veh)	1	0	0	1	0	0	0	0	2

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3: E Whitaker Mill Road & Bernard Street Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.2	0.2	0.0	0.0	0.1
Total Delay (hr)	0.1	0.1	0.1	0.0	0.2	0.1	0.5
Total Del/Veh (s)	3.0	0.7	1.2	0.6	10.8	5.9	2.4
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.2	0.1	0.3
Stop Del/Veh (s)	1.0	0.0	0.0	0.0	9.1	5.6	1.4
Total Stops	21	0	0	0	79	61	161
Stop/Veh	0.28	0.00	0.00	0.00	1.00	1.00	0.20
Travel Dist (mi)	5.7	24.6	48.9	10.6	4.7	3.6	98.1
Travel Time (hr)	0.3	0.8	1.5	0.4	0.5	0.3	3.7
Avg Speed (mph)	21	31	33	29	10	12	27
Fuel Used (gal)	0.1	0.8	1.4	0.3	0.2	0.1	2.9
Fuel Eff. (mpg)	39.1	30.4	34.7	40.0	25.3	27.2	33.3
HC Emissions (g)	2	17	14	4	2	3	42
CO Emissions (g)	58	421	424	88	62	62	1116
NOx Emissions (g)	7	52	50	11	6	7	134
Vehicles Entered	75	324	228	50	79	61	817
Vehicles Exited	75	324	229	50	79	61	818
Hourly Exit Rate	75	324	229	50	79	61	818
Input Volume	75	328	232	52	80	64	830
% of Volume	100	99	99	96	99	95	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							603
Occupancy (veh)	0	1	1	0	0	0	4

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4: Bernard Street & Mills Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.2	5.7	2.4	4.2	7.1	2.1	4.0	4.5	2.0	4.2	6.9	2.3
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	1.9	2.2	2.4	2.4	2.8	2.0	2.3	1.7	2.0	2.5	2.6	2.1
Total Stops	1	6	5	22	5	6	6	41	17	6	24	2
Stop/Veh	1.00	0.86	1.00	1.00	1.00	1.00	1.00	0.66	0.94	1.00	1.00	1.00
Travel Dist (mi)	0.1	0.5	0.4	2.9	0.7	0.7	0.5	4.3	1.4	0.4	1.7	0.1
Travel Time (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.0
Avg Speed (mph)	19	18	18	24	23	25	20	21	21	19	18	20
Fuel Used (gal)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Fuel Eff. (mpg)	49.1	38.9	36.0	41.2	45.5	45.5	51.1	48.5	51.1	45.9	51.3	39.2
HC Emissions (g)	0	0	0	3	1	1	0	1	0	0	0	0
CO Emissions (g)	0	3	3	53	12	21	1	27	4	3	11	1
NOx Emissions (g)	0	0	0	8	2	3	0	3	0	0	1	0
Vehicles Entered	1	7	5	22	5	6	6	62	17	6	24	2
Vehicles Exited	1	7	5	22	5	6	6	62	17	6	24	2
Hourly Exit Rate	1	7	5	22	5	6	6	62	17	6	24	2
Input Volume	2	7	5	24	5	4	5	60	19	5	26	1
% of Volume	50	100	95	92	95	150	114	103	91	114	92	200
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0
Density (ft/veh)												
Occupancy (veh)	0	0	0	0	0	0	0	0	0	0	0	0

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4: Bernard Street & Mills Street Performance by movement

Movement	All
Denied Delay (hr)	0.0
Denied Del/Veh (s)	0.0
Total Delay (hr)	0.2
Total Del/Veh (s)	4.5
Stop Delay (hr)	0.1
Stop Del/Veh (s)	2.1
Total Stops	141
Stop/Veh	0.87
Travel Dist (mi)	13.7
Travel Time (hr)	0.7
Avg Speed (mph)	21
Fuel Used (gal)	0.3
Fuel Eff. (mpg)	46.1
HC Emissions (g)	7
CO Emissions (g)	140
NOx Emissions (g)	18
Vehicles Entered	163
Vehicles Exited	163
Hourly Exit Rate	163
Input Volume	164
% of Volume	100
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	2858
Occupancy (veh)	1

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5: Access #1 & Mills Street Performance by movement

Movement	EBT	WBT	NBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.1	0.1
Total Delay (hr)	0.0	0.0	0.0	0.0
Total Del/Veh (s)	0.0	1.5	1.6	1.0
Stop Delay (hr)	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	0.0	0.2	2.6	0.4
Total Stops	0	0	1	1
Stop/Veh	0.00	0.00	0.33	0.04
Travel Dist (mi)	0.7	0.9	0.2	1.7
Travel Time (hr)	0.0	0.0	0.0	0.1
Avg Speed (mph)	35	23	9	23
Fuel Used (gal)	0.0	0.1	0.0	0.1
Fuel Eff. (mpg)	34.4	11.9	20.9	17.1
HC Emissions (g)	0	2	0	3
CO Emissions (g)	5	81	1	86
NOx Emissions (g)	0	7	0	8
Vehicles Entered	10	14	3	27
Vehicles Exited	10	14	3	27
Hourly Exit Rate	10	14	3	27
Input Volume	10	12	4	27
% of Volume	98	112	75	101
Denied Entry Before	0	0	0	0
Denied Entry After	0	0	0	0
Density (ft/veh)				
Occupancy (veh)	0	0	0	0

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6: Bernard Street & Access #2 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.1	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.4	1.6	1.5	0.2	1.5	1.1	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stop Del/Veh (s)	3.1	2.4	0.1	0.0	0.2	0.2	0.2
Total Stops	1	3	0	0	0	0	4
Stop/Veh	1.00	0.43	0.00	0.00	0.00	0.00	0.02
Travel Dist (mi)	0.1	0.4	0.3	5.0	4.7	0.5	11.0
Travel Time (hr)	0.0	0.0	0.0	0.2	0.2	0.0	0.4
Avg Speed (mph)	9	9	22	33	25	19	26
Fuel Used (gal)	0.0	0.0	0.0	0.2	0.3	0.0	0.6
Fuel Eff. (mpg)	19.8	20.3	43.1	28.5	13.4	21.0	19.0
HC Emissions (g)	0	0	0	2	11	0	14
CO Emissions (g)	0	1	2	83	383	15	484
NOx Emissions (g)	0	0	0	7	33	1	41
Vehicles Entered	1	7	5	84	70	8	175
Vehicles Exited	1	7	5	84	70	8	175
Hourly Exit Rate	1	7	5	84	70	8	175
Input Volume	2	6	6	82	76	7	180
% of Volume	50	112	80	102	92	110	97
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							
Occupancy (veh)	0	0	0	0	0	0	0

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7: Bernard Street & Access #3 Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	2.5	1.9	2.0	0.4	0.2	0.0	0.9
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	3.2	2.8	0.3	0.1	0.0	0.0	0.7
Total Stops	2	24	2	0	0	0	28
Stop/Veh	0.50	0.44	0.06	0.00	0.00	0.00	0.11
Travel Dist (mi)	0.2	3.4	1.9	5.5	4.7	0.1	15.8
Travel Time (hr)	0.0	0.4	0.1	0.3	0.1	0.0	0.9
Avg Speed (mph)	9	9	17	21	32	23	17
Fuel Used (gal)	0.0	0.2	0.1	0.5	0.2	0.0	0.9
Fuel Eff. (mpg)	20.9	20.8	17.7	11.9	30.4	65.8	17.6
HC Emissions (g)	0	1	2	9	4	0	17
CO Emissions (g)	1	26	61	414	101	0	603
NOx Emissions (g)	0	3	6	29	13	0	51
Vehicles Entered	4	55	30	95	76	1	261
Vehicles Exited	4	55	31	94	76	1	261
Hourly Exit Rate	4	55	31	94	76	1	261
Input Volume	3	55	33	94	80	2	267
% of Volume	133	100	93	101	95	50	98
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							1068
Occupancy (veh)	0	0	0	0	0	0	1

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8: E Whitaker Mill Road & Access #5 Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.1	0.2	0.0
Total Delay (hr)	0.0	0.1	0.1	0.0	0.0	0.0	0.2
Total Del/Veh (s)	3.3	1.1	0.7	0.5	6.4	3.1	1.1
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Stop Del/Veh (s)	1.0	0.1	0.4	0.4	7.4	4.1	0.5
Total Stops	4	0	8	0	8	5	25
Stop/Veh	0.25	0.00	0.03	0.00	0.50	0.56	0.04
Travel Dist (mi)	2.6	62.6	16.1	0.7	0.9	0.5	83.4
Travel Time (hr)	0.1	2.0	0.5	0.0	0.1	0.1	2.8
Avg Speed (mph)	26	32	30	20	8	9	30
Fuel Used (gal)	0.1	2.0	0.6	0.0	0.0	0.0	2.8
Fuel Eff. (mpg)	33.9	30.5	27.8	46.9	19.1	20.3	29.9
HC Emissions (g)	1	38	8	0	0	0	46
CO Emissions (g)	27	885	249	3	3	2	1169
NOx Emissions (g)	3	120	26	0	0	0	150
Vehicles Entered	16	376	278	12	16	9	707
Vehicles Exited	15	375	277	13	16	9	705
Hourly Exit Rate	15	375	277	13	16	9	705
Input Volume	18	378	284	11	16	7	714
% of Volume	85	99	98	116	102	124	99
Denied Entry Before	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0
Density (ft/veh)							828
Occupancy (veh)	0	2	1	0	0	0	3

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Total Network Performance

Denied Delay (hr)	0.2
Denied Del/Veh (s)	0.5
Total Delay (hr)	2.5
Total Del/Veh (s)	7.8
Stop Delay (hr)	1.3
Stop Del/Veh (s)	4.1
Total Stops	621
Stop/Veh	0.54
Travel Dist (mi)	600.4
Travel Time (hr)	22.5
Avg Speed (mph)	27
Fuel Used (gal)	20.2
Fuel Eff. (mpg)	29.7
HC Emissions (g)	332
CO Emissions (g)	9019
NOx Emissions (g)	1042
Vehicles Entered	1121
Vehicles Exited	1126
Hourly Exit Rate	1126
Input Volume	5602
% of Volume	20
Denied Entry Before	0
Denied Entry After	0
Density (ft/veh)	685
Occupancy (veh)	22

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Arterial Level of Service: EB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	12	0.3	10.9	0.1	35
Pine Drive	1	1.7	9.7	0.1	29
Access #5	8	1.1	18.3	0.2	33
Center Road	2	0.4	6.5	0.1	33
Bernard Street	3	0.7	8.5	0.1	32
Total		4.2	53.9	0.5	33

Arterial Level of Service: WB E Whitaker Mill Road

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	3	1.2	23.4	0.2	34
Access #4	2	0.6	8.5	0.1	32
Access #5	8	0.3	6.3	0.1	34
Pine Drive	1	2.6	19.9	0.2	30
	12	0.8	8.9	0.1	31
Total		5.5	67.0	0.6	32

Arterial Level of Service: NB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #3	7	0.3	10.1	0.1	24
Access #2	6	0.2	6.4	0.1	36
Mills Street	4	4.5	11.8	0.1	26
Total		4.9	28.2	0.2	27

Arterial Level of Service: SB Bernard Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Mills Street	4	6.9	14.5	0.1	19
Access #2	6	1.7	7.7	0.1	39
Access #3	7	0.2	6.7	0.1	35
E Whitaker Mill Road	3	11.2	19.3	0.1	12
Total		20.0	48.2	0.3	22

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Arterial Level of Service: EB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Access #1	5	0.0	7.2	0.1	38
Bernard Street	4	6.3	13.7	0.1	18
Total		6.4	20.9	0.1	25

Arterial Level of Service: WB Mills Street

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bernard Street	4	7.1	22.0	0.1	23
Access #1	5	2.9	9.2	0.1	27
Total		9.9	31.2	0.2	24

DocuSign Envelope ID: 9A683F85-BB26-43C0-B918-288F98358E18

Intersection: 1: E Whitaker Mill Road & Pine Drive

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	79	99	92	90	74
Average Queue (ft)	28	27	26	40	35
95th Queue (ft)	62	74	71	76	62
Link Distance (ft)		348	830	691	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				250
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Center Road/Access #4 & E Whitaker Mill Road

Movement	EB	WB	WB	NB	SB
Directions Served	TR	L	TR	LTR	R
Maximum Queue (ft)	3	25	3	40	17
Average Queue (ft)	0	3	0	16	1
95th Queue (ft)	3	17	3	39	12
Link Distance (ft)	253		345	535	323
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		100			
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 3: E Whitaker Mill Road & Bernard Street

Movement	EB	EB	WB	SB
Directions Served	L	T	TR	LR
Maximum Queue (ft)	56	8	11	119
Average Queue (ft)	17	0	1	47
95th Queue (ft)	47	6	7	89
Link Distance (ft)		345	1127	286
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	125			
Storage Blk Time (%)				
Queuing Penalty (veh)				

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Intersection: 4: Bernard Street & Mills Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	31	76	37	53
Average Queue (ft)	10	25	26	21
95th Queue (ft)	33	60	43	48
Link Distance (ft)	319	694	377	372
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Access #1 & Mills Street

Movement	NB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	3
95th Queue (ft)	17
Link Distance (ft)	261
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 6: Bernard Street & Access #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	31	3
Average Queue (ft)	7	0
95th Queue (ft)	28	3
Link Distance (ft)	319	283
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

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Intersection: 7: Bernard Street & Access #3

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	35
Average Queue (ft)	30	2
95th Queue (ft)	54	17
Link Distance (ft)	324	286
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: E Whitaker Mill Road & Access #5

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	33	47
Average Queue (ft)	4	19
95th Queue (ft)	22	46
Link Distance (ft)		300
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

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Intersection: 1: E Whitaker Mill Road & Pine Drive

Phase	2	4	6
Movement(s) Served	EBTL	SBL	WBT
Maximum Green (s)	31.9	18.4	32.3
Minimum Green (s)	10.0	7.0	10.0
Recall	C-Min	None	C-Min
Avg. Green (s)	75.7	7.9	76.1
g/C Ratio	-0.01	-0.01	-0.01
Cycles Skipped (%)	38	38	38
Cycles @ Minimum (%)	0	43	0
Cycles Maxed Out (%)	62	0	62
Cycles with Peds (%)	0	0	15

Controller Summary
Average Cycle Length (s): NA
Number of Complete Cycles : 0

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023) with Road Diet\E Whitaker Mill - AM - EB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - AM - EB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	3	22	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.06	4	3	0	5	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.03	4	3	14	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6033	235	2	35	40	None	No	N/A
2 (to Center Road)	1200	5000	244	2	35	40	None	No	N/A
3 (to Bernard Street)	400	5000	243	2	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	261	3220	0.219	10.70	B	0.00	15.17	D
2 (to Center Road)	271	3994	1.131	153.38	F	0.00	4.87	F
3 (to Bernard Street)	270	3375	2.667	813.47	F	0.00	0.38	F

Arterial Length	0.4205	Weighted g/C	0.12	FFS Delay	988.87	Threshold Delay	907.21	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	3.89	D	N/A	N/A				2.09	B	0.00	F
2 (to Center Road)	4.24	D	N/A	N/A				2.33	B	0.00	F
3 (to Bernard Street)	3.86	D	N/A	N/A				2.07	B	0.00	F
	Bicycle LOS	4.10	D			Pedestrian LOS	2.23	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023) with Road Diet\E Whitaker Mill - AM - WB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - AM - WB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	Pretimed
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	3	0	12	No	None	N/A	N/A	N/A	No
Center Road	0	0.51	4	3	3	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.1	4	3	0	14	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	6033	308	2	35	40	None	No	N/A
2 (to Center Road)	1200	5678	267	2	35	40	None	No	N/A
3 (to Bernard Street)	400	5600	272	2	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	342	3997	0.231	10.68	B	0.00	15.16	D
2 (to Center Road)	297	3199	0.182	10.30	B	0.00	25.82	B
3 (to Bernard Street)	302	4177	0.723	60.72	E	0.00	4.35	F

Arterial Length	0.4205	Weighted g/C	0.27	FFS Delay	93.08	Threshold Delay	11.42	Auto Speed	11.84	Auto LOS	E

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	4.26	E	N/A	N/A				2.18	B	0.00	F
2 (to Center Road)	4.37	E	N/A	N/A				2.36	B	0.00	F
3 (to Bernard Street)	4.00	D	N/A	N/A				2.11	B	0.00	F
	Bicycle LOS	4.28	E			Pedestrian LOS	2.27	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023) with Road Diet\E Whitaker Mill - PM - EB - Peak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - Build (2023) - PM - EB Peak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	3	21	0	No	None	N/A	N/A	N/A	No
Center Road	0	0.38	4	3	0	3	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.33	4	3	19	0	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	8367	424	2	35	40	None	No	N/A
2 (to Center Road)	1200	7678	398	2	35	40	None	No	N/A
3 (to Bernard Street)	400	7600	400	2	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	471	3231	0.394	11.88	B	0.00	14.38	D
2 (to Center Road)	442	3999	0.291	20.70	C	0.00	19.62	C
3 (to Bernard Street)	444	3375	0.399	26.56	C	0.00	8.26	F

Arterial Length	0.4205	Weighted g/C	0.35	FFS Delay	70.68	Threshold Delay	0.00	Auto Speed	14.35	Auto LOS	D

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	4.61	E	N/A	N/A				2.33	B	0.00	F
2 (to Center Road)	4.97	E	N/A	N/A				2.52	B	0.00	F
3 (to Bernard Street)	4.48	E	N/A	N/A				2.27	B	0.00	F
	Bicycle LOS	4.80	E			Pedestrian LOS	2.43	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
*** Not applicable for that level of service letter grade. See generalized tables notes for more details.
# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	MM	Arterial Name	E Whitaker Mill Road	Study Period	Dir Hr Demand Vol
Date Prepared	1/25/2021 2:19:07 PM	From	Reaves Drive	Modal Analysis	Multimodal
Agency	MM	To	Bernard Street	Program	ARTPLAN 2012
Area Type	Other Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	2				

File Name	C:\Users\PAT78450\OneDrive - Mott MacDonald\Private\OAKS AT MAYVIEW TIA\TIA\ARTPLAN 2012\Build (2023) with Road Diet\E Whitaker Mill - PM - WB - OffPeak Dir.xap
User Notes	E Whitaker Mill Road/Pine Drive - No-Build (2023) - PM - WB OffPeak Dir

Arterial Data

K	0.09	PHF	0.9	Control Type	CoordinatedActuated
D	0.52	% Heavy Vehicles	6	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Pine Drive	60	0.37	4	3	0	14	No	None	N/A	N/A	N/A	No
Center Road	0	0.42	4	3	4	6	No	None	N/A	N/A	N/A	No
Bernard Street	0	0.49	4	3	0	18	No	None	N/A	N/A	N/A	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Pine Drive)	440	8367	329	2	35	40	None	No	N/A
2 (to Center Road)	1200	7000	293	2	35	40	None	No	N/A
3 (to Bernard Street)	400	6200	284	2	35	40	Non-Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Pine Drive)	366	3993	0.247	10.77	B	0.00	15.10	D
2 (to Center Road)	326	3193	0.243	17.11	B	0.00	21.42	C
3 (to Bernard Street)	316	4166	0.155	11.38	B	0.00	13.78	D

Arterial Length	0.4205	Weighted g/C	0.41	FFS Delay	50.66	Threshold Delay	0.00	Auto Speed	17.72	Auto LOS	C

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Pine Drive)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
2 (to Center Road)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical
3 (to Bernard Street)	Narrow	Typical	No	No	N/A	Yes	Typical	No	0	0.6	Good	Typical

Pedestrian SubSegment Data

	% of Segment			Sidewalk			Separation			Barrier		
Segment #	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Pine Drive)	100			Yes			Typical			No		
2 (to Center Road)	100			Yes			Typical			No		
3 (to Bernard Street)	100			Yes			Typical			No		

Multimodal LOS

	Bicycle Street		Bicycle Sidepath		Pedestrian					Bus	
Link #	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Pine Drive)	4.37	E	N/A	N/A				2.21	B	0.00	F
2 (to Center Road)	4.53	E	N/A	N/A				2.39	B	0.00	F
3 (to Bernard Street)	4.06	D	N/A	N/A				2.12	B	0.00	F
	Bicycle LOS	4.41	E			Pedestrian LOS	2.30	B		Bus LOS	0.00	F

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
** Cannot be achieved based on input data provided.
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# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
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