



AGENDA | REGULAR TOWN COUNCIL MEETING

October 25, 2022 at 6:00 PM

Council Chambers - Apex Town Hall, 73 Hunter Street

The meeting will adjourn when all business is concluded or 10:00 PM, whichever comes first

Town Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Audra Killingworth

Council Members: Brett D. Gantt; Cheryl F. Stallings; Terry Mahaffey; Edward Gray

Town Manager: Catherine Crosby | Deputy Town Manager: Shawn Purvis | Assistant Town Manager: Marty Stone

Town Clerk: Allen Coleman, CMC, NCCCC | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

Rakhis Ceremony

CONSENT AGENDA

All Consent Agenda items are considered routine, to be enacted by one motion with the adoption of the Consent Agenda, and without discussion. If a Council Member requests discussion of an item, the item may be removed from the Consent Agenda and considered separately. The Mayor will present the Consent Agenda to be set prior to taking action on the following items:

CN1 Agreement - Verizon Services Telephony (October 26, 2022 through October 25, 2025)

Erika Sacco, Director, Information Technology

CN2 Annexation No. 734 - Utley Farms PUD - 56.59 acres

Allen Coleman, Town Clerk

CN3 Annexation No. 744 - 7805 Green Level Church Road - 2.24 acres

Allen Coleman, Town Clerk

CN4 Construction Contract Award/Budget Ordinance Amendment No. 9 - Hamlett

Associates Inc. - Public Works Operations Renovation - Phase 1

Daniel Edwards, Senior Capital Projects Manager

CN5 Council Meeting Minutes - August and September 2022

Allen Coleman, Town Clerk

CN6 Developer Agreement - Ten Ten Rd at Jessie Dr Turn Lane Cost Share

Russell Dalton, Traffic Engineering Manager

CN7 Encroachment Agreement - 2937 Macintosh Woods Drive, Lot 25

Marty Stone, Assistant Town Manager

CN8 Memorandum of Understanding between Town of Apex and Wake Technical Community College - Apex Fire Academy Training - Emergency Vehicle Driver (EVD)

Jeffrey Maynard, Assistant Fire Chief

CN9 Memorandum of Understanding between Town of Apex and Wake Technical Community College - Apex Fire Academy Training - Firefighter Series Class

Jeffrey Maynard, Assistant Fire Chief

CN10 Memorandum of Understanding between Town of Apex and Wake Technical Community College - Apex Fire Academy Training - Fireground Procedures

Jeffrey Maynard, Assistant Fire Chief

CN11 Memorandum of Understanding between Town of Apex and Wake Technical Community College - Apex Fire Academy Training - North Carolina Rapid Intervention Crew (NC RIC)

Jeffrey Maynard, Assistant Fire Chief

CN12 Memorandum of Understanding between Town of Apex and Wake Technical Community College - Apex Fire Academy Training - Technical Rescuer and Technical Rescuer - Vehicle

Jeffrey Maynard, Assistant Fire Chief

PRESENTATIONS - None

REGULAR MEETING AGENDA

Mayor Gilbert will call for additional Agenda items from Council or Staff and set the Regular Meeting Agenda prior to Council actions.

PUBLIC FORUM

Public Forum allows the public an opportunity to address the Town Council. The speaker is requested not to address items that appear as Public Hearings scheduled on the Regular Agenda. The Mayor will recognize those who would like to speak at the appropriate time. Large groups are asked to select a representative to speak for the entire group. Comments must be limited to 3 minutes to allow others the opportunity to speak.

PUBLIC HEARINGS

PH1 Transportation Plan Amendments - Chapel Ridge - 22CZ07

Shannon Cox, Long Range Planning Manager

AND

PH2 Rezoning Case No. 22CZ07 Chapel Ridge North PUD

Shelly Mayo, Planner II

PH3 Rezoning Case No. 22CZ09 Utley Farms PUD

Lauren Staudenmaier, Planner II

The above item (PH3) corresponds with a request for annexation (CN2). Staff is requesting this item be continued until the November 8, 2022 Regular Town Council meeting when both the Annexation and Rezoning Requests can be heard at the same time.

NEW BUSINESS - None

UPDATES BY TOWN MANAGER

ADJOURNMENT

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Erika Sacco, IT Director

Department(s): Information Technology

Requested Motion

Motion to approve and continue to utilize Verizon as a vendor for a three-year term (October 26, 2022 through October 25, 2025) to include telephony services and authorize the Town Manager to execute the contract on behalf of the Town.

Approval Recommended?

Yes

Item Details

The agreement is for the continued and upgraded use of our telephony circuits for the Town of Apex. The telephony circuits are centralized and provide desk and remote telephone coverage for all sites and remote workers for the Town of Apex.

Attachments

- Verizon U.S Services Agreement



U.S. Services Agreement

APEX, TOWN OF (Customer)	Verizon's presentation of this Agreement to Customer is an offer by Verizon to bind all Parties to the terms stated herein, which Customer may accept by signing and submitting it to Verizon without alteration on or before the date specified under the signature block below.
Signature:	
Name: Erika Sacco	
Title: Administrative	
Date:	
Email: Erika.Sacco@apexnc.org	

Valid if signed and submitted to Verizon by 10-Nov-2022.

MASTER TERMS

This U.S. Services Agreement ("Agreement") is entered into pursuant to and includes the online Master Terms found at www.verizon.com/business/service_guide/reg/g-omt-us-toc-2021MAR01.htm (as modified by the part of this document labeled Master Terms), as well as the Service Attachment(s) and pricing (including promotions) set out in the parts of this document labeled Service Terms and Pricing. Customer agrees that all future Orders will be subject to the terms of the Agreement. This Agreement is binding on the Commencement Date.

Customer understands that the online Master Terms and Service Attachments include service descriptions, requirements, service level agreements (where applicable), payment terms and other terms and conditions, which materially affect the rights, obligations and remedies of all Parties.

Verizon may change the Master Terms and Service Terms from time to time, effective upon 15 days posting or other notice. By continuing to use Service(s) after a change becomes effective, you agree to be bound by the changed terms, which apply to new and previously-ordered Services. It is Customer's responsibility to check the online Master Terms and Service Terms regularly for changes.

The Parties acknowledge the Agreement includes consent to use CPNI to market new Services. Additional Provision(s).

1. Provisions relating to General Terms.

Section 17.2 Governing Law and Venue, of the online Master Terms is hereby deleted and replaced with the following:

17.2 Governing Law and Venue. This Agreement will be governed by and construed in accordance with the laws of North Carolina, without regard to its choice of law principles, except where the Communications Act of 1934 applies. The Parties waive all objections to venue in the US District Court for the Eastern District of North Carolina or state courts within Wake County, North Carolina, as applicable.

Section 17.3 Dispute Resolution, of the online Master Terms is hereby deleted.

Section 20 Definitions, Subsection "Confidential Information," of the online Master Terms is hereby deleted and replaced with the following:

"Confidential Information" means information (in whatever form): (a) designated as confidential; (b) relating to the Party's business affairs, customers, products, developments, trade secrets, intellectual property rights, knowhow or personnel; or (c) received or discovered at any time that the Agreement is in effect, or otherwise in connection with the Agreement, by a Party (including through an Affiliate or other agent), which information should reasonably have been understood as Confidential Information of the Party (or one of its Affiliates or subcontractors), either because of legends or other markings, the circumstances of disclosure or the nature of the information itself. Confidential Information does not include information that: (i) is in the possession of the receiving Party free of any obligation of confidentiality at the time of its disclosure, (ii) is or becomes publicly known other than by a breach of this provision, (iii) is received without restriction from a third party free to disclose it, (iv) is developed independently by the receiving Party without reference to the Confidential Information, or (v) is a "public record" as defined by Chapter 132 of the North Carolina General Statutes.

The following sections shall be added to the online Master Terms for this Agreement:

21. **E-VERIFY.** Verizon shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Verizon shall require all of Verizon's subcontractors to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify).
22. **ANTI-HUMAN TRAFFICKING.** Verizon warrants and agrees that no labor supplied by Verizon or Verizon's subcontractors in the performance of this Agreement shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.
23. **NONDISCRIMINATION.** Pursuant to Section 3-2 of the Town of Apex Code of Ordinances, Verizon hereby warrants and agrees that Verizon will not discriminate against a protected class in employment, subcontracting practices, or the solicitation or hiring of vendors, suppliers, or commercial customers in connection with this Agreement. For the purposes of this Agreement "protected class" includes age, race, religious belief or non-belief, ethnicity, color, national origin, creed, sex, sexual orientation, gender identity, marital status, natural hair style, genetic information, pregnancy, familial status, disability, veteran or military status, or disabled veteran status.
24. **NON-APPROPRIATION.** Notwithstanding any other provisions of this Agreement, the parties agree that payments due hereunder from the Customer are from appropriations and monies from the Town of Apex Town Council and any other governmental entities. In the event sufficient appropriations or monies are not made available to the Customer to pay the terms of this Agreement for any fiscal year, this Agreement shall terminate immediately without further obligation of the Customer.



Parties	
Customer: APEX, TOWN OF	Verizon: Verizon Business Network Services LLC on behalf of affiliates identified in this Agreement or in the online Service Publication and Price Guide (individually and collectively "Verizon Providers of U.S. Services")
Registered Office Address: 73 HUNTER ST APEX, NC 27502-2312	Registered Office Address: One Verizon Way Basking Ridge, NJ 07920
USA	USA
Registered No., ABN or CIN (if applicable): N/A	Registered No. or ABN (if applicable): Not applicable
VAT/GST/Consumption Tax Number (if applicable): 566001166	VAT/GST/Consumption Tax Number (if applicable): N/A
Additional Legal Entity Information (if applicable):	Additional Legal Entity Information (if applicable): Not applicable
Address for Notices: 73 HUNTER ST APEX, NC 27502-2312 USA Erika.Sacco@apexnc.org	Address for Notices: Verizon Business Services 10000 Park Meadows Drive Lone Tree, CO 80124 Attn: Customer Service Email: notice@verizon.com With a subject of "OFFICIAL LEGAL NOTICE"

SERVICE TERMS

The "+" following the Service name indicates it is an Optimized Service; it is not a part of the Service name. The absence of a "+" following the service name indicates it is a non-Optimized Service.

New Services

1. **Virtual Network Services +**; terms are located at www.verizon.com/business/service_guide/reg/vnsplus-toc-2022MAR15.htm.

PRICING

(Quote ID : 210063097 version: 0)

1. **COMMITMENTS.** Customer agrees to the following pricing terms, as further described in the Master Terms. Additional commitments may be set out in the Service Order Form details.

Volume Commitments	
Annual Volume Commitment (USD)	24,000
Volume Commitment Period (months)	36
Underutilization Charge %	75
Early Termination Charge %	75



2. GENERAL PROMOTIONS

2.1 **Promotions for Optimized Services.** The following promotions will be applied to Optimized Services as indicated below.

Verizon Services 90 Day Satisfaction Guarantee for Contract	https://enterprise.verizon.com/service_guide/reg/pr-verizon_services_90_day_satisfaction_guarantee_for_contract_promotion_v2.pdf
---	---

Promotion Name	Promotional Terms
----------------	-------------------

PRICEBOOK PRICING On-line pricing is fixed for the commitment period, unless otherwise stated.

PRICEBOOK TERMS:

1. **OPTIMIZED SERVICES.** For new orders after the execution of this amendment, the rates, charges and discounts set forth below will be effective immediately upon install, unless otherwise stated below.
2. **NON-OPTIMIZED SERVICES.** The following terms apply only to non-Optimized Services:
 - 2.1 **Pricing Plan.** "Standard" rates and charges means the Verizon Business Services III (VBS III) pricing plan, where applicable unless stated otherwise below.
 - 2.2 **Rates and Charges.** Refer to the pricing section of the Service Terms for details about which Rates and Charges are fixed for the commitment period and those which are subject to change. All other charges not stated below will continue to apply.
 - 2.3 **Effective Date.** Except where stated otherwise for a particular service, the rates, charges and discounts set forth below will be effective on the 1st day of the 2nd billing cycle following Customer's signature and delivery of this contract to Verizon for non-Optimized services.

NEW SERVICE(S)

1. VIRTUAL NETWORK SERVICES + (OPTIMIZED)

1.1 **Standard Service Charges**

Standard Charges	
Standard Charges as of 12-Aug-2022 are at the following URL: https://enterprisecenter.verizon.com/enterprisesolutions/global/viewProductDesc.do?product=PR_VNS&c_urr=USD&date=08122022&scenarioid=294243974	
Service Type	Discount Off Standard Service Charge

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Allen Coleman, Town Clerk

Department(s): Town Clerk's Office

Requested Motion

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting the Date of a Public Hearing for November 8, 2022, on the Question of Annexation - Apex Town Council's intent to annex 56.59 acres, Utlely Farms PUD, Annexation No. 734 into the Town Corporate limits.

Approval Recommended?

Yes

Item Details

The Town Clerk certifies to the investigation of said annexation. Adoption of the Resolution authorizes the Town Clerk to advertise said public hearing by electronic means and on the Town of Apex's website.

Attachments

- Resolution Directing the Town Clerk to Investigate Petition
- Certificate of Sufficiency by the Town Clerk
- Resolution Setting Date of Public Hearing
- Legal Description
- Maps
- Annexation Petition





RESOLUTION DIRECTING THE TOWN CLERK
TO INVESTIGATE PETITION RECEIVED UNDER G.S. § 160A-31

Annexation Petition #734
Utley Farms PUD – 56.59 acres

WHEREAS, G.S. § 160A-31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Apex deems it advisable to proceed in response to this request for annexation;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, that the Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify to the Town Council the result of his investigation.

This the 25th day of October, 2022.

Jacques K. Gilbert
Mayor

ATTEST:

Allen L. Coleman, CMC, NCCCC
Town Clerk



CERTIFICATE OF SUFFICIENCY BY THE TOWN CLERK

Annexation Petition#734
Utley Farms PUD – 56.59 acres

To: The Town Council of the Town of Apex, North Carolina

I, Allen L. Coleman, Town Clerk, do hereby certify that I have investigated the annexation petition attached hereto, and have found, as a fact, that said petition is signed by all owners of real property lying in the area described therein, in accordance with G.S.§ 160A-31, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Apex, North Carolina this 25th day of October, 2022.

Allen L. Coleman, CMC, NCCCC
Town Clerk

(Seal)



RESOLUTION SETTING DATE OF PUBLIC HEARING
ON THE QUESTION OF ANNEXATION PURSUANT TO G.S. § 160A-31 AS AMENDED

Annexation Petition #734
Utley Farms PUD – 56.59 acres

WHEREAS, a petition requesting annexation of the area described herein has been received; and

WHEREAS, the Town Council of Apex, North Carolina has by Resolution directed the Town Clerk to investigate the sufficiency thereof; and

WHEREAS, Certification by the Town Clerk as to the sufficiency of said petition has been made;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, North Carolina that:

Section 1. A public hearing on the question of annexation of the area described herein will be held at the Apex Town Hall at 6 o'clock p.m. on the 8th day of November, 2022.

Section 2. The area proposed for annexation is described as attached.

Section 3. Notice of said public hearing shall be published on the Town of Apex Website, www.apexnc.org, Public Notice, at least ten (10) days prior to the date of said public hearing.

This the 25th day of October, 2022.

Jacques K. Gilbert, Mayor

ATTEST:

Allen L. Coleman, Town Clerk

Attachment: Legal Description

HORTON AND WELLONS/JOHNSON PROEPRTY

"UTLEY FARMS"

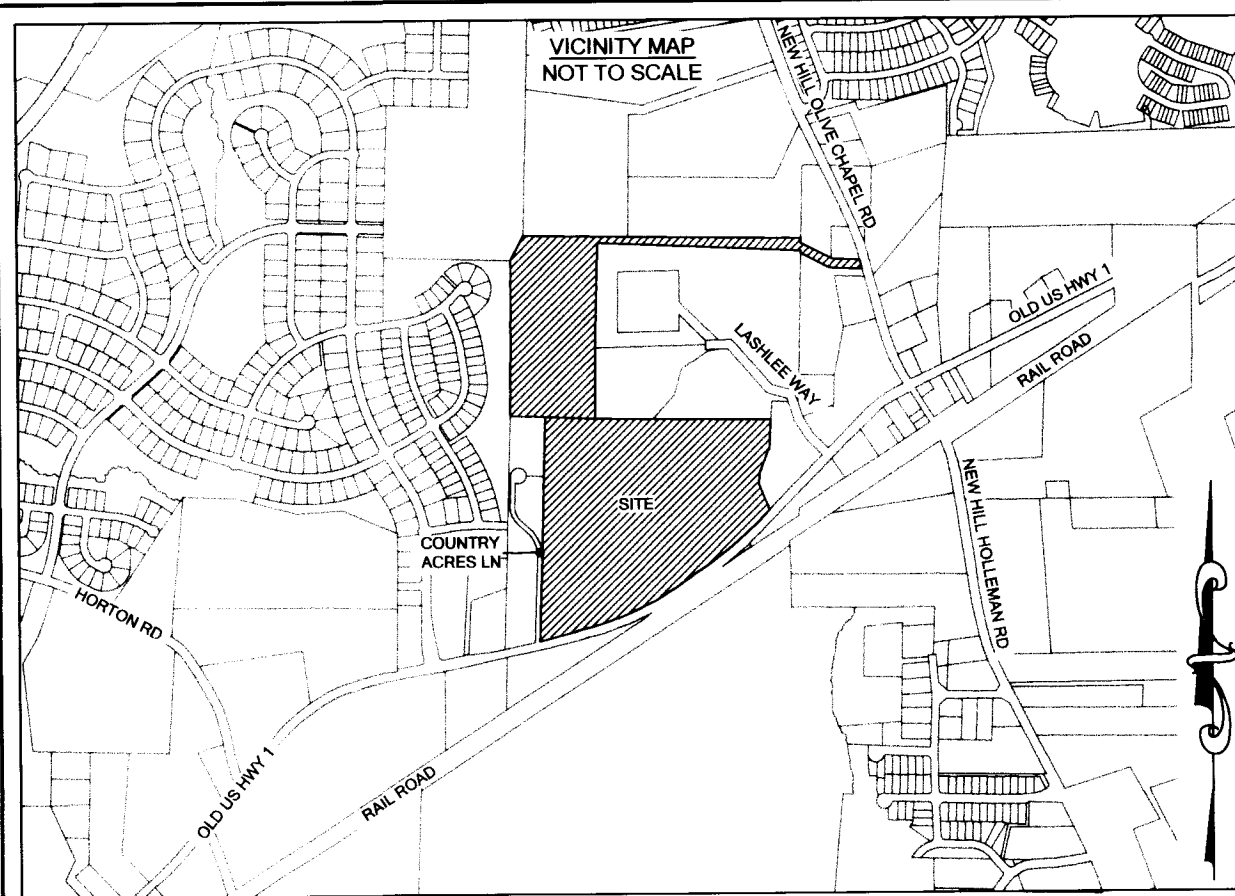
PROJECT BOUNDARY AND ANNEXATION LEGAL DESCRIPTION

BEING THE OUTER BOUNDARY OF 2 PARCELS, ONE NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON (PIN 0710-73-6732) AND THE OTHER NOW OR FORMERLY OF MYRTLE H. HORTON (PIN 0710-71-4834), EXCLUDING THAT PORTION OF THE MYRTLE H. HORTON PARCEL LYING TO THE SOUTH OF OLD U.S. HIGHWAY 1, LOCATED IN THE TOWN OF NEW HILL, BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 3/4" IRON PIPE FOUND ON THE NORTHEASTERN CORNER OF THE PROPERTY NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON AND THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, SAID IRON BEING THE TRUE POINT OF BEGINNING AND HAVING NORTH CAROLINA STATE PLAIN COORDINATES OF N= 703,604.52' AND E= 2,018,799.66'; THENCE, FROM THE POINT OF BEGINNING AND WITH THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, S14°25'18"E A DISTANCE OF 66.83 FEET TO A 5/8" IRON REBAR FOUND; THENCE, LEAVING SAID RIGHT OF WAY, N88°11'18"W A DISTANCE OF 188.21 FEET TO A 5/8" IRON REBAR FOUND; THENCE N88°11'18"W A DISTANCE OF 25.93 FEET TO A 3/4" IRON PIPE SET; THENCE, N62°24'56"W A DISTANCE OF 207.03 FEET TO A 3/4" IRON PIPE FOUND; THENCE, N87°31'49"W A DISTANCE OF 1,326.61 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S00°29'51"W A DISTANCE OF 657.49 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, S00°28'07"W A DISTANCE OF 459.96 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE, S88°54'39"E A DISTANCE OF 376.22 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE S88°54'39"E A DISTANCE OF 760.21 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°27'54"W A DISTANCE OF 193.23 FEET TO A 2" IRON PIPE FOUND; THENCE S40°29'33"W A DISTANCE OF 39.06 FEET TO A 3/4" IRON PIPE SET; THENCE, S20°02'10"W A DISTANCE OF 148.77 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°26'24"W A DISTANCE OF 74.66 FEET TO A 1" IRON PIPE FOUND; THENCE, S21°56'17"E A DISTANCE OF 90.03 FEET TO A 3/4" IRON PIPE SET; THENCE, S21°56'17"E A DISTANCE OF 82.07 FEET TO A 1/2" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, WITH SAID RIGHT OF WAY, S44°08'00"W A DISTANCE OF 57.11 FEET TO A 3/4" IRON PIPE SET; THENCE S04°26'41"W A DISTANCE OF 47.21 FEET TO A COMPUTED POINT IN THE CENTERLINE OF OLD US HIGHWAY 1; THENCE, WITH SAID CENTERLINE, S44°45'01"W A DISTANCE OF 117.34 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S46°50'07"W A DISTANCE OF 75.89 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S51°00'53"W A DISTANCE OF 86.92 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°38'28"W A DISTANCE OF 187.44 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°43'11"W A DISTANCE OF 166.66 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S55°37'49"W A DISTANCE OF 181.50 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,538.08 FEET AND A CHORD OF 222.64 FEET BEARING S62°15'39"W, A DISTANCE OF 222.83 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,502.64 FEET AND A CHORD OF 205.36 FEET BEARING S70°54'26"W, A DISTANCE OF 205.52 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID RIGHT OF WAY, S74°32'21"W A DISTANCE OF 335.97 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S76°14'37"W A

DISTANCE OF 79.04 FEET TO A COMPUTED POINT; THENCE, LEAVING SAID CENTERLINE, N01°40'52"E A DISTANCE OF 31.15 FEET TO A 1" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, LEAVING SAID RIGHT OF WAY, N01°40'52"E A DISTANCE OF 525.44 FEET TO A 1" IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 164.11 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 87.06 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 296.27 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°43'27"E A DISTANCE OF 154.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°45'10"E A DISTANCE OF 230.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N88°57'38"W A DISTANCE OF 226.32 FEET TO A 1.5" CAPPED IRON PIPE FOUND; THENCE, N00°29'37"E A DISTANCE OF 1,013.85 FEET TO A 1" CAPPED IRON PIPE FOUND THENCE, N27°07'07"E A DISTANCE OF 180.77 FEET TO A 3/4" PINCHED IRON PIPE FOUND; THENCE, S89°14'14"E A DISTANCE OF 677.99 FEET TO A 3/4" IRON PIPE SET; THENCE, S89°12'15"E A DISTANCE OF 1,126.48 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S01°21'26"W A DISTANCE OF 33.00 FEET TO A 3/4" BENT IRON PIPE FOUND; THENCE, S62°23'27"E A DISTANCE OF 222.99 FEET TO A 1" BENT IRON PIPE FOUND; THENCE, S89°31'44"E A DISTANCE OF 181.71 FEET TO THE POINT OF BEGINNING.

SAID BOUNDARY CONTAINING 2,465,206 SQUARE FEET (56.59 ACRES), MORE OR LESS.



LEGEND

- EXISTING BOUNDARY CORNER FOUND
- BOUNDARY CORNER SET
- COMPUTED POINT
- PROPERTY LINE SURVEYED
- PROPERTY LINE NOT SURVEYED
- EASEMENTS
- PAVEMENT
- TOWN OF APEX CORPORATE LIMITS (PER WAKE COUNTY GIS)
- EXISTING IRON PIPE
- EXISTING IRON REBAR
- BOOK OF MAPS
- DEED BOOK
- PAGE
- RIGHT OF WAY
- TIE (INDICATES 2 PARTS OF THE SAME PROPERTY)



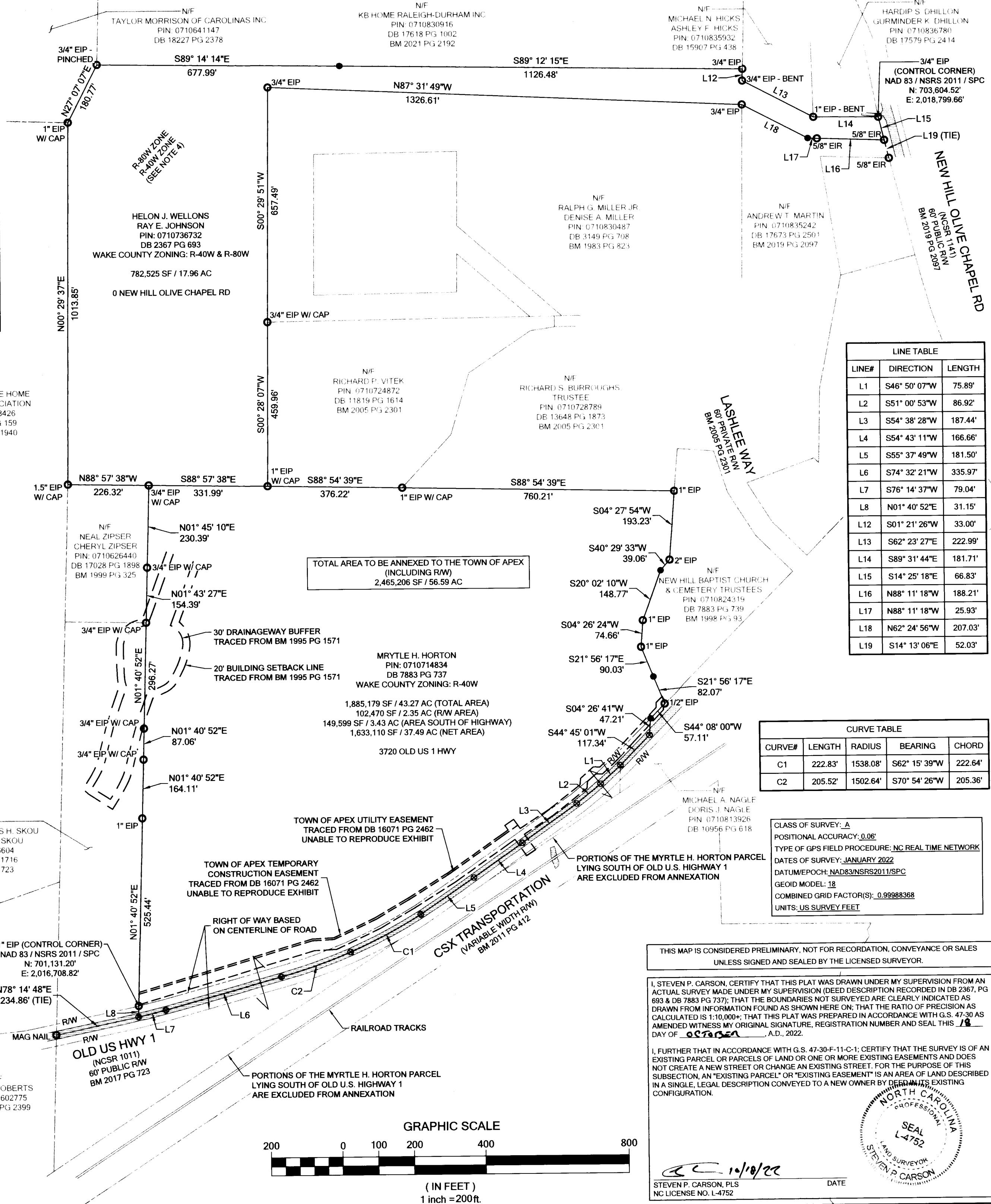
NOTES

- THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY UNDER THE SUPERVISION OF STEVEN P. CARSON, PLS.
- ALL DISTANCE ARE HORIZONTAL GROUND DISTANCE AND ALL BEARINGS ARE BASED ON GPS OBSERVATIONS, NAD83 / NSRS 2011 / SPC, UNLESS OTHERWISE SHOWN.
- PROPERTY LIES IN ZONE "X" PER NATIONAL INSURANCE PROGRAM FLOOD INSURANCE RATE MAP #3720071000K, DATED 02/02/2007.
- SITE ZONED "R-40W" & "R-80W" FOR WAKE COUNTY PER COUNTY GIS.
- AREAS COMPUTED BY COORDINATE METHOD.
- THIS MAP HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.
- ALL BOUNDARY CORNERS SET ARE 3/4" IRON PIPE SET (3/4" IPS), UNLESS OTHERWISE NOTED.

ANNEXATION # _____

I, ALLEN COLEMAN, CMC, NCCCC, TOWN CLERK, APEX, NORTH CAROLINA CERTIFY THIS A TRUE AND EXACT MAP OF ANNEXATION ADOPTED THE _____ DAY OF _____, 20____, BY THE TOWN COUNCIL. I SET MY HAND AND SEAL OF THE TOWN OF APEX, _____ DAY/MONTH/YEAR

ALLEN COLEMAN, CMC, NCCCC,
TOWN CLERK



LINE TABLE

LINE#	DIRECTION	LENGTH
L1	S46° 50' 07"W	75.89'
L2	S51° 00' 53"W	86.92'
L3	S54° 38' 28"W	187.44'
L4	S54° 43' 11"W	166.66'
L5	S55° 37' 49"W	181.50'
L6	S74° 32' 21"W	335.97'
L7	S76° 14' 37"W	79.04'
L8	N01° 40' 52"E	31.15'
L12	S01° 21' 26"W	33.00'
L13	S62° 23' 27"E	222.99'
L14	S89° 31' 44"E	181.71'
L15	S14° 25' 18"E	66.83'
L16	N88° 11' 18"W	188.21'
L17	N88° 11' 18"W	25.93'
L18	N62° 24' 56"W	207.03'
L19	S14° 13' 06"E	52.03'

CURVE TABLE

CURVE#	LENGTH	RADIUS	BEARING	CHORD
C1	222.83'	1538.08'	S62° 15' 39"W	222.64'
C2	205.52'	1502.64'	S70° 54' 26"W	205.36'

CLASS OF SURVEY: A
 POSITIONAL ACCURACY: 0.06'
 TYPE OF GPS FIELD PROCEDURE: NC REAL TIME NETWORK
 DATES OF SURVEY: JANUARY 2022
 DATUM/EPOCH: NAD83/NSRS2011/SPC
 GEOID MODEL: 18
 COMBINED GRID FACTOR(S): 0.99988368
 UNITS: US SURVEY FEET

TOTAL AREA TO BE ANNEXED TO THE TOWN OF APEX (INCLUDING RW)
 2,465,206 SF / 56.59 AC

MRYTLE H. HORTON
 PIN: 0710714834
 DB 7883 PG 737
 WAKE COUNTY ZONING: R-40W
 1,885,179 SF / 43.27 AC (TOTAL AREA)
 102,470 SF / 2.35 AC (R/W AREA)
 149,589 SF / 3.43 AC (AREA SOUTH OF HIGHWAY)
 1,633,110 SF / 37.49 AC (NET AREA)
 3720 OLD US 1 HWY

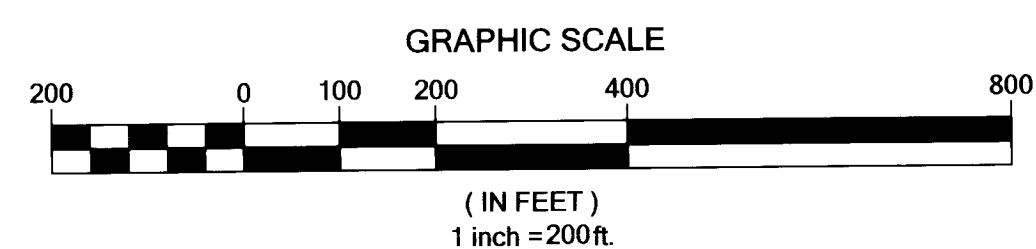
TOWN OF APEX UTILITY EASEMENT
 TRACED FROM DB 16071 PG 2462
 UNABLE TO REPRODUCE EXHIBIT

TOWN OF APEX TEMPORARY
 CONSTRUCTION EASEMENT
 TRACED FROM DB 16071 PG 2462
 UNABLE TO REPRODUCE EXHIBIT

RIGHT OF WAY BASED
 ON CENTERLINE OF ROAD

PORTIONS OF THE MYRTLE H. HORTON PARCEL
 LYING SOUTH OF OLD U.S. HIGHWAY 1
 ARE EXCLUDED FROM ANNEXATION

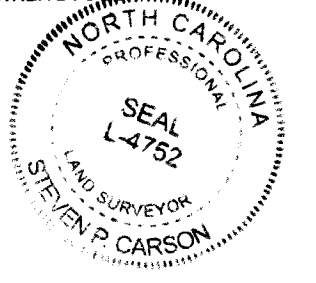
PORTIONS OF THE MYRTLE H. HORTON PARCEL
 LYING SOUTH OF OLD U.S. HIGHWAY 1
 ARE EXCLUDED FROM ANNEXATION



THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.

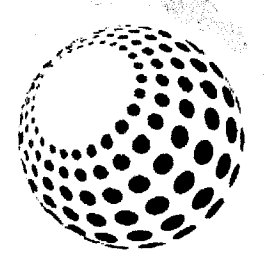
I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DB 2367, PG 693 & DB 7883 PG 737); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND AS SHOWN HERE ON; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 18 DAY OF OCTOBER, A.D., 2022.

I, FURTHER THAT IN ACCORDANCE WITH G.S. 47-30-F-11-C-1; CERTIFY THAT THE SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET. FOR THE PURPOSE OF THIS SUBSECTION, AN "EXISTING PARCEL" OR "EXISTING EASEMENT" IS AN AREA OF LAND DESCRIBED IN A SINGLE, LEGAL DESCRIPTION CONVEYED TO A NEW OWNER BY DEED OR AN EXISTING CONFIGURATION.



STEVEN P. CARSON, PLS
 NC LICENSE NO. L-4752
 DATE 10/18/22

BATEMAN CIVIL SURVEY COMPANY
 ENGINEERS • SURVEYORS • PLANNERS
 2524 RELIANCE AVENUE, APEX, NC 27539
 PHONE: (919) 577-1080 FAX: (919) 577-1081
 INFO@BATEMANCIVILSURVEY.COM
 NCBELS FIRM# C-2378



ANNEXATION MAP FOR THE TOWN OF APEX
 PARCEL ID NUMBER(S): 0710714834 & 0710736732
 AS RECORDED IN DB 7883 PG 737 & DB 2367 PG 693
 BUCKHORN TWP • WAKE COUNTY • NORTH CAROLINA

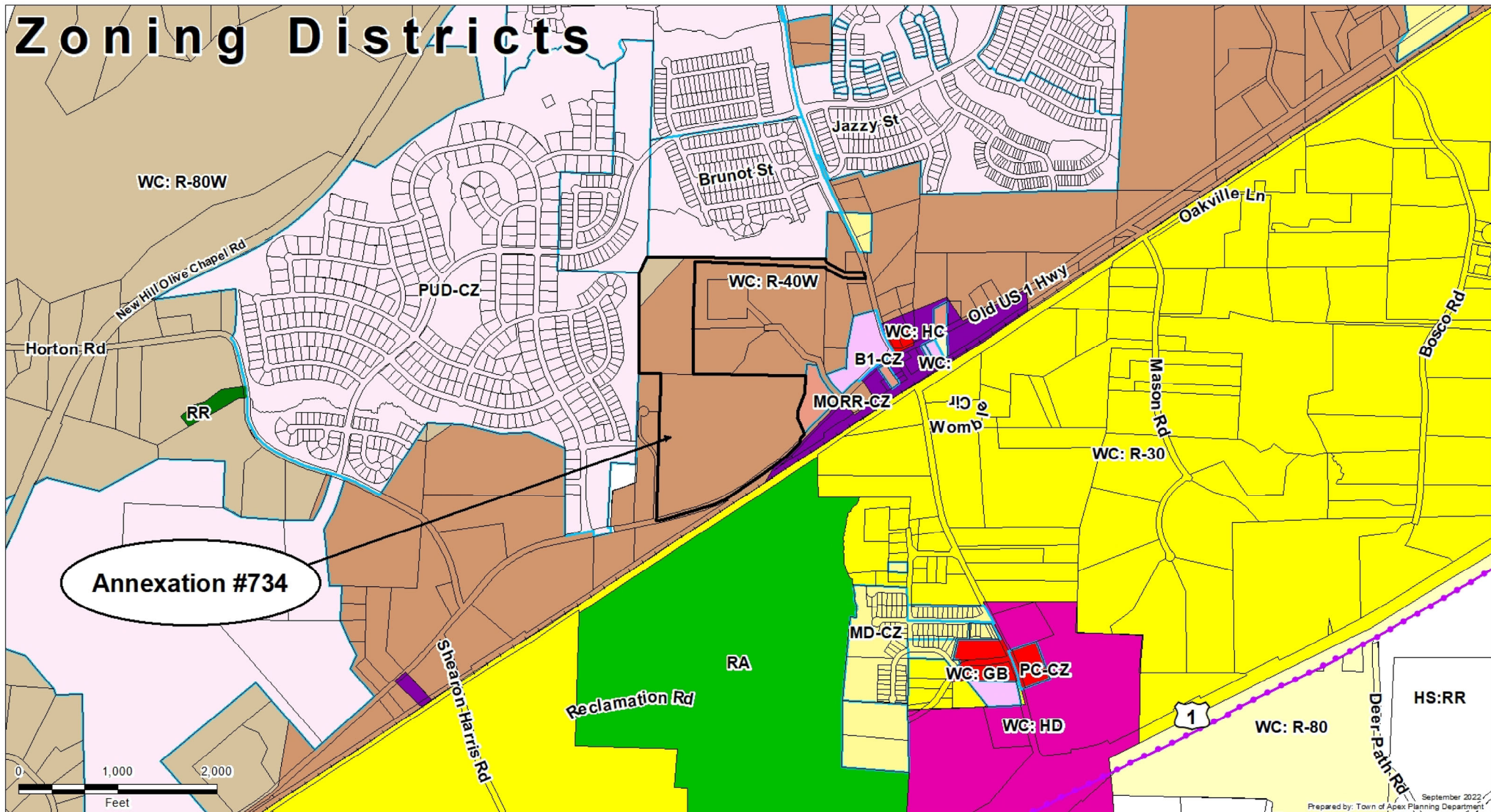
REVISIONS

- REVISED PER TOWN OF APEX COMMENTS (5/13/22)
- REVISED TO REMOVE LAND SOUTH OF OLD US 1 (6/30/22)
- REVISED PER TOWN OF APEX COMMENTS (7/27/22)
-

DESIGNED BY: N/A
 DRAWN BY: ELS
 CHECKED BY: SPC
 SCALE: 1" = 200'
 DATE: 03/29/2022
 JOB NUMBER: 210950

SHEET 1 OF 1

Zoning Districts



PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 2022-012 Submittal Date: 5/2/22
 Fee Paid: \$ 200.00 Check #: 3358

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, Chatham County, North Carolina.
2. The area to be annexed is contiguous, non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads, and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

OWNER INFORMATION

<u>Horton, Myrtle H.</u> Owner Name (Please Print)	<u>0710-71-4834 (DB 13-E Pg 2029)</u> Property PIN or Deed Book & Page #
_____ Phone	_____ E-mail Address
<u>Hellon Joy Wellons & Ray E. Johnson</u> Owner Name (Please Print)	<u>0710-73-6732 (DB 20-E Pg 556)</u> Property PIN or Deed Book & Page #
_____ Phone	_____ E-mail Address
_____ Owner Name (Please Print)	_____ Property PIN or Deed Book & Page #
_____ Phone	_____ E-mail Address

SURVEYOR INFORMATION

Surveyor: Bateman Civil Survey Company (Steven Carson & Josh Davidson)
 Phone: (919) 577-1080 Fax: (919) 577-1081
 E-mail Address: steven@batemancivilsurvey.com (Engineering contact: Jeff Roach, Peak Engineering & Design)

ANNEXATION SUMMARY CHART

Property Information	Reason(s) for annexation (select all that apply)
Total Acreage to be annexed: <u>56.59</u> 61.24 acres	Need water service due to well failure <input type="checkbox"/>
Population of acreage to be annexed: <u>2</u>	Need sewer service due to septic system failure <input type="checkbox"/>
Existing # of housing units: <u>1</u>	Water service (new construction) <input checked="" type="checkbox"/>
Proposed # of housing units: <u>122</u>	Sewer service (new construction) <input checked="" type="checkbox"/>
Zoning District*: <u>PUD-CZ</u>	Receive Town Services <input checked="" type="checkbox"/>

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Department of Planning and Community Development with questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: _____

Submittal Date: _____

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

MYRLE HOLT HORTON
Please Print

Myrle Holt Horton
Signature

Please Print

Signature

Please Print

Signature

Please Print

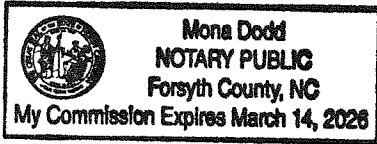
Signature

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Mona Dodd, a Notary Public for the above State and County,
this the 27 day of, April, 2022

Mona Dodd
Notary Public

SEAL



My Commission Expires: March 14, 2026

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the ____ day of _____, 20____.

Corporate Name _____

SEAL

By: _____

Attest:

President (Signature)

Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County,
this the _____ day of _____, 20____.

Notary Public

SEAL

My Commission Expires: _____

PETITION FOR VOLUNTARY ANNEXATION

Application #: _____

Submittal Date: _____

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

Helen J. Wellons
Please Print

Helen J. Wellons
Signature

John D. Wellons Jr.
Please Print

John D. Wellons Jr.
Signature

Please Print

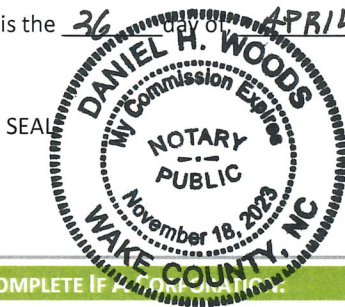
Signature

Please Print

Signature

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, DANIEL H. WOODS, a Notary Public for the above State and County,
this the 36 day of APRIL, 2022.



Daniel H. Woods
DANIEL H. WOODS Notary Public

My Commission Expires: 11/18/2023

COMPLETE IF

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the ____ day of _____, 20 ____.

SEAL Corporate Name _____

Attest: By: _____
President (Signature)

Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County,
this the ____ day of _____, 20 ____.

SEAL

Notary Public

My Commission Expires: _____

PETITION FOR VOLUNTARY ANNEXATION

Application #: _____

Submittal Date: _____

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

RAY E JOHNSON

Please Print Janeto. Johnson

Janeto. Johnson
Please Print

Ray E Johnson
Signature

Janeto Johnson
Signature

Please Print

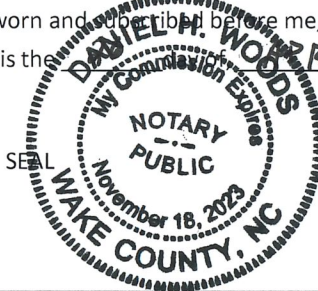
Signature

Please Print

Signature

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, DANIEL H. WOODS, a Notary Public for the above State and County, this the APRIL, 2022.



Daniel H. Woods
DANIEL H. WOODS Notary Public

My Commission Expires: 11/18/2023

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the ____ day of _____, 20 ____.

Corporate Name _____

SEAL

By: _____
President (Signature)

Attest:

Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County, this the ____ day of _____, 20 ____.

Notary Public

SEAL

My Commission Expires: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Allen Coleman, Town Clerk

Department(s): Town Clerk's Office

Requested Motion

Motion to adopt a Resolution Directing the Town Clerk to Investigate Petition Received, to accept the Certificate of Sufficiency by the Town Clerk, and to adopt a Resolution Setting the Date of a Public Hearing for November 8, 2022, on the Question of Annexation - Apex Town Council's intent to annex 2.24 acres, located at 7805 Green Level Church Road, Annexation No. 744 into the Town Corporate limits.

Approval Recommended?

Yes

Item Details

The Town Clerk certifies to the investigation of said annexation. Adoption of the Resolution authorizes the Town Clerk to advertise said public hearing by electronic means and on the Town of Apex's website.

Attachments

- Resolution Directing the Town Clerk to Investigate Petition
- Certificate of Sufficiency by the Town Clerk
- Resolution Setting Date of Public Hearing
- Legal Description
- Maps
- Annexation Petition





RESOLUTION DIRECTING THE TOWN CLERK
TO INVESTIGATE PETITION RECEIVED UNDER G.S. § 160A-31

Annexation Petition #744
7805 Green Level Church Road – 2.24 acres

WHEREAS, G.S. § 160A-31 provides that the sufficiency of the petition shall be investigated by the Town Clerk before further annexation proceedings may take place; and

WHEREAS, the Town Council of the Town of Apex deems it advisable to proceed in response to this request for annexation;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, that the Town Clerk is hereby directed to investigate the sufficiency of the above-described petition and to certify to the Town Council the result of his investigation.

This the 25th day of October, 2022.

Jacques K. Gilbert
Mayor

ATTEST:

Allen L. Coleman, CMC, NCCCC
Town Clerk



CERTIFICATE OF SUFFICIENCY BY THE TOWN CLERK

Annexation Petition#744
7805 Green Level Church Road – 2.24 acres

To: The Town Council of the Town of Apex, North Carolina

I, Allen L. Coleman, Town Clerk, do hereby certify that I have investigated the annexation petition attached hereto, and have found, as a fact, that said petition is signed by all owners of real property lying in the area described therein, in accordance with G.S.§ 160A-31, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Town of Apex, North Carolina this 25th day of October, 2022.

Allen L. Coleman, CMC, NCCCC
Town Clerk

(Seal)



RESOLUTION SETTING DATE OF PUBLIC HEARING
ON THE QUESTION OF ANNEXATION PURSUANT TO G.S. § 160A-31 AS AMENDED

Annexation Petition #744
7805 Green Level Church Road – 2.24 acres

WHEREAS, a petition requesting annexation of the area described herein has been received; and

WHEREAS, the Town Council of Apex, North Carolina has by Resolution directed the Town Clerk to investigate the sufficiency thereof; and

WHEREAS, Certification by the Town Clerk as to the sufficiency of said petition has been made;

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Apex, North Carolina that:

Section 1. A public hearing on the question of annexation of the area described herein will be held at the Apex Town Hall at 6 o'clock p.m. on the 8th day of November, 2022.

Section 2. The area proposed for annexation is described as attached.

Section 3. Notice of said public hearing shall be published on the Town of Apex Website, www.apexnc.org, Public Notice, at least ten (10) days prior to the date of said public hearing.

This the 25th day of October, 2022.

Jacques K. Gilbert, Mayor

ATTEST:

Allen L. Coleman, Town Clerk

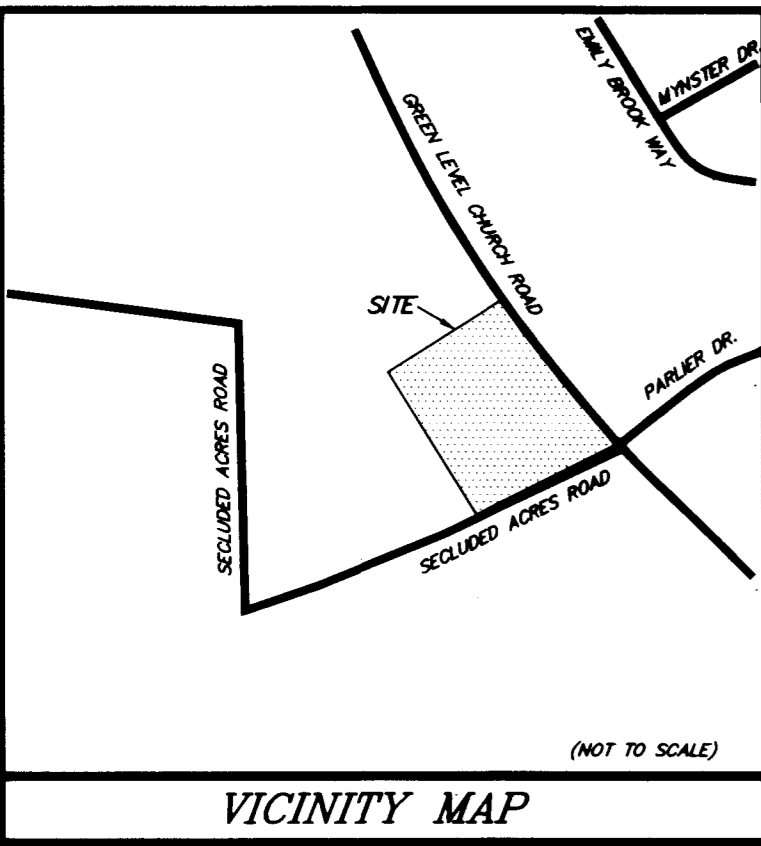
Attachment: Legal Description

Smith & Smith Surveyors, P.A.
P.O. Box 457
Apex, N.C. 27502
(919) 362-7111
Firm License No. C-0155

Lying and being in White Oak Township, Wake County, North Carolina and being described more fully as follows to wit:

BEGINNING at a point being the southeastern corner of David Lee Strickland on the northern right-of-way of Secluded Acres Road (N.C.S.R. No. 1783); thence with the eastern property line of aforesaid Strickland, North $31^{\circ}26'00''$ West, 312.55 feet to a calculated point being in the southern property line of James Alton Segroves; thence with the southern property line of aforesaid Segroves and beyond North $58^{\circ}34'00''$ East, 277.92 feet to a calculated point on the former eastern right-of-way of Green Level Church Road (N.C.S.R. No. 1600); thence with the former eastern right-of-way, a curve in a counterclockwise direction having a radius of 2,017.55 feet, a length of 357.47 feet and a chord of South $38^{\circ}09'18''$ East, 357.01 feet to a calculated point on the former eastern right-of-way of Green Level Church Road (N.C.S.R. No. 1600); thence to and with the northern right-of-way of Secluded Acres Road (N.C.S.R. No. 1783), South $66^{\circ}03'00''$ West, 322.45 feet to the point and place of BEGINNING, containing 2.24 acres more or less. The above-described tract of land is all of Wake County PIN 0723914584 and a portion of the intervening Green Level Church Road (N.C.S.R. No. 1600) right-of-way as shown in Book of Maps 2016, Page 2224.

This legal description was prepared without the benefit of an actual survey for the sole purpose of municipal boundary rezoning.



I, STALEY C. SMITH, certify that this plat was drawn under my supervision from an actual survey made under my supervision from deed description recorded in Deed Book N/A, Page N/A, that the boundaries not surveyed are clearly indicated as drawn from information found in Book 4391, Page 682; that the ratio of precision as calculated is: 1: N/A; This map or plat is exempt from the requirements of G.S. 47-30 pursuant to G.S. 47-30 (j).

Witness my hand and seal this 13 TH day of October, 2022.



Staley C. Smith
Professional Land Surveyor
L-3766
License Number

REFERENCE: ESTATE FILE # 03-E-1996
DEED BOOK 4391, PAGE 662 Back Reference
BOOK OF MAPS 1982, PG. 90

- SURVEYOR NOTES:**
- THE PROPERTY SHOWN HEREON IS SUBJECT TO ALL EASEMENTS OF RECORD AFFECTING THE SAME.
 - 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 UNDERGROUND UTILITIES, BURIAL GROUNDS, OR ANY SUBSURFACE FEATURES THAT MAY OR MAY NOT BE PRESENT ON THIS SITE.
 - NOT A PHYSICAL SURVEY ON THIS DATE.
 - THIS ILLUSTRATIVE MAP IS PREPARED FOR THE SOLE PURPOSE OF MUNICIPAL BOUNDARY ANNEXATION AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
 - ALL DISTANCES ARE EXPRESSED AS PRESUMPTIVE HORIZONTAL GROUND U.S. SURVEY FEET MEASUREMENTS.
 - AREA DETERMINED USING LEGAL DESCRIPTION PREPARED BY OTHERS.

- LEGEND**
- XXXX - Street Address (Typical)
 - TL - Total
 - R/W - Right Of Way
 - Unsurveyed Right Of Way Line
 - Unsurveyed Line
 - Unsurveyed Line
 - Existing Town of Apex Corporate Limit Line (Unsurveyed)

ANNEXATION # 744

I, Allen Coleman, CMC, NCCCO, Town Clerk, Apex, North Carolina certify this is a true and exact map of annexation adopted this the _____ day of _____, 2022, by the Town Council. I set my hand and seal of the Town of Apex, _____, 2022.

Allen Coleman, CMC, NCCCO, Town Clerk

**JAMES ALTON SEAGROVES
GLORIA C. SEAGROVES**
D.B. 18964, PG. 961
B.M. 1981, PG. 725
PIN 0723912723

**ANNA E. NEELY
NATHAN M. NEELY**
D.B. 16967, PG. 2163
PIN 0723911556

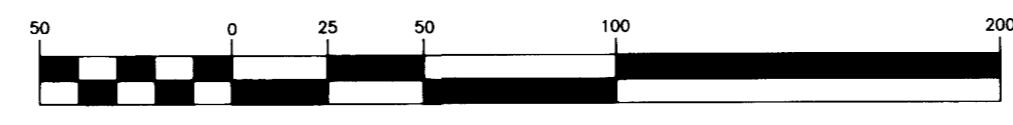
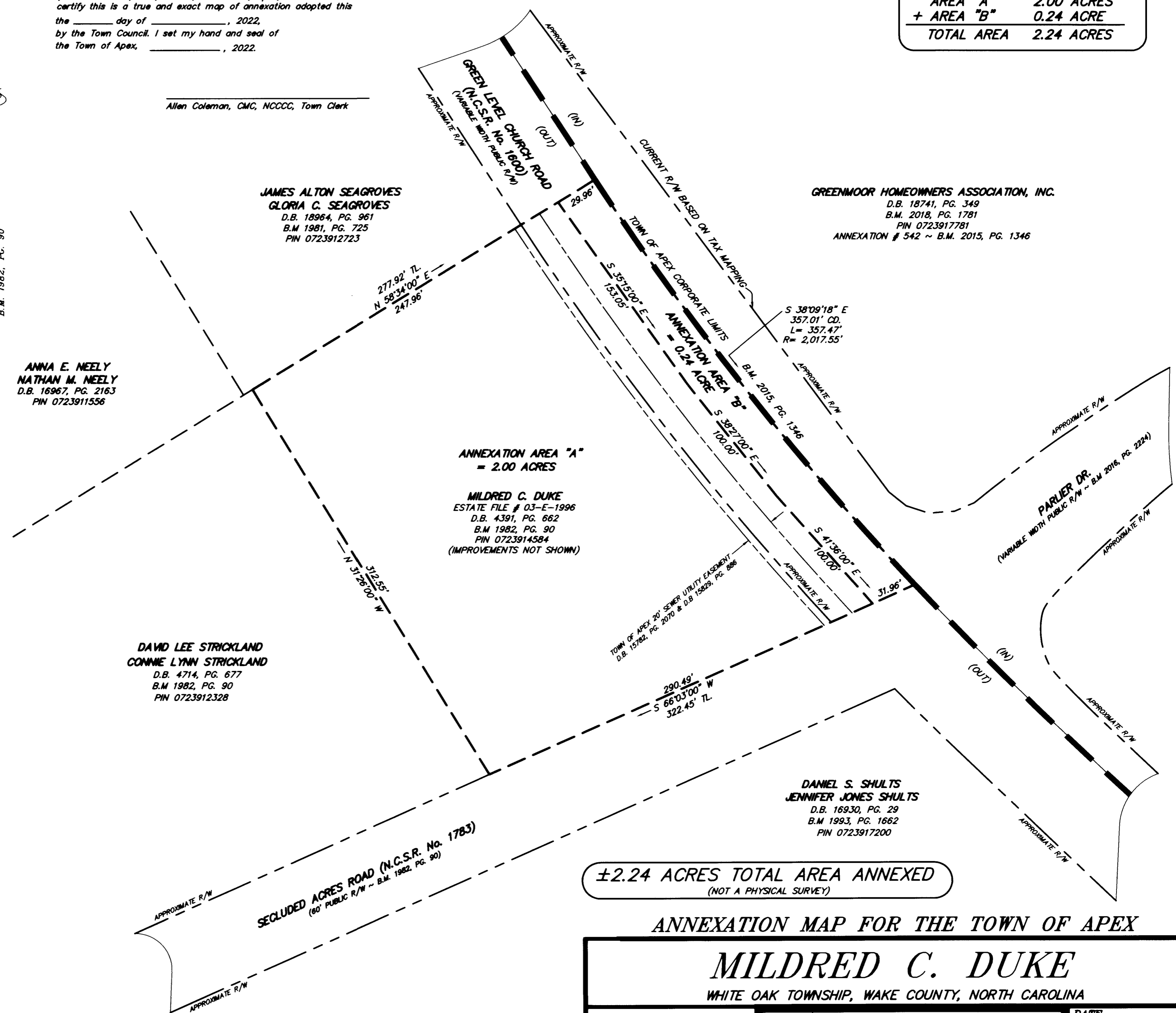
**DAVID LEE STRICKLAND
CONNIE LYNN STRICKLAND**
D.B. 4714, PG. 677
B.M. 1982, PG. 90
PIN 0723912328

**ANNEXATION AREA "A"
= 2.00 ACRES**
MILDRED C. DUKE
ESTATE FILE # 03-E-1996
D.B. 4391, PG. 662
B.M. 1982, PG. 90
PIN 0723914584
(IMPROVEMENTS NOT SHOWN)

GREENMOOR HOMEOWNERS ASSOCIATION, INC.
D.B. 18741, PG. 349
B.M. 2018, PG. 1781
PIN 0723917781
ANNEXATION # 542 ~ B.M. 2015, PG. 1346

**DANIEL S. SHULTS
JENNIFER JONES SHULTS**
D.B. 16930, PG. 29
B.M. 1993, PG. 1662
PIN 0723917200

ANNEXATION AREA SUMMARY	
AREA "A"	2.00 ACRES
+ AREA "B"	0.24 ACRE
TOTAL AREA	2.24 ACRES



ANNEXATION MAP FOR THE TOWN OF APEX

MILDRED C. DUKE
WHITE OAK TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

LISTED OWNER
(NOT A TITLE VERIFICATION)
MILDRED C. DUKE
7805 GREEN LEVEL CHURCH ROAD
APEX, N.C. 27523-9467
P.I.N. 0723914584



**Smith and Smith,
Surveyors, P.A.**

P.O. BOX 457
APEX, N.C. 27602
(919) 962-7111

FIRM LICENSE No. C-0155

DATE SEPTEMBER 20, 2022
SCALE 1" = 50'
DRAWN BY J.A.B.
PROJECT NO. 2022-64

RECORDED IN BOOK OF MAPS 2022, PAGE _____



Annexation #744

Secluded Acres Rd

Parlier Dr

Greenmoor

Castlereagh North, Section 2

Green Level Church Rd

Our Estate

0 100 200 Feet

February 2022 Aerial Photography, October 2022 Prepared by: Town of Apex Planning Department

PETITION FOR VOLUNTARY ANNEXATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 2022-021 Submittal Date: 10-3-2022
 Fee Paid \$ 200.⁰⁰ Check # 3218

TO THE TOWN COUNCIL APEX, NORTH CAROLINA

1. We, the undersigned owners of real property, respectfully request that the area described in Part 4 below be annexed to the Town of Apex, Wake County, Chatham County, North Carolina.
2. The area to be annexed is contiguous, non-contiguous (satellite) to the Town of Apex, North Carolina and the boundaries are as contained in the metes and bounds description attached hereto.
3. If contiguous, this annexation will include all intervening rights-of-way for streets, railroads, and other areas as stated in G.S. 160A-31(f), unless otherwise stated in the annexation amendment.

OWNER INFORMATION

<u>Mildred Cayer Duke</u> Owner Name (Please Print)	<u>0723 91 4584</u> Property PIN or Deed Book & Page #
<u>919-218-1626</u> Phone	<u>None</u> E-mail Address
_____ Owner Name (Please Print)	_____ Property PIN or Deed Book & Page #
_____ Phone	_____ E-mail Address
_____ Owner Name (Please Print)	_____ Property PIN or Deed Book & Page #
_____ Phone	_____ E-mail Address

SURVEYOR INFORMATION

Surveyor: Smith & Smith
 Phone: 919 362-7111 Fax: n/a
 E-mail Address: staley@smithandsmithsurveyors.net

ANNEXATION SUMMARY CHART

Property Information	Reason(s) for annexation (select all that apply)
Total Acreage to be annexed: <u>2.000 2.24</u>	Need water service due to well failure <input checked="" type="checkbox"/>
Population of acreage to be annexed: <u>2</u>	Need sewer service due to septic system failure <input checked="" type="checkbox"/>
Existing # of housing units: <u>1</u>	Water service (new construction) <input type="checkbox"/>
Proposed # of housing units: <u>1</u>	Sewer service (new construction) <input type="checkbox"/>
Zoning District*: <u>RR</u>	Receive Town Services <input checked="" type="checkbox"/>

*If the property to be annexed is not within the Town of Apex's Extraterritorial Jurisdiction, the applicant must also submit a rezoning application with the petition for voluntary annexation to establish an Apex zoning designation. Please contact the Department of Planning and Community Development with questions.

PETITION FOR VOLUNTARY ANNEXATION

Application #: 2022-021

Submittal Date: 10-3-22

COMPLETE IF SIGNED BY INDIVIDUALS:

All individual owners must sign. (If additional signatures are necessary, please attach an additional sheet.)

Mildred C Duke, widow
Please Print

Mildred C Duke
Signature

Please Print

Signature

Please Print

Signature

Please Print

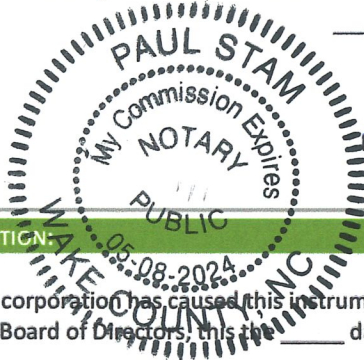
Signature

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Paul Stam, a Notary Public for the above State and County,
this the 21 day of September, 2022.

Paul Stam
Notary Public

SEAL



My Commission Expires: May 8, 2024

COMPLETE IF A CORPORATION:

In witness whereof, said corporation has caused this instrument to be executed by its President and attested by its Secretary by order of its Board of Directors, this the _____ day of _____, 20_____.

Corporate Name _____

SEAL

By: _____

Attest: _____ President (Signature)

Secretary (Signature)

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, _____, a Notary Public for the above State and County,
this the _____ day of _____, 20_____.

Notary Public

SEAL

My Commission Expires: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Daniel Edwards, Senior Capital Projects Manager

Department(s): Administration

Requested Motion

Motion to award building construction contract to Hamlett Associates, Inc. and authorization for the Town Manager to execute the contract on behalf of the Town and approve corresponding Budget Amendment 9.

Approval Recommended?

Yes

Item Details

The town received four bids for the Public Works Operations Renovation - Phase 1 Project on September 29, 2022. Hamlett Associates, Inc. of Climax, NC was the lowest responsive, responsible bidder with a total bid price of \$1,062,596.00. The architect's estimate was approximately \$1,060,000. Staff and Consultant (CRA Associates) recommends awarding the contract to Hamlett Associates, Inc.

This project was budgeted in the FY 2021-2022 Operating Budget with \$415,000 appropriated in the General Fund and \$415,000 appropriated from the Water & Sewer Fund. Because of delays starting the project, a contractor had not been selected so funds were not encumbered. These funds were swept back to fund balance at the close of the Fiscal Year. Staff is requesting reappropriation of these funds and an additional \$232,600 to complete the project. The facility is shared by Water & Sewer Utility and Public Works staff so funding is split equally between the two funds.

Attachments

- Budget Amendment 9
- Recommendation of Award, Certified Bid Tab, and Bid Package
- Notice of Award
- Agreement (for reference only)





Town of Apex

Budget Ordinance Amendment No. 9

BE IT ORDAINED, by the Council of the Town of Apex that the following Budget Amendment for the Fiscal Year 2022-2023 Budget Ordinance be adopted:

General Fund

Section 1. Revenues:

Appropriated Fund Balance	\$531,300
Total Revenues	\$531,300

Section 2. Expenditures:

47300 Facilities Capital Outlay Improvements	\$531,300
Total Expenditures	\$531,300

Water Sewer Fund

Section 3. Revenues:

Appropriated Fund Balance	\$531,300
Total Revenues	\$531,300

Section 4. Expenditures:

47300 WS-Admin Capital Outlay Improvements	\$531,300
Total Expenditures	\$531,300

Section 5. Within five (5) days after adoption, copies of this Amendment shall be filed with the Finance Officer and Town Clerk.

Adopted this the 25th day of October, 2022.

Attest:

Jacques K. Gilbert, Mayor

Allen L. Coleman, CMC, NCCCC
Town Clerk



September 30, 2022

Mr. Daniel Edwards
Senior Capital Projects Manager
Town of Apex
73 Hunter Street
Apex, NC 27502

**RE: Phase 1 Renovations, Public Works Operations Building
Town of Apex
CRA Project #2122**

Dear Mr. Edwards:

We recommend pursuing a contract award with Hamlett Associates, Inc., of Climax, North Carolina, pending due diligence, for the Town of Apex’s Public Works Operations Building Phase 1 Renovation project. They are the apparent low bidder based on the base bid and additive alternates below.

Base Bid	\$1,062,596.00
<u>Alternate #1 – Preferred Brand for Door Hardware</u>	<u>\$ 0.00</u>
Total of Contract Award	<u>\$1,062,596.00</u>

We have subsequently reviewed their Form of Proposal and it appears to be in good order.

If you need anything further regarding the information presented above, please contact me.

Sincerely,

David M. Taylor, AIA, LEED AP

FORM OF PROPOSAL

Town of Apex _____
Phase I Renovation _____
Public Works Operations Building _____

Contract: Single-Prime General Construction
Bidder: HAMMETT ASSOCIATES INC
Date: 9-29-22

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed. The bidder further declares that he and his subcontractors have fully complied with NCGS 64, Article 2 in regards to E-Verification as required by Section 2.(c) of Session Law 2013-418, codified as N.C. Gen. Stat. § 143-129(j).

The Bidder proposes and agrees if this proposal is accepted to contract with the

Town of Apex

in the form of contract specified below, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of

Phase I Renovation – Public Works Operations Building

in full in complete accordance with the plans, specifications and contract documents, to the full and entire satisfaction of the laws of the State of North Carolina, and the

Town of Apex and CRA Associates, Inc.

with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and the contract documents, for the sum of:

SINGLE PRIME CONTRACT:

Base Bid:

TWO
ONE MILLION SIXTY-THOUSAND FIVE HUNDRED Dollars (\$) 1,062,596
NINETY SIX

Plumbing Subcontractor:

EARNHARDT

Lic 0404SP1

Mechanical Subcontractor:

JR MECHANICAL

Lic 24033

Electrical Subcontractor:

ELROD ELEC.

Lic U10280

GS143-128(d) requires all single prime bidders to identify their subcontractors for the above subdivisions of work. A contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except (i) if the listed subcontractor's bid is later determined by the contractor to be non-responsive or non-responsive or the listed subcontractor refuses to enter into a contract for the complete performance of the bid work, or (ii) with the approval of the awarding authority for good cause shown by the contractor.

The bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order of the designer and shall fully complete all work thereunder within the time specified in the Contract Documents. Applicable liquidated damages amount is also stated in the Contract Documents.

ALTERNATES:

Should any of the alternates as described in the contract documents be accepted, the amount written below shall be the amount to be "added to" or "deducted from" the base bid. (Strike out "Add" or "Deduct" as appropriate.)

GENERAL CONTRACT:

Alternate No. #1 Preferred Brand Alternate for Door Hardware

1. Base bid: Provide rough-in, infrastructure, and complete door hardware by acceptable manufacturers as indicated in Section 08 71 00.
2. Alternate G-1: To include the total cost of all labor, materials, and equipment required to provide rough-in, infrastructure, and complete door hardware by owner-preferred brand manufacturers as scheduled in Section 08 71 00.

~~(Add)~~ ZERO Dollars(\$) 0.06

MINORITY BUSINESS PARTICIPATION REQUIREMENTS

Provide with the bid - Under GS 143-128.2(c) the undersigned bidder shall identify **on its bid** (Identification of Minority Business Participation Form) the minority businesses that it will use on the project with the total dollar value of the bids that will be performed by the minority businesses. **Also** list the good faith efforts (Affidavit A) made to solicit minority participation in the bid effort.

NOTE: A contractor that performs all of the work with its own workforce may submit an Affidavit (B) to that effect in lieu of Affidavit (A) required above. The MB Participation Form must still be submitted even if there is zero participation.

After the bid opening - The Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low bidder, the bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the 10% goal established. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort and Affidavit D is not necessary;

* OR *

If less than the 10% goal, Affidavit (D) of its good faith effort to meet the goal shall be provided. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

Note: Bidders must always submit **with their bid** the Identification of Minority Business Participation Form listing all MB contractors, vendors and suppliers that will be used. If there is no MB participation, then enter none or zero on the form. Affidavit A or Affidavit B, as applicable, also must be submitted with the bid. Failure to file a required affidavit or documentation with the bid or after being notified apparent low bidder is grounds for rejection of the bid.

Proposal Signature Page

The undersigned further agrees that in the case of failure on his part to execute the said contract and the bonds within ten (10) consecutive calendar days after being given written notice of the award of contract, the certified check, cash or bid bond accompanying this bid shall be paid into the funds of the owner's account set aside for the project, as liquidated damages for such failure; otherwise the certified check, cash or bid bond accompanying this proposal shall be returned to the undersigned.

Respectfully submitted this day of 9-29-22

HAMILTT ASSOCIATES INC.
(Name of firm or corporation making bid)

WITNESS:
Signature

By: Michael Craig

Name:
(Proprietorship or Partnership)

Michael Craig
Print or type

Title President-owner
(Owner/Partner/Pres./V.Pres)

Address 3704 Security Mills Rd. Climax, NC 27233

ATTEST:

By: Secretary-owner

License No. #9628

Title: Yvonne E. Smith
(Corp. Sec. or Asst. Sec. only)

Federal I.D. No. 56-1195076

Email Address: Michael@hamlitta.com

(CORPORATE SEAL)

Addendum received and used in computing bid:

Addendum No. 1 56 Addendum No. 3 _____ Addendum No. 5 _____ Addendum No. 7 _____
Addendum No. 2 56 Addendum No. 4 _____ Addendum No. 6 _____ Addendum No. 8 _____

FORM OF BID BOND

KNOW ALL MEN BY THESE PRESENTS THAT Hamlett Associates, Inc. as principal, and The Cincinnati Insurance Company, as surety, who is duly licensed to act as surety in North Carolina, are held and firmly bound unto the Town of Apex through Five Percent (5%) of Amount Bid DOLLARS, lawful money of the United States of America, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Signed, sealed and dated this 29th day of September 2022

WHEREAS, the said principal is herewith submitting proposal for Phase 1 Renovations - Public Works Operations Building and the principal desires to file this bid bond in lieu of making the cash deposit as required by G.S. 143-129.

NOW, THEREFORE, THE CONDITION OF THE ABOVE OBLIGATION is such, that if the principal shall be awarded the contract for which the bid is submitted and shall execute the contract and give bond for the faithful performance thereof within ten days after the award of same to the principal, then this obligation shall be null and void; but if the principal fails to so execute such contract and give performance bond as required by G.S. 143-129, the surety shall, upon demand, forthwith pay to the obligee the amount set forth in the first paragraph hereof. Provided further, that the bid may be withdrawn as provided by G.S. 143-129.1

Principal: Hamlett Associates, Inc.
By: [Signature] (SEAL)
(SEAL)
(SEAL)

Surety: The Cincinnati Insurance Company
By: [Signature] (SEAL)
Anne Baker, Attorney-in-Fact

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY and THE CINCINNATI CASUALTY COMPANY, corporations organized under the laws of the State of Ohio, and having their principal offices in the City of Fairfield, Ohio (herein collectively called the "Companies"), do hereby constitute and appoint

John R. Haldeman Jr.; Anne Baker; James P. Lowrey; Rose Magee; Jennifer Underhill and/or Michele Wood

of Greensboro, Wilmington, High Point, Charlotte & Raleigh, NC their true and legal Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and deliver on behalf of the Companies as Surety, any and all bonds, policies, undertakings or other like instruments, as follows:

Any such obligations in the United States, up to
Thirty Five Million and No/100 Dollars (\$35,000,000.00).

This appointment is made under and by authority of the following resolutions adopted by the Boards of Directors of The Cincinnati Insurance Company and The Cincinnati Casualty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the President or any Senior Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company.

RESOLVED, that the signature of the President or any Senior Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Vice-President and the Seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS WHEREOF, the Companies have caused these presents to be sealed with their corporate seals, duly attested by their President or any Senior Vice President this 16th day of March, 2021.



STATE OF OHIO)SS:
COUNTY OF BUTLER)

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

Stephen A. Justice

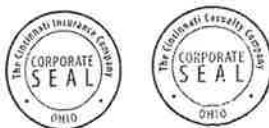
On this 16th day of March, 2021 before me came the above-named President or Senior Vice President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, to me personally known to be the officer described herein, and acknowledged that the seals affixed to the preceding instrument are the corporate seals of said Companies and the corporate seals and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporations.



Keith Collett
Keith Collett, Attorney at Law
Notary Public – State of Ohio
My commission has no expiration date.
Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Vice-President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, hereby certify that the above is the Original Power of Attorney issued by said Companies, and do hereby further certify that the said Power of Attorney is still in full force and effect.

Given under my hand and seal of said Companies at Fairfield, Ohio, this 29th day of September, 2022



Ed H

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of Guilford

Affidavit of HAMLETT ASSOCIATES LMK. (Name of Bidder)

I have made a good faith effort to comply under the following areas checked:

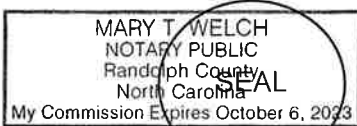
Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts) Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts) Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts) Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts) Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts) Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts) Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts) Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts) Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts) Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts) Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 9/28/22 Name of Authorized Officer: Michael Craig
Signature: Michael Craig
Title: President



State of NC, County of Guilford
Subscribed and sworn to before me this 28 day of September 2022
Notary Public Mary T. Welch
My commission expires October 6, 2023

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of Wake

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of Hamblott Associates, Inc. I do hereby certify that on the
(Name of Bidder)
Town of Apex Public Works Opt. Building
(Project Name)
 Project ID# CRA # 2122 Amount of Bid \$ 1,062,596.00

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value
<u>Elrod Electrical 336-7280</u>	<u>W</u>	<u>Y</u>	<u>Electrical</u>	<u>83,200.00</u>
<u>Div 10 Construction Sp 919-661-1101</u>	<u>W</u>	<u>Y</u>	<u>Tolt Partitions</u>	<u>8,075.00</u>

*Minority categories: Black, African American (B), Hispanic (H), Asian American (A) American Indian (I), Female (F) Socially and Economically Disadvantaged (D)

** HUB Certification with the state HUB Office required to be counted toward state participation goals.

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

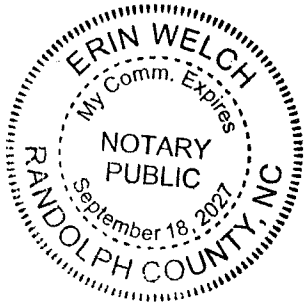
Date: 10-7-22 Name of Authorized Officer: Daniel Hall

Signature: [Signature]

Title: VICE - PRESIDENT



State of North Carolina, County of Guilford
Subscribed and sworn to before me this 7 day of October 2022
Notary Public [Signature]
My commission expires Sept. 18, 2027



IRAN DIVESTMENT ACT CERTIFICATION

Vendor/Contractor Name: Hamlett Associates, Inc.

**IRAN DIVESTMENT ACT CERTIFICATION
REQUIRED BY N.C.G.S. 147-86.59**

As of the date listed below, the entity listed above is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 147-86.58.

The undersigned hereby certifies that he/she is authorized by the entity listed above to make the foregoing statement



Signature

October 6, 2022

Date

~~Michael Craig~~ DANIEL HALL

Printed Name

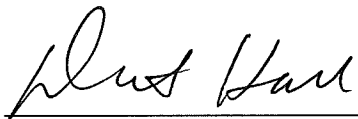
V. President/ Owner

Printed Title

E-VERIFY ADDENDUM

CONTRACTOR/VENDOR agrees that it shall comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Further, if CONTRACTOR/VENDOR utilizes a subcontractor, CONTRACTOR/VENDOR agrees that it shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes.

Dated this the 6th day of October, 2022.



Contractor/Vendor

V. President/ Owner

Title

**Bid Tabulation for the Phase 1 Renovations, Public Works Operations Building
Town of Apex**

CRA Project No. 2122

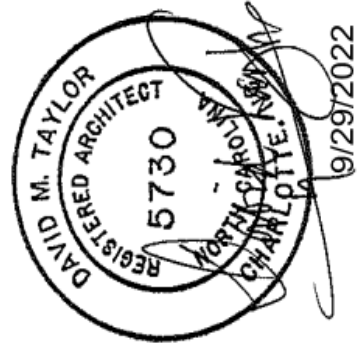
Bids Received: September 29, 2022

Single-Prime General Contractors	Lic. #	Bid Bond	MBE	Add. Ackd.	Base Bid	Alternate #1 Preferred Door Hardware
BAR Construction	7973	■	■	■	\$1,148,000.00	\$0.00
Hamlett Associates	9628	■	■	■	\$1,062,596.00	\$0.00
ggs-Harrod Builders	18667	■	■	■	\$1,304,790.00	\$0.00
W. Ward Construction	7244	■	■	■	\$1,082,208.00	\$1,500.00

Bids as shown above, received at 2:00 pm, Thursday, September 29, 2022, have been checked, validated and are hereby certified as correct.



David M. Taylor, AIA, LEED AP





222 cloister court
chapel hill, nc 27514
919.401.8586
www.cra-ae.com

NOTICE OF AWARD

October 26, 2022

Mr. Daniel Hall, Vice President
Hamlett Associates, Inc.
3704 Security Mills Road
Climax, NC 27233

Re: Contract Documents - Town of Apex Public Works Operations Building, Phase 1 Renovations

Dear Mr. Hall:

The Apex Town Council awarded the above Contract to your company on October 25, 2022, based on your bid submitted on September 29, 2022, in the amount of one million sixty-two thousand five hundred ninety-six dollars (\$1,062,596.00).

Enclosed are four (4) copies of the Notice of Award, Agreement, Payment Bond, and Performance Bond for execution (a fifth set is included for your records and use during construction). Please execute the Notice of Award and Agreement and obtain the Performance and Payment Bonds as soon as possible. The date of the Performance and Payment Bonds shall be the same as the date of the Agreement. Please note that the Agreement date has been set as November 15, 2022. The 4 sets of executed Contract Documents must be returned to our office within 10 calendar days of receipt of this notice.

Please submit the Certificates of Insurance required by the Contract Documents for insurance to be purchased and maintained by the Contractor. Provide documentation that the issuing company will inform the certificate holder, in accordance with the Contract Provisions, regarding any cancellation of policies before the expiration date. Additionally, the Town of Apex and CRA Associates, Inc. shall be included as an additional insured as required the Contract Documents.

Upon receipt, these documents will be forwarded to the Owner for execution. Upon execution of the documents by the Owner, one set of complete Contract Documents will be sent to your office for your files.

Should you have any questions or need additional information, please let us know.

Sincerely,

A handwritten signature in black ink that reads "David M. Taylor". The signature is written in a cursive style with a long horizontal stroke at the end.

David M. Taylor, AIA, LEEDAP
Partner, CRA Associates, Inc.

Enclosures: As stated.

cc: Mr. Daniel Edwards, Town of Apex (w/o enclosures)

AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the Fifteenth day of November in the year Two Thousand Twenty-two
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Town of Apex
73 Hunter Street
Apex, North Carolina 27502

and the Contractor:
(Name, legal status, address and other information)

Hamlett Associates
3704 Security Mills Road
Climax, North Carolina 27233

for the following Project:
(Name, location and detailed description)

Apex PW Operations Renovation
Apex, NC
Interior renovation to PW Operations Building

The Architect:
(Name, legal status, address and other information)

CRA Associates, Inc.
222 Cloister Court
Chapel Hill, North Carolina 27514

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Init.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS**
- 2 THE WORK OF THIS CONTRACT**
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**
- 4 CONTRACT SUM**
- 5 PAYMENTS**
- 6 DISPUTE RESOLUTION**
- 7 TERMINATION OR SUSPENSION**
- 8 MISCELLANEOUS PROVISIONS**
- 9 ENUMERATION OF CONTRACT DOCUMENTS**

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

Init.

Not later than one hundred eighty-three (183) calendar days from the date of commencement of the Work.

By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be One Million Sixty-two Thousand, Five Hundred, Ninety-six Dollars and Zero Cents (\$ 1,062,596.00), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
#1 – Preferred Brand Door Hardware	\$0.00

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. *(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum: *(Identify each allowance.)*

Item	Price
------	-------

§ 4.4 Unit prices, if any: *(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)*

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 4.5 Liquidated damages, if any: *(Insert terms and conditions for liquidated damages, if any.)*

If the Work is not substantially complete on or before the date provided in Section 3.3 of this Contract, or within an extension period granted by the Owner, the Owner will sustain damage that will be impracticable and extremely difficult to quantify in the event of and by reason of such delays. In such event, the Contractor shall pay to the Owner as Liquidated Damages, and not as penalty, the sum of Five Hundred & 00/100 Dollars (\$500) for each consecutive calendar day of delay. Any sums that may be due the Owner as Liquidated Damages may be deducted from any monies due or to become due the Contractor under the Contract or may be collected from the Contractor's Surety.

§ 4.6 Other: *(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)*

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the 25th day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the 10th day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than thirty (30) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Retainage is five percent (5%).

§ 5.1.7.1.1 The following items are not subject to retainage:

(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:

(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

When the Project is fifty percent (50%) complete, the owner, with written consent of the Surety, shall not retain any further retainage from periodic payments due the Contractor if the Contractor continues to perform satisfactorily and any nonconforming work identified in writing prior to that time by the Architect, engineer, or Owner has been corrected by the Contractor and accepted by the Architect, engineer, or Owner. If the Owner determines the Contractor's performance is unsatisfactory, the Owner may reinstate retainage for each subsequent periodic Application for Payment up to the maximum amount of five percent (5%). The Project shall be deemed fifty percent (50%) complete when the Contractor's gross Project invoices, excluding the value of materials stored off-site, equal or exceed fifty percent (50%) of the value of the Contract, except the value of materials stored on-site shall not exceed twenty percent (20%) of the Contractor's gross Project invoices for the purpose of determining whether the Project is fifty percent (50%) complete.

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:

(Insert any other conditions for release of retainage upon Substantial Completion.)

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

Init.

%

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

Daniel Edwards, Capital Projects Manager
Town of Apex
P. O. Box 250
Apex, NC 27502

daniel.edwards@apexnc.org
(919) 249-3535

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

Justin Graves
Hamlett Associates
3704 Security Mills Road
Climax, NC 27233
jgraves@hamlettai.com
336-214-9377

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with AIA Document E203-2013, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

§ 8.7 Other provisions:

The Contractor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Contractor shall require all of the Contractor's subcontractors to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify).

The Contractor warrants and agrees that no labor supplied by the Contractor or the Contractor's subcontractors in the performance of this Contract shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

N.C.G.S. 147-86.59 requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the State Treasurer's Final Divestment List. As of the date of execution of this Agreement the Contractor hereby certifies that the Contractor is not listed on the Final Divestment List created by the North Carolina State Treasurer and that the Contractor will not utilize any subcontractors found on the Final Divestment List.

Pursuant to Section 3-2 of the Town of Apex Code of Ordinances, Contractor hereby warrants and agrees that Contractor will not discriminate against a protected class in employment, subcontracting practices, or the solicitation or hiring of vendors, suppliers, or commercial customers in connection with this Agreement. For the purposes of this Agreement "protected class" includes age, race, religious belief or non-belief, ethnicity, color, national origin, creed, sex, sexual orientation, gender identity, marital status, natural hair style, genetic information, pregnancy, familial status, disability, veteran or military status, or disabled veteran status.

Init.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

N/A

- .5 Drawings

Number	Title	Date
See Exhibit 'B'		

- .6 Specifications

Section	Title	Date	Pages
See Exhibit 'C'			

- .7 Addenda, if any:

Number	Date	Pages
1	9/13/22	4 pages
2	9/22/22	5 pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[N/A] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

[N/A] The Sustainability Plan:

Title	Date	Pages

[X] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Supplementary Conditions	Supplementary Conditions Modifying AIA Document A201-2017 General Conditions	9/6/22	14

- .9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders,

sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

This Agreement entered into as of the day and year first written above.

OWNER *(Signature)*

CONTRACTOR *(Signature)*

(Printed name and title)

(Printed name and title)

This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act.

Finance Director

Init.

Additions and Deletions Report for AIA® Document A101® – 2017

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

Note: This Additions and Deletions Report is provided for information purposes only and is not incorporated into or constitute any part of the associated AIA document. This Additions and Deletions Report and its associated document were generated simultaneously by AIA software at 14:33:10 ET on 10/13/2022.

PAGE 1

AGREEMENT made as of the Fifteenth day of November in the year Two Thousand Twenty-two

...

Town of Apex
73 Hunter Street
Apex, North Carolina 27502

...

Hamlett Associates
3704 Security Mills Road
Climax, North Carolina 27233

...

Apex PW Operations Renovation
Apex, NC
Interior renovation to PW Operations Building

...

CRA Associates, Inc.
222 Cloister Court
Chapel Hill, North Carolina 27514

PAGE 2

A date set forth in a notice to proceed issued by the Owner.

PAGE 3

Not later than one hundred eighty-three (183) calendar days from the date of commencement of the Work.

...

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be One Million Sixty-two Thousand, Five Hundred, Ninety-six Dollars and Zero Cents (\$ 1,062,596.00), subject to additions and deductions as provided in the Contract Documents.

...

#1 – Preferred Brand Door Hardware \$0.00

AIA[®] Document A101[®] – 2017 Exhibit A

Insurance and Bonds

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the Fifteenth day of November in the year Two Thousand Twenty-two (*In words, indicate day, month and year.*)

for the following **PROJECT**:
(*Name and location or address*)

Apex PW Operations Renovation
Apex, NC

THE OWNER:
(*Name, legal status and address*)

Town of Apex
73 Hunter Street, Apex, NC 27502

THE CONTRACTOR:
(*Name, legal status and address*)

Hamlett Associates
3704 Security Mills Road, Climax, NC 27233

TABLE OF ARTICLES

- A.1 GENERAL**
- A.2 OWNER'S INSURANCE**
- A.3 CONTRACTOR'S INSURANCE AND BONDS**
- A.4 SPECIAL TERMS AND CONDITIONS**

ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A201[™]-2017, General Conditions of the Contract for Construction.

ARTICLE A.2 OWNER'S INSURANCE

§ A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

§ A.2.2 Liability Insurance

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document is intended to be used in conjunction with AIA Document A201[®]-2017, General Conditions of the Contract for Construction. Article 11 of A201[®]-2017 contains additional insurance provisions.

Init.

§ A.2.3 Required Property Insurance

§ A.2.3.1 Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

§ A.2.3.1.1 Causes of Loss. The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:
(Indicate below the cause of loss and any applicable sub-limit.)

Causes of Loss	Sub-Limit
----------------	-----------

§ A.2.3.1.2 Specific Required Coverages. The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to falsework and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:
(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)

Coverage	Sub-Limit
----------	-----------

§ A.2.3.1.3 Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

§ A.2.3.1.4 Deductibles and Self-Insured Retentions. If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

§ A.2.3.2 Occupancy or Use Prior to Substantial Completion. The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

§ A.2.3.3 Insurance for Existing Structures
If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

§ A.2.4 Optional Extended Property Insurance.
The Owner shall purchase and maintain the insurance selected and described below.

Init.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)

- § A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

- § A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

- § A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

- § A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

- § A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

- § A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

- § A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

§ A.2.5 Other Optional Insurance.

The Owner shall purchase and maintain the insurance selected below.

(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

- § A.2.5.1 Cyber Security Insurance** for loss to the Owner due to data security and privacy breach,

Init.

including costs of investigating a potential or actual breach of confidential or private information.
(Indicate applicable limits of coverage or other conditions in the fill point below.)

[] § A.2.5.2 Other Insurance
(List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage

Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 **Certificates of Insurance.** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 **Deductibles and Self-Insured Retentions.** The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 **Additional Insured Obligations.** To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect, and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than Two Million Dollars (\$ 2,000,000.00) each occurrence, Four Million Dollars (\$ 4,000,000.00) general aggregate, and Two Million Dollars (\$ 2,000,000.00) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and

Init.

.5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ **A.3.2.2.2** The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ **A.3.2.3** Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than Two Million Dollars (\$ 2,000,000.00) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ **A.3.2.4** The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ **A.3.2.5** Workers' Compensation at statutory limits.

§ **A.3.2.6** Employers' Liability with policy limits not less than One Million Dollars (\$ 1,000,000.00) each accident, One Million Dollars (\$ 1,000,000.00) each employee, and One Million Dollars (\$ 1,000,000.00) policy limit.

§ **A.3.2.7** Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ **A.3.2.8** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than Two Million Dollars (\$ 2,000,000.00) per claim and Four Million Dollars (\$ 4,000,000.00) in the aggregate.

§ **A.3.2.9** If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than Two Million Dollars (\$ 2,000,000.00) per claim and Four Million Dollars (\$ 4,000,000.00) in the aggregate.

§ **A.3.2.10** Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than Two Million Dollars (\$ 2,000,000.00) per claim and Four Million Dollars (\$ 4,000,000.00) in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than (\$) per claim and (\$) in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than One Million Dollars (\$ 1,000,000.00) per claim and One Million Dollars (\$ 1,000,000.00) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)

§ A.3.3.2.1

Contractor, not Owner, shall be responsible for the purchase of Property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required.

(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below.)

§ A.3.3.2.2 **Railroad Protective Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for Work within fifty (50) feet of railroad property.

§ A.3.3.2.3 **Asbestos Abatement Liability Insurance**, with policy limits of not less than (\$) per claim and (\$) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

§ A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

§ A.3.3.2.5 Property insurance on an "all-risks" completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

§ A.3.3.2.6 **Other Insurance**
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage

Limits

Init.

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:
(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	
Performance Bond	

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

The amount of each bond shall be equal to 100% of the Contract Sum. The Contractor shall deliver the required bonds to the Architect not later than three days following the date the Agreement between the Owner and Contractor (AIA101-2017) is entered into, or if the Work is to be commenced prior thereto in response to a letter of intent, the Contractor shall, prior to commencement of the Work, submit evidence satisfactory to the Architect that such bonds will be furnished. The Contractor shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of the Power of Attorney.

The surety shall be a company licensed to do business in the State of North Carolina and shall be acceptable to the Owner. Bonds shall be dated the same as, or subsequent to, the Contract and shall be accompanied by a current Power of Attorney. Bonds shall be furnished in a sufficient number of copies so that one copy can be bound with each copy of the Agreement.

LIST OF DRAWINGS

- G1.0 Cover Sheet
- G1.1 Code Information Sheet
- G1.2 Accessibility Diagrams Sheet A
- G1.3 Accessibility Diagrams Sheet B

CIVIL

- C1.0 Demolition and Construction Staging Plan
- C2.0 Site Plan

STRUCTURAL

- S-001 General Notes
- S-100 Foundation Plan

ARCHITECTURAL

- A1.0 Partition Schedule, Door Schedule and Door Details
- A1.1 Composite Plan
- A2.1 Renovation and Demolition Plans
- A2.2 Renovation and Demolition Reflected Ceiling Plans
- A2.3 Finish Schedule and Finish Plan
- A3.1 Building Elevations
- A3.2 Interior Elevations
- A4.1 Partition Schedule, Door Schedule and Door Details
- A4.2 Finish Schedule and Finish Plan

PLUMBING

- P0.1 Plumbing Cover Sheet
- P1.1 Plumbing Demolition Plan - Waste & Vent
- P1.2 Plumbing Demolition Plan - Water
- P2.1 Plumbing Renovation Plan - Waste & Vent
- P2.2 Plumbing Renovation Plan - Water
- P3.1 Waste & Vent Riser Diagram
- P3.2 Water Riser Diagram

MECHANICAL

- M0.1 Mechanical Legend, Schedules, Notes & Details
- M1.1 Mechanical Demolition Plan
- M2.1 Mechanical Renovation Plan
- M3.1 Mechanical Schematics

ELECTRICAL

- E0.1 Electrical Cover Sheet
- E1.1 Electrical Demolition Plan
- E2.1 Power Renovation Plan
- E2.2 Lighting Renovation Plan
- E3.1 Electrical Panel Schedules
- E4.1 Electrical Details

FIRE ALARM

- FA0.1 Fire Alarm Notes, Details, Riser & Matrix
 - FA1.1 Enlarged Fire Alarm Equipment Plan
 - FA1.2 Fire Alarm Demolition Plan
 - FA2.1 Fire Alarm Renovation Plan
-

TABLE OF CONTENTS

VOLUME 1

Seal Sheet
Table of Contents

BIDDING REQUIREMENTS

Notice to Bidders	2 pages
AIA Document A701 – Instructions to Bidders	7 pages
AIA Document A201 - General Conditions of the Contract for Construction	39 pages
Supplementary Conditions Modifying AIA Document A201-2017	14 pages
Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts	8 pages

BID FORMS

Form of Proposal	5 pages
Form of Bid Bond	1 page
Minority Business Forms	6 pages

CONTRACT FORMS

AIA Document A101 – Standard Form of Agreement Between Owner and Contractor	9 pages
AIA Document A101 Exhibit A – Insurance and Bonds	7 pages
Form of Performance Bond	2 pages
Form of Payment Bond	2 pages
E-Verify Addendum	1 page
Iran Divestment Act Certification	1 page

DIVISION 01 - GENERAL REQUIREMENTS

011001	Summary	011001-1 thru 2
012301	Alternates	012301-1 thru 2
012501	Contract Modification Procedures	012501-1 thru 3
012901	Payment Procedures	012901-1 thru 4
013101	Project Management and Coordination	013101-1 thru 8
013201	Construction Progress Documentation	013201-1 thru 11
013301	Submittal Procedures	013301-1 thru 11
014001	Quality Requirements	014001-1 thru 7
015001	Temporary Facilities and Controls	015001-1 thru 8
016001	Product Requirements	016001-1 thru 7
017001	Execution Requirements	017001-1 thru 7
017311	Cutting and Patching	017311-1 thru 4
017701	Closeout Procedures	017701-1 thru 5
017811	Project Record Documents	017811-1 thru 3
017821	Operation and Maintenance Data	017821-1 thru 8

DIVISION 02 – EXISTING CONDITIONS

024119	Selective Demolition	024119-1 thru 5
--------	----------------------	-----------------

DIVISION 03 – CONCRETE

033000 Cast-in-Place Concrete 033000-1 thru 16

DIVISION 04 – MASONRY

048101 Unit Masonry Assemblies 048101-1 thru 21

DIVISION 05 – METALS

055001 Metal Fabrications 055001-1 thru 9

DIVISION 06 – WOOD AND PLASTICS

061001 Rough Carpentry 061001-1 thru 6
064023 Interior Architectural Woodwork 064023-1 thru 5

DIVISION 07 – BUILDING ENVELOPE

079201 Joint Sealants 079201-1 thru 12

DIVISION 08 – DOORS AND WINDOWS

081110 Hollow Metal Doors and Frames 081110-1 thru 6
082110 Flush Wood Doors 082110-1 thru 5
083051 Access Doors and Frames 083051-1 thru 5
087110 Door Hardware 087110-1 thru 19
088001 Glazing 088001-1 thru 5
089001 Louvers 089001-1 thru 7

DIVISION 09 – FINISHES

091110 Non-Load-Bearing Steel Framing 091110-1 thru 5
092501 Gypsum Board 092501-1 thru 9
093101 Ceramic Tile 093101-1 thru 10
095110 Acoustical Panel Ceilings 095110-1 thru 7
096510 Resilient Floor Tile 096510-1 thru 6
099110 Exterior Painting 099110-1 thru 6
099120 Interior Painting 099120-1 thru 9

DIVISION 10 – SPECIALTIES

101550 Toilet Compartments 101550-1 thru 4
104310 Signage 104310-1 thru 9
105050 Metal Lockers 105050-1 thru 7
105201 Fire Protection Specialties 105201-1 thru 7
108101 Toilet Accessories 108101-1 thru 8

DIVISION 11 – EQUIPMENT

117510 Shop Equipment 117510-1 thru 2

DIVISION 22 – PLUMBING SYSTEMS

220500	COMMON WORK RESULTS FOR PLUMBING
220505	EXCAVATION AND BACKFILL
220510	PIPE TESTING
220513	MOTORS AND CONTROLLERS
220519	METERS AND GAUGES
220523	VALVES FOR PLUMBING
220529	HANGERS AND SUPPORTS FOR PLUMBING
220553	IDENTIFICATION FOR PLUMBING
220700	PLUMBING INSULATION
221116	DOMESTIC WATER PIPING
221119	DOMESTIC WATER PIPING SPECIALTIES
221316	SANITARY WASTE AND VENT PIPING
221319	SANITARY WASTE PIPING SPECIALTIES
223300	ELECTRIC DOMESTIC WATER HEATERS
224000	PLUMBING FIXTURES

DIVISION 23 – MECHANICAL SYSTEMS

230500	COMMON WORK RESULTS FOR HVAC
230513	MOTORS AND CONTROLLERS
230529	HANGERS AND SUPPORTS
230553	IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT
230593	TESTING, ADJUSTING, AND BALANCING FOR HVAC
230700	HVAC DUCT INSULATION
230706	REFRIGERANT AND CONDENSATE PIPE INSULATION
230900	CONTROLS FOR HVAC
232300	REFRIGERANT PIPING
233113	METAL DUCTS
233300	AIR DUCT ACCESSORIES
233423	HVAC POWER VENTILATORS
233713	DIFFUSERS, REGISTERS, AND GRILLES
234100	PARTICULATE AIR FILTERATION
237435	PACKAGED, DEDICATED OUTDOOR AIR UNIT
238128	VRF SPLIT AIR CONDITIONERS

DIVISION 26 – ELECTRICAL SYSTEMS

260500	COMMON WORK RESULTS FOR ELECTRICAL
260519	CONDUCTORS AND CABLES
260526	GROUNDING AND BONDING
260533	RACEWAY AND BOXES
260534	TELEPHONE DATA SYSTEM
260553	IDENTIFICATION FOR ELECTRICAL SYSTEMS
260923	LIGHTING CONTROL DEVICES
262416	PANELBOARDS
262726	WIRING DEVICES
262816	ENCLOSED SWITCHES AND CIRCUIT BREAKERS
263600	TRANSFER SWITCHES
265100	INTERIOR LIGHTING

DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

283111 DIGITAL, ADDRESSABLE FIRE-ALARM SYSTEM

DIVISION 32 – EXTERIOR IMPROVEMENTS

321313	Concrete Paving	321313-1 thru 13
321373	Concrete Paving Joint Sealants	321373-1 thru 5
323200	Chain Link Fences	323100-1 thru 7

DIVISION 33 – UTILITIES

330500	Common Work Results for Utilities	330500-1 thru 8
333100	Sanitary Utility Sewerage Piping	333100-1 thru 7

END OF TABLE OF CONTENTS

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Allen Coleman, Town Clerk

Department(s): Town Clerk's Office

Requested Motion

Motion to approve, as submitted or amended, Meeting Minutes from the following meetings:

- August 23, 2022 - Regular Town Council Meeting
- September 13, 2022 - Regular Town Council Meeting
- September 27, 2022 - Regular Town Council Meeting

Approval Recommended?

Yes

Item Details

In accordance with 160A-72 of North Carolina General Statutes (NCGS), the Governing Board has the legal duty to approve all minutes that are entered into the official journal of the Board's proceedings.

Attachments

- MINUTES - August 23, 2022 - Regular Town Council Meeting
- MINUTES - September 13, 2022 - Regular Town Council Meeting
- MINUTES - September 27, 2022 - Regular Town Council Meeting



MINUTES



REGULAR TOWN COUNCIL MEETING

August 23, 2022 at 6:00 PM

Council Chambers - Apex Town Hall, 73 Hunter Street

The meeting will adjourn when all business is concluded or 10:00 PM, whichever comes first

Town Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Audra Killingworth

Council Members: Brett D. Gantt; Cheryl F. Stallings; Terry Mahaffey; Edward Gray

Town Manager: Catherine Crosby | Assistant Town Managers: Shawn Purvis and Marty Stone

Town Clerk: Allen Coleman, CMC, NCCCC | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

Mayor Jacques K. Gilbert called the meeting to order at 6:00 PM, welcomed those in attendance, and offered the Town's diversity statement.

NOTE: Councilmember Brett Gantt was absent.

Mayor Gilbert recognized Wake County Sheriff's Deputy Ned Byrd whose life was honored yesterday and offered a moment of silence for his family, his life of service, and a private moment of silence as the invocation.

CONSENT AGENDA

CN1 Budget Ordinance Amendment No. 2 - Deer Creek 2022 Capital Reimbursement Fees

Marty Stone, PE, Assistant Town Manager

CN2 Budget Ordinance Amendment No. 3 - Jordan Pointe 2022 Capital Reimbursement Fees

Marty Stone, PE, Assistant Town Manager

CN3 Construction Agreement - CSX Transportation Inc. - Widening Pleasant Plains Road - Pleasant Park Project

Daniel Edwards, Senior Capital Projects Manager

CN4 Contract Multi-Year - Cintas - Uniforms - August 22, 2022 through August 21, 2027

Michael Deaton, P.E., Director of Water Resources

CN5 Encroachment Agreement - 1835 Firenze Dr Lot 39

Marty Stone, Assistant Town Manager

MINUTES

CN6 Fee-in-Lieu (FIL) of Land Dedication - Estates at White Oak

Angela Reincke, Parks Planning Project Manager, Parks, Recreation, and Cultural Resources

CN7 Lease Agreement Renewal - New Cingular Wireless PCS, LLC. Tingen - July 1, 2023 through June 30, 2038

Michael Deaton, P.E., Director of Water Resources

CN8 Ordinance Amendment for Article I of Chapter 10 - **REMOVED - Move to New Business**

Brian Meyer, Deputy Town Attorney, and Senior Zoning Compliance Officers Mark Siburt and Trevor Johnson

CN9 Resolution - Public Utility Easement Abandonment

Steve Adams, Utilities Acquisition Specialist

CN10 Tax Report - July 2022

Allen Coleman, Town Clerk

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Terry Mahaffey, to approve the Consent agenda as amended.

VOTE: UNANIMOUS (4-0)

PRESENTATIONS

PR1 Financial Update - Customer Assistance Program (CAP) and Fiscal Year-End Operating Results

Vance Holloman, Finance Director

Staff provided a presentation.

Council discussed the financial update and recognized Director Holloman for his exceptional service and financial leadership for the Town of Apex and wished him well in his retirement.

REGULAR MEETING AGENDA

A motion was made by Councilmember Ed Gray, seconded by Councilmember Cheryl Stallings, to set the regular meeting agenda.

VOTE: UNANIMOUS (4-0)

PUBLIC FORUM

The following individual(s) spoke during the public forum portion:

- **Elizabeth Stitt - 3113 Friendship Road, Apex, NC**
 - Public Participation Policy - Revision to include decorum language

MINUTES

PUBLIC HEARINGS

PH1 2022 General Obligation Bond Extension - \$15M Street and Sidewalk Improvement Bonds

Vance Holloman, Finance Director

Staff provided a presentation and no one signed up to speak.

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Terry Mahaffey, to adopt an order extending the bond order authorizing \$15 million of street and sidewalk improvement general obligation bonds and directed the clerk to publish the order

VOTE: UNANIMOUS (4-0)

PH2 Annexation No. 733 - Adams Property PUD - 23.92 acres

Liz Loftin, Senior Planner, Planning and Community Development

PH3 Rezoning Case No. 22CZ08 Adams Property PUD

Liz Loftin, Senior Planner, Planning and Community Development

Staff provided a presentation.

A motion was made by Councilmember Terry Mahaffey, seconded by Councilmember Cheryl Stallings, to continue the discussion for public hearing items 2 and 3 to the September 27, 2022 Town Council Meeting and consider a final vote at that time. The public hearing was closed.

VOTE: UNANIMOUS (4-0)

PH4 Annexation No. 737 - 905 Wimberly Road - 7.21 acres

Lauren Staudenmaier, Planner II, Planning and Community Development

PH5 Rezoning Case No. 22CZ14 905 Wimberly Road

Lauren Staudenmaier, Planner II, Planning and Community Development

Staff provided a presentation.

A motion was made by Councilmember Ed Gray, seconded by Mayor Pro-Tempore Audra Killingsworth, to adopt an ordinance on the question of annexation - Apex Town Council's Intent to Annex 7.21 acres located at 905 Wimberly Road, Annexation No. 737 into the Town's Corporate Limits, and, to approve Rezoning Application #22CZ14 - 905 Wimberly Road to rezone approximately 7.21 acres from Wake County Residential-80W (R-80W) to

MINUTES

Residential Agricultural-Conditional Zoning (RA-CZ). The proposed rezoning is located at 905 Wimberly road.

VOTE: UNANIMOUS (4-0)

PH6 Annexation No. 739 - Triad Education Services (TMSA) - 6.524 acres

Dianne Khin, Director of Planning and Community Development

Staff provided a presentation.

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Ed Gray, to adopt an ordinance on the question of annexation - Apex Town Council's intent to annex 6.524 acres as petitioned by Triad Education Services; Triangle Math and Science Academy (TMSA), Annexation no. 739 into the town's corporate limits.

VOTE: UNANIMOUS (4-0)

PH7 Rezoning Case No. 22CZ10 Calyx Senior Living (KOBRA PUD Amendment)

Liz Loftin, Senior Planner, Planning and Community Development

Staff provided a presentation.

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Ed Gray, to approve Rezoning Application #22CZ10 Calyx Senior Living Apex (Kobra PUD Amendment), to rezone approximately 5.738 acres from Planned Unit Development-Conditional Zoning (PUD-CZ #20CZ04) to Planned Unit Development-Conditional Zoning (PUD-CZ). The proposed rezoning is located at 7501 Jenks Road.

VOTE: UNANIMOUS (4-0)

Mayor Gilbert announced a recess until 8:00 p.m.

PH8 Rezoning Case No. 22CZ15 CarSpace Apex

Amanda Bunce, Current Planning Manager, Planning and Community Development

Staff provided a presentation.

A motion was made by Councilmember Ed Gray, seconded by Mayor Pro-Tempore Audra Killingsworth, to approve Rezoning Application #22CZ15 Carspace Apex to rezone approximately 6.92 acres from tech/flex-conditional zoning (TF-CZ #14CZ30) to light

MINUTES

industrial-conditional zoning (LI-CZ). The proposed rezoning is located at 1720 & 1740 Pinnacle Center Drive.

VOTE: UNANIMOUS (4-0)

PH9 Unified Development Ordinance (UDO) Amendments - August 2022

Amanda Bunce, Current Planning Manager, Planning and Community Development

Staff provided a presentation.

A motion was made by Councilmember Cheryl Stallings, seconded by Councilmember Ed Gray, to approve various amendments to the Unified Development Ordinance (UDO).

VOTE: UNANIMOUS (4-0)

OLD BUSINESS - None

UNFINISHED BUSINESS - None

NEW BUSINESS

NB1 Ordinance Amendment for Article I of Chapter 10 - **MOVED FROM CONSENT**

Brian Meyer, Deputy Town Attorney, and Senior Zoning Compliance Officers Mark Siburt and Trevor Johnson

Staff provided a presentation.

A motion was made by Councilmember Terry Mahaffey, seconded by Mayor Pro-Tempore Audra Killingsworth, to schedule a public hearing for September 13, 2022 and directed staff to prepare a revised ordinance amendment based on Council's feedback for consideration at that time.

VOTE: UNANIMOUS (4-0)

UPDATES BY TOWN MANAGER

Town Manager, Catherine Crosby, provided an update on various projects and events in the Town.

ADJOURNMENT

Mayor Gilbert announced the meeting adjourned at 8:32 p.m.

MINUTES



REGULAR TOWN COUNCIL MEETING

September 13, 2022 at 6:00 PM

Council Chambers - Apex Town Hall, 73 Hunter Street

The meeting will adjourn when all business is concluded or 10:00 PM, whichever comes first

Town Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Audra Killingworth

Council Members: Brett D. Gantt; Cheryl F. Stallings; Terry Mahaffey; Edward Gray

Town Manager: Catherine Crosby | Deputy Town Manager: Shawn Purvis | Assistant Town Manager: Marty Stone

Town Clerk: Allen Coleman, CMC, NCCCC | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

Mayor Jacques K. Gilbert called the meeting to order at 6:00 PM, welcomed those in attendance, and offered the Town's diversity statement.

Dr. Kishore Trivedi, Priest, with The Hindu Society of North Carolina offered the invocation.

CONSENT AGENDA

CN1 Appointments - Planning Board - REMOVED

Allen Coleman, Town Clerk

CN2 Appointment to North Carolina Eastern Municipal Power Agency (NCEMPA) Board of Commissioners - Eric Neumann

Shawn Purvis, Deputy Town Manager

CN3 Budget Ordinance Amendment No. 4 - Retiree Cost of Living (COL) Supplement

Amanda Grogan, Director of Budget and Performance Management

CN4 Budget Ordinance Amendment No. 5 - Property Acquisition

Shawn Purvis, Deputy Town Manager (as Interim Finance Director)

CN5 Council Meeting Minutes - May/June 2022

Allen Coleman, Town Clerk

CN6 Encroachment Agreement - NCDOT - American Tobacco Trail

Michael S. Deaton, PE, Director of Water Resources

CN7 Grant Contract - North Carolina Land and Water Fund Reimbursement Grant

Jessica Bolin, P.E., Stormwater Engineering Manager

MINUTES

CN8 Jenks Road Veterinarian - Fee-in-Lieu (FIL)

Michael S. Deaton, PE, Director of Water Resources

CN9 Memorandum of Understanding (MOU) between Triangle J Council of Governments (TJCOG) and the Town of Apex - Clean Water Education Partnership (CWEP)

Jessica Bolin, P.E., Stormwater Engineering Manager

CN10 Memorandum of Understanding (MOU) between Triangle J Council of Governments (TJ-COG) and Town of Apex - Solarize the Triangle Program

Amanda Grogan, Director of Budget and Performance Management

CN11 Resolution - Delegation of Authority to Accept Donations

Shawn Purvis, Deputy Town Manager

CN12 Rezoning Case No. 22CZ10 Calyx Senior Living (KOBRA PUD Amendment) - Statement and Ordinance

Liz Loftin, Senior Planner

CN13 Rezoning Case No. 22CZ15 CarSpace Apex - Statement and Ordinance

Amanda Bunce, Current Planning Manager

CN14 Rezoning Case No. 22CZ16 1039 Irongate Drive- Set Public Hearing

Lauren Staudenmaier, Planner II

CN15 Rezoning Case No. 21CZ17 Ten Ten Business Park - Set Public Hearing

Sarah Van Every, Senior Planner

CN16 Tax Report - July 2022

Allen Coleman, Town Clerk

CN17 Unified Development Ordinance (UDO) Amendments Statement - August 2022

Dianne Khin, Director of Planning and Community Development

CN18 Unified Development Ordinance Amendments - September 2022 - Set Public Hearing

Amanda Bunce, Current Planning Manager

A motion was made by Councilmember Brett Gantt, seconded by Mayor Pro-Tempore Audra Killingsworth, to approve the Consent agenda as presented.

VOTE: UNANIMOUS (5-0)

PRESENTATIONS - None

REGULAR MEETING AGENDA

A motion was made by Councilmember Ed Gray, seconded by Councilmember Cheryl Stallings, to set the regular meeting agenda.

VOTE: UNANIMOUS (5-0)

MINUTES

PUBLIC FORUM

The following individuals spoke during the public forum portion:

- **Russell Carpiceto - 1201 Dunn Ridge Lane - off the Peakway**
 - Traffic Issues on the Peakway near this intersection, requesting a speed limit change and additional signage
- **Elizabeth Stitt - 3113 Friendship Road, Apex, NC**
 - Budget Request for FY2024 to fund and build Turn lanes on old Highway US 1 and Friendship Road intersection

PUBLIC HEARINGS

PH1 **Bicycle and Pedestrian System Plan Map Amendment - Proposed Bike Lanes - Laura Duncan Road**

Jenna Shouse, Senior Long Range Planner

Staff provided a presentation and no one signed up to speak.

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Cheryl Stallings, to amend the Bicycle and Pedestrian System Map to add proposed bicycle lanes along Laura Duncan Road between Old Apex Road and the Town of Apex boundary with the Town of Cary.

VOTE: UNANIMOUS (5-0)

PH2 **Ordinance Amendment for Article I of Chapter 10**

Brian Meyer, Deputy Town Attorney, and Senior Zoning Compliance Officers Mark Siburt and Trevor Johnson

Staff provided a presentation.

Elizabeth Ray Stitt - 3113 Friendship Road, Apex spoke during the public hearing.

A motion was made by Councilmember Ed Gray, seconded by Councilmember Terry Mahaffey, to adopt an ordinance amendment to Chapter 10, Article I of the Town Code of Ordinances.

VOTE: UNANIMOUS (5-0)

OLD BUSINESS

OB1 **Town's Strategic Plan Framework - Adoption**

Shawn Purvis, Deputy Town Manager

Staff provided a presentation.

MINUTES

A motion was made by Councilmember Cheryl Stallings, seconded by Mayor Pro-Tempore Audra Killingsworth, to approve the Town's Strategic Plan Framework for the Apex Strategic Plan 2022 and adopt a Resolution titled "Resolution of Apex Town Council Adopting the Apex Strategic Plan".

VOTE: UNANIMOUS (5-0)

UNFINISHED BUSINESS

UB1 Rezoning Case No. 22CZ06 Yellowbridge PUD

Lauren Staudenmaier, Planner II

Staff provided a presentation.

A motion was made by Councilmember Ed Gray, seconded by Councilmember Brett Gantt, to approve Rezoning Application #22CZ06 Yellowbridge PUD to rezone approximately 48.24 acres from rural residential (RR) to Planned Unit Development-Conditional Zoning (PUD-CZ). The proposed rezoning is located at 2813 and 2817 US 64 Highway West.

VOTE: 4-1 with Councilmember Terry Mahaffey dissenting

NOTE: During the July 26, 2022 meeting, Council conducted a public hearing on the following items and continued the final vote until the September 13, 2022 meeting:

- Transportation Plan Amendments - Chapel Ridge Road
- Rezoning Case No. 22CZ07 Chapel Ridge North PUD

Due to a change in the application, these items will not be heard on September 13, 2022. New public hearing notices will be advertised at a later date.

NEW BUSINESS

UPDATES BY TOWN MANAGER

Town Manager, Catherine Crosby, provided an update on various projects and events in the Town.

ADJOURNMENT

Mayor Gilbert announced the meeting adjourned at 7:26p.m.

MINUTES

REGULAR TOWN COUNCIL MEETING



September 27, 2022 at 6:00 PM

Council Chambers - Apex Town Hall, 73 Hunter Street

The meeting will adjourn when all business is concluded or 10:00 PM, whichever comes first

Town Council and Administration

Mayor: Jacques K. Gilbert | Mayor Pro Tem: Audra Killingsworth

Council Members: Brett D. Gantt; Cheryl F. Stallings; Terry Mahaffey; Edward Gray

Town Manager: Catherine Crosby | Deputy Town Manager: Shawn Purvis | Assistant Town Manager: Marty Stone

Town Clerk: Allen Coleman, CMC, NCCCC | Town Attorney: Laurie L. Hohe

COMMENCEMENT

Call to Order | Invocation | Pledge of Allegiance

Mayor Jacques K. Gilbert called the meeting to order at 6:00 PM, welcomed those in attendance, and offered the Town's diversity statement.

Mayor Gilbert announced the following changes to the meeting agenda:

- **Addition - Presentation Number 3 - Proclamation - Hispanic Heritage Month**
- **Continuance - Public Hearing Number 1 - 21CZ17 Ten Ten Business Park - applicant requested to continue this item until the November 8, 2022 Regular Council Meeting**

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Cheryl Stallings to set the regular meeting agenda.

VOTE: UNANIMOUS (5-0)

CONSENT AGENDA

All Consent Agenda items are considered routine, to be enacted by one motion with the adoption of the Consent Agenda, and without discussion. If a Council Member requests discussion of an item, the item may be removed from the Consent Agenda and considered separately. The Mayor will present the Consent Agenda to be set prior to taking action on the following items:

CN1 Annexation No. 703 - Haddock Properties - 1.989 acres

Allen Coleman, Town Clerk

CN2 Encroachment Agreement - NCDOT - Apex West Greenway Trail

Angela Reincke, Parks Planning Project Manager

CN3 Encroachment Agreement - NCDOT - Apex West Greenway on Olive Chapel Road (Ratification)

MINUTES

Adam Stephenson, PE, CFM, Transportation Engineering Manager

CN4 Grant Renewal - North Carolina Governor's Highway Safety Program (GHSP)

Mitchell McKinney, Deputy Chief of Police

CN5 Ordinance Amendment for Chapter 20, Article VIII., Subsection 166(b) N Salem St Loading Zone Removal

Russell Dalton, Traffic Engineering Manager

CN6 Rezoning Case No. 22CZ06 Yellowbridge PUD Statement and Ordinance

Lauren Staudenmaier, Planner II, Planning and Community Development Department

A motion was made by Councilmember Ed Gray, seconded by Councilmember Brett Gantt, to approve the Consent agenda as presented.

VOTE: UNANIMOUS (5-0)

PRESENTATIONS

PR1 Proclamation - Indigenous Peoples Day

Taylor Wray, Special Events Coordinator, Department of Parks, Recreation, and Cultural Res.

Mayor Gilbert presented the Indigenous Peoples Day proclamation.

Ms. Taylor Tray, Special Events Coordinator, and Mr. JD Freeman, Community Member, received the proclamation.

PR2 Proclamation - October 2022 Hindu Heritage Month

Jacques K. Gilbert, Mayor and Audra Killingsworth, Mayor Pro-Tempore (co-sponsor)

Mayor Gilbert presented the Hindu Heritage Month proclamation.

Mr. Rajeev Singh and several other community members received the proclamation.

PR3 Proclamation - Hispanic Heritage Month - ADDITIONAL ITEM

Linda Graham-Jones, Director, Diversity, Equity, and Inclusion

Mayor Gilbert presented the Hispanic Heritage Month proclamation.

Pastor Luis Jose Villasenor and Mishell Gonzalez with the Fiesta Cristiana Organization, and other community members received the proclamation.

REGULAR MEETING AGENDA

Mayor Gilbert will call for additional Agenda items from Council or Staff and set the Regular Meeting Agenda prior to Council actions.

Voted on earlier in the meeting.

MINUTES

PUBLIC FORUM

Public Forum allows the public an opportunity to address the Town Council. The speaker is requested not to address items that appear as Public Hearings scheduled on the Regular Agenda. The Mayor will recognize those who would like to speak at the appropriate time. Large groups are asked to select a representative to speak for the entire group. Comments must be limited to 3 minutes to allow others the opportunity to speak.

The following individuals spoke during the public forum portion:

- **Elizabeth Stitt - 3113 Friendship Road, Apex, NC**
 - Distributed a handout and spoke about the Community Meeting held by Water Resources Staff on the Big Branch Elevated Water Tank

PUBLIC HEARINGS

~~PH1—Rezoning Case No. 21CZ17 Ten Ten Business Park~~

Sarah Van Every, Senior Planner, Planning and Community Development Department

NO ACTION - this item was continued to the November 8, 2022 Council Meeting, as requested by the applicant. Vote to continue the item was taken earlier in the meeting under "Commencement".

PH2 Rezoning Case No. 22CZ16 - 1039 Irongate Drive

Lauren Staudenmaier, Planner II, Planning and Community Development Department

A motion was made by Mayor Pro-Tempore Audra Killingsworth, seconded by Councilmember Ed Gray, to approve rezoning application #22CZ16 - 1039 Irongate Drive; approximately 0.46 acres from rural residential (RR) to medium density-conditional zoning (MD-CZ).

VOTE: 4-1 with Councilmember Brett Gantt dissenting.

PH3 Unified Development Ordinance (UDO) Amendments - September 2022

Amanda Bunce, Current Planning Manager, Planning and Community Development Department

A motion was made by Councilmember Brett Gantt, seconded by Terry Mahaffey, to approve various amendments to the unified development ordinance (UDO).

VOTE: UNANIMOUS (5-0)

A motion was made by Councilmember Terry Mahaffey, seconded by Councilmember Ed Gray, to enter into closed session pursuant to NCGS § 143-318.11(3) to consult with the attorney. Council entered into closed session at 6:48p.m.

MINUTES

A motion was made by Councilmember Brett Gantt, seconded by Cheryl Stallings, to return to open session. Council returned to open session at 7:22pm

OLD BUSINESS - None

UNFINISHED BUSINESS

UB1 Annexation No. 733 - Adams Property PUD - 23.92 acres

Liz Loftin, Senior Planner, Planning and Community Development Department

UB2 Rezoning Case No. 22CZ08 Adams Property PUD

Liz Loftin, Senior Planner, Planning and Community Development Department

UB1 and UB2 were voted on together.

A motion was made by Councilmember Brett Gantt, seconded by Councilmember Ed Gray, to adopt an ordinance on the question of annexation apex town council's intent to annex Adams Property Planned Unit Development (PUD) containing 23.92 acres, annexation no. 733 into the Town's Corporate Limits, and, to approve rezoning case no. 22CZ08 - Adams Property PUD, approximately 23.92 acres from wake county residential-40w (R-40W) to planned unit development-conditional zoning (PUD-CZ). The proposed rezoning is located at 0, 0, 8820 New Hope Farm Road; 8841 & 8833 Twin Ponds Lane.

VOTE: UNANIMOUS (5-0)

NEW BUSINESS

NB3 Appointments - Planning Board

Allen Coleman, Town Clerk

Councilmember Terry Mahaffey provided comments.

A motion was made by Councilmember Ed Gray, seconded by Brett Gantt, to appoint Alyssa Stepusin to the Apex Planning Board.

VOTE: 3-2 with Councilmembers Terry Mahaffey and Cheryl Stallings dissenting

A motion was made by Councilmember Terry Mahaffey, seconded by Mayor Pro-Tempore Audra Killingsworth, to appoint Daniel Khodaparast to the Apex Planning Board.

VOTE: UNANIMOUS (5-0)

MINUTES

A motion was made by Councilmember Ed Gray, seconded by Councilmember Terry Mahaffey to confirm Tina Sherman as the Apex Planning Board Vice-Chair. This appointment would be for the unexpired Vice-Chair term (August 9, 2022 - December 31, 2022).

VOTE: UNANIMOUS (5-0)

UPDATES BY TOWN MANAGER

Town Manager, Catherine Crosby, provided an update on various projects and events in the Town.

ADJOURNMENT

Mayor Gilbert announced the meeting adjourned at 7:56p.m.

DRAFT

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Russell Dalton, Traffic Engineering Manager

Department(s): Transportation & Infrastructure Development

Requested Motion

Motion to approve a Development Agreement between the Town of Apex and Horton Park Investments, LLC. in the amount of \$107,242.00 for reimbursement of 200 feet of additional storage length for the westbound left turn lane on Ten Ten Road at Jessie Drive and authorization for the Town Manager to execute the contract on behalf of the Town.

Approval Recommended?

Yes

Item Details

The Developer of Horton Park is required to construct improvements at the intersection of Ten Ten Road at Jessie Drive including a westbound left turn lane. Following approval of the Horton Park transportation improvement requirements in the PUD rezoning, NCDOT identified a need to extend the westbound left turn lane on Ten Ten Road as part of the Town's later planned upgrades to Jessie Drive to serve longer term traffic needs. This agreement provides for the extension of that left turn lane in the Horton Park construction plans so the Town can avoid the later requirement to extend it with the Jessie Drive Phase 1 improvement project. The Town's project will expand Jessie Drive to a 4-lane divided section at Ten Ten Road tapering to a 2-lane section westward (planned in 2025-26) to meet the extension of Jessie Drive that will have been constructed by Horton Park (planned in 2023). In the meantime, Horton Park will provide an eastbound right turn lane and the longer westbound left turn lane on Ten Ten Road as well as a northbound left turn lane on Jessie Drive (planned in 2023) to serve their development needs. Funds for the agreement/project are already appropriated in the Street Improvements Capital Project Fund (\$350,000 in account 63-0000-47695).

Attachments

- Developer Agreement - Ten Ten Road at Jessie Drive Turn Lane Cost Share



NORTH CAROLINA

DEVELOPMENT AGREEMENT

WAKE COUNTY

This Development Agreement (the “**Agreement**”), made this the ____ day of _____, 20__, by and between the Town of Apex, a municipal corporation under the laws of North Carolina (the “**Town**”) and Horton Park Investments, LLC a North Carolina limited liability company (the “**Developer**”).

WITNESSETH:

WHEREAS, Developer is the owner of those certain tracts of real property totaling approximately 124.13 acres and located between Jessie Drive to the north and Colby Chase Drive to the south as depicted on the map entitled Exempt Recombination Plat Horton Park (the “**Map**”), recorded in Book of Maps 2022, Pages 1376 - 1380 at the Wake County Register of Deeds (the “**Properties**”) and plans to develop a residential subdivision commonly known as “Horton Park, Pods 5,6,7 & 8” on the Properties; and

WHEREAS, Ten Ten Road is a busy thoroughfare within the Town and the Town and Developer desire to provide 200 feet of additional storage length for the westbound left turn lane on Ten Ten Road at Jessie Drive combined with the 100 feet of storage committed by the Developer in rezoning case 18CZ04, with the entire 300 feet of storage to be constructed by the Developer to provide additional traffic capacity (the “**Improvements**”); and

WHEREAS, pursuant to North Carolina General Statute § 160A-309, the Town is authorized to contract with a developer for public intersection and roadway improvements that are adjacent of ancillary to a private land development project where the public cost will not exceed \$250,000; and

WHEREAS, the Town finds that the coordination of separately constructed public intersection or roadway improvements, and the adjacent or ancillary private land development improvements would be impracticable; and

WHEREAS, the Town and the Developer desire to cooperate to facilitate construction of the Improvements, with Developer acting as the contracting and managing party with third parties hired to construct the Improvements.

NOW, THEREFORE, IT IS HEREBY AGREED between the Town and the Developer:

1. Recitals. The foregoing recitals shall constitute an integral part of this Agreement, and this Agreement shall be construed in light thereof.

2. Construction of Improvements. The Developer shall, at its own expense, construct the Improvements, all of which are more particularly described on **Exhibit A** attached hereto and incorporated herein by reference (the “**Plans**”). The Developer shall design, construct and install the Improvements (i) in a good and workmanlike manner, (ii) in compliance with this Agreement, Town Specifications, and all applicable Federal, State, and local laws, statutes, ordinances, rules, regulations, policies, and specifications, and (iii) in accordance with the Plans.

The Developer shall administer the construction contract without cost or expense to the Town except as provided for in this Agreement, and the Town may require the Developer to file reports of its administration with the Town’s Engineer.

3. Certification, Inspection, and Acceptance of Facilities. Upon completion of construction of the Improvements, Developer shall provide the Town with written certification and as-built drawings from Developer’s designated consulting engineering firm that the Improvements are complete and have been constructed and installed in compliance with this Agreement and within appropriate easements or fee simple parcels. Fee simple interest is required for street rights-of-way. The Improvements shall be offered for public dedication to the North Carolina Department of Transportation (“**NCDOT**”) upon completion of construction, and shall be subject to inspection and acceptance by the NCDOT. Upon the inspection and acceptance of the Improvements, Developer shall take any steps necessary to transfer title to and possession of the Improvements, easements and fee simple parcels to the NCDOT. Thereafter, the NCDOT shall own the Improvements and have exclusive possession and control of the Improvements. In the event that any defect or breach of warranty claim becomes known after acceptance and dedication of the Improvements, Developer agrees either to pursue its rights and claims against the contractor or other party responsible for the defect or breach of warranty and pay over any recoveries to the Town or to assign such rights and claims to the Town as directed by the Town.

4. Approved Project Costs. The “**Approved Project Costs**” are those costs attributed to the 200 feet additional storage length for the westbound left turn lane on Ten Ten Road at Jessie Drive and as shown in the estimate provided by the Developer’s Engineer and attached hereto as **Exhibit B**. The Town agrees that within thirty (30) days after inspection and acceptance of the Improvements by NCDOT, the Town shall pay to Developer an amount equal to the costs attributed to the construction of the Improvements as shown in Exhibit B as may be modified as provided herein.

Costs that are not certified by the Developer’s Engineer and approved by the Town’s Engineer shall not be included in the Approved Project Costs. Approved Project Costs shall not include any costs for designing, bidding, and managing services.

The Town shall not participate in or be responsible to pay or reimburse any change order increasing the costs of the Improvements unless agreed to by the Town and approved by the Town’s Engineer in writing prior to execution of the change order. In other words, the costs associated with a

change order shall be excluded from the Approved Project Costs unless the change order is pre-approved by the Town's Engineer, which approval will not be unreasonably withheld, conditioned or delayed. Developer shall immediately upon learning of a proposed change order provide the Town with all the documentation and information needed for the Town to evaluate the proposed change order. In addition, the Approved Project Costs incurred by Developer in constructing the Improvements shall reflect any cost savings that reduce the amount that the Developer actually pays to construct the Improvements.

Developer agrees to provide the Town with any additional information reasonably requested by the Town in connection with the Approved Project Costs, provided that the Town requests such additional information within ten (10) business days of receipt of the detailed invoices from Developer.

5. Notices. Any notice given pursuant to this Agreement shall be deemed given if (a) delivered by hand, or (b) faxed to the addressee and then deposited in the United States Mail to the addressee, postage paid certified mail, return receipt requested and addressed as follows:

If to the Town: Town of Apex
 Post Office Box 250
 Apex, NC 27502-0250
 Attention: Russell Dalton, Traffic Engineering Manager
 Email: russell.dalton@apexnc.org

If to Developer: Horton Park Investments, LLC
 6908 North Ridge Dr.
 Raleigh, NC 27615
 Attn: Pablo Reiter
 Email: pablo@prmsinv.com

6. Termination for Failure to Complete. If Developer does not complete construction of the Improvements on or before the fifth anniversary of the full execution of this Agreement absent force majeure delays (as defined below), the Town may terminate this Agreement and have no further obligations to Developer.

7. Delay Beyond the Control of the Parties. Neither Developer nor Town, having taken commercially reasonable precautions, shall be in default of the provisions of this Agreement for delays in performance due to forces beyond the control of the parties. "Forces beyond the control of the parties" shall mean, but is not limited to, delay caused by natural disaster, fire, flood, earthquakes, storms, lightning, epidemic, pandemic, war, riot, civil disobedience, or other event reasonably outside of the parties' control. Due to the ever-changing circumstances surrounding the COVID-19 pandemic, situations may arise during the performance of this Agreement that affect availability of resources and

staff of Developer or Developer's contractors or the Town. There could be changes in anticipated performance times and service costs. Developer will exercise reasonable efforts to overcome the challenges presented by current circumstances. In the event of changes in performance times or service costs caused by the COVID-19 pandemic the Town reserves the right to terminate this Agreement in accordance with its terms. The Parties agree that they shall not be liable to each other for any delays, expenses, losses, or damages of any kind arising out of the impact of the COVID-19 pandemic.

8. Indemnification. To the extent permitted by law, the Developer agrees to defend, pay on behalf of, indemnify, and hold-harmless the Town of Apex, its elected and appointed officials, employees, agents, and volunteers against any and all claims, demands, suits or losses, including all costs connected therewith, for any damages which may be asserted, claimed or recovered against or from the Town of Apex, its elected or appointed officials, employees, agents, and volunteers by reason of personal injury, including bodily injury or death and/or property damage, including loss of use thereof resulting from the negligence of the Developer or Developer's contractors.

9. Anti-Human Trafficking. The Developer warrants and agrees that no labor supplied by the Developer or the Developer's subcontractors in the performance of this Agreement shall be obtained by means of deception, coercion, intimidation or force, or otherwise in violation of North Carolina law, specifically Article 10A, Subchapter 3 of Chapter 14 of the North Carolina General Statutes, Human Trafficking.

10. Insurance. The Developer shall maintain valid general liability insurance in the minimum amount of \$1,000,000, commercial automobile liability insurance in the minimum amount of \$2,000,000, and provide certificates of such insurance naming the Town of Apex as an additional insured by endorsement to the policies. If the policy has a blanket additional insured provision, the contractor's insurance shall be primary and non-contributory to other insurance. Additionally, the Developer shall require all of the Developer's subcontractors to maintain and show proof of workers' compensation and employer's liability insurance in the minimum amount of \$1,000,000. The Developer shall provide notice of cancellation, non-renewal or material change in coverage to the Town of Apex within 10 days of their receipt of notice from the insurance company. All required certificates of insurance, endorsements, and blanket additional insured policy provisions are attached and considered part of this document. Notwithstanding the foregoing, neither the requirement of Developer to have sufficient insurance nor the requirement that Town is named as an additional insured, shall constitute waiver of the Town's governmental immunity in any respect, under North Carolina law.

11. Nondiscrimination. Pursuant to Section 3-2 of the Town of Apex Code of Ordinances, Developer hereby warrants and agrees that Developer will not discriminate against a protected class in employment, subcontracting practices, or the solicitation or hiring of vendors, suppliers, or commercial customers in connection with this Agreement. For the purposes of this Agreement "protected class" includes age, race, religious belief or non-belief, ethnicity, color, national origin, creed, sex, sexual

orientation, gender identity, marital status, natural hair style, genetic information, pregnancy, familial status, disability, veteran or military status, or disabled veteran status.

12. E-Verify Compliance. The Developer shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Developer shall require all of the Developer's subcontractors to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes (E-Verify). Town shall comply with North Carolina General Statute § 160A-169.1 (E-Verify).

13. Complete Agreement, Modifications, Waiver and Assignment. This Agreement constitutes the entire agreement between the parties hereto and it is understood and agreed that all undertakings, negotiations, representations, promises, inducements and agreements heretofore had between these parties are merged herein. This Agreement may not be changed, modified, or amended orally, but only by an agreement in writing signed by both the Town and the Developer. No waiver of any of the provisions to this Agreement shall be valid unless in writing and signed by the party against whom it is sought to be enforced. This Agreement is not assignable without the written consent of all parties to this Agreement. There are no third-party beneficiaries of this Agreement.

14. No Agency, Joint Venturer Relationship. The Town and the Developer agree to exercise good faith in dealing with each other. The Town and the Developer are not agents, partners, or joint venturers of any kind, and the Town shall have no relationship via this Agreement with any third party with whom the Developer contracts in furtherance of this Agreement.

15. Choice of Law, Jurisdiction, and Venue. This Agreement shall be governed, interpreted and construed under the laws of the State of North Carolina without regard to principals of conflicts of laws. The parties agree that any dispute or other matter concerning this Agreement shall be decided by state or federal courts sitting in Wake County, North Carolina. The parties irrevocably submit to the sole and exclusive jurisdiction of such courts and waive all objections and defenses based on jurisdiction and/or improper or inconvenient venue. The parties agree that this Agreement may be enforced by specific performance.

16. Electronic Signature. Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this Agreement and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The Parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the Agreement and any related documents. If electronic signatures are used the Agreement shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

IN WITNESS WHEREOF, the Town and the Developer have duly executed this Agreement under seal as of the day and year first above written.

TOWN OF APEX

BY: _____(SEAL)
Catherine Crosby, Town Manager

ATTEST:

Allen Coleman, Town Clerk

STATE OF NORTH CAROLINA)
WAKE COUNTY)

I, a Notary Public of the County and State aforesaid, certify that Allen Coleman, personally came before me this day and acknowledged that he is Town Clerk of the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by her as its Town Clerk.

Witness my hand and official stamp or seal, this the ____ day of _____, 20__.

[AFFIX NOTARIAL STAMP SEAL]


[Signature of Notary Public]

My Commission Expires: _____

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act

By: _____
Finance Director
Town of Apex


DEVELOPER

By: 
Print Name: Pablo Reiter
Title: Manager

STATE OF North Carolina
COUNTY OF Wake

I, a Notary Public of the County and State aforesaid, do hereby certify that Pablo Reiter, Managing Member of Horton Park Investments, LLC a North Carolina limited liability company, personally appeared before me this day and acknowledged due execution of the foregoing instrument on behalf of Horton Park Investments, limited liability company.

Witness my hand and official stamp or seal, this the 13 day of October, 2022


[Signature of Notary Public]

[AFFIX NOTARIAL STAMP SEAL]

My Commission Expires: August 4, 2026

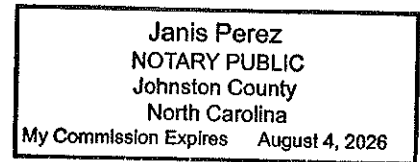
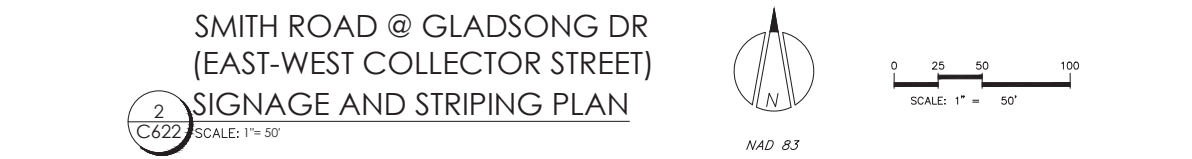
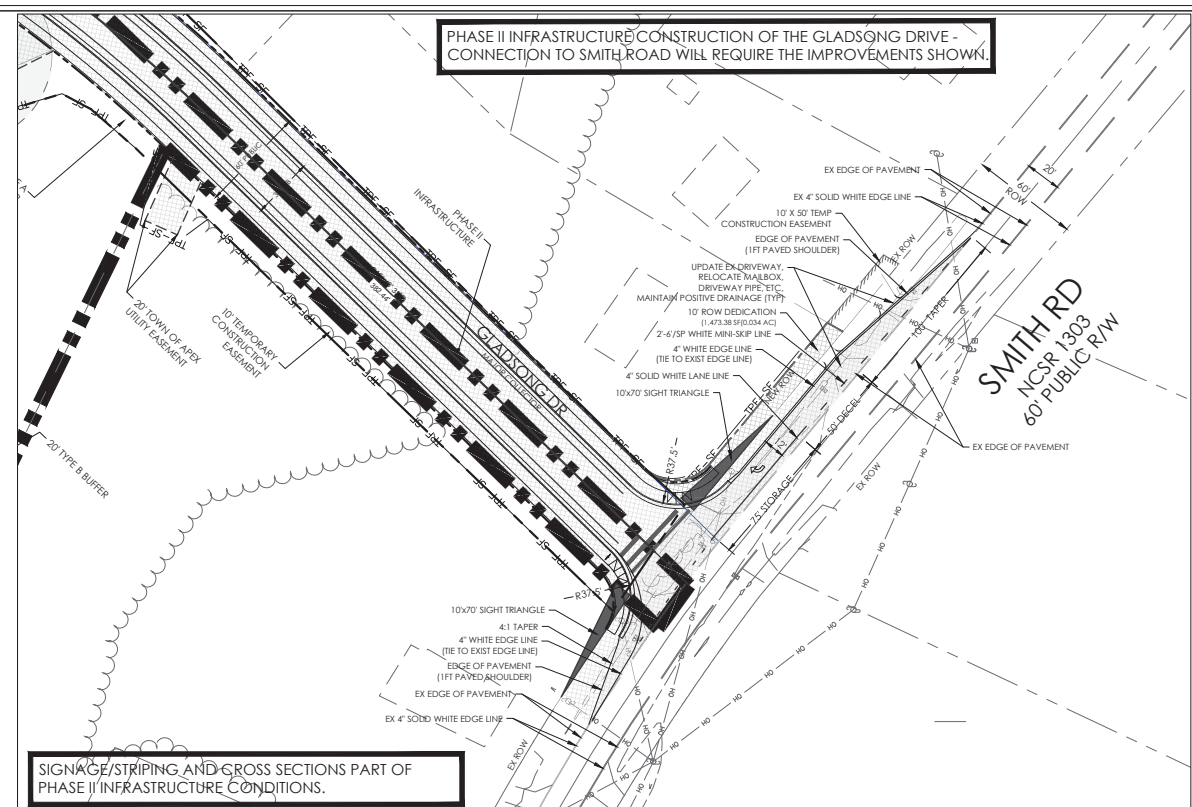
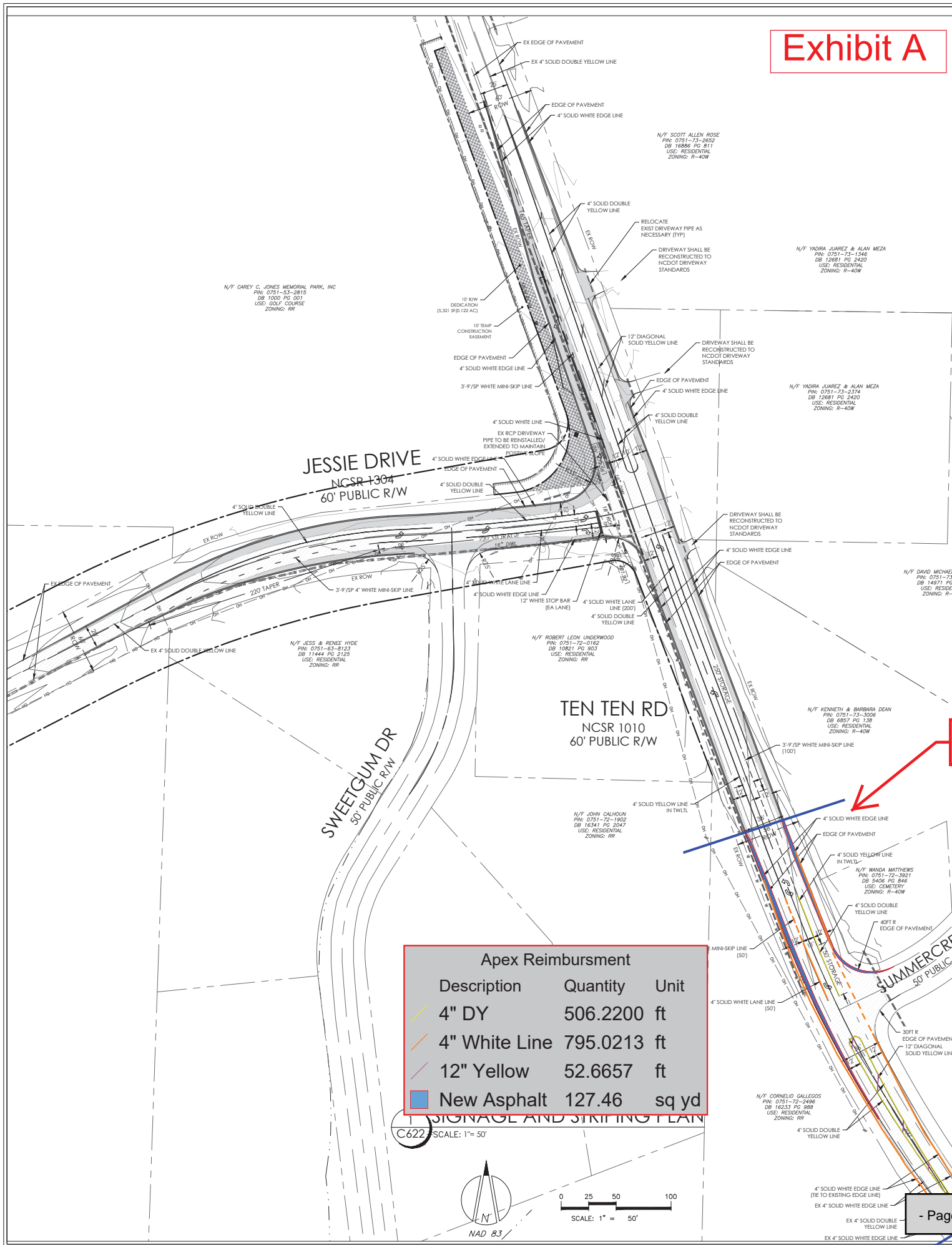


Exhibit A



TRANSPORTATION IMPROVEMENTS:

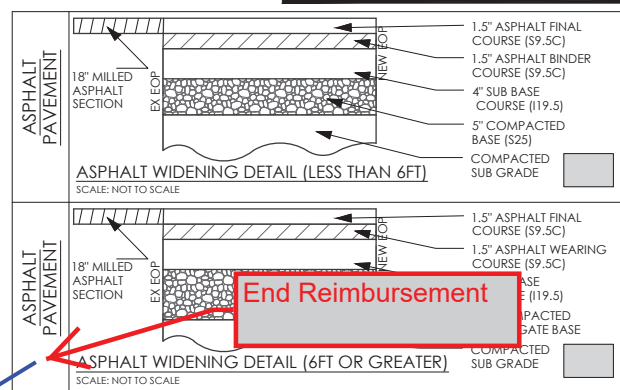
- Jessie Drive at Ten-Ten Road**
- THE DEVELOPER SHALL CONSTRUCT A WESTBOUND LEFT-TURN LANE WITH A MINIMUM OF 100 FEET OF STORAGE AND APPROPRIATE TAPER PRIOR TO THE PENDING STATE TIP PROJECT.
 - THE DEVELOPER SHALL CONSTRUCT AN EASTBOUND RIGHT-TURN LANE WITH A MINIMUM OF 200 FEET OF STORAGE AND APPROPRIATE TAPER PRIOR TO THE PENDING STATE TIP PROJECT.
 - THE DEVELOPER SHALL CONSTRUCT A NORTHBOUND RIGHT-TURN LANE WITH 100 FEET OF STORAGE AND APPROPRIATE TAPER PRIOR TO THE PENDING STATE TIP PROJECT.
 - The Developer shall monitor this intersection and install a traffic signal if warranted and permitted by NCDOT prior to the pending state TIP project.
 - The Developer shall construct the improvements at the aforementioned Jessie Drive/Ten-Ten intersection prior to the first Final Plat for the site.
- Smith Road at Gladsong Dr (formerly DeZola Street)**
- THE DEVELOPER SHALL CONSTRUCT A SOUTHBOUND RIGHT-TURN LANE WITH A MINIMUM OF 100 FEET OF STORAGE AND APPROPRIATE TAPER.
 - THE DEVELOPER SHALL CONSTRUCT AND IMPROVE DEZOLA STREET TO A MAJOR COLLECTOR STREET TYPICAL SECTION ON A 60-FOOT PUBLIC RIGHT OF WAY FOR THE ENTIRE LENGTH.
 - The Developer shall provide access to existing residential properties on DeZola Street in a manner that avoids residential driveways directly accessing any Major Collector Streets.
 - The Developer shall construct the aforementioned improvements at the Smith Road/DeZola Street (aka East-West Collector) intersection at the time the East-West Collector Street is constructed and planted to Smith Road.

KEY SITE NOTES:

- ALL DETAILS LOCATED ON DETAIL SHEETS OR WITHIN CONSTRUCTION DOCUMENTS.
- | | |
|-------------------------------------|--|
| 1 STOP SIGN MUTCD R1-1 AND STOP BAR | 11 10' SIDEWALK |
| 2 10' X 70' SIGHT DISTANCE TRIANGLE | 12 MAIL KIOSK |
| 3 TYPICAL PARKING SPACE | 13 PUBLIC ACCESS & SIDEWALK EASEMENT |
| 4 HANDICAP PARKING SPACE | 14 MONOLITHIC CONCRETE ISLAND |
| 5 HANDICAP PARKING SPACE | 15 3 RED RETROREFLECTIVE SIGNS OM4-3, AND 1 SIGN STATING "FUTURE ROAD EXTENSION" |
| 6 HANDICAP PARKING SIGN | 16 CUL-DE-SAC |
| 7 5' SIDEWALK | 17 STUB STREET TURN-AROUND |
| 8 6' SIDEWALK | 18 RETAINING WALL |
| 9 18" MEDIAN CURB | 19 YIELD SIGN MUTCD R1-2 FOR MINI TRAFFIC CIRCLE AND ROUNDABOUT |
| 10 30" STANDARD CURB AND GUTTER | |

ROADWAY IMPROVEMENT NOTE:

Per UDO Section 7.5.9 (C), all road improvements within a public right-of-way (including but not limited to road widening, road extension, pavement markings, curb and gutter installation, and sidewalk installation) shall be completed prior to the first Certificate of Occupancy (CO) for site plans and first plat for residential subdivisions. If a developer seeks to obtain the first CO or first plat approval prior to completion of the required road widening, a phasing plan requesting a delay in the road widening must be submitted for consideration. This phasing plan shall in no way change the requirements with respect to NCDOT permits.



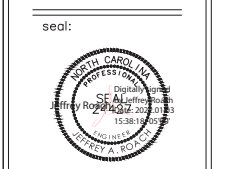
The signatures affixed below certify that this sheet has been reviewed and approved solely per the certifications signed on the cover sheet of these construction plans.

Discipline	Date	Discipline	Date
Public Works-Transportation		Water Resources - Stormwater	
Building Inspections		Planning	
Water Resources-Utility Engineering		Planning - Transportation	
Electric		Fire	
Water Resources - Soil & Erosion Control		Parks, Recreation & Cultural Res.	



NC License #P-0673

Project: **HORTON PARK**
JESSIE DRIVE
WHITE OAK TOWNSHIP
APEX, NORTH CAROLINA 27539



NO.	DATE	REVISION	BY
1	October 22, 2018	Issue for Construction Document 1st Review	JR
2	December 11, 2018	Issue for Construction Document 2nd Review	JR
3	February 15, 2019	Issue for Construction Document 3rd Review	JR
4	May 28, 2020	Issue for Construction Document 4th Review	JR
5	July 20, 2020	Issue for Construction Document 5th Review	JR
6	July 20, 2020	Issue for Construction Document 6th Review	JR
7	July 20, 2020	Issue for Construction Document 7th Review	JR
8	July 20, 2020	Issue for Construction Document 8th Review	JR
9	July 20, 2020	Issue for Construction Document 9th Review	JR
10	July 20, 2020	Issue for Construction Document 10th Review	JR

title: **OFFSITE ROADWAY IMPROVEMENTS SIGNAGE AND STRIPING PLAN**

proj #: **161201**
 date: **October 1, 2018**
 dwg by: **chkd by: FS JR**
 scale: **AS NOTED**
 sheet: **C622**

	In addition, payment terms will be net 30 days or per the executed contract.		
	If work has not commenced or contracts not signed within 30 days of this approval, pricing will be voided.		
	Please contact Brett Hoover at 919-586-8006 if you have any questions.		

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Marty Stone, Assistant Town Manager

Department(s): Administration

Requested Motion

Motion to approve an encroachment agreement between the Town and property owners Ramanpreet Singh and spouse Mandeep Kaur to install a fence that will encroach 104 linear feet onto the 40' Town of Apex Public Sanitary Sewer Easement and authorize the Town Manager to execute the same.

Approval Recommended?

Yes

Item Details

The proposed Encroachment Agreement is between the Town and property owners Ramanpreet Singh and spouse Mandeep Kaur (Grantees) for the property described as a residential lot known as Wake County PIN #0721-32-0539, Book of Maps 2017, Page 00893, lot is also known as 2937 Macintosh Woods Drive, Apex, NC 27502. Grantees wish to install certain improvements, more particularly described as a fence that will encroach 104 linear feet onto the 40' Town of Apex Public Sanitary Sewer Easement.

Attachments

- Encroachment Agreement
- Exhibit A



After Recording Mail To: Development Services
 Town of Apex
 PO Box 250
 Apex, NC 27502

STATE OF NORTH CAROLINA
COUNTY OF WAKE

ENCROACHMENT AGREEMENT

THIS ENCROACHMENT AGREEMENT, being made this ____ day of _____, 2022, by and between Ramanpreet Singh and spouse Mandeep Kaur, hereinafter referred to as "Grantees," and the Town of Apex, hereinafter referred to as the "Town."

WHEREAS, the Grantees are the owners of a certain residential lot of land in the County of Wake, State of North Carolina, which is designated as **PIN #0721-32-0539** by the Wake County Revenue Department and more particularly described as **Lot 25** of the subdivision known as **McKenzie Ridge Phase 2** as shown on that certain plat recorded in **Book of Maps 2017, Page 00893**, Wake County Registry (hereinafter the "**Subdivision Plat**"). The residential lot is also known as **2937 Macintosh Woods Drive, Apex, NC 27502**. The residential lot described in this paragraph is hereinafter referred to as the "**Residential Lot**."

WHEREAS, the Town is the owner of a **40' TOASSE** as shown on the **Subdivision Plat** hereinafter referred to as the "**Public Sanitary Sewer Easement**".

WHEREAS, Grantees wish to install certain improvements, more particularly described as 104 linear feet of fence which will encroach **onto the Public Sanitary Sewer Easement**, which serves the Residential Lot, hereinafter referred to as the "**Encroachment**," all as shown on the attached **Exhibit A**. Grantees desire to make certain agreements and covenants regarding the Encroachment.

WHEREAS, the Town, under the terms and conditions herein set forth, is willing to allow the above-described Encroachment upon the **Public Sanitary Sewer Easement**.

NOW, THEREFORE, in consideration of these promises and other consideration, the receipt and sufficiency of which is hereby acknowledged, Grantees and the Town hereby covenant and agree:

1. Subject to the terms herein, the Town agrees to allow Grantees, and Grantees' successors and assigns at Grantees' sole risk and expense, to encroach into the **Public Sanitary Sewer Easement** of the Town as shown in the attached **Exhibit A**, and incorporated by reference as though fully set forth herein.

2. The Encroachment shall not be enlarged or increased beyond the Encroachment shown in the **Exhibit A** and described in this Encroachment Agreement. Grantees are responsible for any and all expenditures of labor or materials required for the installation, erection, repair, removal, or maintenance of the above-referenced Encroachment.

3. Grantees are to be fully responsible for any and all property damage or injury or death of any person which results from any and all negligence, omission, defect in design, maintenance, or workmanship created by the Encroachment described herein, or any cause of action arising out of the installation, maintenance, removal, destruction, or location of said Encroachment.

4. Grantees agree to and do hereby hold the Town, its officers, council members and employees harmless from any and all liability arising out of such negligence, omission, defect or other cause of action; that it will defend the Town, its officers, council members and employees, and pay all attorney fees in any and all actions brought as a result of such; and that it will indemnify the Town, its officers, council members, and employees against any and all loss sustained by reason of such negligence, omission, defect, or other cause of action, claim, cost, or expense arising out of the installation, maintenance, removal, or location of said Encroachment.

5. Sections 3 and 4 shall survive the termination of this Encroachment Agreement for any reason.

6. All notices required herein shall be deemed given by depositing such in the United States mail, first class, and addressed to:

To Town: Town Manager
Town of Apex
PO Box 250
Apex, NC 27502

To Grantees: Ramanpreet Singh and Mandeep Kaur
2937 Macintosh Woods Drive
Apex, NC 27502

7. In the event there is a dispute between the parties concerning the interpretation of the terms of this Encroachment Agreement or their respective rights and obligations hereunder, such dispute or controversy shall be adjudged pursuant to the laws of the State of North Carolina.

8. Grantees agree to abide by all applicable laws, regulations, statutes and ordinances.

9. This Encroachment Agreement shall not divest the Town of any rights or interest in said **Public Sanitary Sewer Easement** and the Town may terminate this Encroachment Agreement by giving Grantees ninety (90) days written notice of termination. Prior to the termination date, Grantees shall remove, at their own expense, all or part of the Encroachment as specified by the Town.

10. If the Town deems, within its sole discretion, that there is not time to give Grantees notice as provided in Paragraph 9 and that removal of the Encroachment is necessary in order to operate, protect, maintain, modify, replace, add-to or improve its facilities located within the **Public Sanitary Sewer Easement**, then no notice shall be required and the Town may remove the Encroachment from the **Public Sanitary Sewer Easement** without cost, risk or liability to the Town.

11. Grantees agree to pay and reimburse the Town the entire expense and cost of removal of the Encroachment in the event that the Town removes the Encroachment as provided in Paragraph 10 or if Grantees fail to remove the Encroachment within the time limit after receiving notice under Paragraph 9.

12. Grantees, if not self-performing the installations that are the subject of this Agreement, agree to purchase or cause to be procured from a responsible insurance carrier or carriers authorized under the laws of the State of North Carolina, valid general liability insurance in the minimum amount of \$500,000 and provide a certificate of such insurance naming the Town of Apex as additional insured by endorsement to the policy. Where the Grantees are self-performing the installations, Grantees shall show proof of homeowner's insurance with personal liability coverage in a minimum amount of at least \$300,000. Grantees shall provide notice of cancellation, non-renewal or material change in coverage to the Town of Apex within 10 days of their receipt of notice from the insurance company.

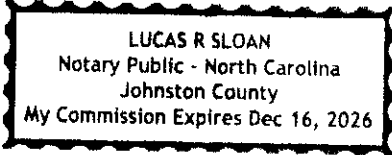
13. Notwithstanding Section 14 below, Grantees shall be released from its obligation under this Encroachment Agreement only upon the assumption of said obligations either by a successor in title to real property known as **Wake County PIN #0721-32-0539, 2937 Macintosh Woods Drive, Apex, NC, 27502**. The Town's consent to such assumption and release shall be required but shall not be withheld, conditioned or delayed if, as reasonably determined by the Town, the party assuming Grantees obligations possesses adequate financial resources and ownership interest, and Grantees delegate and proposed assignee assume and agree to fulfill, in writing, all of Grantees duties set forth in this Encroachment Agreement.

14. The right to encroach is appurtenant to and runs with the land hereinabove referred to and shall forever be subject to the conditions above agreed on between the parties. This Encroachment Agreement is binding upon the heirs, assigns, transferees, and successors in interest of the Grantees and shall, upon execution, be recorded in the Office of the Register of Deeds of Wake County, North Carolina.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

In testimony whereof, said Grantee and said Town have here unto set their hands and seals, the day and year first above written.

GRANTEES



By: [Signature]
Ramanpreet Singh

By: [Signature]
Mandeep Kaur

STATE OF NORTH CAROLINA

COUNTY OF Wake [county in which acknowledgement taken]

I, do hereby certify that Ramanpreet Singh, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 19th day of August, 2022.

[Signature]
[Signature of Notary Public]

My Commission Expires: Dec 16th, 2026

STATE OF NORTH CAROLINA

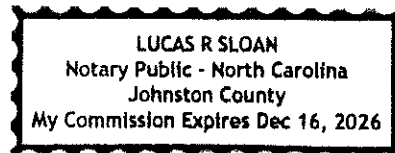
COUNTY OF Wake [county in which acknowledgement taken]

I, do hereby certify that Mandeep Kaur, personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 19th day of August, 2022.

[Signature]
[Signature of Notary Public]

My Commission Expires: Dec 16th, 2026



TOWN OF APEX

Catherine Crosby
Town Manager

(Corporate Seal)

ATTEST:

Allen Coleman, CMC, NCCCC
Town Clerk

STATE OF NORTH CAROLINA

COUNTY OF _____ [county in which acknowledgement taken]

I, _____, a Notary Public of _____ County, North Carolina, certify that Allen Coleman personally came before me this day and acknowledged that he is the Town Clerk for the Town of Apex, a North Carolina Municipal Corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its Town Manager, sealed with its corporate seal and attested by him as Town Clerk.

Witness my hand and official stamp or seal, this _____ day of _____, 2022.

[Signature of Notary Public]

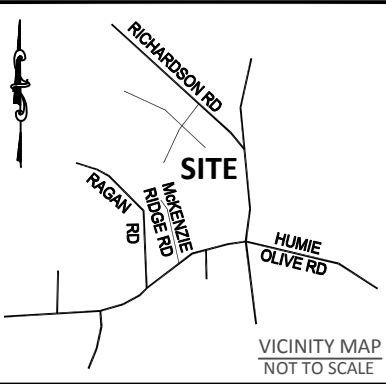
(Seal)

My Commission Expires: _____

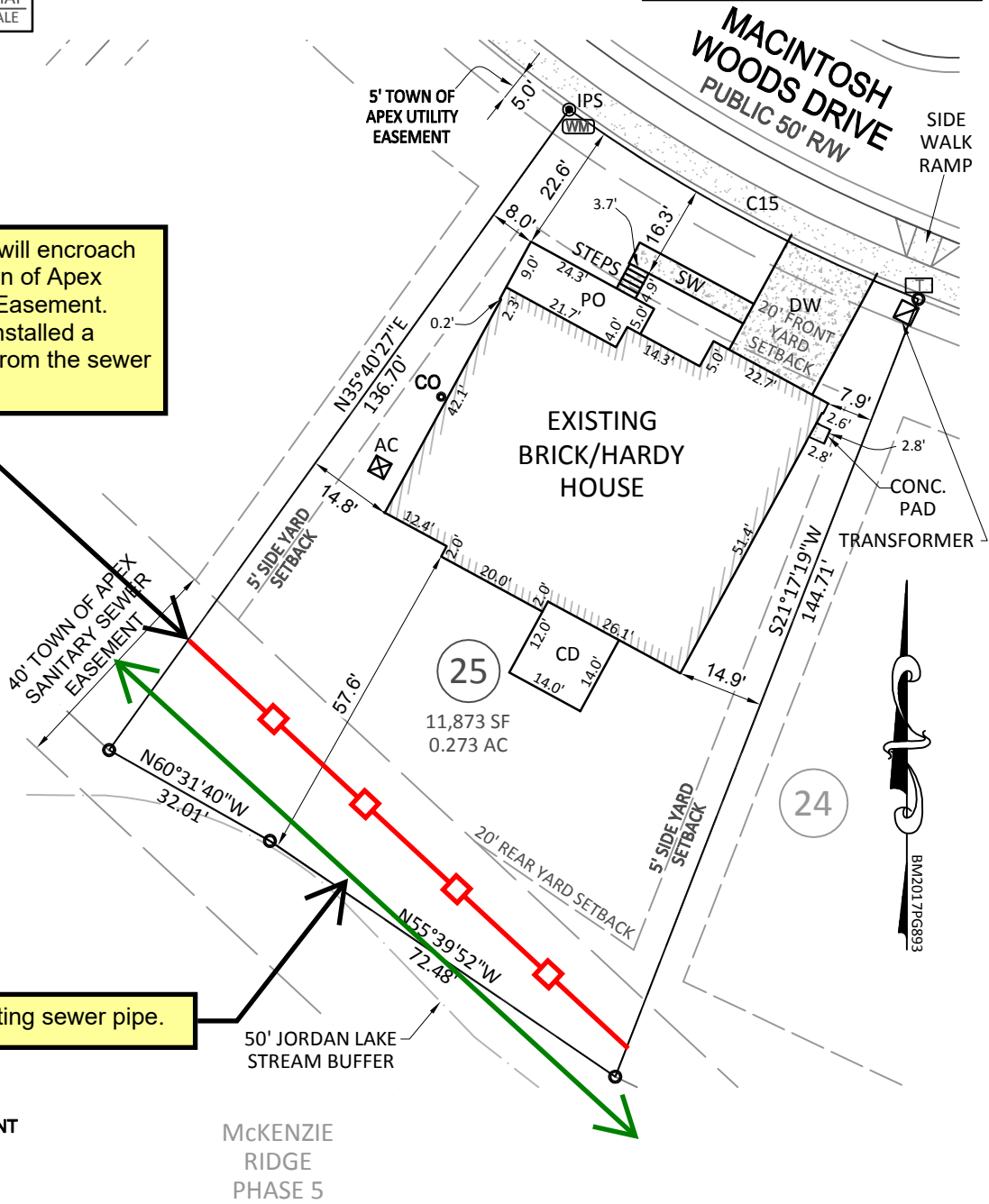
EXHIBIT A

LOT INFORMATION:

PIN: 0721320539
 TOTAL LOT AREA = 0.273 AC = 11,873 SF
 HOUSE = 2,886 SF
 SW & STEPS = 107 SF
 DW = 357 SF
 PO = 208 SF
 CD = 196 SF
 AC PAD = 9 SF
 CONC. PAD = 8 SF
 EXISTING IMPERVIOUS = 3,771 SF
 PERCENT IMPERVIOUS = 31.8 %



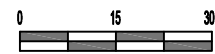
104 LF of fence will encroach onto the 40' Town of Apex Sanitary Sewer Easement. Fence shall be installed a minimum of 10' from the sewer pipe.



LEGEND

- PO = PORCH
- CD = COVERED DECK
- SW = SIDEWALK
- DW = CONC DRIVEWAY
- SP = SCREENED PORCH
- CP = COVERED PORCH
- P = CONCRETE PATIO
- ⊗ = COMPUTED POINT
- = IRON PIPE FOUND
- = IRON PIPE SET
- = DRILL HOLE FOUND
- WMM = WATER METER
- CO = CLEAN OUT
- AC = AIR CONDITIONER
- ⊙ = CABLE BOX
- ☐ = TELEPHONE PEDESTAL
- CI = CURB INLET
- ☼ = LIGHT POLE
- G = GAS METER
- E = ELECTRIC METER
- ES = ELECTRIC SERVICE
- ☒ = ELECTRICAL BOX
- STE = SIGHT TRIANGLE EASEMENT

Existing sewer pipe.



SCALE:
1" = 30 ft.

NOTE:
THIS MAY NOT BE A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS AND HAS NOT BEEN REVIEWED FOR COMPLIANCE WITH RECORDING REQUIREMENTS FOR PLATS

JOB#: 170231



Bateman Civil • Survey Company, PC
 Engineers • Surveyors • Planners
 2524 Reliance Ave., Apex, NC 27539
 (919) 577-1080
 NCBELS C 2378

FINAL SURVEY
 EXCLUSIVELY FOR: MERITAGE HOMES
MCKENZIE RIDGE PHASE 2 - LOT 25
 2937 MACINTOSH WOODS DRIVE, APEX, NC
 WAKE COUNTY
DATE: 10/31/18 DRAWN BY: AG CHECKED BY: SPC
 REFERENCE: BM 2017, PG 893 SCALE: 1" = 30'

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Jeffrey Maynard, Interim Fire Chief

Department(s): Fire

Requested Motion

Motion to approve the Memorandum of Understanding ("MOU") between Wake Technical Community College and the Town of Apex to provide training for the Town of Apex's fire academy in the listed areas and authorize the Town Manager to execute the agreement on behalf of the Town.

- Firefighter Series Class, which includes Firefighter 1 & 2, Hazardous Materials Responder Level 1, Emergency Medical Care, Safety & Survival, and Traffic Incident Management System.
- Fireground Procedures
- Technical Rescuer and Technical Rescuer - Vehicle
- Rapid Intervention Crew
- Emergency Vehicle Driver

Approval Recommended?

Yes

Item Details

Wake Technical Community College will provide a total of \$30,414 to the Town of Apex to reimburse Apex Fire Department instructors for the instructional costs of the Firefighter classes of the academy. Between November 2022 and April 2023 instructors will provide 822 classroom and practical hours of instruction to the academy students.

Attachments

Memorandum of Understandings between Town of Apex and WTCC.



CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire
Department Contact Person for Contract: Jeffrey Maynard Extension: 1040 Contractor/Vendor Name and address: Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603 Contractor/Vendor Phone: Contractor/Vendor Contact Person: 919-866-6139 / Dr. Jamie Wicker Purpose of Contract: Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Emergency Vehicle Driver class Amount: \$0 Budget Code: 10-5300 40200 Fire Department Salaries Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A Department Director's Signature: <u>Tim Herman</u> Date: 10/10/2022 All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.
LEGAL
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u> Comments: <input checked="" type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Other Approvals required/permitted:
RISK MANAGER
Reviewed by and approved: _____ Date: _____ <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Insurance specifications meet requirements. <input type="checkbox"/> Insurance specifications have been revised. <input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required. Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured
FINANCE DIRECTOR
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure. <input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds. <input type="checkbox"/> A budget amendment is necessary before this agreement is approved. <input type="checkbox"/> A budget amendment is attached as required for approval of this agreement. Finance Director: _____ Date: ____/____/20__
TOWN CLERK
Date Received: ____/____/20__ Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department Council Action Required:– forward to Town Manager Agenda Date: ____/____/20__ Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO
TOWN MANAGER
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO Town Manager: _____ Date: ____/____/20__
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer. Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide first responder training, which includes: Emergency Vehicle Driver for the Apex Fire Department’s fire academy, which commences on 11/07/2022 and concludes on 11/10/2022. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the Emergency Vehicle Driver class in this academy is 29 hours including didactic classroom instruction, practical skills application and testing, and written testing which will be offered over one week.

Wake Technical Community College will provide \$1,073 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town

of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the

approval of each institution's authorized representatives.

ARTICLE 2 TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the "Initial Term"). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3 NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4 COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5 AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6 FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act ("FERPA"), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student's written consent.

ARTICLE 7 USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual

property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8 INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9 SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10 WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11 ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12 GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13 NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14 BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with

regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program involving Partner and College shall be deemed to exist between the parties unless and until a Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____
Name: _____
Title: _____

College:

Wake Technical Community College

By: _____
Name: _____
Title: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Jeffrey Maynard, Interim Fire Chief

Department(s): Fire

Requested Motion

Motion to approve the Memorandum of Understanding ("MOU") between Wake Technical Community College and the Town of Apex to provide training for the Town of Apex's fire academy in the listed areas and authorize the Town Manager to execute the agreement on behalf of the Town.

- Firefighter Series Class, which includes Firefighter 1 & 2, Hazardous Materials Responder Level 1, Emergency Medical Care, Safety & Survival, and Traffic Incident Management System.

Approval Recommended?

Yes

Item Details

Wake Technical Community College will provide a total of \$30,414 to the Town of Apex to reimburse Apex Fire Department instructors for the instructional costs of the Firefighter classes of the academy. Between November 2022 and April 2023 instructors will provide 822 classroom and practical hours of instruction to the academy students.

Attachments

Memorandum of Understanding between Town of Apex and WTCC.



CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire
Department Contact Person for Contract: <u>Jeffrey Maynard</u> Extension: <u>1040</u> Contractor/Vendor Name and address: <u>Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603</u> Contractor/Vendor Phone: <u>919-866-6139</u> / Contractor/Vendor Contact Person: <u>Dr. Jamie Wicker</u> Purpose of Contract: <u>Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Firefighter I&II class</u> Amount: <u>\$0</u> Budget Code: <u>10-5300 40200</u> Fire Department Salaries Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A Department Director's Signature: <u><i>Tim Herman</i></u> Date: <u>10/10/2022</u> <p style="color: red; text-align: center;">All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.</p>
LEGAL
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u> Comments: <input checked="" type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Other Approvals required/permitted:
RISK MANAGER
Reviewed by and approved: _____ Date: _____ <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Insurance specifications meet requirements. <input type="checkbox"/> Insurance specifications have been revised. <input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required. <p style="color: red;">Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured</p>
FINANCE DIRECTOR
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure. <input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds. <input type="checkbox"/> A budget amendment is necessary before this agreement is approved. <input type="checkbox"/> A budget amendment is attached as required for approval of this agreement. Finance Director: _____ Date: ____/____/20__
TOWN CLERK
Date Received: ____/____/20__ Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department Council Action Required:– forward to Town Manager Agenda Date: ____/____/20__ Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO
TOWN MANAGER
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO Town Manager: _____ Date: ____/____/20__
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer. Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide Firefighter Series class, which includes: Firefighter 1&2, Hazardous Materials Responder Level 1, Emergency Medical Care, Safety & Survival, and Traffic Incident Management System for the Apex Fire Department’s fire academy, which commences on 11/14/2022 and concludes on 03/10/2023. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the Firefighter Series class in this academy is 514 hours including didactic classroom instruction, practical skills application and testing, and written testing which be offered over several weeks.

Wake Technical Community College will provide \$19,018 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain

employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the approval of each institution's authorized representatives.

ARTICLE 2 TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the "Initial Term"). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3 NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4 COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5 AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6 FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act ("FERPA"), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student's written consent.

ARTICLE 7
USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8
INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9
SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10
WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11
ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12
GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13
NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14
BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program involving Partner and College shall be deemed to exist between the parties unless and until a Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____
Name: _____
Title: _____

College:

Wake Technical Community College

By: _____
Name: _____
Title: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Jeffrey Maynard, Interim Fire Chief

Department(s): Fire

Requested Motion

Motion to approve the Memorandum of Understanding ("MOU") between Wake Technical Community College and the Town of Apex to provide training for the Town of Apex's fire academy in the listed areas and authorize the Town Manager to execute the agreement on behalf of the Town.

- Fireground Procedures

Approval Recommended?

Yes

Item Details

Wake Technical Community College will provide a total of \$30,414 to the Town of Apex to reimburse Apex Fire Department instructors for the instructional costs of the Firefighter classes of the academy. Between November 2022 and April 2023 instructors will provide 822 classroom and practical hours of instruction to the academy students.

Attachments

Memorandum of Understanding between Town of Apex and WTCC.



CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire	
Department Contact Person for Contract: Jeffrey Maynard Extension: 1040	
Contractor/Vendor Name and address: Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603	
Contractor/Vendor Phone: Contractor/Vendor Contact Person: 919-866-6139 / Dr. Jamie Wicker	
Purpose of Contract: Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Fireground Procedures class	
Amount: \$0 Budget Code: 10-5300 40200 Fire Department Salaries	
Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	
Department Director's Signature: <u>Tim Herman</u> Date: 10/10/2022	
All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.	
LEGAL	
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u>	
Comments: council approval required	
x <input type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve	
<input type="checkbox"/> N/A – Purchasing and Contract Manager to forward	
<input type="checkbox"/> Other Approvals required/permitted:	
RISK MANAGER	
Reviewed by and approved: _____ Date: _____	
<input type="checkbox"/> N/A – Purchasing and Contract Manager to forward	
<input type="checkbox"/> Insurance specifications meet requirements.	
<input type="checkbox"/> Insurance specifications have been revised.	
<input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required.	
Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director	
Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured	
FINANCE DIRECTOR	
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure.	
<input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds.	
<input type="checkbox"/> A budget amendment is necessary before this agreement is approved.	
<input type="checkbox"/> A budget amendment is attached as required for approval of this agreement.	
Finance Director: _____ Date: ____ / ____ /20	
TOWN CLERK	
Date Received: ____ / ____ /20 Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department	
Council Action Required:– forward to Town Manager Agenda Date: ____ / ____ /20	
Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO	
TOWN MANAGER	
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Town Manager: _____ Date: ____ / ____ /20	
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer.	
Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)	

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide first responder training, which includes: Fireground Procedures class for the Apex Fire Department’s fire academy, which commences on 12/02/2022 and concludes on 02/24/2023. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the Fireground Procedures class in this academy is 48 hours including didactic classroom instruction, practical skills application and testing, and written testing which be offered over several weeks.

Wake Technical Community College will provide \$1,776 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town

of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the approval of each institution's authorized representatives.

ARTICLE 2
TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the “Initial Term”). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3
NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4
COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5
AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6
FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act (“FERPA”), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student’s written consent.

ARTICLE 7
USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to

each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8
INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9
SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10
WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11
ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12
GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13
NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14
BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program involving Partner and College shall be deemed to exist between the parties unless and until a

Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____
Name: _____
Title: _____

College:

Wake Technical Community College

By: _____
Name: _____
Title: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Jeffrey Maynard, Interim Fire Chief

Department(s): Fire

Requested Motion

Motion to approve the Memorandum of Understanding ("MOU") between Wake Technical Community College and the Town of Apex to provide training for the Town of Apex's fire academy in the listed areas and authorize the Town Manager to execute the agreement on behalf of the Town.

- North Carolina Rapid Intervention Crew (NC RIC)

Approval Recommended?

Yes

Item Details

Wake Technical Community College will provide a total of \$30,414 to the Town of Apex to reimburse Apex Fire Department instructors for the instructional costs of the Firefighter classes of the academy. Between November 2022 and April 2023 instructors will provide 822 classroom and practical hours of instruction to the academy students.

Attachments

Memorandum of Understanding between Town of Apex and WTCC.



CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire	
Department Contact Person for Contract: Jeffrey Maynard Extension: 1040	
Contractor/Vendor Name and address: Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603	
Contractor/Vendor Phone: Contractor/Vendor Contact Person: 919-866-6139 / Dr. Jamie Wicker	
Purpose of Contract: Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Rapid Intervention Crew class	
Amount: \$0 Budget Code: 10-5300 40200 Fire Department Salaries	
Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	
Department Director's Signature: <u>Tim Herman</u> Date: 10/10/2022	
All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.	
LEGAL	
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u>	
Comments:	
<input checked="" type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve	
<input type="checkbox"/> N/A – Purchasing and Contract Manager to forward	
<input type="checkbox"/> Other Approvals required/permitted:	
RISK MANAGER	
Reviewed by and approved: _____ Date: _____	
<input type="checkbox"/> N/A – Purchasing and Contract Manager to forward	
<input type="checkbox"/> Insurance specifications meet requirements.	
<input type="checkbox"/> Insurance specifications have been revised.	
<input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required.	
Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director	
Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured	
FINANCE DIRECTOR	
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure.	
<input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds.	
<input type="checkbox"/> A budget amendment is necessary before this agreement is approved.	
<input type="checkbox"/> A budget amendment is attached as required for approval of this agreement.	
Finance Director: _____ Date: ____/____/20__	
TOWN CLERK	
Date Received: ____/____/20__ Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department	
Council Action Required:– forward to Town Manager Agenda Date: ____/____/20__	
Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO	
TOWN MANAGER	
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO	
Town Manager: _____ Date: ____/____/20__	
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer.	
Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)	

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide first responder training, which includes: North Carolina Rapid Intervention Crew (NC RIC) class for the Apex Fire Department’s fire academy, which commences on 02/20/2023 and concludes on 02/23/2023. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the North Carolina Rapid Intervention Crew class in this academy is 29 hours including didactic classroom instruction, practical skills application and testing, and written testing which be offered over one week.

Wake Technical Community College will provide \$1,073 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town

of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the approval of each institution's authorized representatives.

ARTICLE 2
TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the “Initial Term”). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3
NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4
COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5
AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6
FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act (“FERPA”), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student’s written consent.

ARTICLE 7
USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to

each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8
INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9
SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10
WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11
ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12
GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13
NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14
BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program involving Partner and College shall be deemed to exist between the parties unless and until a

Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____

Name: _____

Title: _____

College:

Wake Technical Community College

By: _____

Name: _____

Title: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: CONSENT AGENDA

Meeting Date: October 25, 2022

Item Details

Presenter(s): Jeffrey Maynard, Interim Fire Chief

Department(s): Fire

Requested Motion

Motion to approve the Memorandum of Understanding ("MOU") between Wake Technical Community College and the Town of Apex to provide training for the Town of Apex's fire academy in the listed areas and authorize the Town Manager to execute the agreement on behalf of the Town.

- Technical Rescuer and Technical Rescuer - Vehicle

Approval Recommended?

Yes

Item Details

Wake Technical Community College will provide a total of \$30,414 to the Town of Apex to reimburse Apex Fire Department instructors for the instructional costs of the Firefighter classes of the academy. Between November 2022 and April 2023 instructors will provide 822 classroom and practical hours of instruction to the academy students.

Attachments

Memorandum of Understanding between Town of Apex and WTCC.



CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire
Department Contact Person for Contract: Jeffrey Maynard Extension: 1040 Contractor/Vendor Name and address: Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603 Contractor/Vendor Phone: Contractor/Vendor Contact Person: 919-866-6139 / Dr. Jamie Wicker Purpose of Contract: Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Technical Rescuer--Vehicle class Amount: \$0 Budget Code: 10-5300 40200 Fire Department Salaries Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A Department Director's Signature: <u>Tim Herman</u> Date: 10/10/2022 All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.
LEGAL
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u> Comments: <input checked="" type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Other Approvals required/permitted:
RISK MANAGER
Reviewed by and approved: _____ Date: _____ <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Insurance specifications meet requirements. <input type="checkbox"/> Insurance specifications have been revised. <input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required. Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured
FINANCE DIRECTOR
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure. <input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds. <input type="checkbox"/> A budget amendment is necessary before this agreement is approved. <input type="checkbox"/> A budget amendment is attached as required for approval of this agreement. Finance Director: _____ Date: ____/____/20__
TOWN CLERK
Date Received: ____/____/20__ Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department Council Action Required:– forward to Town Manager Agenda Date: ____/____/20__ Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO
TOWN MANAGER
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO Town Manager: _____ Date: ____/____/20__
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer. Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide first responder training, which includes: Technical Rescuer – Vehicle class for the Apex Fire Department’s fire academy, which commences on 04/10/2023 and concludes on 04/20/2023. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the Technical Rescuer – Vehicle class in this academy is 58 hours including didactic classroom instruction, practical skills application and testing, and written testing which be offered over two weeks.

Wake Technical Community College will provide \$2,146 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town

of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the approval of each institution's authorized representatives.

ARTICLE 2
TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the “Initial Term”). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3
NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4
COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5
AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6
FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act (“FERPA”), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student’s written consent.

ARTICLE 7
USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to

each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8 INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9 SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10 WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11 ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12 GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13 NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14 BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program

involving Partner and College shall be deemed to exist between the parties unless and until a Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____
Name: _____
Title: _____

College:

Wake Technical Community College

By: _____
Name: _____
Title: _____

CONTRACT ROUTING CONTROL SHEET

Routing Order: (1) Department Director, (2) Purchasing and Contract Manager (3) Legal,
(4) Risk Manager, (5) Vendor for Signature (6) Finance Director, (7) Town Clerk, (8) Town Council/Town Manager

EVERY SECTION MUST BE COMPLETED

DEPARTMENT: Fire
Department Contact Person for Contract: Jeffrey Maynard Extension: 1040 Contractor/Vendor Name and address: Wake Technical Community College 9101 Fayetteville Road Raleigh, NC 27603 Contractor/Vendor Phone: Contractor/Vendor Contact Person: 919-866-6139 / Dr. Jamie Wicker Purpose of Contract: Reimbursement from WTCC for academy class - MOU between WTCC & Town of Apex Technical Rescuer class Amount: \$0 Budget Code: 10-5300 40200 Fire Department Salaries Type of Contract: <input checked="" type="checkbox"/> New <input type="checkbox"/> Renew <input type="checkbox"/> Amendment Exhibits/Attachments included: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A Department Director's Signature: <u>Tim Herman</u> Date: 10/10/2022 All Contracts should be sent to the Purchasing and Contract Manager (Steve Maynard). Steve will determine whether the contract will need to go to the Legal Department for review or not.
LEGAL
Reviewed by: <u>Chris Welch</u> Date: <u>10/10/22</u> Comments: <input checked="" type="checkbox"/> Town Council approval required <input type="checkbox"/> Town Manager authorized to approve <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Other Approvals required/permitted:
RISK MANAGER
Reviewed by and approved: _____ Date: _____ <input type="checkbox"/> N/A – Purchasing and Contract Manager to forward <input type="checkbox"/> Insurance specifications meet requirements. <input type="checkbox"/> Insurance specifications have been revised. <input type="checkbox"/> A pre-project safety review between the contractor and contracting department is required. Return to Department Contact Person to have contract signed by Contractor prior to forwarding to Finance Director Obtain a copy of Certificate of Insurance that includes the proper coverage and shows the Town as an additional insured
FINANCE DIRECTOR
<input type="checkbox"/> Sufficient funds are available in the proper category to pay for this expenditure. <input type="checkbox"/> This contract is conditioned upon appropriation by the Town Council of sufficient funds. <input type="checkbox"/> A budget amendment is necessary before this agreement is approved. <input type="checkbox"/> A budget amendment is attached as required for approval of this agreement. Finance Director: _____ Date: ____/____/20__
TOWN CLERK
Date Received: ____/____/20__ Signed by Contractor: <input type="checkbox"/> YES <input type="checkbox"/> NO--Return to Department Council Action Required:– forward to Town Manager Agenda Date: ____/____/20__ Approved by Council: <input type="checkbox"/> YES <input type="checkbox"/> NO
TOWN MANAGER
This document has been reviewed and approval is recommended by the Town Manager: <input type="checkbox"/> YES <input type="checkbox"/> NO Town Manager: _____ Date: ____/____/20__
After approval and signatures, contract will be sent to the Purchasing and Contracts Manager who will return it to the Department Contact Person for Department to administer. Scan signed contract to Department contracts folder (include Routing Sheet and copy of Certificate of Insurance)

MEMORANDUM OF UNDERSTANDING

Between
APEX FIRE DEPARTMENT
And
WAKE TECHNICAL COMMUNITY COLLEGE

This Memorandum of Understanding (“MOU”) is made this 1st day of November 2022 (the “Effective Date”) between Wake Technical Community College, a public institution of higher education which is located at 9101 Fayetteville Road, Raleigh, NC 27603 (“College”) and Town of Apex, located at P.O. Box 250 Apex, NC 27502 (“Partner”). Except as otherwise set forth below, this MOU is a non-binding statement of intent and understanding. In the spirit of friendship and with mutual interest in cooperation, College and Partner enter into this MOU to promote joint educational and cultural collaboration as more particularly described below.

ARTICLE 1 SCOPE OF COLLABORATION

1.1 Areas of collaboration (collectively, the “Program”) may be proposed by either institution and may include, but are not limited to:

This agreement between the Town of Apex and Wake Technical Community College to provide first responder training, which includes: Technical Rescuer class for the Apex Fire Department’s fire academy, which commences on 03/13/2023 and concludes on 04/06/2023. The assistance of Wake Technical Community College will enable Apex Fire Department to better utilize its resources for public safety services and produce first responders in their organization immediately.

The total number of hours for the Technical Rescuer class in this academy is 144 hours including didactic classroom instruction, practical skills application and testing, and written testing which be offered over four weeks.

Wake Technical Community College will provide \$5,328 to Town of Apex to reimburse for instructional costs of the program. Town of Apex will invoice Wake Technical Community College for the total amount prior to the conclusion of the course. Funds will be designated from the Workforce Continuing Education budget of Wake Technical Community College. Town of Apex will provide at no cost to Wake Technical Community College a facility to conduct the training that meets the requirements as published by the North Carolina Office of State Fire Marshal and/or North Carolina Community College System.

The Program Coordinator to oversee the administration of the course and/or any instructional support designated by Wake Technical Community College will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including

but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex.

The Academy Coordinator and instructors designated by Town of Apex utilized for the course will remain employees of Town of Apex at all times and are not employees of Wake Technical Community College and therefore are not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Wake Technical Community College. The Academy Coordinator and instructors will complete any necessary paperwork required by Wake Technical Community College for the purpose to tracking student attendance and participation. The instructors will meet the requirements to carry out the instructional responsibilities as required by the North Carolina Office of State Fire Marshal and the North Carolina Fire and Rescue Commission Certification Board.

Wake Technical Community College Fire Services staff will remain employees of Wake Technical Community College at all times and are not employees of Town of Apex and are therefore not provided with compensation or benefits, including but not limited to, sick leave, vacation leave, or Workers Compensation through Town of Apex. Wake Technical Community College Fire Services staff will administer the written certification test and/or re-test for all students upon satisfactorily completing skills and objectives required for each course.

Wake Technical Community College will provide equipment and supplies to support the instructional labs including manikins, simulation technology, computer labs for testing, and mobile simulation units, or other instructional support if applicable and available. Town of Apex agrees to maintain security of the equipment and supplies at their facility and utilize them as indicated and required for the duration of first responder training.

Persons enrolled in this class are students of Wake Technical Community College and are subject to the Student Code of Conduct for Wake Technical Community College. Students are also subject to any academy rules and regulations set forth by Town of Apex.

Wake Technical Community College and Town of Apex will follow COVID protocols, including contact-tracing and reporting, as developed mutually between the partners that meet the current industrial standard practice.

Special accommodations for students in this class will be based on the policies and practices of Wake Technical Community College as published by Student Services.

1.2 Any specific activity developed under this MOU shall be detailed in a subsequent agreement, signed by each institution's authorized signatory, which will describe the scope of the proposed activity, intended outcomes, budget, and responsible departments or individuals. Any such agreement shall be referred to herein as a "Definitive Agreement."

1.3 Any Definitive Agreement shall be subject to the availability of funds and the approval of each institution's authorized representatives.

ARTICLE 2 TERM AND EVALUATION

2.1 The initial term of this MOU shall commence on the Effective Date and expire on 05/31/2023 (the "Initial Term"). Either party may terminate this MOU, in writing, by giving the other party ninety (90) days prior notice. Any activities in progress at the time of termination shall be permitted to conclude as planned unless otherwise agreed in writing.

2.2 A joint evaluation of the MOU will be initiated by the designated representatives 30 days prior to the end of the Initial Term. Following the evaluation, the MOU may be renewed by mutual agreement of the parties for a renewal term of one (1) year.

ARTICLE 3 NON-DISCRIMINATION

The parties agree not to discriminate on the basis of religion, race, creed, national or ethnic origin, sex, age, handicap, political affiliation, marital status, natural hair style, pregnancy, genetic information, familial status, gender identity, sexual orientation, disability or status as a veteran.

ARTICLE 4 COMPLIANCE WITH LAW

The parties specifically intend to comply with all applicable laws, rules and regulations as they may be amended from time to time. If any part of this MOU is determined to violate federal, state, or local laws, rules, or regulations, the parties agree to negotiate in good faith revisions to any such provisions. If the parties fail to agree within a reasonable time to revisions required to bring the entire MOU into compliance, either party may terminate this MOU upon thirty (30) days prior written notice to the other party.

ARTICLE 5 AVAILABILITY OF FUNDS

Any payments due from College under this MOU may be subject to the availability of funds provided to the College for this purpose.

ARTICLE 6 FERPA

The parties acknowledge that information (if any) received from College regarding students may be protected by the Family Educational Rights and Privacy Act ("FERPA"), and Partner agrees to use such information only for the purpose for which it was disclosed and not to make it available to any third party without first obtaining the applicable student's written consent.

ARTICLE 7 USE OF NAME

Neither party shall use the name, logo, likeness, trademarks, image or other intellectual

property of the other party for any advertising, marketing, endorsement or any other purposes without the specific prior written consent of an authorized representative of the other party as to each such use. Partner may refer to the affiliation with College in its brochures and other public information materials having to do with the Program, provided that College reserves the right to review and request modification of Partner's reference to College in such materials.

ARTICLE 8 INDEPENDENT CONTRACTORS

Each party is separate and independent and this MOU shall not be deemed to create a relationship of agency, employment, or partnership between or among them. Each party understands and agrees that this MOU establishes an independent contractor relationship and that the agents or employees of each respective party are not employees or agents of any other party.

ARTICLE 9 SEVERABILITY

The provisions of this MOU are severable, and if any provision of this MOU is found to be invalid, void or unenforceable, the remaining provisions will remain in full force and effect.

ARTICLE 10 WAIVER

The waiver of any breach of any term of this MOU does not waive any subsequent breach of that or another term of this MOU.

ARTICLE 11 ASSIGNMENT

No party may assign this MOU or any rights or obligations under this MOU to any person or entity without the prior written consent of the other parties. Any assignment in violation of this provision is null and void.

ARTICLE 12 GOVERNING LAW; VENUE

This MOU shall be construed and enforced solely pursuant to the laws of the State of North Carolina, without giving effect to the principles of conflicts of laws thereof. The parties agree that disputes regarding this MOU shall be subject to the sole and exclusive jurisdiction of the state and federal courts located in Raleigh, North Carolina.

ARTICLE 13 NO AMENDMENTS

This MOU may not be amended, except by a written document executed by both parties.

ARTICLE 14 BINDING PROVISIONS

This MOU reflects the intention of the parties, but for the avoidance of doubt this MOU shall not give rise to any legally binding or enforceable obligation on any party, except with

regard to Articles 2 through 14 hereof. No contract or agreement providing for any Program involving Partner and College shall be deemed to exist between the parties unless and until a Definitive Agreement regarding such Program shall have been executed and delivered.

Partner and College, by their duly authorized representatives, hereby enter into this MOU as of the Effective Date.

Partner:

Town of Apex

By: _____
Name: _____
Title: _____

College:

Wake Technical Community College

By: _____
Name: _____
Title: _____

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING

Meeting Date: October 25, 2022

Item Details

Presenter(s): Shannon Cox, Long Range Planning Manager

Department(s): Planning and Community Development

Requested Motion

Public hearing and possible motion regarding amendments to the Transportation Plan for Chapel Ridge Road.

Approval Recommended?

Planning staff recommend adoption of the proposed amendments.

The Planning Board considered the proposed amendments at their July 11, 2022 meeting and recommended approval in a vote of 4 in favor and 2 against.

Item Details

The amendments to the Transportation Plan include: (1) Adding a future Minor Collector street extending from existing Chapel Ridge Road to Beaver Creek Commons Drive to the Thoroughfare and Collector Street Plan map and removing the Minor Collector street designation from Ackerman Hill Drive, (2) Adding a future local route designation along the extended Chapel Ridge Road to the Transit Plan map, and (3) adding a future side path designation to a portion of Chapel Ridge Road on the Bicycle and Pedestrian System Plan map.

Attachments

- Staff report





The Thoroughfare and Collector Street Plan map, Transit Plan map, and Bicycle and Pedestrian System Plan map collectively represent a network of current and future facilities that provide guidance on what is likely to be suitable for long term growth, connectivity, recreation, and multimodal travel. The Transportation Plan does not require a schedule for implementation nor does it set aside funding for improvements. The purpose of the public hearing is to consider proposed amendments to the Transportation Plan in the vicinity of Chapel Ridge Road in order to make a decision. The proposed amendments are associated with rezoning case 22CZ07 Chapel Ridge Apartments Planned Unit Development (PUD).

The proposed amendment to the Thoroughfare and Collector Street Plan map would show a future Minor Collector street extending from Chapel Ridge Road to Beaver Creek Commons Drive (see Figure 1). The amendment would also remove the Minor Collector street designation shown along Ackerman Hill Drive.

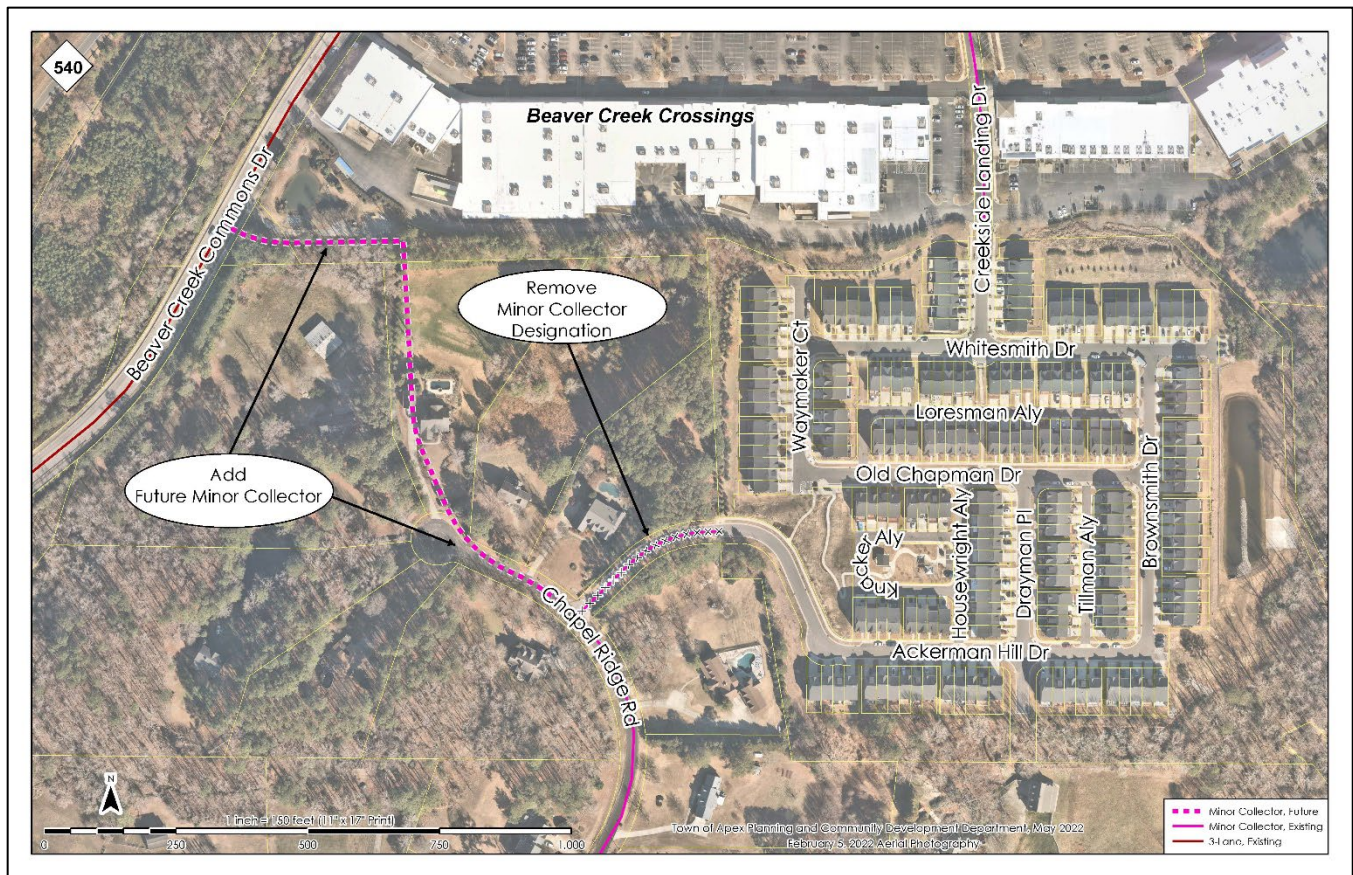


Figure 1. Proposed amendment to the Thoroughfare and Collector Street Plan map

The proposed amendment to the Bicycle and Pedestrian System Plan map would add future side path along the east side of Chapel Ridge Road from the northern boundary of the approved 21CZ32 Chapel Ridge Towns PUD (across from Clark Farm Road) to Beaver Creek Commons Drive (see Figure 2).

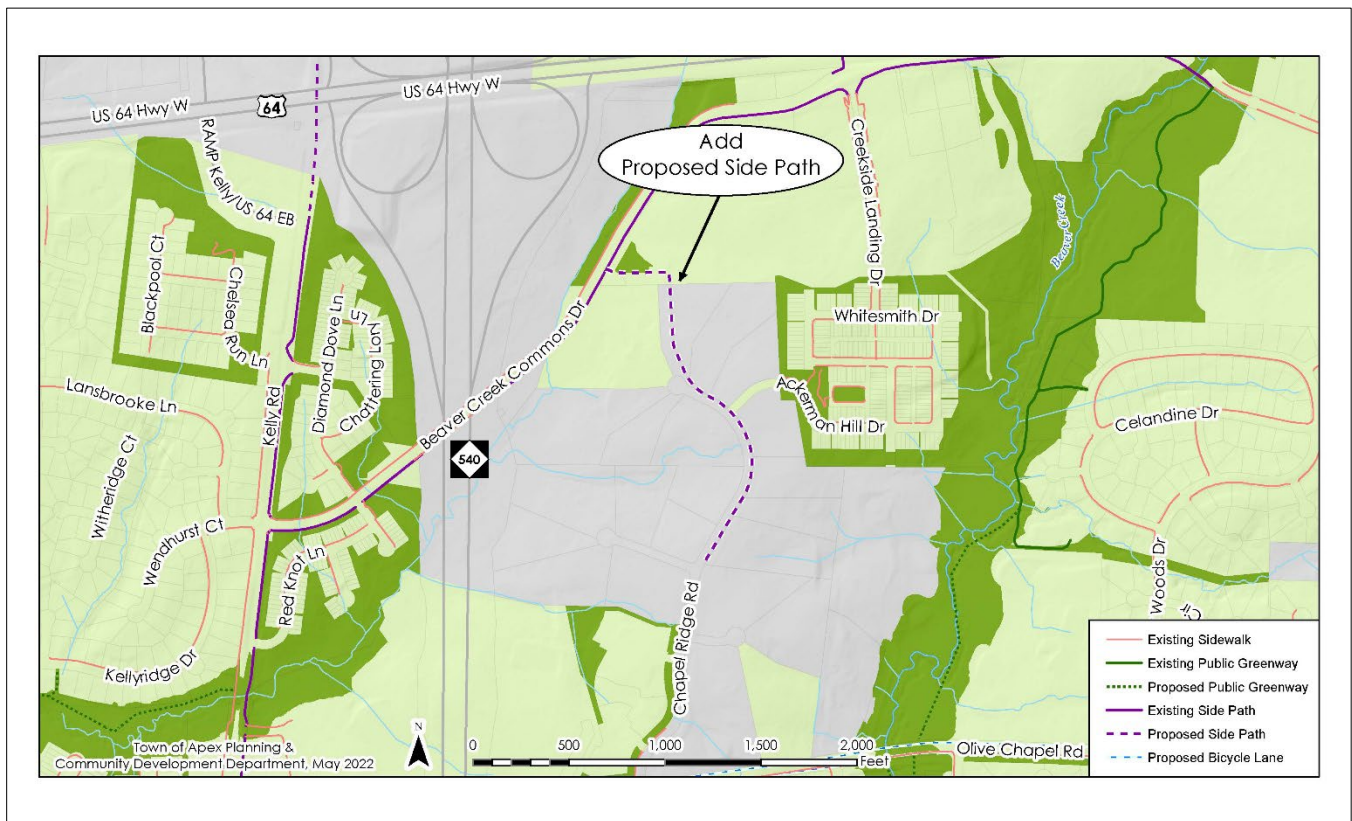


Figure 2. Proposed amendment to the Bicycle and Pedestrian System Plan map

The proposed amendment to the Transit System Plan map would show a future local route extending along Chapel Ridge Road to Beaver Creek Commons Drive (see Figure 3). In the future, it is anticipated that GoApex Route 1 would use this route instead of turning around on private property within Olive Chapel Professional Park.

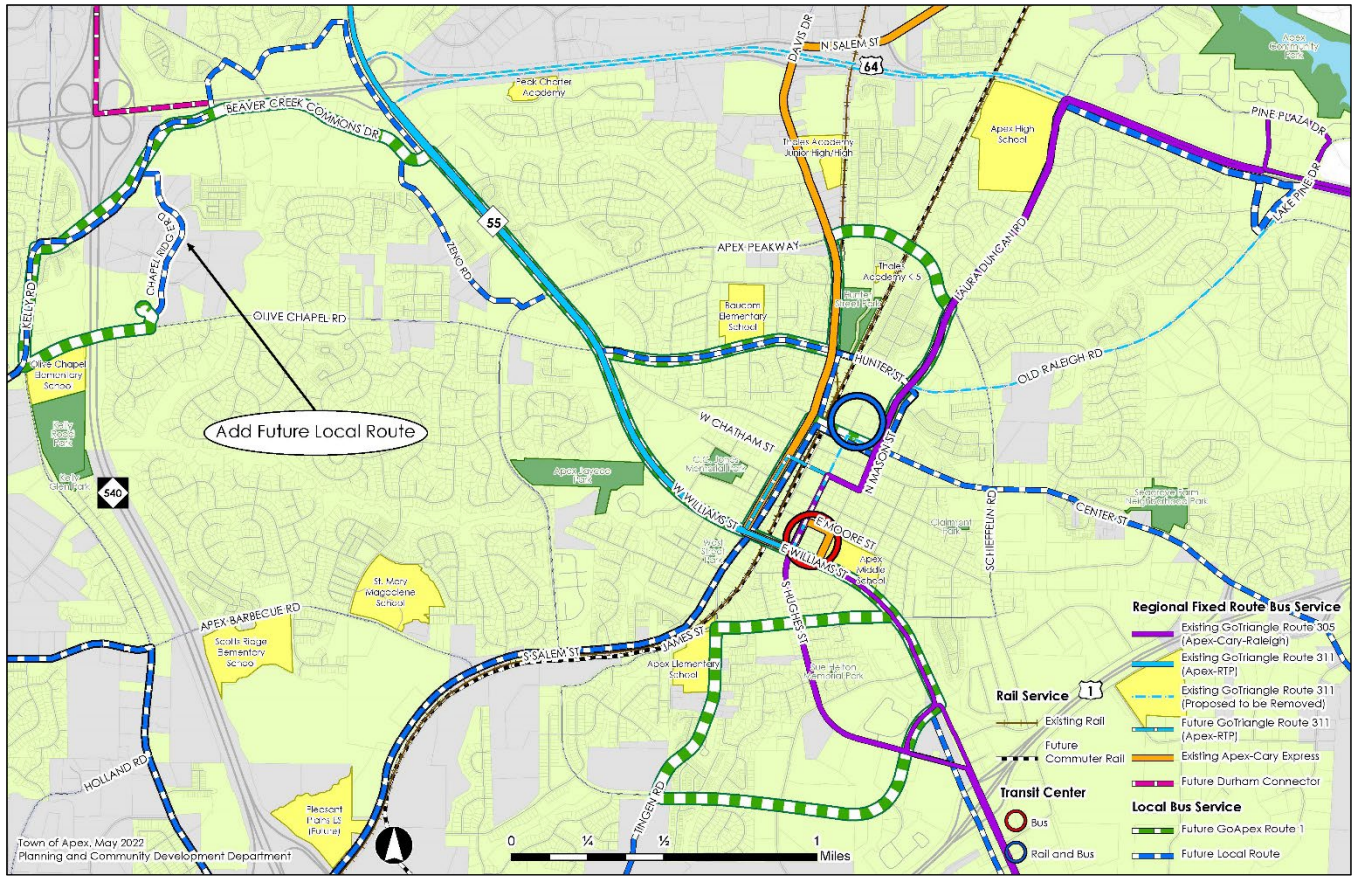


Figure 3. Proposed amendment to the Transit System Plan map

The proposed amendments are requested by Planning staff and are consistent with the proposed 22CZ07 Chapel Ridge Apartments PUD. These changes would improve connectivity of the roadway, bicycle and pedestrian, and transit network in this growing area. Connectivity shortens travel time and reduces impacts to thoroughfares and intersections. In addition, it would provide a route for GoApex Route 1 using public facilities and permanent public easements. The agreement to use Olive Chapel Professional Park will expire in five years.

Programmed Projects:

No municipal or state projects are programmed to complete the facilities addressed by these amendments. If approved, 22CZ07 Chapel Ridge Apartments PUD would construct a roadway connection with side path and a bus stop from Chapel Ridge Road to Beaver Creek Commons Drive. A portion of the connection would remain private with a public access and maintenance easement.

Staff Recommendation:

Planning staff recommend supporting the proposed amendments. Staff from Public Works and Transportation; Fire; Police; and Parks, Recreation, and Cultural Resources are also supportive of the proposed amendment.

Transit Advisory Committee Recommendation:

The Town of Apex Transit Advisory Committee considered the proposed amendment to the Transit Plan Map at their July 13, 2022 meeting and unanimously recommended approval.

Planning Board Recommendation:

The Planning Board considered the amendments at their July 11, 2022 meeting and recommended approval in a vote of four in favor and two opposed.

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING

Meeting Date: October 25, 2022

Item Details

Presenter(s): Shelly Mayo, Planner II

Department(s): Planning and Community Development

Requested Motion

Public Hearing and possible motion to approve Rezoning Application #22CZ07 Chapel Ridge North PUD. The applicant, Matthew Carpenter for High Street District Development, Inc., seeks to rezone approximately 22.71 acres from Rural Residential (RR) to Planned Unit Development-Conditional Zoning (PUD-CZ). The proposed rezoning is located at 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd and 1512 Clark Farm Rd.

Approval Recommended?

The Planning and Community Development Department recommends approval.

The Planning Board held a Public Hearing on October 10, 2022 and the motion for a recommendation failed due to a tie vote. Board member Ryan Akers was recused due to a conflict.

Item Details

The properties to be rezoned are identified as PINs 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180

Attachments

- Staff Report
- Vicinity Map
- Application



STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



All property owners, tenants, and neighborhood associations within 300 feet of this rezoning have been notified per UDO Sec. 2.2.11 *Public Notification*.

Note: Staff has indicated in bold any information and conditions that have been changed or added since the July 26, 2022 Town Council meeting.

BACKGROUND INFORMATION:

Location:	1200, 1204, 1205, 1209, 1213 , 1220, 1225 Chapel Ridge Rd and 1512 Clark Farm Rd
Applicant:	High Street District Development, Inc.
Authorized Agent:	Joshua Dix
Owners:	Su Yueh Kao and Chi-Chang Ho; Michael P. and Catherine A. Mohan; Douglas and Carrie Cox; Ronald L. and Katherine L. Stringari; Larry L. and Kathi E. Carlson; Tigh M. and Dianne Cundieff; David D. and Ethel V. Sherry; Michael J. Bishop

PROJECT DESCRIPTION:

Acreage:	+/- 22.71 acres
PINs:	0732340602, 0732347912, 0732343920, 0732354594, 0732352538, 0732249869, 0732256180, & 0732356305
Current Zoning:	Rural Residential (RR)
Proposed Zoning:	Planned Unit Development–Conditional Zoning (PUD-CZ)
Current 2045 Land Use Map:	Medium Density Residential
If rezoned as proposed, the 2045 Land Use Map Designation will change to:	High Density Residential
Town Limits:	Inside the ETJ

ADJACENT ZONING & LAND USES:

	Zoning	Land Use
North:	Planned Unit Development-Conditional Zoning (PUD-CZ #06CU17)	Shopping Center (Beaver Creek Crossings)
South:	Rural Residential (RR)	Single-family Residential (Chapel Ridge Estates Subdivision)
East:	Rural Residential (RR); Planned Unit Development-Conditional Zoning (PUD-CZ #15CZ04)	Single-family Residential (Chapel Ridge Estates Subdivision); Townhomes (Hempstead Subdivision)
West:	Rural Residential (RR); Planned Commercial-Conditional Zoning (PC-CZ #94CU20)	Jordan Lutheran Church; Vacant

BACKGROUND:

This project was originally submitted in March 2022 with seven (7) parcels and 20.67 acres. On July 11, 2022, Planning Board held a public hearing and voted to recommend approval of the project by a vote of 4 to 2. On July 26, 2022, Town Council held a public hearing, and continued the vote until September 13, 2022. They expressed the following concerns:

- The exclusion of the Bishop property created a hole in the project;
- There wasn't enough communication with the adjacent residents; and

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



- The Sherry property should remain as a single-family home in order to minimize disturbance to the adjacent neighbors.

After the July 26, 2022 meeting, the developers were able to add the Bishop property to the petition and designate the Sherry property as remaining a single-family use. The project acreage increased to 22.71 acres, but the number of proposed residential units has only increased by one (1) to allow the home on the Sherry property to remain. These changes required the application to go back to Planning Board and Town Council for new public hearings.

EXISTING CONDITIONS:

The site consists of eight (8) parcels totaling +/- 22.71 acres. The Chapel Ridge North PUD is in the northcentral region of Apex, north of Olive Chapel Road, south of Beaver Creek Commons Drive, and east of NC 540 Hwy. Beaver Creek Crossings shopping center is north of the site and the Chapel Ridge Estates subdivision is south of the site. The future home of Jordan Lutheran Church abuts the site to the west. The subject properties contain single-family homes with large areas of woods, yards, streams, and a pond.

NEIGHBORHOOD MEETING:

The applicant conducted a neighborhood meeting on February 16, 2022. The meeting report is attached to the staff report. Because the applicant wanted to change the Sherry property to single-family and was able to bring the Bishop parcel into the assemblage, a new neighborhood meeting was required. That neighborhood meeting was held on August 22, 2022 and the report is attached to the staff report.

WCPSS COORDINATION:

A Letter of Impact from Wake County Public School System (WCPSS) was received for this rezoning and is included in the staff report packet. WCPSS indicates that elementary and high schools within the current assignment area for this rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated. School expansion or construction within the next five years may address concerns at both the elementary and high school levels. Since the number of new units did not change, a new letter was not requested from WCPSS.

2045 LAND USE MAP:

The 2045 Land Use Map designates the site as Medium Density Residential. The Medium Density Residential designation permits up to 7 dwelling units per acre and does not permit apartments. Chapel Ridge North PUD proposes 371 dwelling units on 22.71 acres, or approximately 16.34 dwelling units per acre. If the properties are rezoned as proposed, the 2045 LUM will automatically be amended to High Density Residential per NCGS 160D-605(a).

While the site is located with the Suburban Context Area, it is immediately adjacent to a Transit-Oriented Development (TOD) Context Area as adopted with Advance Apex. TOD development typically dictates transit-supportive densities, which is a minimum of seven (7) units per acre for a circulator bus service and a minimum 15 units per acre for fixed route bus service.

PLANNED UNIT DEVELOPMENT PLAN:

The applicant is proposing a Planned Unit Development with uses and development standards as follows:

Proposed Uses:

The Rezoned Lands may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

- **Single-family (1 dwelling unit, only as shown on the layout sheet.)**
- Multi-family or apartment
- Condominium
- Utility, minor
- Greenway
- Park, active
- Park, passive
- Recreation facility, private

Conditions:

1. **No dumpster shall be located within 50 feet of the northern property line of PINs 0732343658 and 0732348711.**
2. **A 6-ft tall fence shall be provided along the southern facing property line adjacent to PINs 0732246637, 0732343658, and 0732348711.**
3. The project shall use full cutoff LED fixtures that have a maximum color temperature of 3500K for all exterior lighting, including, but not limited to, parking lot and building mounted fixtures.
4. The project shall be designed to meet the requirements for one of the following green building certifications: LEED, Energy Star, BREEAM, Green Globes, NGBS Green, or GreenGuard. Prior to the issuance of building permits, the developer shall hire a third-party consultant to evaluate the project and ensure the design conforms with green building certification requirements. Prior to the issuance of a certificate of occupancy for a building, the developer shall demonstrate to the Town that that building has been certified as a green building by providing a copy of the green building certification.
5. The project shall install at least three (3) pet waste stations across the development locations that are publicly accessible, such as adjacent to amenity centers, sidewalks, greenways, or side paths.
6. **Affordable Housing:** A minimum of three and a half percent (3.5%) of the total residential units (as shown on the first site plan submittal) shall be designated as restricted low-income affordable housing rental units (the "Affordable Units") for a minimum affordability period of ten (10) years starting from the date of issuance of the first residential Certificate of Occupancy (the "Affordable Restriction Period"). The Affordable Units shall be occupied by low-income households earning no more than sixty percent (60%) of the Raleigh, NC Metropolitan Statistical Area (MSA) Area Median Income (AMI), adjusted for family size, as most recently published by the U.S. Department of Housing and Urban Development (HUD). The Affordable Units shall be one-bedroom units and rented to low-income households during the Affordable Restriction Period at maximum rent limits per bedroom size, no greater than sixty percent (60%) of the Raleigh, NC MSA AMI as most recently published by the HUD and stipulated by the most recently published North Carolina Housing Finance Agency (NCHFA) Low-Income Housing Tax Credit (LIHTC) Multifamily Tax Subsidy Program (MTSP) income and rent limits for the Wake County Metropolitan Area. If the Affordable Units calculation results in a fraction between 0.00 and 0.49, the number of Affordable Units shall be rounded down to the nearest whole number. If the Affordable Units calculation results in a fraction between 0.50 and 0.99, the number of Affordable Units shall be rounded up to the nearest whole number. Prior to issuance of the first residential Certificate of Occupancy, a restrictive covenant between the Town and property owner shall be executed and recorded in the Wake County Registry to memorialize the affordable housing terms and conditions. During the Affordable Restriction Period, the property owner shall be responsible for performing all property management and administration duties to ensure compliance with this affordable housing condition and shall submit annual compliance reports to the Town verifying compliance with this affordable housing condition. Following expiration of the Affordable Restriction Period, this affordable housing condition shall expire, and the property owner shall

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



be relieved of all obligations set forth in this affordable housing condition, and the Affordable Units may freely be marketed and leased at market-rate rents.

Architectural Conditions:

The proposed development offers the following architectural controls to ensure consistency of character throughout the development. Conceptual elevation examples are included in Section 19 of this PUD. Elevations included are limited examples of multiple style options being considered. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Major Site Plan submittal. In an effort to reflect the unique nature of the existing neighborhood, the architectural style of the buildings shall be classic southern traditional architecture.

Additional features used as focal points or key terminus points shall be located within or around the development (i.e. a patio seating area, water feature, pedestrian plaza with benches, planters, public art, decorative bicycle parking, or focal feature) in order to meet the Community Amenities requirement of the UDO. Other features not mentioned may be considered with administrative staff approval.

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. Rear and side elevations of units that have right-of-way frontage shall have trim around the windows.
3. A minimum of four of the following decorative features shall be used on each building:
 - Decorative shake
 - Board and batten
 - Decorative porch railing/posts
 - Shutters
 - Decorative/functional air vents on roof or foundation
 - Recessed windows
 - Decorative windows
 - Decorative brick/stone
 - Decorative gables
 - Decorative cornices
 - Tin/metal roof
4. Garage doors must have windows, decorative details, or carriage-style adornments on them.
5. Siding materials shall be varied in type and/or color on 30% of each façade on each building.
6. Windows must vary in size and/or type.
7. Windows that are not recessed must be trimmed.
8. Solar conduit shall be provided on all buildings to accommodate the future installation of solar panels.

Materials:

Proposed Residential Materials and Styles Proposed materials and styles will be of a similar palette to provide consistency of character along with visual interest. Exterior materials that may be incorporated into any of the building products include:

- Cementitious lap, board and batten, and/or shake and shingle siding
- Stone or synthetic stone
- Brick

Additional building materials may be included with administrative staff approval. Substitute materials shall be allowed by staff as long as they are determined by the Director of Planning and Development to be substantially similar.

Proposed Design Controls:

Maximum Residential Units:	370 apartments
----------------------------	----------------

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



	1 single-family
Maximum Building Height:	55 ft & 5 stories*
Maximum Built-Upon Area:	70%

**Building facades facing PINs 073243658, 0732340602, and 0732348711 shall be limited to a maximum of four stories. Any buildings located in Area C on the Concept Plan shall be limited to a maximum of 3 stories.*

Building Setbacks:	Multi-Family/ Apartments/Condominiums
Front:	10 Ft
Side:	20 Ft
Rear:	20 Ft
Corner:	20 Ft
Alley:	5 Ft
From Buffers/RCA:	
For buildings:	10 Ft

For Single-family design controls, please refer to the RR Dimensional Standards set forth in UDO Section 5.1.

PARKING:

Parking calculations and dimensions for this PUD will comply with UDO Section 8.3 (Off-Street Parking and Loading) of the Town of Apex’s Unified Development Ordinance, unless otherwise stated in this document.

Apartments shall provide the following minimum parking spaces per dwelling unit based on the number of bedrooms:

# of Bedrooms:	Proposed Minimum Parking Ratio:
1 & 2 Bedrooms	1.3 spaces per unit
3 bedrooms	1.8 spaces per unit

The following table is an estimate of the proposed parking vs the UDO requirement using the number of units listed in the Wake Co. Residential Development Notification sheet in the application.

Parking Space Comparison				
Estimated # of Units	Per UDO Ratio Min Required	Per UDO Total Spaces	Per PUD Ratio Min Required	Per PUD Total Spaces
1 & 2 bedrooms: 370	1.5 per unit	555	1.3 per unit	481
Total: 370		555		481
PUD difference from UDO		0		-74

Electric Vehicle Charging Spaces:

A minimum of 5% of the total parking spaces required by the UDO for the project shall be Electric Vehicle Charging spaces consistent with the standards of UDO Section 8.3.11. At least 6 bicycle parking spaces shall also be provided.

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



Proposed RCA, Buffers and Landscaping:

The PUD will provide a minimum of 20% of the gross project area as a Resource Conservation Area (RCA). Designated RCA areas will be consistent with the items listed in Section 8.1.2(B) of the Town's UDO. Preserved streams, wetlands, and associated riparian buffers provide the primary RCAs throughout the site. Additional RCA areas may include perimeter and streetfront buffers, stormwater management areas (as permitted by the UDO), and greenways.

Buffers:	UDO Requirement:	Proposed:
Chapel Ridge Road (Minor Collector):	10-foot Type A	10-foot Type A*
*Only required along the public right-of-way fronting the Property. A buffer is not required along the public access easement. Developer shall only be responsible for providing the buffer on property adjacent to the public right-of-way which is within this rezoning.		
North boundary:	15-foot Type A	20-foot Type A
South boundary:	20-foot Type B	25-foot Type A
East boundary		
Adjacent to Single-family lots:	20-foot Type B	25-foot Type A
Adjacent to Townhomes:	15-foot Type A	15-foot Type A
West boundary		
Adjacent to Jordan Lutheran Church:	15-foot Type A	20-foot Type A
Adjacent to vacant PC-CZ parcel:	20-foot Type B	20-foot Type B

- **No buffer shall be required between single-family parcels.**
- The project shall select and install tree, shrub and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall.
- The project will increase biodiversity in perimeter buffers and open space areas by providing a variety of species for the canopy, understory, and shrub levels. Native and adaptive plant species shall be provided within these areas to minimize death from disease and to provide increased habitat and food sources for insects and animals. A minimum of 70% of the species provided shall be native or a nativar of North Carolina. No invasive species shall be permitted. No single species of tree or shrub shall constitute more than 20% of the plant material of its type installed on a single development site.
- The project shall install a minimum of one sign for each Resource Conservation area. The signage shall indicate that the area is RCA and is to be preserved in perpetuity and not disturbed.
- Six-foot wide private walking trails may be located throughout the development, including RCA areas. Locations of trails are to be determined at site plan.
- Tree canopy areas in Chapel Ridge North are primarily concentrated around the wetland areas, stream features, and perimeter buffers.
- Existing trees greater than 18" in diameter that are removed by site development shall be replaced by planting a 1.5" caliper native tree from the Town of Apex Design and Development Manual either onsite or at an alternative location approved by Town Planning Staff, above and beyond standard UDO requirements.

Public Facilities:

The Chapel Ridge North PUD will be served by Town of Apex water, sanitary sewer, and electrical systems. The utility design will be finalized at Master Subdivision Plan review. A conceptual Utility Plan is included in the PUD Plan for reference. The ultimate design for the utilities shall meet the current Town of Apex Master Water and Sewer Plans for approval.

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



The developer shall provide at least one sewer stub and one water stub to the eastern property line of PIN 0732258464 in locations to be determined at Site Plan and agreed to by the developer and owner of PIN 0732258464.

This PUD shall go above the stormwater management requirements for quality and quantity treatment outlined in Section 6.1.7 of the UDO such that:

- Post development peak runoff shall not exceed pre-development peak runoff conditions for the 1 year, 10-year, 25-year, and 24-hour storm events.
- Treatment for the first 1 inch of runoff will provide 85% removal of total suspended solids.

Acceptable stormwater structures shall include detention ponds, constructed wetlands, bio-retention areas, or other approved devices consistent with the NC DEQ Stormwater Design Manual and the Town of Apex UDO.

Pursuant to all applicable Town and State regulations, the developer shall work with the owner of PIN 0732258464 to drain the existing pond on the southern property line of PIN 0732258464 concurrently with the development and construction of the project.

Apex Transportation Plan/Access and Circulation:

Construction Traffic:

Following construction of the Chapel Ridge Road extension, all heavy-duty construction traffic shall enter and exit the site via Beaver Creek Commons Drive. "No Construction Traffic" signs shall be posted along Creekside Landing Drive south of its intersection with Beaver Creek Commons Drive, Ackerman Hill Drive, Chapel Ridge Road at the southern project boundary, and at the intersection of Chapel Ridge Road and Olive Chapel.

Pedestrian Facilities:

Per the proposed Apex Bicycle and Pedestrian System Plan Map amendment, future sidepath is shown being extended along the northern and eastern side of Chapel Ridge Road. The following facilities will be provided to contribute to a walkable community within and surrounding the Chapel Ridge North development:

- Five-foot wide public sidewalk along the western side of Chapel Ridge Road public right-of-way fronting the development.
- Ten-foot wide side path along the eastern and northern side of Chapel Ridge Rd adjacent to land that's a part of this rezoning application.
- Sidewalks along entry drives and parking areas will comply with the UDO.
- **Five-foot wide sidewalk along the both sides of Ackerman Drive fronting the project.**
- A crosswalk will be provided from the future sidewalk on the south side of Ackerman Drive to the existing sidewalk on the north side of Ackerman Drive.
- Six-foot wide private walking trails throughout the development, locations to be determined at site plan.

Transit:

The Apex Transit Plan Map shows GoApex Route 1 turning around in Olive Chapel Professional Park. The Town was only able to negotiate a 5-year lease with the owners of the Professional Park. By connecting Chapel Ridge Road to Beaver Creek Commons Drive, the development will provide a natural turnaround for the Town's first transit line and provide natural access to the residents in the proposed apartments.

The developer shall design, construct and install a bus stop along the west side of Chapel Ridge Road in a location mutually agreed to by the developer and the Traffic Engineering Manager. The bus stop shall include an 8 x 30-foot pad, bench, and bike rack. Construction costs for the bus stop shall not exceed a maximum of \$25,000 (the

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



“Cost Limit”). In the event construction costs exceed the Cost Limit, the developer may elect to either (a) pay a fee in lieu of \$25,000 for the bus stop, or (b) design and construct the bus stop despite construction costs exceeding the Cost Limit. The bus stop shall be shown on the overall site plan and designed, approved, and constructed concurrently with the project.

Road Improvements:

Per the proposed Apex Thoroughfare and Collector Street Plan map amendment, Chapel Ridge Road is designated as an existing 2-lane Minor Collector and is shown connecting to Beaver Creek Commons Drive just north of the Jordan Lutheran Church property. The developer will dedicate right-of-way along their property frontage on Chapel Ridge Road to meet the requirements shown in Advance Apex.

Roadway improvements are subject to modification and final approval by the Town of Apex and NCDOT as part of the Master Subdivision Plan review and approval process. A Traffic Impact Analysis has been performed as part of this PUD rezoning consistent with the Town’s standards for the same. Based upon the Traffic Impact Analysis, the following traffic improvements are proposed for this development:

1. All proposed driveway access and improvements on state-maintained roadways are subject to both Apex and NCDOT review and approval. This includes proposed access to Chapel Ridge Road and any modifications to Chapel Ridge Road.
2. Chapel Ridge Road shall be extended north to connect to Beaver Creek Commons Drive (the “Road Extension”) in the approximate location shown on the Concept Plan. The Road Extension shall be constructed to Town of Apex standards and specifications. At the site plan stage, the portion of the Road Extension shown in pink on the Concept Plan and labeled “Public ROW” shall be dedicated to the Town as public right-of-way (the “Public ROW Section”). The portion of the Public ROW Section south of the shared property line with PIN 0732366134 shall have a minimum ROW width of 60 feet and be constructed to the Minor Collector Street standard. The portion of the Public ROW Section across PIN 0732258769 shall have a minimum ROW width of 50 feet. The portion of the Road Extension shown in orange on the Concept Plan and labeled “Private drive with minimum 45’ public access easement” (the “Easement Section”) shall be subject to a recorded public access and maintenance agreement with a minimum easement width of 45 feet. The public access and maintenance agreement shall be approved by the Planning Director as to form.
3. The center turn lane on Beaver Creek Commons Drive shall be restriped to provide 75 feet of southbound left turn storage and 75 feet of taper at the site driveway.

ENVIROMENTAL ADVISORY BOARD:

The Apex Environmental Advisory Board (EAB) held a pre-application meeting for this rezoning on February 17, 2022. The zoning conditions suggested by the EAB are listed below along with the applicant’s response to each condition. The addition of land and change of use did not require the project to return the EAB.

EAB Suggested Conditions	Applicant’s Response
5% of all required motor vehicle spaces shall be electric vehicle charging spaces	Added
Locate the EV charging stations such that the charging cables do not cause a trip hazard across the sidewalks.	Added
A minimum of 3 pet waste stations shall be installed (at least one per building).	Added
Exterior lighting shall be shielded in a way that focuses lighting to the ground.	Added
Increase biodiversity.	Added
Plant pollinator-friendly flora.	Added

STAFF REPORT

Rezoning #22CZ07 Chapel Ridge North PUD

October 25, 2022 Town Council Meeting



EAB Suggested Conditions	Applicant's Response
Plant native flora (Refer to the Apex Design & Development Manual for approved native species).	Added
Implement green infrastructure.	Not added
Provide diverse and abundant pollinator and bird food sources (e.g. nectar, pollen, and berries from blooming plants) that bloom in succession from spring to fall.	Added
Add information signage or other marking at the boundary of lots when they are adjacent to a wooded or natural condition resource conservation area (RCA) indicating that the area beyond the sign is RCA and is not to be disturbed.	Added
If possible, increase the type A buffer width from 15 feet to 20 feet in order to increase the distance between site line and the adjacent church.	Added
Add 75-kW of solar PV in total over all three buildings on site.	Not added
Apply for green building certifications, such as LEED, Energy Star, BREEAM, Green Globes, NGBS Green, or GreenGuard.	Added

PARKS, RECREATION, AND CULTURAL RESOURCES ADVISORY COMMISSION:

The Parks, Recreation, and Cultural Resources Advisory Commission reviewed the Chapel Ridge North Planned Unit Development at their April 17, 2022 and September 28, 2022 meetings. The Advisory Commission unanimously recommended fee-in-lieu of dedication. The fee per unit will be based \$2,226.05.

PLANNING BOARD RECOMMENDATION:

The Planning Board held a Public Hearing on October 10, 2022. A motion was made to recommend approval of the rezoning with the conditions offered by the applicant, but the motion failed due to a tie vote. Board member Ryan Akers was recused due to a conflict. The reasons provided for the dissenting votes were a desire to avoid changing the 2045 LUM; inadequate buffers adjacent to remaining single-family residential; inadequate school capacity; and insufficient transition from high density apartments to rural density single-family.

PLANNING STAFF RECOMMENDATION:

Planning staff recommends approval of Rezoning #22CZ07 Chapel Ridge North PUD as proposed by the applicant.

ANALYSIS STATEMENT OF THE REASONABLENESS OF THE PROPOSED REZONING:

This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness, and effect on public interest:

The 2045 Land Use Map designates the site as Medium Density Residential. The Medium Density Residential designation permits up to 7 dwelling units per acre and does not permit apartments. Chapel Ridge North PUD proposes 371 dwelling units on 22.71 acres, or approximately 16.34 dwelling units per acre. If the properties are rezoned as proposed, the 2045 LUM will automatically be amended to High Density Residential per NCGS 160D-605(a). The proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) will provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map.

The proposed rezoning is reasonable and in the public interest because it will provide for infill redevelopment that serves as a transition from the large commercial development to the north while being compatible with the scale of the townhome development to the east. The rezoning will also require more energy efficient housing, improve local transit options, and offer affordable housing units. The proximity to large shopping centers, bus stops, and greenways will encourage residents to walk, bike, or take transit to local destinations and the proximity to regional highways provides easy access to that network, thus



reducing the impacts of a similar amount of traffic on the local street network. The compact nature of the proposed development lowers the cost per capita of providing and maintaining public services and infrastructure while also ensuring the protection of open space.

PLANNED UNIT DEVELOPMENT DISTRICT AND CONDITIONAL ZONING STANDARDS:

Standards

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments.

1. *Planned Unit Development (PUD-CZ) District*

In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:

a) *Development parameters*

- (i) The uses proposed to be developed in the PD Plan for PUD-CZ are those uses permitted in Sec. 4.2.2 *Use Table*.
- (ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.
- (iii) The dimensional standards in Sec. 5.1.3 *Table of Intensity and Dimensional Standards, Planned Development Districts* may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.
- (iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details*, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.
- (v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-de-sac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.
- (vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.



- (vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.
- b) *Off-street parking and loading.* The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.3 *Off-Street Parking and Loading*, except that variations from these standards may be permitted if a comprehensive parking and loading plan for the PUD-CZ is submitted as part of the PD Plan that is determined to be suitable for the PUD-CZ, and generally consistent with the intent and purpose of the off-street parking and loading standards.
- c) *RCA.* The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 Resource Conservation Area, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than 10% provided that the PD Plan for PUD-CZ includes one or more of the following:
 - (i) A non-residential component;
 - (ii) An overall density of 7 residential units per acre or more; or
 - (iii) Environmental measures including but not limited to the following:
 - a. The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;
 - b. The installation of a geothermal system for a certain number or percentage of units within the development; or
 - c. Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).
- d) *Landscaping.* The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.2 *Landscaping, Buffering and Screening*, except that variations from these standards may be permitted where it is demonstrated that the proposed landscaping sufficiently buffers uses from each other, ensures compatibility with land uses on surrounding properties, creates attractive streetscapes and parking areas and is consistent with the character of the area. In no case shall a buffer be less than one half of the width required by Sec. 8.2 or 10 feet in width, whichever is greater.
- e) *Signs.* Signage in the PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.7 *Signs*, except that the standards can be varied if a master signage plan is submitted for review and approval concurrent with the PD plan and is determined by the Town Council to be suitable for the PUD-CZ and generally consistent with the intent and purpose of the sign standards of the UDO. The master signage plan shall have design standards that are exceptional and provide for higher quality signs than those in routine developments and shall comply with Sec. 8.7.2 *Prohibited Signs*.
- f) *Public facilities.* The improvements standards and guarantees applicable to the public facilities that will serve the site shall comply with Article 7: *Subdivision* and Article 14: *Parks, Recreation, Greenways, and Open Space*.
 - (i) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site transportation circulation system. The on-site transportation circulation system shall be integrated with the off-site transportation circulation system of the Town. The PD Plan for PUD-CZ shall be consistent with the Apex Transportation Plan and the *Town of Apex Standard Specifications and*



Standard Details and show required right-of-way widths and road sections. A Traffic Impact Analysis (TIA) shall be required per Sec. 13.19.

- (ii) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site system of potable water and wastewater lines that can accommodate the proposed development, and are efficiently integrated into off-site potable water and wastewater public improvement plans. The PD Plan shall include a proposed water and wastewater plan.
- (iii) Adequate off-site facilities for potable water supply, sewage disposal, solid waste disposal, electrical supply, fire protection and roads shall be planned and programmed for the development proposed in the PD Plan for PUD-CZ, and the development is conveniently located in relation to schools and police protection services.
- (iv) The PD Plan shall demonstrate compliance with the parks and recreation requirements of Sec. Article 14: *Parks, Recreation, Greenways, and Open Space* and Sec. 7.3.1 *Privately-owned Play Lawns* if there is a residential component in the PUD-CZ.
- g) *Natural resource and environmental protection.* The PD Plan for PUD-CZ demonstrates compliance with the current regulatory standards of this Ordinance related to natural resource and environmental protection in Sec. 6.1 *Watershed Protection Overlay District*, Sec. 6.2 *Flood Damage Prevention Overlay District*, and Sec. 8.1 *Resource Conservation*.
- h) *Storm water management.* The PD Plan shall demonstrate that the post-development rate of on-site storm water discharge from the entire site shall not exceed pre-development levels in accordance with Sec. 6.1.7 of the UDO.
- i) *Phasing.* The PD Plan for PUD-CZ shall include a phasing plan for the development. If development of the PUD-CZ is proposed to occur in more than one phase, then guarantees shall be provided that project improvements and amenities that are necessary and desirable for residents of the project, or that are of benefit to the Town, are constructed with the first phase of the project, or, if this is not possible, then as early in the project as is technically feasible.
- j) *Consistency with 2045 Land Use Map.* The PD Plan for PUD-CZ demonstrates consistency with the goals and policies established in the Town's 2045 Land Use Map.
- k) *Complies with the UDO.* The PD Plan for PUD-CZ demonstrates compliance with all other relevant portions of the UDO.

Legislative Considerations

The Town Council shall find the Planned Unit Development-Conditional Zoning (PUD-CZ) designation demonstrates compliance with the following standards. 2.3.3.F:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

- 1) *Consistency with 2045 Land Use Map.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.
- 2) *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
- 3) *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 *Supplemental Standards*, if applicable.
- 4) *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's



minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

- 5) *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
- 6) *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
- 7) *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.
- 8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
- 9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
- 10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.



April 7, 2022

Kevin Dean
Kimley-Horn & Associates, Inc.
300 S. Main Street, Suite 212
Holly Springs, NC 27540

Subject: **Staff summary and comments for the Chapel Ridge Apartments TIA, 3/1/2022**

Mr. Dean:

Please review the following summary of my comments and recommendations. You may schedule a meeting with me and your client to discuss at your convenience.

Study Area

The TIA studied access to the proposed development via five (5) intersections:

- Beaver Creek Commons Drive and Proposed Site Access
- Chapel Ridge Road and Proposed Site Access/North Site Driveway
- Chapel Ridge Road and Central Site Driveway
- Chapel Ridge Road and South Site Driveway
- Ackerman Hill Drive and Site Driveway

Additionally, the TIA studied the following four (4) intersections within the study area:

- Kelly Road and Wendhurst Court/Beaver Creek Commons Drive
- Olive Chapel Road and Chapel Ridge Road
- Chapel Ridge Road and Ackerman Hill Drive
- Beaver Creek Commons Drive and Creekside Landing Drive

Trip Generation

The proposed development is expected to consist of 350 apartment units. The development is projected to generate approximately 30 new trips entering and 87 new trips exiting the site during the weekday A.M. peak hour and 90 new trips entering and 57 new trips exiting the site during the weekday P.M. peak hour. The development is projected to add a total of 1,906 daily trips onto the adjacent roadway network.

Background traffic

Background traffic consists of 3% annual background traffic growth compounded to build out year 2025, and a portion of the Olive Chapel Professional Park (50% of build-out traffic). It should be noted that traffic from the adjacent Chapel Ridge Townhomes development was evaluated as a supplemental analysis but not included in the background traffic as the development had not yet been rezoned by Town Council at the time this TIA was prepared. It also happened to be below the trip threshold for requiring a TIA by itself and is providing additional direct full movement access on Olive Chapel Road, which will minimize potential traffic impacts to Chapel Ridge Road from that development plan.

Trip Distribution and Assignment

The trip distributions to and from the development are as follows:

- 40% to/from the north on Kelly Road (via Beaver Creek Commons Drive)
- 20% to/from the east on Beaver Creek Commons Drive
- 15% to/from the east on Olive Chapel Road
- 15% to/from the west on Olive Chapel Road
- 10% to/from the north on Creekside Landing Drive

Traffic Capacity Analysis and Recommendations

Level of Service (LOS) is a grade of A through F assigned to an intersection, approach, or movement to describe how well or how poorly it operates. LOS A through D is considered acceptable for peak hour operation. LOS E or F describes potentially unacceptable operation and developers may be required to mitigate their anticipated traffic impact to improve LOS based on the Apex Unified Development Ordinance (UDO). Tables 1 through 9 describe the levels of service (LOS) for the scenarios analyzed in the TIA. "NA" is shown when the scenario does not apply. The scenarios are as follows:

- **Existing 2021** - Existing year 2021 traffic counts.
- **No Build 2025** – Projected year (2025) with background traffic growth and committed improvements by others, where applicable.
- **Build 2025** – Projected year (2025) with background traffic, and site build-out including recommended improvements, where applicable.

Beaver Creek Commons Drive and Proposed Site Access

Table 1. A.M. / P.M. Unsignalized Peak Hour Levels of Service Beaver Creek Commons Drive and Proposed Site Access	
	Build 2025
<u>Overall</u>	<u>NA</u>
<i>Westbound (Site Access)</i>	<i>B / B¹</i>
<i>Northbound (Beaver Creek Commons Drive)</i>	NA
<i>Southbound (Beaver Creek Commons Drive)</i>	<i>A / A²</i>

1. Level of service for stop-controlled minor street approaches.
2. Level of service for major street left turn.

TIA recommendations:

- The TIA recommends construction of Proposed Site Access approximately half-way between the proposed Jordan Lutheran Church (200 feet to the south) and the existing Beaver Creek Crossing mall alley (200 feet to the north). The TIA recommends the Site Access be constructed as a stop-controlled, privately maintained driveway with one lane of ingress and one lane of egress. Additionally, the TIA recommends restriping the two-way left turn lane of Beaver Creek Commons Drive to provide for a 100-foot left turn storage bay in the southbound direction of travel.

Apex staff recommendations:

- There's an existing driveway and gravel road that serves a sanitary sewer pump station, just a few feet north of the Proposed Site Access. Apex staff recommends that the Proposed Site Access driveway is constructed to serve both the apartment site and the existing pump station to reduce the number of driveways and potential turn movement conflicts through this short stretch of frontage along Beaver Creek Commons Drive. The Proposed Site Access should provide a public access easement up to its termination point with the Chapel Ridge Road extension. Apex staff also recommends the center turn lane on Beaver Creek Commons Drive be restriped to provide 75 feet of southbound left turn storage and 75 feet of taper at the Proposed Site Driveway.
- The intersection is projected to operate at LOS B or better for all movements. Additionally, Apex staff reviewed right turn warrants for this location. Based on the p.m. peak hour projected traffic volumes, a right turn taper is warranted per NCDOT guidelines. However, due to the context of this roadway facility (35 mph thoroughfare with many closely spaced commercial access points), a right turn lane is not recommended at this location.

Chapel Ridge Road and Proposed Site Access/North Site Driveway

Table 2. A.M. / P.M. Unsignalized Peak Hour Levels of Service Chapel Ridge Road and Proposed Site Access/North Site Driveway	
	Build 2025
<u>Overall</u>	<u>NA</u>
<i>Eastbound (Proposed Site Access)</i>	NA
<i>Westbound (North Site Driveway)</i>	A / A ²
<i>Northbound (Chapel Ridge Road)</i>	A / A ¹

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends realignment and extension of Chapel Ridge Road by approximately 550 feet to the north, from its existing terminus point at the cul-de-sac, to the Proposed Site Access. The TIA proposes that the Chapel Ridge Road extension is constructed as a two-lane, two-way, public roadway on 60 feet of right of way, with stop control at the intersection of the Proposed Site Access and North Site Driveway.

Apex staff recommendations:

- Apex staff concur with the realignment and extension of Chapel Ridge Road as a two-way, two lane road. Additionally, Apex staff recommends coordination with the Jordan Lutheran Church to connect their southern driveway to the realigned roadway, and to remove the existing asphalt driveway on their site that extends south to the existing Chapel Ridge Road cul-de-sac. The realignment of the road, as proposed, will cause an issue with the existing asphalt drive connection and should be addressed as part of this development plan.
- The proposed intersection of Chapel Ridge Road and the Proposed Site Access / North Site Driveway is projected to operate at LOS A for all intersection movements during both peak hours of the day.

Chapel Ridge Road and Central Site Driveway

Table 3. A.M. / P.M. Unsignalized Peak Hour Levels of Service Chapel Ridge Road and Central Site Driveway	
	Build 2025
Overall	NA
Eastbound (Chapel Ridge Road)	A / A ²
Westbound (Chapel Ridge Road)	A / A ²
Northbound (Central Site Driveway)	A / A ¹
Southbound (Central Site Driveway)	A / A ¹

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends construction of the Central Site Driveway as a privately maintained two-lane, two-way roadway with stop-control on both minor street approaches at the intersection with Chapel Ridge Road.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All movements are projected to operate at LOS A at this intersection during both peak hours of the day.

Chapel Ridge Road and South Site Driveway

Table 4. A.M. / P.M. Unsignalized Peak Hour Levels of Service Chapel Ridge Road and South Site Driveway	
	Build 2025
<u>Overall</u>	<u>NA</u>
<i>Eastbound (Chapel Ridge Road)</i>	<i>A / A²</i>
<i>Westbound (Chapel Ridge Road)</i>	<i>A / A²</i>
<i>Northbound (South Site Driveway)</i>	<i>A / A¹</i>
<i>Southbound (South Site Driveway)</i>	<i>A / A¹</i>

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends construction of the South Site Driveway as a privately maintained two-lane, two-way roadway with stop-control on both minor street approaches at the intersection with Chapel Ridge Road.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All movements are projected to operate at LOS A at this intersection during both peak hours of the day.

Ackerman Hill Drive and Site Driveway

Table 5. A.M. / P.M. Unsignalized Peak Hour Levels of Service Ackerman Hill Drive and Site Driveway	
	Build 2025
<u>Overall</u>	<u>NA</u>
<i>Eastbound (Ackerman Hill Drive)</i>	<i>NA</i>
<i>Westbound (Ackerman Hill Drive)</i>	<i>A / A²</i>
<i>Northbound (Site Driveway)</i>	<i>A / A¹</i>

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends construction of Site Driveway as a privately maintained two-lane, two-way roadway with stop-control at the intersection with Ackerman Hill Drive.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All movements are projected to operate at LOS A at this intersection during both peak hours of the day.

Kelly Road and Wendhurst Court/Beaver Creek Commons Drive

Table 6. A.M. / P.M. Signalized Peak Hour Levels of Service Kelly Road and Wendhurst Court/Beaver Creek Commons Drive			
	Existing 2021	No Build 2025	Build 2025
<u>Overall</u>	<u>B / C</u>	<u>B / C</u>	<u>B / C</u>
<i>Eastbound (Wendhurst Court)</i>	<i>C / B</i>	<i>C / B</i>	<i>C / B</i>
<i>Westbound (Beaver Creek Commons Drive)</i>	<i>E / D</i>	<i>E / D</i>	<i>D / D</i>
<i>Northbound (Kelly Road)</i>	<i>A / B</i>	<i>A / B</i>	<i>A / B</i>
<i>Southbound (Kelly Road)</i>	<i>A / C</i>	<i>A / C</i>	<i>A / C</i>

TIA recommendations:

- The TIA recommends no improvements at this intersection. The TIA also notes that development traffic is projected to account for approximately 3% of total intersection traffic, and the overall level of service (LOS B and C in the AM and PM peak hours respectively), is not projected to change with or without the development.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All approaches are projected to operate at LOS D or better in the build scenario. As noted in the TIA, the westbound approach improves from LOS E to D in the AM peak hour from the No Build to the Build scenario. That improvement is negligible and due to the addition of site trips to movements already operating with adequate capacity and the associated weighted-average methodology for delay calculations.

Olive Chapel Road and Chapel Ridge Road

Table 7. A.M. / P.M. Unsignalized Peak Hour Levels of Service Olive Chapel Road and Chapel Ridge Road			
	Existing 2021	No Build 2025	Build 2025
<u>Overall</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<i>Eastbound (Olive Chapel Road)</i>	<i>A / A²</i>	<i>A / A²</i>	<i>A / A²</i>
<i>Westbound (Olive Chapel Road)</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>Southbound (Chapel Ridge Road)</i>	<i>B / B¹</i>	<i>B / C¹</i>	<i>B / C¹</i>

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends no improvements at this intersection.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All movements are projected to operate at LOS C or better in the build scenario during both peak hours. 95th percentile queues are not projected to exceed 25 feet on the stop-controlled southbound approach. An eastbound left turn lane on Olive Chapel Road already exist to store the major street left turn queues.

Chapel Ridge Road and Ackerman Hill Drive

Table 8. A.M. / P.M. Unsignalized Peak Hour Levels of Service Chapel Ridge Road and Ackerman Hill Drive			
	Existing 2021	No Build 2025	Build 2025
<u>Overall</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
<i>Westbound (Ackerman Hill Drive)</i>	<i>A / A¹</i>	<i>A / A¹</i>	<i>A / A¹</i>
<i>Northbound (Chapel Ridge Road)</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<i>Southbound (Chapel Ridge Road)</i>	<i>A / A²</i>	<i>A / A²</i>	<i>A / A²</i>

1. Level of service for minor street stop-controlled approaches.
2. Level of service for major street left turn movements.

TIA recommendations:

- The TIA recommends no improvements at this intersection.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All movements are projected to operate at LOS A in the build scenario during both peak hours.

Beaver Creek Commons Drive and Creekside Landing Drive (Roundabout)

Table 9. A.M. / P.M. Unsignalized Roundabout Peak Hour Levels of Service Beaver Creek Commons Drive and Creekside Landing Drive			
	Existing 2021	No Build 2025	Build 2025
Overall	<i>A / A</i>	<i>A / A</i>	<i>A / B</i>
<i>Eastbound (Beaver Creek Commons Drive)</i>	<i>A / A</i>	<i>A / A</i>	<i>A / B</i>
<i>Westbound (Beaver Creek Commons Drive)</i>	<i>A / A</i>	<i>A / A</i>	<i>A / B</i>
<i>Northbound (Creekside Landing Drive)</i>	<i>A / A</i>	<i>A / B</i>	<i>A / B</i>
<i>Southbound (Creekside Landing Drive)</i>	<i>A / A</i>	<i>A / A</i>	<i>A / A</i>

TIA recommendations:

- The TIA recommends no improvements at this intersection.

Apex staff recommendations:

- Apex staff concur with the recommendation in the TIA. All approaches are projected to operate at LOS B or better in the build scenario during both peak hours. The roundabout is projected to have ample capacity to handle future traffic growth from this development.

Please coordinate with the NCDOT District Engineer’s Office concerning recommended improvements. Town staff will be available for meetings with NCDOT staff to discuss improvements on state maintained roadways as needed. All recommendations are subject to review by Town Council prior to approval.

Sincerely,



Serge Grebenshikov
Traffic Engineer
919-372-7448



Rezoning #22CZ07

Peak 502 at
Beaver Creek

Chapel Ridge

Hempstead at
Beaver Creek

PLANNED UNIT DEVELOPMENT APPLICATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: _____ Submittal Date: _____
Fee Paid \$ _____ Check # _____

PETITION TO AMEND THE OFFICIAL ZONING DISTRICT MAP

Project Name: Chapel Ridge North
Address(es): See attached Exhibit A
PIN(s) See attached Exhibit A

_____ Acreage: 22.71 acres
Current Zoning: Rural Residential (RR) Proposed Zoning: Planned Unit Development Conditional Zoning (PUD-CZ)
Current 2045 LUM Designation: Medium Density Residential

Is the proposed rezoning consistent with the 2045 LUM Classification(s)? Yes No

If any portion of the project is shown as mixed use (3 or more stripes on the 2045 Land Use Map) provide the following:

Area classified as mixed use:	Acreage:	<u>N/A</u>
Area proposed as non-residential development:	Acreage:	<u>N/A</u>
Percent of mixed use area proposed as non-residential:	Percent:	<u>N/A</u>

Applicant Information

Name: High Street District Development, Inc., c/o Matthew Carpenter
Address: 301 Fayetteville Street, Suite 1400
City: Raleigh State: NC Zip: 27601
Phone: (919) 835-4032 E-mail: matthewcarpenter@parkerpoe.com

Owner Information

Name: See attached Exhibit A
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ E-mail: _____

Agent Information

Name: Josh Dix, High Street District Development, Inc.
Address: 555 Fayetteville Street, Suite 300
City: Raleigh State: NC Zip: 27601
Phone: (919) 835-4032 E-mail: JDix@trammellcrow.com

Other contacts: _____

Exhibit A
Trammell Crow PUD-CZ
Owner Information Addendum

Parcel 1

Site Address: 1200 Chapel Ridge Road
PIN: 0732256180
Deed Reference (book/page): 12343/2193
Acreage: 5.27
Owner: Su Yueh Kao and Chi Chang Ho
Owner Address: 1200 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 2

Site Address: 1204 Chapel Ridge Road
PIN: 0732249869
Deed Reference (book/page): 8218/1726
Acreage: 1.71
Owner: Michael P. Mohan and Catherine A. Mohan
Owner Address: 1204 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 3

Site Address: 1205 Chapel Ridge Road
PIN: 0732352538
Deed Reference (book/page): 12171/2059
Acreage: 2.48
Owner: Douglas Cox and Carrie Cox
Owner Address: 1205 Chapel Hill Road, Apex, NC 27502-8502

Parcel 4

Site Address: 1209 Chapel Ridge Road
PIN: 0732354594
Deed Reference (book/page): 6236/386
Acreage: 3.0
Owner: Ronald L. Stringari, and Katherine L. Stringari
Owner Address: 1209 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 5

Site Address: 1220 Chapel Ridge Road
PIN: 0732343920
Deed Reference (book/page): 4168/302
Acreage: 2.88
Owner: Larry L. Carlson and Kathi E. Carlson
Owner Address: 1220 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 6

Site Address: 1225 Chapel Ridge Road

PIN: 0732347912

Deed Reference (book/page): 9720/361

Acreage: 2.13

Owner: Tigh M. Cundieff and Diane Cundieff

Owner Address: 1225 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 7

Site Address: 1512 Clark Farm Road

PIN: 0732340602

Deed Reference (book/page): 5351/223

Acreage: 2.34

Owner: David D. Sherry and Ethel V. Sherry

Owner Address: 1512 Clark Farm Road, Apex, NC 27502-8500

Parcel 8

Site Address: 1213 Chapel Ridge Road

PIN: 0732356305

Deed Reference (book/page): 14563/1075

Acreage: 2.09

Owner: Michael J. Bishop

Owner Address: 1213 Chapel Ridge Road, Apex, NC 27502-8502

PLANNED UNIT DEVELOPMENT APPLICATION

Application #: _____

Submission Date: March 1, 2022

PLANNED UNIT DEVELOPMENT DISTRICT STANDARDS:

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments. The PD text and plan should demonstrate how the standards of Sec. 2.3.4.F are met by the proposed rezoning.

LEGISLATIVE CONSIDERATIONS - CONDITIONAL ZONING

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest. Use additional pages as needed.

1) *Consistency with 2045 Land Use Map.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.

Although the proposed development contemplates greater density than recommended by the property's Medium Density Residential Land Use Map ("LUM") designation, it is generally consistent with the purposes, goals, objectives, and policies of the Apex Comprehensive Plan (the "Comp Plan"). The proposed development will place additional housing density in close proximity to existing services, transit, restaurants, retail, and future transit; consistent with the Comp Plan goals of providing a variety of housing types, a variety of transportation options to enhance mobility, and walkable, mixed-use developments and pedestrian-oriented streets.

2) *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

The proposed development will place housing density in an appropriate location - directly adjacent to the Beaver Creek Shopping Center, within walking distance of a future transit stop, and in close proximity to 540 and US-64. It will offer a density/land use intensity transition from higher intensity commercial uses to the north to lower intensity townhomes and single-family detached homes to the south. Appropriate buffers and Resource Conservation Areas ("RCAs") will be located to mitigate negative effects on neighboring properties.

3) *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 *Supplemental Standards*, if applicable.

The proposed PUD-CZ will comply with any applicable standards in UDO Section 4.4.

PETITION PROCESS INFORMATION

4) *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

Buffers and RCAs have been located to help minimize adverse effects on adjacent properties. Trash, parking and loading, and odors will be screened from adjacent uses as required by the UDO and as set forth in the PUD. The PUD text contains a condition that prevents dumpsters from being placed in close proximity to existing homes to the south. The extension of Chapel Ridge Road to the north will improve connectivity in the area and route traffic north to Beaver Creek Commons Drive rather than south past the existing single-family detached homes on Chapel Ridge. Additionally, the PUD text contains a condition that exterior lighting shall be focused towards the ground.

5) *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

The property is not within a designated current or future 100 year floodplain but is located within the Beaver Creek Drainage Basin. Accordingly, the property is within the Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Map. This PUD will comply with all built upon area, vegetated conveyances, structural SCMs and riparian stream buffer requirements of UDO Section 6.1.7. The PUD will include a minimum 20% RCA. Further, the PUD text contains additional environmental commitments including electric vehicle charging stations and installation of pet waste stations.

6) *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

The proposed development will improve access to public facilities and services. The Chapel Ridge Road extension will improve traffic circulation in the area and the project will place additional housing in close proximity to a future transit stop. The project will also extend water and sewer infrastructure south along Chapel Ridge Road which may facilitate future connections to Town services.

7) *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

The proposed multi-family community will have a positive effect on the health, safety, and welfare of Town residents by providing additional housing types in a well-connected location.

8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

The proposed multi-family community will not be detrimental to adjacent properties. RCAs and buffers - together with other conditions contained in the PUD text - will help mitigate negative effects on adjacent properties.

PETITION PROCESS INFORMATION

9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

The proposed development will not constitute a nuisance or hazard. Traffic impacts will be mitigated by the northern extension of Chapel Ridge Road. Buffers, RCAs, and conditions on lighting will help mitigate negative effects on adjacent properties.

10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

The PUD will be governed by the regulations contained in the attached PUD Text and Concept Plan. The PUD will comply with all other regulations of the UDO to the extent they do not conflict with the PUD regulations.

DEVELOPMENT NAME APPROVAL APPLICATION

Application #: _____

Submittal Date: _____

Fee for Initial Submittal: No Charge

Fee for Name Change after Approval: \$500*

Purpose

To provide a consistent and clearly stated procedure for the naming of subdivisions and/or developments and entrance roadways (in conjunction with *Town of Apex Address Policy*) so as to allow developers to define and associate the theme or aesthetics of their project(s) while maintaining the Town's commitment to preserving the quality of life and safety for all residents of Apex proper and extraterritorial jurisdiction.

Guidelines

- ✓ The subdivision/development name shall not duplicate, resemble, or present confusion with an existing subdivision/development within Apex corporate limits or extraterritorial jurisdiction except for the extension of an existing subdivision/development of similar or same name that shares a continuous roadway.
- ✓ The subdivision/development name shall not resemble an existing street name within Apex corporate limits or extraterritorial jurisdiction unless the roadway is a part of the subdivision/development or provides access to the main entrance.
- ✓ The entrance roadway of a proposed subdivision/development shall contain the name of the subdivision/development where this name does not conflict with the Town of Apex *Road Name Approval Application* and *Town of Apex Address Policy* guidelines.
- ✓ The name "Apex" shall be excluded from any new subdivision/development name.
- ✓ Descriptive words that are commonly used by existing developments will be scrutinized more seriously in order to limit confusion and encourage distinctiveness. A list of commonly used descriptive words in Apex's jurisdiction is found below.
- ✓ The proposed subdivision/development name must be requested, reviewed and approved during preliminary review by the Town.
- ✓ A \$500.00 fee will be assessed to the developer if a subdivision/development name change is requested after official submittal of the project to the Town.*

*The imposed fee offsets the cost of administrative changes required to alleviate any confusion for the applicant, Planning staff, other Town departments, decision-making bodies, concerned utility companies and other interested parties. There is no charge for the initial name submittal.

Existing Development Titles, Recurring

	Residential	Non-Residential
10 or more	Creek, Farm(s), Village(s),	Center/Centre
6 to 9	Crossing(s), Park, Ridge, Wood(s)	Commons, Park
3 to 5	Acres, Estates, Glen(s), Green*, Hills	Crossing(s), Plaza, Station, Village(s)

*excludes names with Green Level

DEVELOPMENT NAME APPROVAL APPLICATION

Application #: _____ Submittal Date: _____

Proposed Subdivision/Development Information

Description of location: 1200; 1204; 1205; 1209; 1213; 1220; & 1225 Chapel Ridge Road and 1512 Clark Farm F
Nearest intersecting roads: Chapel Ridge Road/Ackerman Hill Drive
Wake County PIN(s): See attached Application Exhibit A
Township: White Oak

Contact Information (as appropriate)

Contact person: High Street District Development, inc., c/o Matthew Carpenter
Phone number: (919) 835-4032 Fax number: N/A
Address: 301 Fayetteville Street, Suite 1400, Raleigh, NC 27601
E-mail address: matthewcarpenter@parkerpoe.com
Owner: See attached Application Exhibit A
Phone number: _____ Fax number: _____
Address: _____
E-mail address: _____

Proposed Subdivision/Development Name

1st Choice: Chapel Ridge North
2nd Choice (Optional): _____

Town of Apex Staff Approval:

Town of Apex Planning Department Staff Date

TOWN OF APEX UTILITIES OFFER AND AGREEMENT

Application #: _____ Submittal Date: _____

**Town of Apex
73 Hunter Street
P.O. Box 250 Apex, NC 27502
919-249-3400**

WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

1200; 1204; 1205; 1209; 1213; 1220; & 1225 Chapel Ridge Road

and 1512 Clark Farm Road

(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer & Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

High Street District Development, the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.

Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

ACCEPTED:

CUSTOMER: High Street District Development, Inc.

TOWN OF APEX

BY: 
Authorized Agent

BY: _____
Authorized Agent

DATE: 8/29/2022

DATE: _____

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Michael J. Bishop is the owner* of the property for which the attached application is being submitted:

- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 1213 Chapel Ridge Road

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent


Agent Name: Josh Dix

Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601

Telephone Number: (919) 835-4032

E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

DocuSigned by:

994521D44BB9418...

8/24/2022

Michael J. Bishop

Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Larry L. Carlson and Kathi E. Carlson is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 1220 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

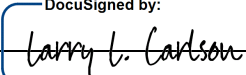
Agent Name: Josh Dix

Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601


Telephone Number: (919) 835-4032

E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

DocuSigned by:


Larry L. Carlson AF7F6591C7A7416... March 1, 2022
Type or print name Date

DocuSigned by:


Kathi E. Carlson BE5DD374CDBC4E0... March 1, 2022
Type or print name Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Douglas Cox and Carrie Cox is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 1205 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

Agent Name: Josh Dix

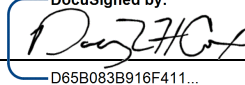
Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601

Telephone Number: (919) 835-4032

E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

DocuSigned by:

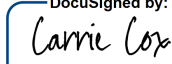


D65B083B916F411...

Douglas Cox
Type or print name

March 1, 2022
Date

DocuSigned by:



15AFD993F11F4FA...

Carrie Cox
Type or print name

March 1, 2022
Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Tigh M. Cundieff and Diane Cundieff is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

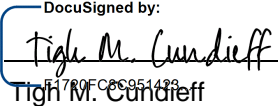
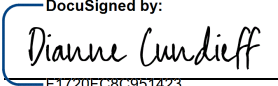
The property address is: 1225 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

Agent Name: Josh Dix
 Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601
 Telephone Number: (919) 835-4032
 E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

<p><small>DocuSigned by:</small>  Tigh M. Cundieff</p>	<p>February 28, 2022</p>
<p>_____ Type or print name</p>	<p>_____ Date</p>
<p><small>DocuSigned by:</small>  Diane Cundieff</p>	<p>February 28, 2022</p>
<p>_____ Type or print name</p>	<p>_____ Date</p>

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Su Yueh Kao and Chi-Chang Ho is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 1200 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

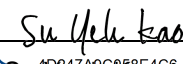
Agent Name: Josh Dix

Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601

Telephone Number: (919) 835-4032

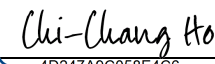
E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

DocuSigned by:

 Su Yueh Kao
40247A9C058E4C6...

February 28, 2022
 Date

Type or print name

DocuSigned by:

 Chi-Chang Ho
4D247A9C058E4C6...

February 28, 2022
 Date

Type or print name

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Michael P. Mohan and Catherine A. Mohan is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

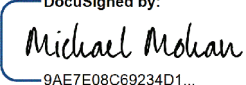
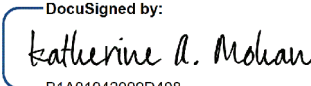
The property address is: 1204 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

Agent Name: Josh Dix
 Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601
 Telephone Number: (919) 835-4032
 E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*

<p><small>DocuSigned by:</small>  <small>9AE7E08C69234D1.....</small></p> <p>_____</p> <p style="text-align: right;">Type or print name</p>	<p><u>February 28, 2022</u></p> <p style="text-align: right;">Date</p>
<p><small>DocuSigned by:</small>  <small>B1A01942099D408...</small> Catherine A. Mohan</p> <p>_____</p> <p style="text-align: right;">Type or print name</p>	<p><u>February 28, 2022</u></p> <p style="text-align: right;">Date</p>

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

David D. Sherry and Ethel V. Sherry _____ is the owner* of the property for which the attached application is being submitted:

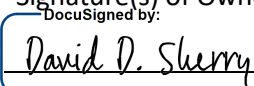
- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

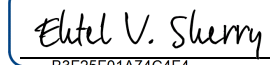
The property address is: 1512 Clark Farm Road, Apex, NC 27502-8500

The agent for this project is: Josh Dix

I am the owner of the property and will be acting as my own agent

Agent Name: Josh Dix
 Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601
 Telephone Number: (919) 835-4032
 E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*
DocuSigned by:

B3F25F01A74C4F4...
David D. Sherry _____ February 28, 2022
 Type or print name Date

DocuSigned by:

B3F25F01A74C4F4...
Ethel V. Sherry _____ February 28, 2022
 Type or print name Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Katherine L. Stringari is the owner* of the property for which the attached application is being submitted:

- Land Use Amendment
- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 1209 Chapel Ridge Road, Apex, NC 27502-8502

The agent for this project is: Josh Dix

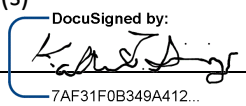
I am the owner of the property and will be acting as my own agent

Agent Name: Josh Dix

Address: 555 Fayetteville Street, Suite 300, Raleigh, NC 27601

Telephone Number: (919) 835-4032

E-Mail Address: JDix@trammellcrow.com

Signature(s) of Owner(s)*
DocuSigned by:

7AF31F0B349A412...
Katherine L. Stringari
 Type or print name

March 10, 2022
 Date

 Type or print name

 Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: _____

Submittal Date: _____

The undersigned, Joshua Dix of High Street District Development, Inc. (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

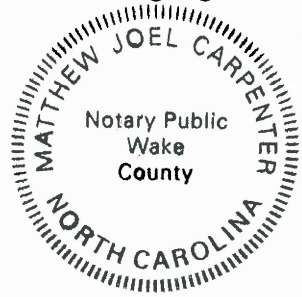
1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the authorized agent of all owners of the property described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owners.
4. To Affiant's knowledge, no claim or action has been brought against the owners of the property which questions title or right to possession of the Property nor is any claim or action pending against Affiant or owners in court regarding possession of the Property.
5. This the 29 day of August, 2022.

Joshua Dix

Joshua Dix (seal)

STATE OF NORTH CAROLINA
COUNTY OF Wake

I, the undersigned, a Notary Public in and for the County of Wake, hereby certify that Josh M. Dix, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's ID, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.



[NOTARY SEAL]

Matthew J. Carpenter

Notary Public
State of North Carolina
My Commission Expires: 2/7/2024

Exhibit A
to Affidavit of Ownership
Legal Description

Being all of lots 1, 2, 5, and 6 with no right-of-way taking as shown on book of maps 1987, page 556 in the Wake County Register of Deeds; all of lot 8 with no right-of-way taking as shown on book of maps 1987, page 1272 in the Wake County Register of Deeds; all of lot 10 with no right-of-way taking as shown on book of maps 1986, page 1627 in the Wake County Register of Deeds; and a portion of lot 3 as shown on book of maps 1987, page 556 with a right-of-way taking described in deed book 15527, page 772 in the Wake County Register of Deeds. Being more particularly described as follows.

Beginning at a point on the southern right-of-way line of Ackerman Hill Drive as shown on book of maps 2017, page 467, being the common corner of lands now or formally owned by MREC DT Beaver Creek LLC to the east as shown on book of maps 2006, page 1567; thence with the western line of MREC DT Beaver Creek LLC South 02°41'18" East a distance of 67.48 feet to an iron pipe, thence South 89°20'41" East a distance of 74.94 feet to an iron pipe, thence South 09°36'18" East a distance of 299.04 feet to an iron pipe, being the common corner of lands now or formally owned by MREC DT Beaver Creek LLC to the northeast and Daniel E. Corey, Et.Al. to the south as shown on book of maps 1987, page 1272; thence with the northern line of Daniel E. Corey, Et.Al. North 89°32'41" West a distance of 270.13 feet to an iron pipe, being the common corner on the eastern right-of-way line of Chapel Ridge Road as shown on book of maps 1987, page 1272; thence along the eastern right-of-way line of Chapel Ridge Road with a curve to the right a radius of 405.00 feet, an arc length of 50.19 feet, a chord bearing of South 03°10'24" East, a chord length of 50.16 feet to a point, thence North 89°32'50" West a distance of 50.00 feet to a point on the western right-of-way line of Chapel Ridge Road, being the common corner of land now or formally owned by James Patrick Serino and Melinda Busi to the south as shown on book of maps 1986, page 1627; thence leaving the right-of-way along the northern line of James Patrick Serino and Melinda Busi North 89°32'50" West a distance of 345.06 feet to an iron pipe, thence along the western line of the aforesaid land owners South 18°59'36" West a distance of 180.00 feet to a point, being the common corner of lands now or formally owned by James Patrick Serino and Melinda Busi to the northeast and Rita L. and Raymond V. Boykin Jr to the southeast as shown on book of maps 1986, page 1627; thence along the western line of Rita L. and Raymond V. Boykin Jr. South 18°59'39" West a distance of 269.66 feet to a point, being the common corner on the northern right-of-way line of Clark Farm Road as shown on book of maps 1986, page 1627; thence along the northern right-of-way line of Clark Farm Road with a curve to the left a radius of 2407.57 feet, an arc length of 172.19 feet, a chord bearing of North 71°16'12" West, a chord length of 172.15 feet to a point, thence with a curve to the right a radius of 25.00 feet, an arc length of 15.09 feet, a chord bearing of North 56°01'37" West, a chord length of 14.86 feet to a point, being the common corner of land now or formally owned by Christine and Frank A. Bria III to the west as shown on book of maps 1986, page 1627; thence leaving the northern right-of-way line with the eastern line of Christine and Frank A. Bria III North 01°00'50" West a distance of 364.22 feet to a point, thence along the northern line of the aforesaid land owners North 89°32'50" West a distance of 78.77 feet to a point, thence North 89°32'50" West a distance of 435.45 feet to a point, being the common corner of land now or formally owned by Christine and Frank A. Bria III to the south on the eastern right-of-way line of NC 540 HWY; thence along the eastern right-of-way line North 12°30'06" West a distance of 163.69 feet to a concrete monument; thence North 27°30'03" West a distance of 31.60 feet to a point, being the common corner of land now or formally owned by Shee Gopalprabhu LLC to the north, as described in deed book 18530, page 244, on the eastern right-of-way line of NC 540 HWY; thence leaving the right-of-way along the eastern line of Shee Gopalprabhu LLC

North 36°50'22" East a distance of 21.14 feet to a point, thence North 38°51'36" East a distance of 40.28 feet to a point, thence North 38°00'37" East a distance of 83.84 feet to a point, thence North 38°19'59" East a distance of 53.41 feet to a point, thence North 34°12'14" East a distance of 64.39 feet to a rebar, being the common corner of lands now or formally owned by Shee Gopalprabhu LLC to the west and Jordan Lutheran Church LLC to the northeast as shown on book of maps 1987, page 556; thence with the southern line of Jordan Lutheran Church LLC South 89°18'34" East a distance of 516.36 feet to an iron pipe, thence North 84°43'51" East a distance of 165.05 feet to an iron pipe, being the common corner on the southern right-of-way line of Chapel Ridge Road; thence along the right-of-way line with a curve to the right a radius of 50.00 feet, an arc length of 62.76 feet, a chord bearing of North 30°41'41" East, a chord length of 58.72 feet to a point, being the common corner of lands now or formally owned by Jordan Lutheran Church LLC to the west on the aforesaid right-of-way line; thence leaving the right-of-way along the eastern line of Jordan Lutheran Church LLC North 23°21'49" West a distance of 162.27 feet to an iron pipe, thence North 03°08'58" West a distance of 329.33 feet to an iron pipe, being the common corner of lands now or formally owned by Jordan Lutheran Church LLC to the southwest and CTO21 Apex LLC to the north as shown on book of maps 2021, page 1878; thence along the southern line of CTO21 Apex LLC North 88°45'08" East a distance of 388.91 feet to an iron pipe, thence North 88°45'08" East a distance of 47.28 feet to an iron pipe, thence North 88°42'10" East a distance of 177.95 feet to an iron pipe, being the common corner of lands now or formally owned by CTO21 Apex LLC to the northwest and MREC DT Beaver Creek LLC to the east; thence along the western line of MREC DT Beaver Creek LLC South 02°41'18" East a distance of 157.29 feet to a point, being the common corner of lands now or formally owned by MREC DT Beaver Creek LLC to the east and Michael J. Bishop to the south as shown on book of maps 1987, page 556; thence along the northern line of Michael J. Bishop South 51°53'36" West a distance of 297.36 feet to an iron pipe, thence along the western line of the aforesaid land owner South 25°27'10" West a distance of 274.97 feet to a point, being the common corner on the northern right-of-way line of Chapel Ridge Road; thence along the right-of-way line with a curve to the right a radius of 405.00 feet, an arc length of 118.06 feet, a chord bearing of South 56°11'36" East, a chord length of 117.64 feet to a point, thence with a curve to the right a radius of 405.00 feet, an arc length of 45.37 feet, a chord bearing of South 44°36'20" East, a chord length of 45.34 feet to a rebar, being the common corner on the southern right-of-way line of Ackerman Hill Drive and the northern right-of-way line of Chapel Ridge Road; thence leaving the Chapel Ridge Road right-of-way along the Ackerman Hill Drive right-of-way North 45°10'55" East a distance of 115.22 feet to a point, thence with a curve to the right a radius of 199.04 feet, an arc length of 145.84 feet, a chord bearing of North 66°19'50" East, a chord length of 142.60 feet to a point, thence North 87°15'57" East a distance of 28.56 feet to the point and place of beginning, containing an area of 898,352 square feet, 20.62 acres more or less.

Being all of lot 7, as shown on Book of Maps 1987, page 556 in the Wake County Register of Deeds.
Being more particularly described as:

Beginning at an iron pipe on the northern right of way line of Chapel Ridge Road (a 50 foot public right of way), being the southeast corner of lot 6, as shown on Book of Maps 1987, page 556, the point of beginning; thence with said common line, North 25°27'10" East a distance of 274.97 feet to an iron pipe; thence North 51°53'36" East a distance of 297.36 feet to an iron pipe on the western line of Tract 4, as shown on Book of Maps 2006, page 1567; thence with said common line, South 02°41'18" East a distance of 345.28 feet to an iron pipe on the northern right of way line of Ackerman Hill Drive (a 45 foot public right of way), as shown on Book of Maps 2017, page 461; thence with the northern right of way line of Ackerman Hill Drive, South 87°15'57" West a distance of 28.56 feet to an iron pipe; thence with a curve to the left a radius of 244.04 feet, an arc length of 178.84 feet, a chord bearing of South 66°29'09" West, a chord length of 174.86 feet to an iron pipe; thence South 45°10'55" West a distance of 115.22 feet to an iron pipe on the northern right of way line of Chapel Ridge Road; thence with the northern right of way line of Chapel Ridge Road, with a curve to the left a radius of 405.00 feet, an arc length of 118.06 feet, a chord bearing of North 56°11'36" West, a chord length of 117.64 feet to the point and place of beginning, containing an area of 90,845 square feet or 2.09 acres.

Wake County Residential Development Notification

Please complete each section of this form and submit with your application.

Town of Apex staff will enter this information into the online WCPSS form.

Please send any questions about this form to:
studentassignment-gis-group@wcpss.net

Developer Company Information	
Company Name	High Street District Development, Inc.
Company Phone Number	202-295-3383
Developer Representative Name	Josh Dix
Developer Representative Phone Number	202-295-3383
Developer Representative Email	JDix@trammellcrow.com

New Residential Subdivision Information	
Date of Application for Subdivision	Unknown
City, Town or Wake County Jurisdiction	Town of Apex
Name of Subdivision	Chapel Ridge
Address of Subdivision (if unknown enter nearest cross streets)	Chapel Ridge Road
REID(s)	
PIN(s)	0732256180; 0732249869; 0732352538; 0732354594; 0732343920; 0732347912; 0732340602

Projected Dates Information	
Subdivision Completion Date	unknown
Subdivision Projected First Occupancy Date	Approx. 2026

Lot by Lot Development Information																	
Unit Type	Total # of Units	Senior Living	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	Square Foot Range		Price Range		Anticipated Completion Units & Dates					
								Min	Max	Low	High	Year	# Units	Year	# Units	Year	# Units
Single Family																	
Townhomes																	
Condos																	
Apartments	<u>370</u>			<u>222</u>	<u>148</u>					<u>unknown</u>		<u>2026</u>	<u>370</u>				
Other																	

February 16, 2022
Neighborhood Meeting

NOTICE OF ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

January 31, 2022

Date

Dear Neighbor:

You are invited to an electronic neighborhood meeting to review and discuss the development proposal at

See attached Exhibit A

See attached Exhibit A

Address(es)

PIN(s)

in accordance with the Town of Apex Electronic Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, you may contact the applicant before or after the meeting is held. Once an application has been submitted to the Town, it may be tracked using the [Interactive Development Map](#) or the [Apex Development Report](#) located on the Town of Apex website at www.apexnc.org. If at all feasible given emergency declarations, limits on in-person gatherings, and social distancing, an additional in-person Neighborhood Meeting may be scheduled and held prior to a public hearing or staff decision on the application.

An Electronic Neighborhood Meeting is required because this project includes (check all that apply):

Application Type	Approving Authority
<input checked="" type="radio"/> Rezoning (including Planned Unit Development)	Town Council
<input type="radio"/> Major Site Plan	Town Council (QJPH*)
<input type="radio"/> Special Use Permit	Town Council (QJPH*)
<input type="radio"/> Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):

The applicant is proposing to rezone the property to Planned Unit Development - Conditional Zoning District to facilitate the development of an amenitized multi-family community. Additional information will be provided at the meeting.

Estimated submittal date: March 1, 2022

MEETING INFORMATION:

Property Owner(s) name(s): See attached Exhibit A

Applicant(s): Josh Dix, Trammell Crow Company c/o Matthew Carpenter

Contact information (email/phone): matthewcarpenter@parkerpoe.com; (919) 835-4032

Electronic Meeting invitation/call in info: See accompanying letter with Zoom instructions

Date of meeting**: February 16, 2022

Time of meeting**: 6:00 PM - 8:00 PM

MEETING AGENDA TIMES:

Welcome: 6:00 PM Project Presentation: between 6:00 - 8:00 PM Question & Answer: between 6:00 - 8:00 PM

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at <http://www.apexnc.org/180/Planning>.

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: Chapel Ridge Zoning: Rural Residential (RR)
 Location: See attached Exhibit A
 Property PIN(s): See attached Exhibit A Acreage/Square Feet: 19.81 acres

Property Owner: See attached Exhibit A
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Email: _____

Developer: Trammell Crow Company, c/o Matthew Carpenter
 Address: 301 Fayetteville Street, Suite 1400
 City: Raleigh State: NC Zip: 27601
 Phone: 919-835-4032 Fax: n/a Email: MatthewCarpenter@parkerpoe.com

Engineer: McAdams, attn. Kody Trowbridge
 Address: One Glenwood, Suite 201
 City: Raleigh State: NC Zip: 27603
 Phone: 919-287-0841 Fax: n/a Email: trowbridge@mcadamsco.com

Builder (if known): n/a
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Fax: _____ Email: _____

Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts

Planning Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Senior Transportation Engineer	(919) 249-3358
Water Resources Department Jessica Bolin, Senior Engineer (Stormwater, Sedimentation & Erosion Control) Stan Fortier, Senior Engineer (Stormwater, Sedimentation & Erosion Control) James Gregg, Utility Engineer (Water & Sewer)	(919) 249-3537 (919) 249-1166 (919) 249-3324
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

January 31, 2022

Re: Notice of Virtual Neighborhood Meeting

Neighboring Property Owners:

You are invited to attend a neighborhood meeting on February 16, 2022 from 6–8pm. The purpose of the meeting is to discuss an upcoming application to rezone 7 parcels of land located at 1200 Chapel Ridge Road (PIN 0732256180), 1204 Chapel Ridge Road (PIN 0732249869), 1205 Chapel Ridge Road (PIN 0732352538), 1209 Chapel Ridge Road (PIN 0732354594), 1220 Chapel Ridge Road (PIN 0732343920), 1225 Chapel Ridge Road (PIN 0732347912), and 1512 Clark Farm Road (PIN 0732340602) (collectively, the “Property”). The Property is currently zoned Rural Residential (RR) and is proposed to be rezoned to Planned Unit Development-Conditional Zoning (PUD-CZ).

The applicant is proposing a rezoning to PUD-CZ to facilitate the development of an amenitized multi-family community. During the meeting, the applicant will describe the nature of this rezoning request and field any questions from the public. Enclosed are: (1) a vicinity map outlining the location of the subject parcel; (2) a zoning map of the subject area; (3) a preliminary concept plan; (4) a project contact information sheet; and (5) a common construction issues & who to call information sheet.

The meeting will be held virtually. You can participate online via Zoom or by telephone. To participate in the Zoom online meeting:

Visit:	https://zoom.us/join
Enter the following meeting ID:	893 2645 9717
Enter the following password:	329414

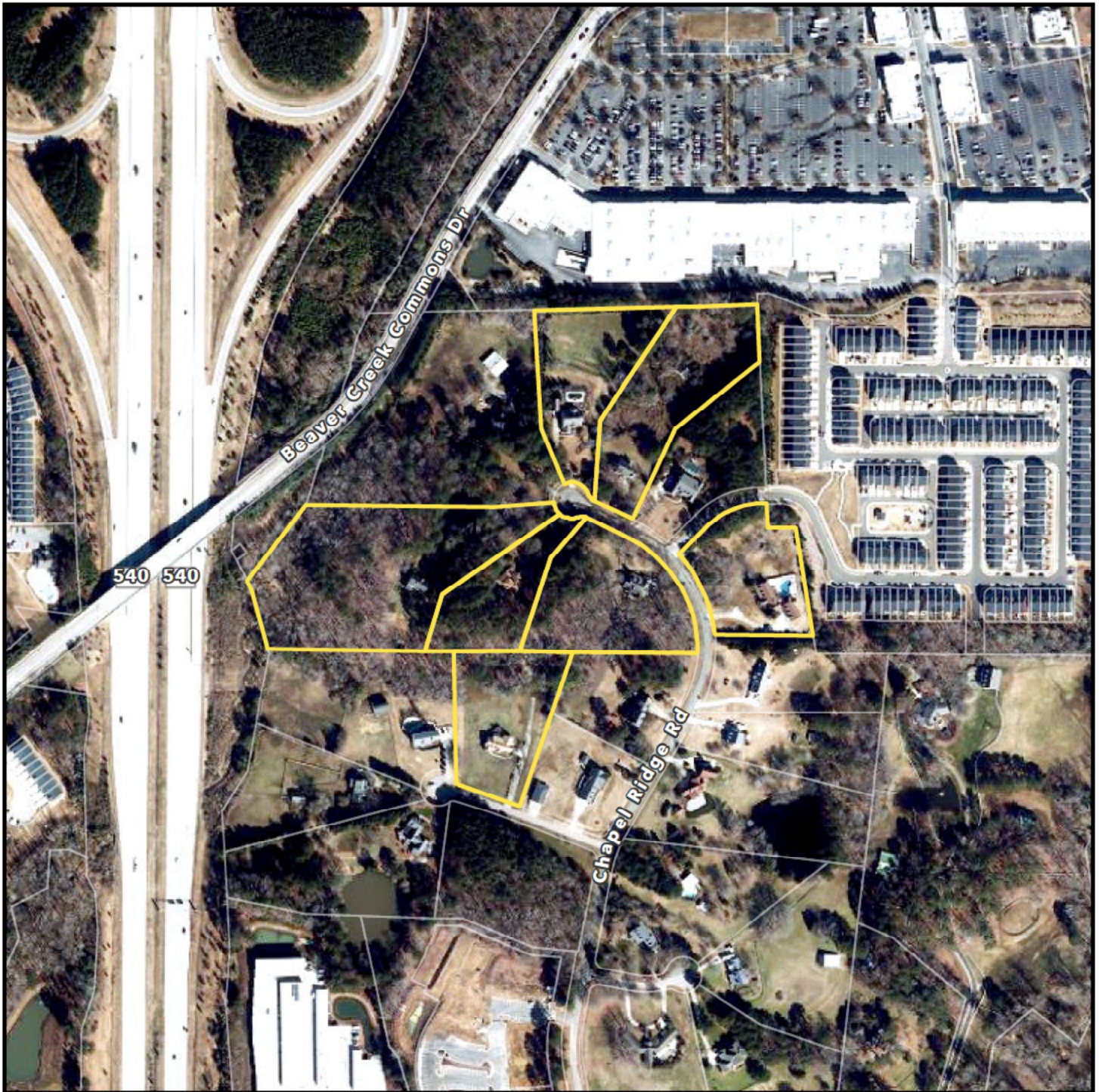
To participate by telephone:

Dial:	1 929 205 6099
Enter the following meeting ID:	893 2645 9717 #
Enter the Participant ID:	#
Enter the Meeting password:	329414 #

If you have any questions about this rezoning, please contact me at (919) 835-4032 or via email at matthewcarpenter@parkerpoe.com.

Thank you,

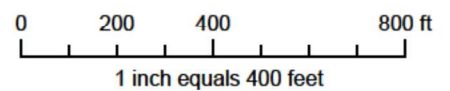
Matthew Carpenter



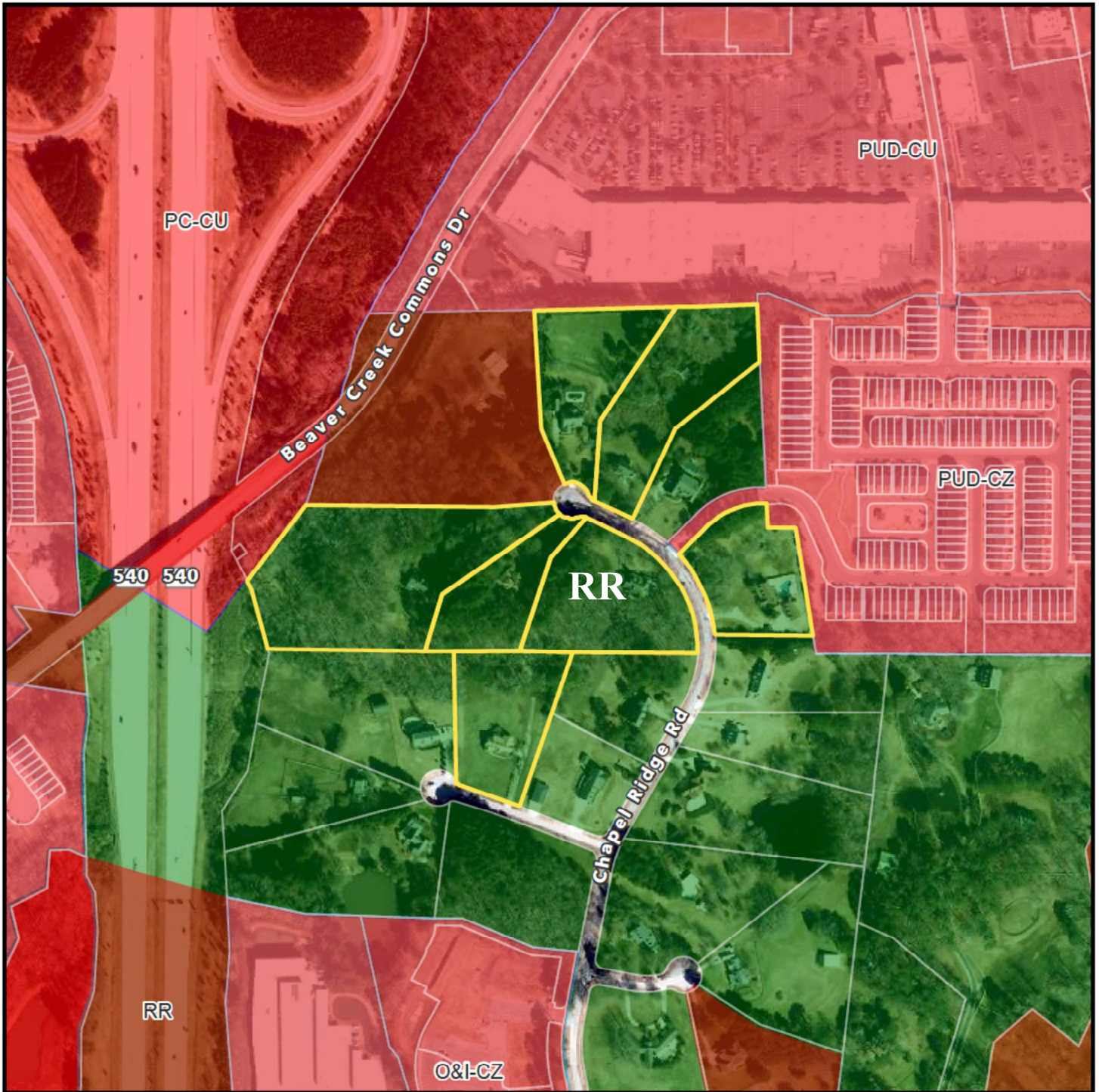
Rezoning of:

**1220, 1204, 1205, 1209, 1220 and
1225 Chapel Ridge Road, &
1512 Clark Farm Road**

Vicinity Map



Disclaimer
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are NOT surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.

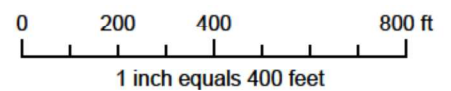


Rezoning of:

**1200, 1204, 1205, 1209, 1220 and
1225 Chapel Ridge Road; &
1512 Clark Farm Road**

Zoning Map

Current Zoning: RR



Disclaimer
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.

Exhibit A
Trammell Crow PUD-CZ
Owner Information Addendum

Parcel 1

Site Address: 1200 Chapel Ridge Road
PIN: 0732256180
Deed Reference (book/page): 12343/2193
Acreage: 5.27
Owner: Su Yueh Kao and Chi Chang Ho
Owner Address: 1200 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 2

Site Address: 1204 Chapel Ridge Road
PIN: 0732249869
Deed Reference (book/page): 8218/1726
Acreage: 1.71
Owner: Michael P. Mohan and Catherine A. Mohan
Owner Address: 1204 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 3

Site Address: 1205 Chapel Ridge Road
PIN: 0732352538
Deed Reference (book/page): 12171/2059
Acreage: 2.48
Owner: Douglas Cox and Carrie Cox
Owner Address: 1205 Chapel Hill Road, Apex, NC 27502-8502

Parcel 4

Site Address: 1209 Chapel Ridge Road
PIN: 0732354594
Deed Reference (book/page): 6236/386
Acreage: 3.0
Owner: Ronald L. Stringari, and Katherine L. Stringari
Owner Address: 1209 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 5

Site Address: 1220 Chapel Ridge Road
PIN: 0732343920
Deed Reference (book/page): 4168/302
Acreage: 2.88
Owner: Larry L. Carlson and Kathi E. Carlson
Owner Address: 1220 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 6

Site Address: 1225 Chapel Ridge Road

PIN: 0732347912

Deed Reference (book/page): 9720/361

Acreage: 2.13

Owner: Tigh M. Dundieff and Diane Cundieff

Owner Address: 1225 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 7

Site Address: 1512 Clark Farm Road

PIN: 0732340602

Deed Reference (book/page): 5351/223

Acreage: 2.34

Owner: David D. Sherry and Ethel V. Sherry

Owner Address: 1512 Clark Farm Road, Apex, NC 27502-8500

Providing Input to Town Council:

Each Town Council meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Town Council meets on the 1st and 3rd Tuesdays of each month at 6:00 p.m. (except for holidays, see schedule of meetings at <http://www.apexnc.org/838/Agendas-Minutes>). You may also contact Town Council by e-mail at AllCouncil@apexnc.org.

Private Agreements and Easement Negotiation:

The Town of Apex cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Apex can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Town Council public hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the Town Council public hearing if the agreement is included in the conditions. If it is not, you may request that the Town Council not approve the rezoning without the agreement being included in the conditions (note that it is up to Town Council whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Interactive Development Map at: <http://apexnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=fa9ba2017b784030b15ef4da27d9e795>

Documentation:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

COMMON CONSTRUCTION ISSUES & WHO TO CALL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Noise & Hours of Construction: Non-Emergency Police 919-362-8661

Noise from tree removal, grading, excavating, paving, and building structures is a routine part of the construction process. The Town generally limits construction hours from 7:00 a.m. to 8:30 p.m. so that there are quiet times even during the construction process. Note that construction outside of these hours is allowed with special permission from the Town when it makes more sense to have the construction occur at night, often to avoid traffic issues. In addition, the Town limits hours of blasting rock to Monday through Friday from 8:00 a.m. to 5:00 p.m. Report violations of construction hours and other noise complaints to the Non-Emergency Police phone number at 919-362-8661.

Construction Traffic: James Misciagno 919-372-7470

Construction truck traffic will be heavy throughout the development process, including but not limited to removal of trees from site, loads of dirt coming in and/or out of the site, construction materials such as brick and wood brought to the site, asphalt and concrete trucks come in to pave, etc. The Town requires a construction entrance that is graveled to try to prevent as much dirt from leaving the site as possible. If dirt does get into the road, the Town can require they clean the street (see "Dirt in the Road" below).

Road Damage & Traffic Control: Water Resources – Infrastructure Inspections 919-362-8166

There can be issues with roadway damage, roadway improvements, and traffic control. Potholes, rutting, inadequate lanes/signing/stripping, poor traffic control, blocked sidewalks/paths are all common issues that should be reported to Water Resources – Infrastructure Inspections at 919-249-3427. The Town will get NCDOT involved if needed.

Parking Violations: Non-Emergency Police 919-362-8661

Unless a neighbor gives permission, there should be no construction parking in neighbors' driveways or on their property. Note that parking in the right-of-way is allowed, but Town regulations prohibit parking within 15 feet of driveways so as not to block sight triangles. Trespassing and parking complaints should be reported to the Non-Emergency Police phone number at 919-362-8661.

Dirt in the Road: James Misciagno 919-372-7470

Sediment (dirt) and mud gets into the existing roads due to rain events and/or vehicle traffic. These incidents should be reported to James Misciagno. He will coordinate the cleaning of the roadways with the developer.

**Dirt on Properties or in Streams: James Misciagno 919-372-7470
Danny Smith Danny.Smith@ncdenr.gov**

Sediment (dirt) can leave the site and get onto adjacent properties or into streams and stream buffers; it is typically transported off-site by rain events. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the appropriate repairs with the developer. Impacts to the streams and stream buffers should also be reported to Danny Smith (danny.smith@ncdenr.gov) with the State.

Dust: James Misciagno 919-372-7470

During dry weather dust often becomes a problem blowing into existing neighborhoods or roadways. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the use of water trucks onsite with the grading contractor to help control the dust.

Trash: James Misciagno 919-372-7470

Excessive garbage and construction debris can blow around on a site or even off of the site. These incidents should be reported to James Misciagno at 919-372-7470. He will coordinate the cleanup and trash collection with the developer/home builder.

Temporary Sediment Basins: James Misciagno 919-372-7470

Temporary sediment basins during construction (prior to the conversion to the final stormwater pond) are often quite unattractive. Concerns should be reported to James Misciagno at 919-372-7470 so that he can coordinate the cleaning and/or mowing of the slopes and bottom of the pond with the developer.

Stormwater Control Measures: Jessica Bolin 919-249-3537

Post-construction concerns related to Stormwater Control Measures (typically a stormwater pond) such as conversion and long-term maintenance should be reported to Mike Deaton at 919-249-3413.

Electric Utility Installation: Rodney Smith 919-249-3342

Concerns with electric utility installation can be addressed by the Apex Electric Utilities Department. Contact Rodney Smith at 919-249-3342.

NEIGHBORHOOD MEETING SIGN-IN SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Address: Online via Zoom

Date of meeting: February 16, 2022 Time of meeting: 6:00

Property Owner(s) name(s): See exhibit A attached to neighbor notice letter

Applicant(s): Josh Dix, Trammell Crow Company

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only. For virtual meetings, applicants must include all known participants and request the information below.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	<u>See attached attendance list</u>				
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

**Chapel Ridge PUD
Neighborhood Meeting Sign-In Sheet
February 16, 2022**

Mike Bishop
Rita Boykin
Sara Grover
James Faulkner
Melinda Busi
Jim Serino
Nancy Corey
Prakash Patel
Mike Mohan
Michael Merker
Carrie Cox
Kathi Carlson
Jason Buehring
Scott Kipp
David Prestrud
Shree Gopalprabhu LLC
Russ Overton
Cat Mohan
Richard Biseli
Charles Pope

*Contact information was received but has been redacted for filing

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): See exhibit A attached to neighbor notice letter

Applicant(s): Josh Dix, Trammell Crow Company

Contact information (email/phone): _____

Meeting Address: Online via Zoom

Date of meeting: February 16, 2022 Time of meeting: 6:00

Please summarize the questions/comments and your responses from the Neighborhood Meeting or emails/phone calls received in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1: How many units are planned for the project?

Applicant's Response: We expect around 357 apartment units spread across three separate buildings along Chapel Ridge Road, although the final density and acreage will be determined when we file the rezoning application and PUD documents.

Question/Concern #2: Can you look at moving the dumpster currently shown along the southern property line? As shown, the dumpster would be close to my home and I do not want to hear and see garbage trucks pulling in and out.

Applicant's Response: Final dumpster locations will be determined at the site plan stage, but we can look at adding a condition to the PUD text that there won't be a dumpster within x feet of your property line.

Question/Concern #3: Will the extension of Chapel Ridge Road be public right-of-way or a private road? If public right-of-way, will it be maintained by NCDOT or the Town of Apex?

Applicant's Response: The portion of the Chapel Ridge extension north of the existing cul-de-sac, all the way up to the shared property line with Beaver Creek will be public right-of-way. The portion across the Beaver Creek property will be a private road but will be subject to a public access easement. We have had preliminary discussions with Town transportation staff, but do not know definitively at this point whether the public right-of-way portion of Chapel Ridge will be maintained by the Town or NCDOT.

Question/Concern #4: General concerns about traffic, including cut through traffic from residents of the proposed development.

Applicant's Response: We expect the Chapel Ridge Road extension to improve traffic connectivity in the area. We are in the process of completing a Traffic Impact Analysis that examines existing and proposed traffic and will recommend any necessary road improvements. The TIA will be filed with our rezoning application.

Chapel Ridge North PUD
Summary of Neighborhood Meeting Discussion
February 16, 2022
6:00 PM via Zoom

Question 1. What is the expected density? Net and gross if you have it.

Response: We are currently planning approximately 350 units and an overall density between 17-20 units an acre depending on our final total acreage.

Question 2. Could you further explain the PUD designation? Maybe give more background? Why PUD. Obviously it's zoning adjacent to Beaver Creek. What real flexibility does that give you? Or what are Apex's from a PUD zoning as opposed to something more traditional? And a follow up, how does that fit into Apex's land use plans?

Response: Normally when you go for rezoning request, you're asking for a change from the base district, so you could be asking for a change from low density residential to high density residential. So those standards for those districts are outlined in the UDO and so what the PUD does, it allows you to draft your own ordinance for just this property and the idea is you can change certain standards like, provide larger sidewalks or reduce a setback. You can change a lot of different things to allow kind of a unique site design. So, part of the reason we went that route, was because it allows us flexibility as to where to locate buildings, driveways, RCA areas, which we will comply with, which won't be any deviation we don't think anyway. So what the Town looks for when you do a PUD, is in exchange for those separate standards, they look for a development that's higher quality. They look for things like architectural commitments, and conditions in that text that ensure that the Town and the neighbors will get a high quality development in that location. It also adds a lot of conditions and certainty at this stage that you don't see in a regular re-zoning request.

Question 3. I'm at 1213 Chapel Ridge Road, and I just want to make it clear that I don't want to be the "donut hole" in the center of the re-zoning, nor does the town want a donut hole where the property and the town knows So currently my property is for sale for current market value

Response: Reaching out in next week to better understand what your goals are.

Question 4: It's my understanding that the Toll brothers was denied a permit at the beginning of the neighborhood due to [not] enough resources for school and education purposes, so can you explain what you're doing to alleviate those concerns that the Town posed the Toll Brothers.

Response: We don't have a definitive answer on schools right now, but we are aware of the school capacity situation in Apex and we're in the process of doing some research as to what schools in the neighborhood are capped, what schools are under construction, are planned over the next several years, and how those future opening and districting will align with our project. We have had some early discussions as a team about that. We've reached out to Wake County Public Schools, and so it's an ongoing conversation.

Question 5: I assume as part of the traffic studies as well, for what you're proposing it may include a light at Chapel Ridge Road and Old Chapel Road but again I assume you're not quite far enough along to reach those discussion topics.

Response: We don't anticipate there will be a light required but we are in the process now of putting together the traffic impact analysis which will be finished by the time we file. So once we're done with that, we will submit it to the Town and the Town's traffic engineers... well first, when you file a TIA you meet with the Town's engineers and agree on the scoping of the study and what your development will look like which will trigger the traffic numbers in the study. So once we file the TIA the Town will review it and their traffic engineers will recommend mitigation efforts or improvements required based on the impact of the traffic impact analysis.

Question 6: Is the Church property going to connect to the proposed Northern access to your development or is it going to have a separate driveway?

Response: Right now the plan is for the church to have its own driveway. We have thought about it and have reviewed the plans. First, the Church is well ahead of our planning process and they're moving forward and the last thing we want to do is and the last thing they wanted us to do is derail their process. That became difficult. Second, as you all know there are very strict requirements for RCA areas and greenspace, and so we would struggle to fit a roadway anywhere on their site that would impact their greenspace requirement. In the end it made more sense to route the road to the North across the space that is being used as a pump station pull out drainage pond for the shopping center and that doesn't impact the church or their plans whatsoever.

Question 7: I have a couple of questions on the site plan/layout. The first Question: you have the color that runs over my property line. Could you explain a little about that?

Response: This color is actually my way of showing the steam buffer. Not a plan or anything, just trying to identify the buffers.

Question 8: have a concern about that because that site map that you're showing everybody, unless you can expand it, the site plan that was given to us, the Southwest of building 3, there is an existing stream on that property so if you develop that property what's going to happen to that stream in terms of pushing it on to people's property to the south?

Response: I can clarify a little on this one. Early on in this process we downloaded GIS data before we could get survey teams and environmental consultants out to the site. And so that line came from GIS data but we have since had natural resource consultants go out and evaluate the environmental features on this site and the stream buffer that has been determined kind of ends about in the middle of that southern parcel where that green line is going through and does not extend. So it's even further west than the ..and down of that far south parcel above that buffer and everything to the right of that has been determined non-jurisdictional. Which The town of Apex , the natural resource consultants are coordinating with them to confirm their initial determination but we do not plan to impact any stream buffers.

Question 9: that leads me into my second question. And thank you for answering that, is on the west side are you keeping that open, I think you called it a park area and all that, there is a large portion of that that is deemed wetlands, okay. I believe it's up and to the left. Are you planning on petitioning to convert any of those wetland at any point in the future. And secondly, no matter what, if you do building #3, are you planning on doing an environmental impact study?

Response: We do not plan to have any wetlands impacted by this project. I believe in the most recent determination we received they did not find any jurisdictional wetlands out in that area. And that will still go through coordination through the town and confirmation with Town staff. But the only environmental features determined on this site by our consultant are the stream along the far western property boundary kind of parallel to beaver creek road and then that portion of the southern stream up until about the middle of that southern parcel.

Follow up: ok did I hear that right? You checked and you said it wasn't wetlands?

Response: Yes, that's correct. We've had a professional environmental consultant evaluate that area.

Question 10: Russ Overton: Mike asked a question about the traffic study and the signal, but I was wondering about the, at the appropriate time, if it was possible to get a copy of the traffic study just to see what the assumptions are, how much traffic this is actually going to out on Chapel Ridge Road itself, not necessarily a question about a signal or not, just traffic in general.

Response: We will actually file that as part of our application. So it will be publicly available.

Question 11: Ok and number of units are one thing, do you have an idea of breakdown of units; if its 1 bedroom, 2 bedroom, 3 bedroom and potentially with that how many people that might end up bringing and also then how many parking spaces would then be required?

Response: Obviously Russ, it's a bit in flux as you could imagine, but we're looking at a pretty even mix, about 50/50 or 45/55 between 1's and 2-3s. that's the current plan. I just pulled it up real quick. It looks like we're 45/45/10. So 45% one bedroom, 45% 2, and 3 bedroom 10%. The average size for the units is under 1,000 square feet, 950 across the buildings. We are looking at all surface parking if you can see on this plan, nothing structured and a ratio that will be 1.5 maybe even under that. We will be refining the parking as we refine the bedroom count mix. We like to make sure generally in all developments we do that you have about one parking space per bedroom. So it works out somewhere about that 1.5 a little less.

Question 12: Are you going with the Apex standard parking or are you asking for any special reductions? Does the PUD allow for any reductions as a special condition or anything?

Response: The PUD does allow for it, but you know we went in to our initial meeting with the Town and what you see I believe meets the UDO standard, which I think is 1.5 if I remember correctly. But the Town did mention they have a lot of parking lot landscaping requirements that actually exceed what you see here, so that may reduce a couple of spaces. So we're going to be right around what's required maybe a couple spaces less, we don't know for sure yet.

Question 13: I was going to ask you about storm water. I know it's a preliminary concept plan, but is it under the parking? Have you contemplated that yet? How you might treat stormwater?

Response: We're planning on the majority of the treatment to be through surface treatment, through most likely a wet pond, essentially a bio retention area but more of your typical surface pond treatment as opposed to large underground vaults.

Question 14: There's like a curve line, it's in the middle, it's probably I'm guessing where the cul-de-sac is, yes right there, So it's a curve and it's a collector and Matthew I was asking you

it's a collector by Apex standards coming out of Hempstead, so the rest of it's a DOT road, are you contemplating some abandonment by DOT, I'm guessing that might be an abandoned right of way that you'd be taking advantage of because you're re-aligning the road and then would that become a private street, an Apex street, how are you dealing with the DOT situation with the current status of the road?

Response: We talked to the Town transportation stuff about this and they are open to all of Chapel Ridge being a Town maintained road but we haven't settled on that yet. The majority of the extension would be public Right of way, whether that's DOT or that's the Town of Apex. Right here, you can see that line, shaded in the blue area here, north of that area shaded in blue is the Beaver Creek Commons Property. So what we're going to acquire from them is an easement over this portion and so for that reason that portion of the road is most likely going to be a private drive. What that will look like practically we think, is that will execute a public access easement to the Town so that it will function just like a public right of way, but be maintained by the property owner.

This curve continues there so you can see think pink on the screen and the property line is actually more about right here and so this is intended to have that right of way go to the Town or to NC DOT, and regardless of how it ends up working out, it would be public right of way of some sort from that pink line I'm drawing back down to the existing right of way. So that swath would be right of way. And as Matthew said this (references blue portion) is a little more complicated and we're working with the Town in terms of the best way, the intention is that it's public access no matter what. But what form legally it takes, is still TBD.

Question 15: I have a very minute question that probably pertains alone to my property, but in the building 2 schematics you have there, is there room for negotiation as far as where you have that trash dumpster? I would really like to not go out on my back porch and be smelling trash.

Response: Absolutely we can talk about where that can be. Again, I wouldn't get too hung up on a lot of this but it's a valid point and we're happy to talk about that. The Architect and Kody are taking notes. We will take a look we're that can be. The locations of things like dumpsters, will actually be determined at the site plan and so that process happens after the zoning. So locations of things like this are normally sited at site plan, but there's some specific requests like the one you just raised, that we can make sure of that before we go to site plan. We can work on a condition that would limit how close dumpsters can be placed to your property line.

Question 16: Going back to that buffer area to the West of Chapel Ridge Road and the Church property, who would be responsible for whatever would be in that buffer zone as far as planting and that kind of thing. You drew those pink lines to the West...

Response: So the intent is that this would all be sidewalks and would be landscaped and would all be done by the development team, by us, and that we would maintain those buffer zones as we would the rest of the property. Commercially landscaped, commercially mowed, things like that.

Question 17: One other question, on the south side under the property line, there's a pond that runs through the property line, what is your consideration of that pond. We can talk offline about it if you would like, but if you have an answer?

Response: We currently don't have any plans to use the pond but can discuss this further.

Question 18: My personal feeling, and I'm only speaking for myself, I have always had a hard time with it being maintained by DOT, maintenance whatever, even though it looks great right now because they just repaved it, but just to get some consistency rather than it being segmented. Dot owns that then back to Apex.

Response: We don't have strong preferences who maintains it. For example, if you want to have Apex maintain all of Chapel Ridge, we can definitely include you in those discussions, might make them more likely to take over the street.

Question 19: What will be discussed at EAB tomorrow night? Can you give us details? Are you asking them for anything? Proposing something? What do they look for what do they do? Can you clue us into an EAB meeting in Apex?

Response: The EAB is the Environmental Advisory Board and it's kind of like, a sub-board for the a planning commission for the environment. What they'll do, we've submitted a request to them saying you know, we've filed this zoning request, here are our initial plans, and they will provide recommendations to us that will provide a certain number of electric vehicle charging stations. They request things like signs that demarcate wetlands, or buffers, solar power. So the initial meeting is going for them to provide recommendations to us as to what they think we should include in our re-zoning application. They're a little unique, they are the only jurisdiction that has this that I know of.

Question 20: Regardless of the traffic study, we're actually living here in this subdivision and have noticed a ridiculous amount of traffic that has come from that Hempstead community, so whether you take over the whole road, or just that small portion, I'd like to strongly encourage the use of speedbumps through there. People are unfortunately using it as a cut through to get to other areas of Apex. I normally take walks, and I'm constantly wondering if I'm going to be hit because people are not driving 25 mph through there. So I would like to strongly suggest your consideration of that.

Response: We can explore traffic calming measures but Town transportation staff and NCDOT are normally pretty strict when it comes to traffic calming measures.

Question 21: I have several things, but let me start off by saying (address given) and my husband and I along with our neighbors are opposed to this, strongly. I just want to go ahead and get that out front. I think everyone else probably knows that. First, I noticed at the beginning of the introduction, you showed the overview of everything and you pointed out Beaver Creek, you pointed out Hempstead, you pointed out these neighbors that want to sell and put apartments there, and noticed, I think you may have pointed out, 540, office park and you did the 100 townhomes that are supposed to be possibly developed here. You did not mention the homeowners who are single family homes, who want to stay here. I just thought that was sort of obvious. You talk about everyone else here in the neighborhood but those of us, some of us, living here for over 30 years.

Response: There was no nefarious intent there. You all live there.

Question 22: I'm sure there wasn't but you talked about everyone else...but anyway.. I'm going to continue from there, okay? You were going to out forward to the Town of Apex, requesting a rezoning from rural residential, even though the 2045 plan says medium density, to the PUD. Apparently, you are not submitting your own land use map amendment to Apex, you are requesting a PUD – CZ. All that is, is just going around and changing that property from medium to high density. That's all it is. Instead of going in and being straight forward about it and trying to see if you can get it re-zoned ...anyway...you know what I'm talking about. It just doesn't seem quite right. I know that's the way things are done.

Response: We are not actually trying to get around anything, that's actually a change in the law recently. You know, before, I think it was last year, we you submitted a rezoning request that was different than the future land use map, you also submitted a future land use map amendment request. And so now, 160D, which is the new statute that governs development and municipalities, when you re-zone properties and the proposed use is different than the land use map, the land use map is automatically amended. So even if we filed a future land use map amendment, the Town wouldn't review it. You know, the Town did that in another case, and the said, you know it happens automatically now, we don't accept these with re-zonings.

Question 23: You have an area on Barnside lane and that area is approximately a little over 21 acres. And you're dealing with a little over 19. They have gone to the Town of Apex, and first of all I think they were request 116 townhomes. That did not pass by the Town council, because of schooling and I think a few other issues. You on the other hand, are looking at little over 19 acres and are proposing, now well was 344, now I think its 350 approximately on just about the same acreage. I mean that's going from 4 plus units an acre down her on the Barnside and you're proposing 17-19 units per acre. That's just the extreme. I mean what they're proposing at Chapel Ridge Townes is within the medium density, the lower part because medium density for residential is 3-7 units per acre. Why are you coming up with this many? Is it because you're having to pay that much more for the property than they have? I mean when you're talking about putting 4 story apartment buildings next to single story family homes, it's just...abhorrent. It's about the only word I can think of right now. ... I can't understand why one developer is working at 100 units and you're working at 350 on pretty much the same acreage. But, okay, after that, the other thing I want to talk is let's see.. you were talking about traffic. The road coming through here. Well, if you think this is such an ideal situation to the extend Chapel Ridge Road out behind a shopping center, coming in and out at the back of the shopping center then why don't you think about putting a cul de sac right there before your apartment buildings start. And that way you'll have that one entrance and exit. They can also use Hempstead, unless, because you want to put in 350 units you have to have 3 exits, is that why?

Response: No, it's not the density. The Town really dis-favors cul de sacs, you know they haven't said this, but my experience in the past they probably wouldn't approve a cul de sac here. They like connectivity and different access points to help with traffic circulation. But that's what this plan does. We differ in that I understand.

Question 24: I understand completely and it makes sense not to put one there, but I do not see 350 units/people or more, wanting to go in an and out of that back entrance from the back of the shopping center. They're going to come in off Chapel Ridge Road. I mean Olive Chapel and it's just going to add to that I mean we have what we have we're dealing with now Hempstead is 193 townhomes I believe. They now want to put 1 00 at the entrance. And you're talking 3 50 more individuals or families I mean that traffic situation is going to be again just a poor just abhorrent.

Absolutely it's going to be a nightmare. We live here. And you don't. Ok you got all this green and it might not be wetlands, but it's wet back there which if you've had anyone traipsing back through there and we have seen surveyors going back there.

They know it's wet. That's an awful lot of land that's not cannot be used I mean you can say it's part of the RCA and you're going to use it for screen buffers and stuff like that and storm retention. That's a lot of acreage that's not being utilized and then you have a Sherry property which is right beside my property and also the Brea's and no You're going to jut out between three homes I mean that's just when you look at that it just makes no sense whatsoever.

Response: The Sherry property actually you know they're right now they're no buildings or developments proposed for that lot. So the site, that property is included in the site, but there are no buildings there so it won't jut out at all by your property. It will stop along the edge of the parking lot right there.

Question 25: but what should happen in 10 years? You own the property what's to say it's not going to be developed later on?

Response: If we include it as part of our plan, and show it as open space or RCA area, then it won't be. If we cut it off and sold it, it could be re-developed. But it's a small enough lot that it would be tough to support really a separate development on just that parcel because it's not its own space.

Question 26: why even have their why even have that lot in that home in with everything else? I know part of it because I know little bit of what's been going on we have a bunch of neighbors rather than sell their houses individually, decide to get together because they thought they could get more money for their property and the Sherry's said OK let's get in and join it and it just..... I don't know anyway that's not real please pleasant either. Then there's the issue with the lighting. You've got lighting at all on these apartments lights I'm sure on the buildings lights in the parking lot next to single-family homes that's not good. We've had issues with the office park down here. It took nine months to get that straight and it still an awful lot of lights with three more buildings to. So there's a concern. I mean we're talking concern with trash cans, lighting is another concern. Lighting is right next to those people and it's just....

It's a mess I mean you look at something you're going in and putting apartments.

And I want to say 19 acres you're not even utilizing 19 acres and then they're just right next to single-family homes whether it's the Bishops whether for the Coreys itit just...It does not look like it's been well thought out and well planned .. um.... I'm trying to think there's anything else I wanted to ask because I've got notes here and there. It is not wanted. When you take a look at the chapel the Old Chapel Ridge land map, the original development, which was 22 lots and you look at that now and it wants to be chopped up into six different projects you might say it's not really projects, but you're talking flex 540, you're talking the office Park, you're talking a possible 100 and townhomes at the south end, you're talking about those people who have single-family homes who wish to stay here who do not wish to sell out to developers you have this, your group which wants to put 350 high-rise apartments right next to us.

Question 27: Can I follow up on her.... Rita sparked some questions and I want to get a couple of them to on the cul-de-sac issue and Matthew I know you said with Apex likes but I might would point to ... I think it's the village at Westford apartments. This was brought up

previously. The developer actually built a cul de sac in that and that it's kind of stubbed my opinion from a traffic engineer prospective, which I am one they should've connected through but they didn't for some reason so it's really hard to understand when Apex says things like that why one subdivision gets something in our subdivision get something different.

Response: That's fair. What I was referencing is there's language in the PUD section in the UDO that actually says that cul-de-sacs should be avoided. I think what people do, is reference the sentence after that that says, except for some extenuating circumstances and they probably cited those.

Question 28: I'm not trying to call you out with me in particular have pointed some of these inconsistencies out to Apex and we seem to always be at the... so I get Rita's frustration and a lot of frustration in the neighborhood, because we seem to get the deal and I think I mentioned it feels like a death by 1 000 cuts sometimes... well if I can qualify something you said on the Sherry property, you said that property could be included in the CRA? I wanted to... is it included as a CRA or not.

Response: Let me be more clear on what we're evaluating there, We're trying to decide whether we're going to include that lot in our re-zoning request in this development at all. And so if we include it, I think, and Kody can correct me if I'm wrong, most of it will be RCA and if we don't include it then it would stay a single-family home and it wouldn't be part of our re-zoning request.

Question 29: The medium density thing is hard to swallow ...a sub-committee of the Town Council invited us to a meeting. Some of the neighbors that wanted to sell, some that don't want to sell, it was a mixed bag from the neighborhood I guess, we all went they were asking us our opinion I guess. We all got to speak. Well, the ones that wanted to speak, because they were changing the plan at the time and ultimately they concluded through a no vote not to change the plan, so I think it's hard to understand you know where Apex is at regardless of what the law allows or doesn't allow it's like there's an open dialogue about keeping the Land use plan at medium density despite what some people may have wanted to change it and they kept it that way so I think that's that again something maybe for us talk to Apex about to get an understanding. For myself, I just want to understand what the neighborhood should or wants to become. And I'll make this my last comment; as I feel like Rita. I'm not supportive of this either.

Question 30: My wife and I are at 1313 Chapel Ridge Rd. which is next-door to Russ across the street from Rita and Melinda and I just wanted to say amen to everything to Rita said. I want it to be understood that she pretty much speaks for all of us who plan to stay here, in her concerns and her frustration with the way things have gone here in in particular what's being proposed here so just want to put that on the table thanks.

AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Matthew J. Carpenter, do hereby declare as follows:
Print Name

1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.
2. The meeting invitations were mailed to the Apex Department of Planning and Community Development, all property owners and tenants abutting and within 300 feet of the subject property and any neighborhood association that represents citizens in the notification area via first class mail a minimum of 14 days in advance of the Neighborhood Meeting.
3. The meeting was conducted at online via zoom (location/address) on February 16, 2022 (date) from 6:00 (start time) to 8:00 (end time).
4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.
5. I have prepared these materials in good faith and to the best of my ability.

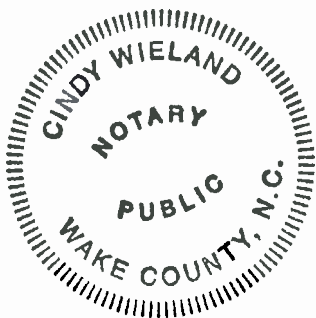
3/1/2022
Date

By: [Signature]

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Cindy Wieland, a Notary Public for the above State and County, on this the 1st day of March, 2022.

SEAL



Cindy Wieland
Notary Public
Cindy Wieland
Print Name

My Commission Expires: 2-22-26

August 22, 2022

Neighborhood Meeting –

Required to add Bishop property to the case and change the proposed use for the Sherry property.

NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

August 5, 2022

Date

Dear Neighbor:

You are invited to a neighborhood meeting to review and discuss the development proposal at

See attached Exhibit A

See attached Exhibit A

Address(es)

PIN(s)

in accordance with the Town of Apex Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, please refer to the Project Contact Information page for ways to contact the applicant. Notified neighbors may request that the applicant provide updates and send plans via email or mail. Once an application has been submitted to the Town, it may be tracked using the [Interactive Development Map](#) or the [Apex Development Report](#) located on the Town of Apex website at <http://www.apexnc.org/180/Planning-Community-Development>.

A Neighborhood Meeting is required because this project includes (check all that apply):

Application Type		Approving Authority
<input checked="" type="checkbox"/>	Rezoning (including Planned Unit Development)	Town Council
<input type="checkbox"/>	Major Site Plan	Technical Review Committee (staff)
<input type="checkbox"/>	Special Use Permit	Board of Adjustment (QJPH*)
<input type="checkbox"/>	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Board of Adjustment cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):

The applicant is proposing to rezone the property to Planned Unit Development - Conditional Zoning

District to facilitate the development of an amenitized multi-family community with one or more single-family detached homes. Additional information will be provided at the meeting.

Estimated submittal date: Application was submitted March 1, 2022

MEETING INFORMATION:

Property Owner(s) name(s): See attached Exhibit A

Applicant(s): Josh Dix, Trammell Crow Company c/o Matthew Carpenter

Contact information (email/phone): matthewcarpenter@parkerpoe.com; (919) 835-4032

Meeting Address: Apex Recreation Center; 53 Hunter Street, Apex, NC 27502

Date/Time of meeting**: August 22, 2022 (6:30 - 8:30 PM)

Welcome: 6:30 PM Project Presentation: between 6:30 - 8:30 PM Question & Answer: between 6:30 - 8:30 PM

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning and Community Development Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at <http://www.apexnc.org/180/Planning-Community-Development>.

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: Chapel Ridge Zoning: Rural Residential (RR)

Location: See attached Exhibit A

Property PIN(s): See attached Exhibit A Acreage/Square Feet: 19.81 acres

Property Owner: See attached Exhibit A

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Email: _____

Developer: Trammell Crow Company, c/o Matthew Carpenter

Address: 301 Fayetteville Street, Suite 1400

City: Raleigh State: NC Zip: 27601

Phone: 919-835-4032 Fax: N/A Email: matthewcarpenter@parkerpoe.com

Engineer: McAdams, attn. Kody Trowbridge

Address: One Glenwood, Suite 201

City: Raleigh State: NC Zip: 27603

Phone: 919-287-0841 Fax: N/A Email: trowbridge@mcadamsco.com

Builder (if known): Trammell Crow, c/o Matthew Carpenter

Address: 301 Fayetteville Street, Suite 1400

City: Raleigh State: NC Zip: 27603

Phone: 919-835-4032 Fax: N/A Email: matthewcarpenter@parkerpoe.com

Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts	
Planning and Community Development Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks and Greenways Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Traffic Engineering Manager	(919) 249-3358
Water Resources Department Jessica Bolin, Environmental Engineering Manager (Stormwater, Sedimentation & Erosion Control)	(919) 249-3537
James Gregg, Utility Engineering Manager (Water & Sewer)	(919) 249-3324
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

August 5, 2022

Re: Notice of Second Neighborhood Meeting

Neighboring Property Owners:

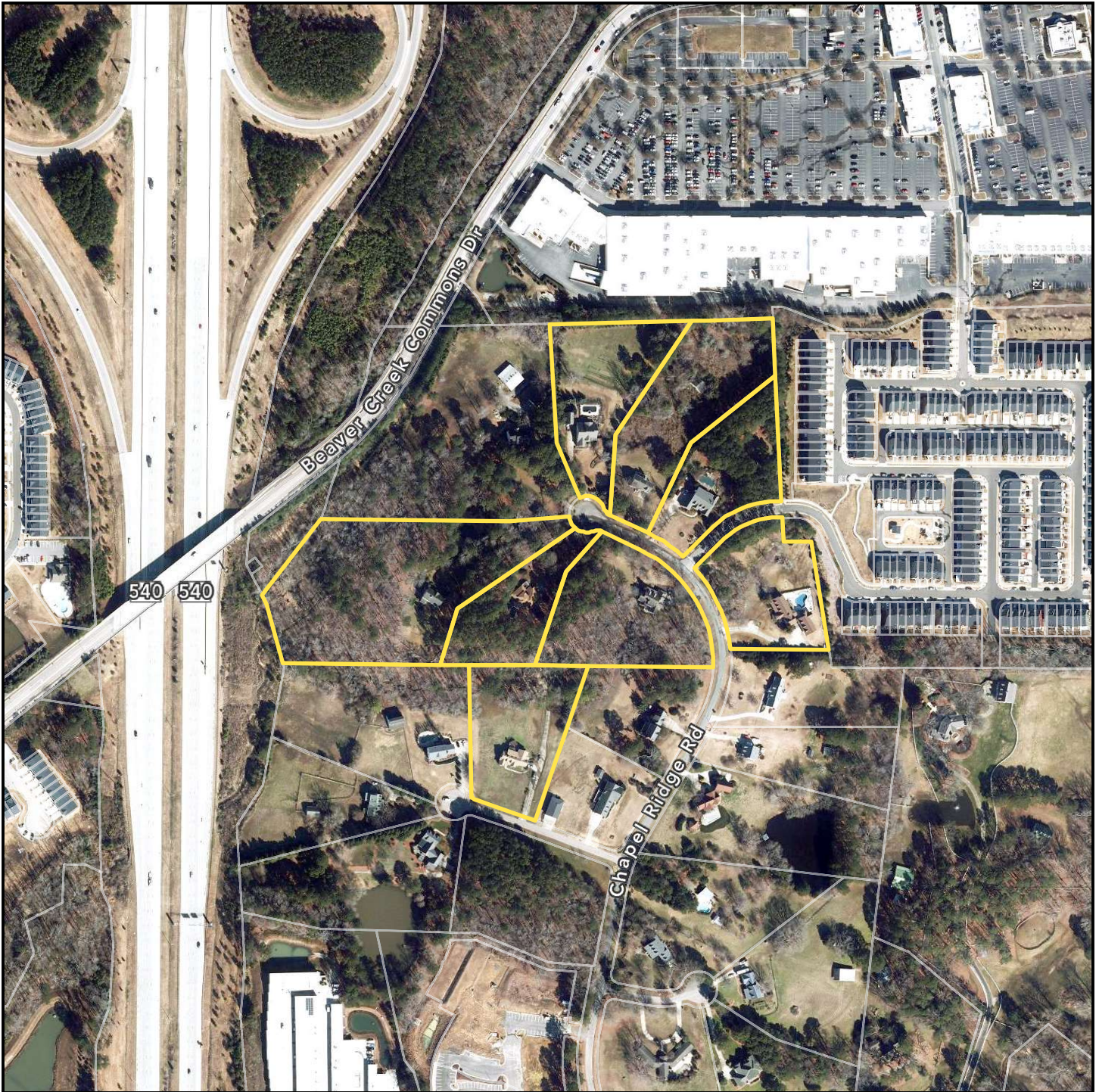
You are invited to attend a neighborhood meeting on August 22, 2022 from 6:30–8:30pm at the Apex Recreation Center, located at 53 Hunter Street, Apex, NC 27502. The purpose of the meeting is to discuss 22-CZ-07, the proposed rezoning of 8 parcels of land located at 1200 Chapel Ridge Road (PIN 0732256180), 1204 Chapel Ridge Road (PIN 0732249869), 1205 Chapel Ridge Road (PIN 0732352538), 1209 Chapel Ridge Road (PIN 0732354594), 1213 Chapel Ridge Road (PIN 0732356305), 1220 Chapel Ridge Road (PIN 0732343920), 1225 Chapel Ridge Road (PIN 0732347912), and 1512 Clark Farm Road (PIN 0732340602) (collectively, the “Property”). The Property is currently zoned Rural Residential (RR) and is proposed to be rezoned to Planned Unit Development-Conditional Zoning (PUD-CZ).

The applicant is proposing a rezoning to PUD-CZ to facilitate the development of an amenitized multi-family community that could include one or more single-family detached homes. During the meeting, the applicant will describe the nature of this rezoning request, provide updates since the first neighborhood meeting, and field any questions from the public. Enclosed are: (1) a vicinity map outlining the location of the subject parcel; (2) a zoning map of the subject area; (3) a preliminary concept plan; (4) a project contact information sheet; and (5) a common construction issues & who to call information sheet.

If you have any questions about this rezoning, please contact me at (919) 835-4032 or via email at matthewcarpenter@parkerpoe.com.

Thank you,

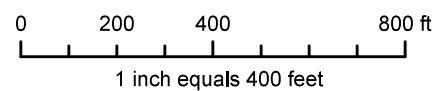
Matthew Carpenter



Rezoning of:

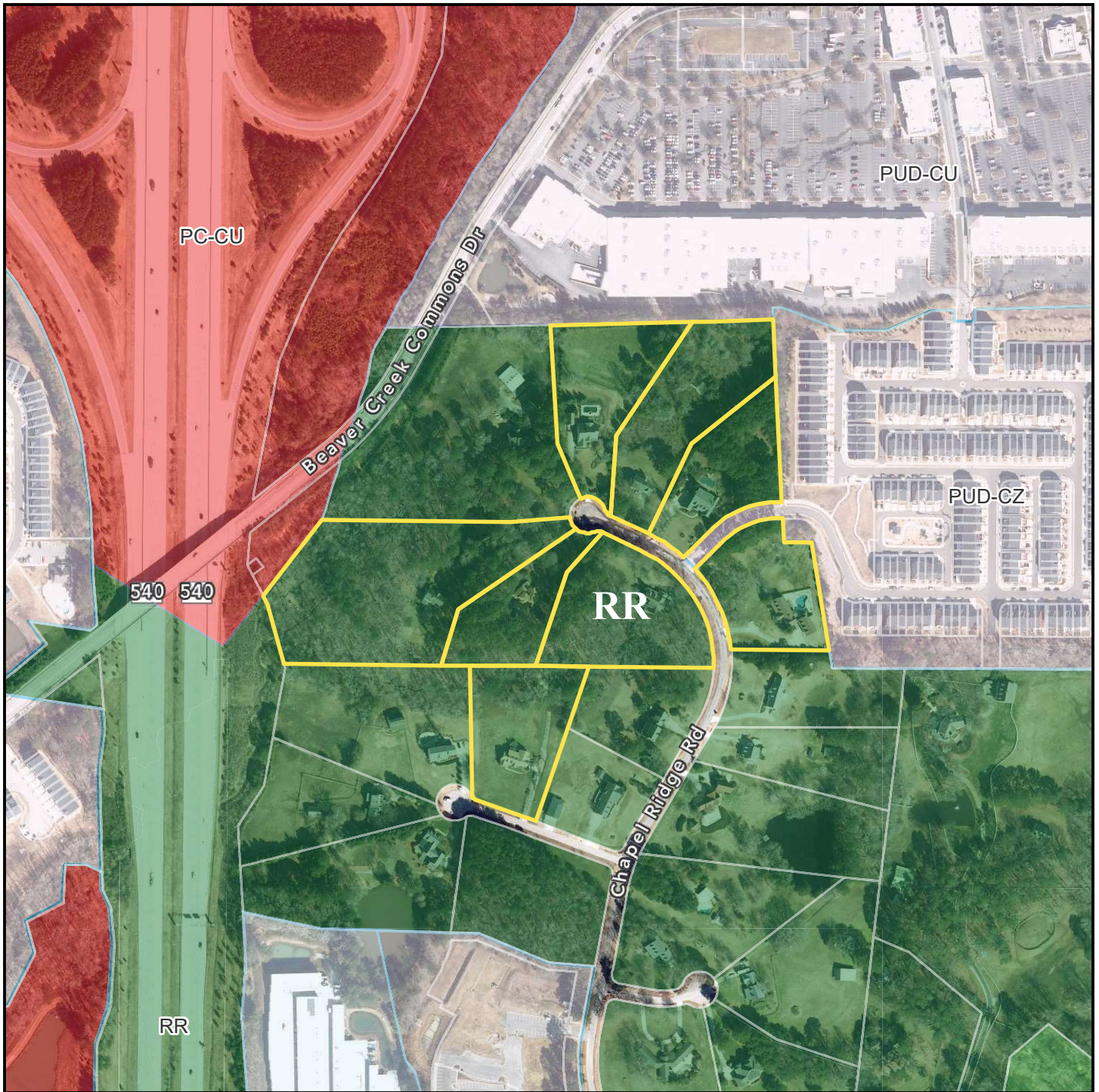
**1220, 1204, 1205, 1209, 1213, 1220 and
1225 Chapel Ridge Road, &
1512 Clark Farm Road**

Vicinity Map



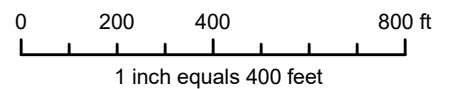
Disclaimer

iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are NOT surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.



Rezoning of:

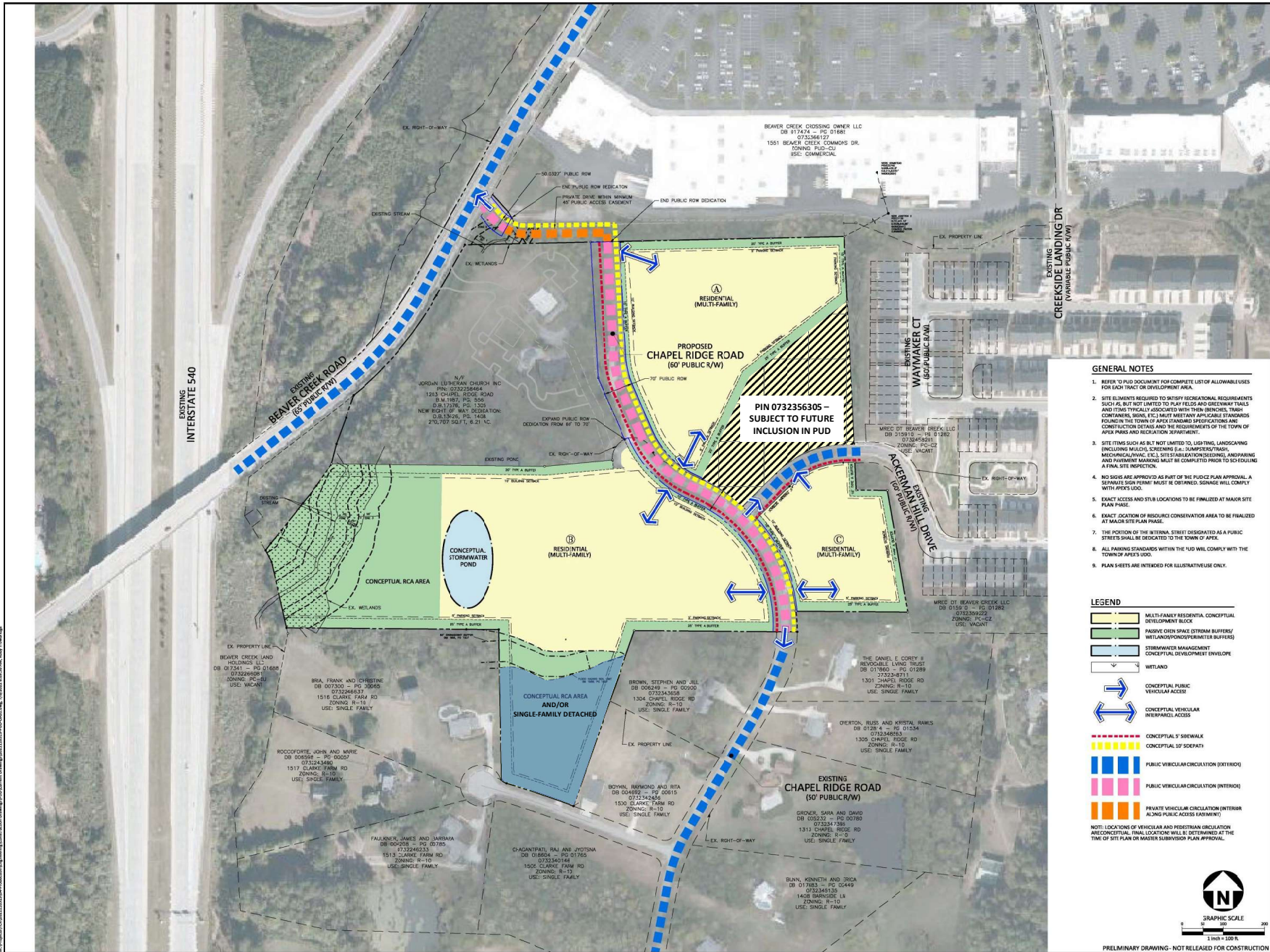
**1200, 1204, 1205, 1209, 1213, 1220 and
1225 Chapel Ridge Road; &
1512 Clark Farm Road**



Zoning Map

Current Zoning: RR

Disclaimer
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.



McADAMS
 The John R. McAdams Company, Inc.
 One Glenwood Avenue
 Suite 201
 Raleigh, NC 27603
 phone 919.823.4300
 fax 919.361.2269
 license number: C-0293, C187
 www.mcafamco.com

CLIENT
 HIGH STREET DISTRICT DEVELOPMENT, INC.
 553 FAYETTEVILLE STREET SUITE 303
 RALEIGH, NC 27601
 CONTACT: JOE DIX

**CHAPEL RIDGE NORTH
 PLANNED UNIT DEVELOPMENT PLAN**
 APEX, NORTH CAROLINA

- GENERAL NOTES**
- REFER TO PUD DOCUMENT FOR COMPLETE LIST OF ALLOWABLE USES FOR EACH TRACT OR DEVELOPMENT AREA.
 - SITE ELEMENTS REQUIRED TO MEET RECREATIONAL REQUIREMENTS SUCH AS, BUT NOT LIMITED TO PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS PROVIDED IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PUBLIC AND RECREATION DEPARTMENT.
 - SITE ITEMS SUCH AS, BUT NOT LIMITED TO LIGHTING, LANDSCAPING (INCLUDING MULCH, SCREENS E.G., DUMPSTER/STASH), MECHANICAL/PLUMBING (E.G. SITE-SERIALIZED DOWNSPROUTING), ANCHORING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.
 - NO SIGNS ARE APPROVED AS PART OF THE PUD/CC PLAN APPROVAL. A SEPARATE SIGN PERMIT MUST BE OBTAINED. SIGNAGE WILL COMPLY WITH APDES LUDO.
 - EXACT ACCESS AND STUB LOCATIONS TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
 - EXACT LOCATION OF RESOURCE CONSERVATION AREA TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
 - THE PORTION OF THE INTERNAL STREET DESIGNATED AS A PUBLIC STREET SHALL BE DEDICATED TO THE TOWN OF APEX.
 - ALL FINISH STANDARDS WITHIN THE PUD WILL COMPLY WITH THE TOWN OF APEX'S LUDO.
 - PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY.

- LEGEND**
- MULTI-FAMILY RESIDENTIAL/CONCEPTUAL DEVELOPMENT BLOCK
 - MAJOR OPEN SPACE (STREAM BUFFER/ WETLANDS/POND/PERIMETER BUFFERS)
 - STORMWATER MANAGEMENT CONCEPTUAL DEVELOPMENT ENVELOPE
 - WETLAND
 - CONCEPTUAL PUBLIC VEHICULAR ACCESS
 - CONCEPTUAL VEHICULAR INTERPARCEL ACCESS
 - CONCEPTUAL 5' SIDEWALK
 - CONCEPTUAL 10' SIDEWALK
 - PUBLIC VEHICULAR CIRCULATION (EXTERIOR)
 - PUBLIC VEHICULAR CIRCULATION (INTERIOR)
 - PRIVATE VEHICULAR CIRCULATION (INTERIOR ALONG PUBLIC ACCESS/DRIVEWAY)

NOTE: LOCATION OF VEHICULAR AND PEDESTRIAN CIRCULATION ARE CONCEPTUAL. FINAL LOCATION WILL BE DETERMINED AT THE TIME OF SITE PLAN OR MAJOR SUBDIVISION PLAN APPROVAL.

REVISIONS

NO.	DATE	REVISION OF APEX COMMENTS
1	04.08.2022	REVISION OF APEX COMMENTS
2	05.13.2022	REVISION OF APEX COMMENTS
3	06.10.2022	REVISION OF APEX COMMENTS
4	06.28.2022	REVISION OF APEX COMMENTS
5	07.06.2022	REVISION OF APEX COMMENTS

PLAN INFORMATION

PROJECT NO. 202-110513
 FILENAME 202-110513-PUD-OAS1
 CHECKED BY DCB
 DRAWN BY KST
 SCALE 1"=100'
 DATE 03.01.2022

PRELIMINARY LAYOUT PLAN
C2.00

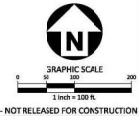


Exhibit A
Trammell Crow PUD-CZ
Owner Information Addendum

Parcel 1

Site Address: 1200 Chapel Ridge Road
PIN: 0732256180
Deed Reference (book/page): 12343/2193
Acreage: 5.27
Owner: Su Yueh Kao and Chi Chang Ho
Owner Address: 1200 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 2

Site Address: 1204 Chapel Ridge Road
PIN: 0732249869
Deed Reference (book/page): 8218/1726
Acreage: 1.71
Owner: Michael P. Mohan and Catherine A. Mohan
Owner Address: 1204 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 3

Site Address: 1205 Chapel Ridge Road
PIN: 0732352538
Deed Reference (book/page): 12171/2059
Acreage: 2.48
Owner: Douglas Cox and Carrie Cox
Owner Address: 1205 Chapel Hill Road, Apex, NC 27502-8502

Parcel 4

Site Address: 1209 Chapel Ridge Road
PIN: 0732354594
Deed Reference (book/page): 6236/386
Acreage: 3.0
Owner: Ronald L. Stringari, and Katherine L. Stringari
Owner Address: 1209 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 5

Site Address: 1220 Chapel Ridge Road
PIN: 0732343920
Deed Reference (book/page): 4168/302
Acreage: 2.88
Owner: Larry L. Carlson and Kathi E. Carlson
Owner Address: 1220 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 6

Site Address: 1225 Chapel Ridge Road

PIN: 0732347912

Deed Reference (book/page): 9720/361

Acreage: 2.13

Owner: Tigh M. Dundieff and Diane Cundieff

Owner Address: 1225 Chapel Ridge Road, Apex, NC 27502-8502

Parcel 7

Site Address: 1512 Clark Farm Road

PIN: 0732340602

Deed Reference (book/page): 5351/223

Acreage: 2.34

Owner: David D. Sherry and Ethel V. Sherry

Owner Address: 1512 Clark Farm Road, Apex, NC 27502-8500

Parcel 8

Site Address: 1213 Chapel Ridge Road

PIN: 0732356305

Deed Reference (book/page): 14563/1075

Acreage: 2.09

Owner: Michael J. Bishop

Owner Address: 1213 Chapel Ridge Road, Apex, NC 27502-8502

Providing Input to Town Council:

Each Town Council meeting agenda includes a Public Forum time when anyone is permitted to speak for three (3) minutes on any topic with the exception of items listed as Public Hearings for that meeting. The Town Council meets on the 2nd and 4th Tuesdays of each month at 6:00 p.m. (except for holidays, see schedule of meetings at <http://www.apexnc.org/838/Agendas-Minutes>). You may also contact Town Council by e-mail at AllCouncil@apexnc.org.

Private Agreements and Easement Negotiation:

The Town of Apex cannot enforce private agreements between developers and neighbors and is not a party to the easement and right-of-way negotiation that occurs between developers and neighboring property owners for easements or rights-of-way that are necessary to build the project.

It is recommended that all private agreements be made in writing and that if a property owner feels it necessary, they should obtain private legal counsel in order to protect their interests in both private agreements and during easement negotiations. The only conditions that the Town of Apex can enforce are those conditions that are made a part of the conditional zoning of the property by agreement of the developer and the Town.

As an example, if a developer offers to build a fence for a neighbor to mitigate some impact, the Town can only enforce the construction of the fence if the fence becomes a condition of the rezoning. This would occur by the developer offering the condition as part of their conditional zoning application package or at the Town Council public hearing on the conditional zoning and the Town accepting it as a condition. Private agreements regarding a fence being constructed will not be enforced by the Town.

To request that any agreement with a developer is made a part of the conditional zoning at the time of approval, you may ask at the Town Council public hearing if the agreement is included in the conditions. If it is not, you may request that the Town Council not approve the rezoning without the agreement being included in the conditions (note that it is up to Town Council whether to approve or deny the rezoning but they cannot impose conditions that the applicant does not agree to add). The developer's proposed conditions can be viewed any time after a rezoning is submitted on the Interactive Development Map at: <http://apexnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=fa9ba2017b784030b15ef4da27d9e795>

Documentation:

Neighbors to a requested new development and/or rezoning are strongly encouraged to fully document (such as through dated photographs) the condition of their property before any work is initiated for the new development. Stormwater controls installed on developed property are not designed to and will likely not remove 100% of the soil particles transported by stormwater runoff. As a result, creeks and ponds could become cloudy for a period of time after rain events.

COMMON CONSTRUCTION ISSUES & WHO TO CALL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Noise & Hours of Construction: Non-Emergency Police 919-362-8661

Noise from tree removal, grading, excavating, paving, and building structures is a routine part of the construction process. The Town generally limits construction hours from 7:00 a.m. to 8:30 p.m. so that there are quiet times even during the construction process. Note that construction outside of these hours is allowed with special permission from the Town when it makes more sense to have the construction occur at night, often to avoid traffic issues. In addition, the Town limits hours of blasting rock to Monday through Friday from 8:00 a.m. to 5:00 p.m. Report violations of construction hours and other noise complaints to the Non-Emergency Police phone number at 919-362-8661.

Construction Traffic: James Misciagno 919-372-7470

Construction truck traffic will be heavy throughout the development process, including but not limited to removal of trees from site, loads of dirt coming in and/or out of the site, construction materials such as brick and wood brought to the site, asphalt and concrete trucks come in to pave, etc. The Town requires a construction entrance that is graveled to try to prevent as much dirt from leaving the site as possible. If dirt does get into the road, the Town can require they clean the street (see "Dirt in the Road" below).

Road Damage & Traffic Control: Water Resources – Infrastructure Inspections 919-362-8166

There can be issues with roadway damage, roadway improvements, and traffic control. Potholes, rutting, inadequate lanes/signing/stripping, poor traffic control, blocked sidewalks/paths are all common issues that should be reported to Water Resources – Infrastructure Inspections at 919-249-3427. The Town will get NCDOT involved if needed.

Parking Violations: Non-Emergency Police 919-362-8661

Unless a neighbor gives permission, there should be no construction parking in neighbors' driveways or on their property. Note that parking in the right-of-way is allowed, but Town regulations prohibit parking within 15 feet of driveways so as not to block sight triangles. Trespassing and parking complaints should be reported to the Non-Emergency Police phone number at 919-362-8661.

Dirt in the Road: James Misciagno 919-372-7470

Sediment (dirt) and mud gets into the existing roads due to rain events and/or vehicle traffic. These incidents should be reported to James Misciagno. He will coordinate the cleaning of the roadways with the developer.

Dirt on Properties or in Streams: James Misciagno 919-372-7470 Danny Smith Danny.Smith@ncdenr.gov

Sediment (dirt) can leave the site and get onto adjacent properties or into streams and stream buffers; it is typically transported off-site by rain events. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the appropriate repairs with the developer. Impacts to the streams and stream buffers should also be reported to Danny Smith (danny.smith@ncdenr.gov) with the State.

Dust: James Misciagno 919-372-7470

During dry weather dust often becomes a problem blowing into existing neighborhoods or roadways. These incidents should be reported to James Misciagno at 919-372-7470 so that he can coordinate the use of water trucks onsite with the grading contractor to help control the dust.

Trash: James Misciagno 919-372-7470

Excessive garbage and construction debris can blow around on a site or even off of the site. These incidents should be reported to James Misciagno at 919-372-7470. He will coordinate the cleanup and trash collection with the developer/home builder.

Temporary Sediment Basins: James Misciagno 919-372-7470

Temporary sediment basins during construction (prior to the conversion to the final stormwater pond) are often quite unattractive. Concerns should be reported to James Misciagno at 919-372-7470 so that he can coordinate the cleaning and/or mowing of the slopes and bottom of the pond with the developer.

Stormwater Control Measures: Jessica Bolin 919-249-3537

Post-construction concerns related to Stormwater Control Measures (typically a stormwater pond) such as conversion and long-term maintenance should be reported to Jessica Bolin at 919-249-3537.

Electric Utility Installation: Rodney Smith 919-249-3342

Concerns with electric utility installation can be addressed by the Apex Electric Utilities Department. Contact Rodney Smith at 919-249-3342.

NEIGHBORHOOD MEETING SIGN-IN SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Address: Apex Community Center; 53 Hunter Street, Apex, NC 27502

Date of meeting: 8/22/2022 Time of meeting: 6:30-8:30 PM

Property Owner(s) name(s): See Exhibit A attached to neighbor notice letter

Applicant(s): Josh Dix, High Street District Development, Inc.

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only. For virtual meetings, applicants must include all known participants and request the information below.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.	<u>See attached sign-in sheet</u>				
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

NAME

ADDRESS

E-MAIL

Frank Bria	1576 Clark Farm Rd.	
Suzanne Bwald	1028 Waymaker Ct	
Michael Merker	1201 Chapel Ridge Rd	
Boudewijn "BP" Hanrath	" " " "	
Melinda Busi / James Serino	1304 Chapel Ridge Rd	
Nancy Corey	1301 Chapel Ridge Rd	
Ray + Rita Dyble	1500 Clark Farm Rd.	
Jim + Barbara Faulkner	1513 Clark Farm Rd.	
Erin Schultz	1020 Draymen Pl	
Rupesh Mishra	1025 Brownsmith Dr	
DAVID PESTRU	1313 CHAPEL RIDGE RD	

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): See exhibit A attached to neighbor notice letter

Applicant(s): Josh Dix, High Street District Development, Inc.

Contact information (email/phone): _____

Meeting Address: 53 Hunter Street, Apex, NC 27502

Date of meeting: 8/22/2022 Time of meeting: 6:30-8:30

Please summarize the questions/comments and your responses from the Neighborhood Meeting or emails/phone calls received in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

See attached.

Applicant's Response:

Question/Concern #2:

Applicant's Response:

Question/Concern #3:

Applicant's Response:

Question/Concern #4:

Applicant's Response:

Chapel Ridge North PUD
Summary of Neighborhood Meeting Discussion
August 22, 2022
Apex Recreation Center

Questions/Comments From Neighbors

- Comment: Neighborhood goals/views are not necessarily in line with goals/views of Town staff.
- Question: Could you consider placing buildings, rather than parking lots, closer to the shared property line with the Coreys and Serinos to reduce noise?
 - ***Applicant response:*** We can look into this. However, building placement will also be determined by factors such as existing tree coverage, topography, and Town setback requirements which are better understood at the Site Plan phase.
- Question: Could you consider a fence along the property's southwestern property line? This area is wooded which will make it difficult to determine where the property line is even after construction is complete. Concerned about apartment residents wandering onto neighboring property.
 - ***Applicant response:*** We previously discussed a fence along the shared property line but believed a natural buffer would be preferred since much of the property line will remain wooded Resource Conservation Area and a fence would disturb tree cover/natural area. We can reconsider it as an option and look into costs.
- Question: Why does the Concept Plan show the side path extending along the frontage of the Corey property? Our understanding was that the side path would only be built along the project's frontage?
 - ***Applicant response:*** This was a drawing error and the side path should stop further north prior to the Corey property. We will revise the Concept Plan to correct this with our next submittal.
- Comment: We generally prefer buildings and density to be pushed as far north as possible.
- Question: What are the Carriage Houses you referred to previously?
 - ***Applicant response:*** These will be separate buildings with one or more units above a garage. They are often two stories and will help provide a transition between your homes and the larger apartment buildings.
- Question: How many people can live in one one-bedroom apartment unit?
 - ***Applicant response:*** This is typically regulated by the Town's ordinance and the building code. Single-family detached homes are subject to the same limitations

and the Fair Housing Act prohibits certain regulations that treat children/families different than other prospective residents.

- Comment: Decreasing height to 3 stories would be better for residents
 - ***Applicant response***: We've evaluated planned heights across the site and have agreed to limit height in Area C (as labeled on the Concept Plan) to a maximum of three stories. A condition to this effect will be included in the PUD Text with our next submittal.

- Question: Can the bus stop be removed? Staff wants the bus stop but we do not.
 - ***Applicant response***: We can discuss removing the bus stop with staff but it is consistent with Transportation staff and Council's long term transit goals.

- Question: Would you be willing to help in petitioning NCDOT for traffic calming along Chapel Ridge Road?
 - ***Applicant response***: NCDOT has a very specific process for requesting traffic calming. For neighborhoods with no HOA, like Chapel Ridge, NCDOT requires a majority of the owners along the street to join in the petition. Additionally, owners have to agree to be financially responsible for the maintenance and upkeep of traffic calming devices installed in the street. We've printed some information on the petition process we will share with you.

- Question: Does the condition prohibiting construction traffic along Chapel Ridge Road require "no construction traffic" signs to be placed at the intersection of Chapel Ridge Road and Olive Chapel?
 - ***Applicant response***: As currently written, the condition doesn't include signs at that intersection, but we have no problem posting signs there and will add that sign location to the PUD Text with our next submittal.

- Comment: We are generally concerned about the maintenance of the empty homes you are purchasing between the closing and when the homes are actually demolished.
 - ***Applicant response***: We hope to have most of our approvals so that there won't be a large timing gap between when we close and when the homes are demolished. However, if there is a period where we own the property prior to demolition, we will maintain the properties and prevent overgrowth.

- Comment: I think the bus stop is a great idea and will be vital for residents without cars that need to get to work. I would ride the bus and get on at that stop, especially to get to downtown Apex for events where there is limited parking.

AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Matthew J. Carpenter, do hereby declare as follows:

Print Name

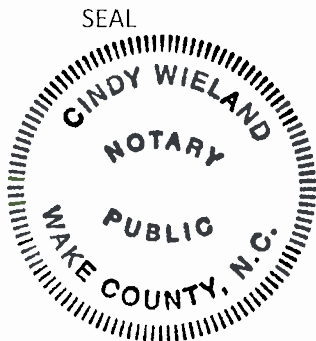
1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.
2. The meeting invitations were mailed to the Apex Department of Planning and Community Development, all property owners and tenants abutting and within 300 feet of the subject property and any neighborhood association that represents citizens in the notification area via first class mail a minimum of 14 days in advance of the Neighborhood Meeting.
3. The meeting was conducted at 53 Hunter Street, Apex, NC 27502 (location/address) on August 22, 2022 (date) from 6:30 PM (start time) to 8:30 PM (end time).
4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.
5. I have prepared these materials in good faith and to the best of my ability.

8/24/2022
Date

By: [Signature]

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Cindy Wieland, a Notary Public for the above State and County, on this the 24th day of August, 2022.



Cindy Wieland
Notary Public
Cindy Wieland
Print Name

My Commission Expires: 2-22-26

Notice List for Neighborhood Meeting

OWNER	MAILING ADDRESS	
APEX TOWN OF	PO BOX 250	APEX NC 27502-0250
ASHOK, VIMAL DEV DEV, SANGITA VIMAL	1015 WAYMAKER CT	APEX NC 27502-4325
ASHRAFI, ZAHRA JOGHATAEI, MAJID	1013 WAYMAKER CT	APEX NC 27502-4325
BEAVER CREEK CROSSINGS OWNER LLC	TYLER COVINGTON	1111 METROPOLITAN AVE STE 700
BEAVER CREEK LAND HOLDINGS LLC	2574 CORLEY WOOD DR	CHARLOTTE NC 28204-3424
BECK, PATRICK A LIU, JANET F	8412 SECRETO DR	RALEIGH NC 27606-4266
BHATTA, HIMANSHU	1004 WAYMAKER CT	RALEIGH NC 27606-0030
BISHOP, MICHAEL J	1213 CHAPEL RIDGE RD	APEX NC 27502-4325
BOYKIN, V RAYMOND JR BOYKIN, RITA L	1500 CLARK FARM RD	APEX NC 27502-8500
BRIA, FRANK A III BRIA, CHRISTINE	1516 CLARK FARM RD	APEX NC 27502-8500
BUNN, KENNETH G, BUNN, ERICA CHRISTINE	1408 BARNSIDE LN	APEX NC 27502-8501
BUWALDA, NATHAN BUWALDA, SUZANNE	1028 WAYMAKER CT	APEX NC 27502-4325
CARLSON, LARRY L CARLSON, KATHI E	1220 CHAPEL RIDGE RD	APEX NC 27502-8502
CARSON, DARREN DWAYNE SR CARSON, REGINA	2045 ACKERMAN HILL DR	APEX NC 27502-5109
CHAGANTIPATI, RAJ KIRAN VEMURI, JYOTSNA	4016 SYKES ST	CARY NC 27519-7301
CHAPEL RIDGE ESTATES HOA	1001-105 GOODWORTH DR	APEX NC 27539
CHIU, CHERIE	2065 ACKERMAN HILL DR	APEX NC 27502-5109
CNG PROPERTIES LLC	1010 GOODWORTH DR	APEX NC 27539-3869
COOPER, DONNA L THE DONNA L COOPER TRUST	2047 OLD CHAPMAN DR	APEX NC 27502-4326
COREY, DANIEL E II THE DANIEL E COREY II REVOCABLE LIVING TRUST	1301 CHAPEL RIDGE RD	APEX NC 27502-8503
COX, DOUGLAS COX, CARRIE	1205 CHAPEL RIDGE RD	APEX NC 27502-8502
CTO21 APEX LLC	1140 N WILLIAMSON BLVD STE 140	DAYTONA BEACH FL 32114-8112
CUNDIEFF, TIGH M CUNDIEFF, DIANE	1225 CHAPEL RIDGE RD	APEX NC 27502-8502
Current Tenant	1561 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1571 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1575 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1583 Creekside Landing DR	APEX NC 27502
Current Tenant	1585 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1587 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1591 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1595 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1611 Beaver Creek DR	APEX NC 27502
Current Tenant	1615 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1200 Chapel Ridge	APEX NC 27502
Current Tenant	1201 Chapel Ridge	APEX NC 27502
Current Tenant	1204 Chapel Ridge	APEX NC 27502
Current Tenant	1205 Chapel Ridge	APEX NC 27502
Current Tenant	1209 Chapel Ridge	APEX NC 27502
Current Tenant	1213 Chapel Ridge	APEX NC 27502
Current Tenant	1220 Chapel Ridge	APEX NC 27502
Current Tenant	1225 Chapel Ridge	APEX NC 27502
Current Tenant	1301 Chapel Ridge	APEX NC 27502
Current Tenant	1304 Chapel Ridge	APEX NC 27502
Current Tenant	1305 Chapel Ridge	APEX NC 27502
Current Tenant	1313 Chapel Ridge	APEX NC 27502
Current Tenant	1500 Clark Farm	APEX NC 27502
Current Tenant	1505 Clark Farm	APEX NC 27502
Current Tenant	1512 Clark Farm	APEX NC 27502
Current Tenant	1513 Clark Farm	APEX NC 27502
Current Tenant	1516 Clark Farm	APEX NC 27502
Current Tenant	1517 Clark Farm	APEX NC 27502
Current Tenant	2000 Creekside Landing DR	APEX NC 27502
Current Tenant	2001 Creekside Landing DR	APEX NC 27502
Current Tenant	2004 Creekside Landing DR	APEX NC 27502
Current Tenant	2005 Creekside Landing DR	APEX NC 27502
Current Tenant	2008 Creekside Landing DR	APEX NC 27502
Current Tenant	2009 Creekside Landing DR	APEX NC 27502
Current Tenant	2012 Creekside Landing DR	APEX NC 27502
Current Tenant	2013 Creekside Landing DR	APEX NC 27502
Current Tenant	2016 Creekside Landing DR	APEX NC 27502
Current Tenant	2017 Creekside Landing DR	APEX NC 27502
Current Tenant	2021 Creekside Landing DR	APEX NC 27502
Current Tenant	2025 Creekside Landing DR	APEX NC 27502
Current Tenant	2026 Creekside Landing DR	APEX NC 27502
Current Tenant	2033 Creekside Landing DR	APEX NC 27502
Current Tenant	2034 Creekside Landing DR	APEX NC 27502
Current Tenant	2037 Creekside Landing DR	APEX NC 27502
Current Tenant	2038 Creekside Landing DR	APEX NC 27502
Current Tenant	2042 Creekside Landing DR	APEX NC 27502
Current Tenant	2045 Creekside Landing DR	APEX NC 27502
Current Tenant	2046 Creekside Landing DR	APEX NC 27502
Current Tenant	2050 Creekside Landing DR	APEX NC 27502
Current Tenant	2053 Old Chapman DR	APEX NC 27502
Current Tenant	1006 Waymaker CT	APEX NC 27502

Current Tenant	1026 Waymaker CT	APEX NC 27502
Current Tenant	1030 Waymaker CT	APEX NC 27502
Current Tenant	2122 Whitesmith DR	APEX NC 27502
Current Tenant	2128 Whitesmith DR	APEX NC 27502
Current Tenant	2049 Ackerman Hill DR	APEX NC 27502
Current Tenant	2051 Ackerman Hill DR	APEX NC 27502
Current Tenant	2058 Ackerman Hill DR	APEX NC 27502
Current Tenant	2059 Ackerman Hill DR	APEX NC 27502
Current Tenant	2063 Ackerman Hill DR	APEX NC 27502
Current Tenant	1521 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1531 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1541 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1551 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1553 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1555 Beaver Creek Commons DR	APEX NC 27502
Current Tenant	1020 Waymaker CT	APEX NC 27502
DAS, BISHNU PRASAD CHATTOPADHYAY, PALLABI	2048 ACKERMAN HILL DR	APEX NC 27502-5109
DAVE, GHANSHYAM	2055 ACKERMAN HILL DR	APEX NC 27502-5109
EBENEZER, CHARLES EBENEZER, JULIANA	1018 WAYMAKER CT	APEX NC 27502-4325
ENGLISH, AMANDA ENGLISH, CORY	2046 ACKERMAN HILL DR	APEX NC 27502-5109
FANG, YUEHONG WANG, YU	105 BRIAR RIDGE CIR	WINSTON SALEM NC 27104-4482
FAULKNER, JAMES V JR FAULKNER, BARBARA B	1513 CLARK FARM RD	APEX NC 27502-8500
GADI, BIPIN PONNAPALLI, VANIPRIYA	2047 ACKERMAN HILL DR	APEX NC 27502-5109
GROVER, SARA W PRESTRUD, DAVID G	1313 CHAPEL RIDGE RD	APEX NC 27502-8503
HEMPSTEAD AT BEAVER CREEK HOMEOWNERS ASSOCIATION,	CHARLESTON MANAGEMENT CORP	PO BOX 97243
HINSLEY, MICHAEL HINSLEY, EMILLEE	2048 ACKERMAN HILL DR	APEX NC 27502-5109
HOECKBERG, ERIC HOECKBERG, ERIKA	2054 ACKERMAN HILL DR	APEX NC 27502-5109
JARIWALA, AJAY H JARIWALA, DIVYABEN S	1032 WAYMAKER CT	APEX NC 27502-4325
JILANI, ATIF B CHOUDHARY, NAJIA	2048 OLD CHAPMAN DR	APEX NC 27502-4326
JORDAN LUTHERAN CHURCH INC	1031 PEMBERTON HILL RD STE 202	APEX NC 27502-4278
KADZIK, MARY	1008 WAYMAKER CT	APEX NC 27502-4325
KAO, SU YUEH HO, CHI CHANG	1200 CHAPEL RIDGE RD	APEX NC 27502-8502
KARUMBALAH, KAVERIAPPA MUDDIYADA RAMESH, NIVEDITA KAMBAYANDA	2056 ACKERMAN HILL DR	APEX NC 27502-5109
KING, JAMES KING, JOANNE	2052 ACKERMAN HILL DR	APEX NC 27502-5109
KOLLASSERY, GANGADHARAN SHELLY SHELLY, HEERA	329 HOLSTEN BANK WAY	CARY NC 27519-7574
KONDATI, VIJAY NUNI, MADHU	1034 WAYMAKER CT	APEX NC 27502-4325
KUMAR, YOGESH KUMARI, MADHU BALA	1000 WAYMAKER CT	APEX NC 27502-4325
LAM, CHRISTOPHER HUANG, WEI	1024 WAYMAKER CT	APEX NC 27502-4325
LI, NAN	6708 MILLORY SPRINGS LN	CARY NC 27519-8500
LU, LIN	647 SEALINE DR	CARY NC 27519-2572
MANI, SURESH SURESH, NIVETHA	2049 OLD CHAPMAN DR	APEX NC 27502-4326
MARIN, MICHAEL	1021 WAYMAKER CT	APEX NC 27502-4325
MCGRAW, BENJAMIN IV	2043 OLD CHAPMAN DR	APEX NC 27502-4326
MOHAN, MICHAEL P MOHAN, CATHERINE A	1204 CHAPEL RIDGE RD	APEX NC 27502-8502
MOHANASUNDARAM, RANJITH KUMAR TRUSTEE MUTHURAMAN, RAJALAKSHMI TRUSTEE	2051 OLD CHAPMAN DR	APEX NC 27502-4326
MONAHAN, RICHARD CHARLES TRUSTEE RICHARD C MONAHAN LIVING TRUST	4225 LOFTY RIDGE PL	MORRISVILLE NC 27560-9586
MREC DT BEAVER CREEK LLC	STE 130	13860 BALLANTYNE CORPORATE PL
MREC DT BEAVER CREEK LLC	11610 N COMMUNITY HOUSE RD STE 100	CHARLOTTE NC 28277-1894
NADELLA, VIDYADHAR PATIBANDLA, ANUSHA	1014 WAYMAKER CT	APEX NC 27502-4325
O'NEAL, BRANDON GRAY	2119 WHITESMITH DR	APEX NC 27502-4327
OVERTON, RUSS OVERTON, KRISTAL RAWLS	1305 CHAPEL RIDGE RD	APEX NC 27502-8503
PAIDIPALLI, NAVEEN	1010 WAYMAKER CT	APEX NC 27502-4325
POPE, CHARLES V POPE, IRIS ISLEY	1408 OLIVE CHAPEL RD	APEX NC 27502-8511
PUFF, SANDRA PUFF, JOHN	1020 WAYMAKER CT	APEX NC 27502-4325
PULLJALA, TARUN KASHYAP YELLAPRAGADA, LAVANYA	1017 WAYMAKER CT	APEX NC 27502-4325
QIN, DANFENG JIANG, CHUANYAN	2655 BRYANT POND LN	APEX NC 27502-4318
QUE, ROGER	623 HALCYON MEADOW DR	CARY NC 27519-7701
ROCCOFORTE, JOHN A ROCCOFORTE, MARIE F	1517 CLARK FARM RD	APEX NC 27502-8500
SAMUDRAPU, NARASIMHA DASS DANDUMITTA, KRANTHI	1021 WAYMAKER CT	APEX NC 27502-4325
SERINO, JAMES PATRICK BUSI, MELINDA	1304 CHAPEL RIDGE RD	APEX NC 27502-8503
SHAIK, MOHAMMED GHOUSE	2124 WHITESMITH DR	APEX NC 27502-4327
SHAKYA, SUDEEP SHAKYA, NEENA	1023 WAYMAKER CT	APEX NC 27502-4325
SHERRY, DAVID D SHERRY, ETHEL V	1512 CLARK FARM RD	APEX NC 27502-8500
SHREE GOPALPRABHU LLC	3716 LINVILLE GORGE WAY	CARY NC 27519-9619
SIMPSON, SHERIKA S	1010 WOODLANDS CREEK WAY	APEX NC 27502-5250
SMITH, GINNY K SMITH, TIMOTHY J	1000 WAYMAKER CT	APEX NC 27502-4325
SOTO, NOEL MANUEL JR	1025 WAYMAKER CT	APEX NC 27502-4325
STOROZHEVA, MARIA SPIRES, JACKSON P	2041 ACKERMAN HILL DR	APEX NC 27502-5109
STRINGARI, RONALD L STRINGARI, KATHERINE L	1209 CHAPEL RIDGE RD	APEX NC 27502-8502
VATTIGUNTA, SRINIVASA REDDY NARU, CHAITANYA BHARATHI	1027 WAYMAKER CT	APEX NC 27502-4325
VERMA, ANAGH VERMA, SHWETA	2061 ACKERMAN HILL DR	APEX NC 27502-5109
VILLANUEVA, BRIAN D VILLANUEVA, ERIKA L	2126 WHITESMITH DR	APEX NC 27502-4327
WAGNER, KEITH J II	1016 WAYMAKER CT	APEX NC 27502-4325
WILLIAMS, SUSAN L	2053 ACKERMAN HILL DR	APEX NC 27502-5109
YANG, LONGLONG GAN, YOUXIN	1002 WAYMAKER CT	APEX NC 27502-4325

YIN, XINHE
ZY&L LLC

302 MINTON VALLEY LN
351 GARTRELL WAY

CARY NC 27519-9105
CARY NC 27519-8942

CHAPEL RIDGE NORTH PLANNED UNIT DEVELOPMENT

1225 CHAPEL RIDGE RD
APEX, NORTH CAROLINA | PD PLAN

REZONING CASE #22CZ07



CHAPEL RIDGE NORTH

Planned Unit Development Prepared for Town of Apex, North Carolina

Submittal Dates

First Submittal:	March 1, 2022
Second Submittal:	April 8, 2022
Third Submittal:	May 13, 2022
Fourth Submittal:	June 10, 2022
Fifth Submittal:	June 28, 2022
Sixth Submittal:	July 6, 2022
Seventh Submittal:	September 1, 2022
Eight Submittal:	September 19, 2022

Developer

High Street Residential
555 Fayetteville Street, Suite 300
Raleigh, NC 27601

Planner, Engineer, Landscape Architect, Surveyor

McAdams
2905 Meridian Parkway
Durham NC 27113

Attorney

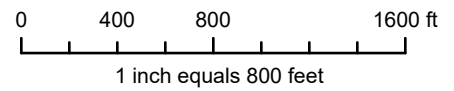
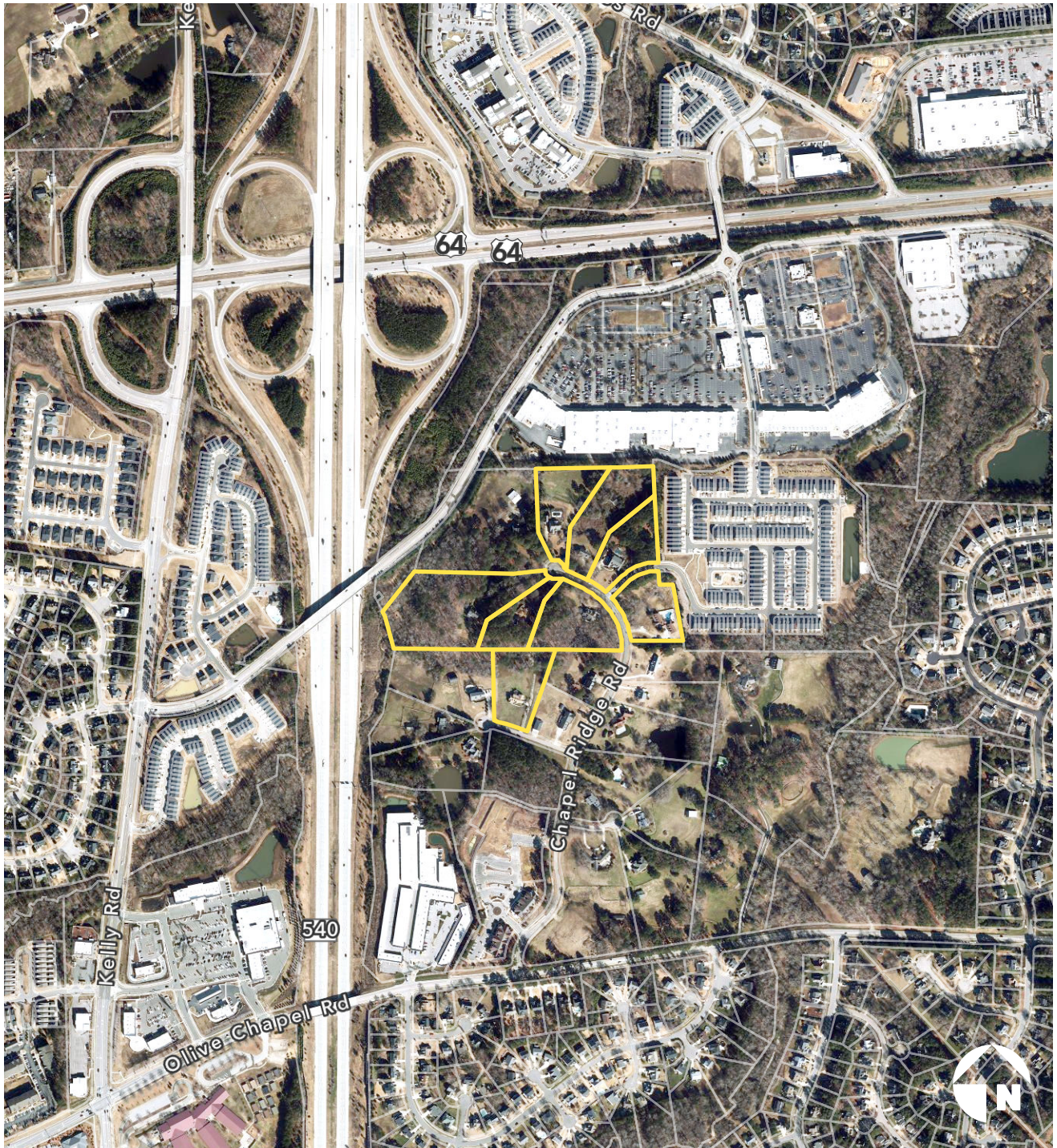
Parker Poe
301 Fayetteville St, Suite 1400
Raleigh, NC 27601



TABLE OF CONTENTS

1. VICINITY MAP
2. PROJECT DATA
3. PURPOSE STATEMENT
4. PERMITTED USES
5. AFFORDABLE HOUSING
6. DESIGN CONTROLS
7. ARCHITECTURAL STANDARDS
8. PARKING AND LOADING
9. SIGNAGE
10. LANDSCAPING
11. NATURAL RESOURCE AND ENVIRONMENTAL DATA
12. STORMWATER MANAGEMENT
13. PARKS AND RECREATION
14. PUBLIC FACILITIES
15. PHASING PLAN
16. CONSISTENCY WITH LAND USE PLAN
17. COMPLIANCE WITH UDO
18. TRANSPORTATION IMPROVEMENTS
19. REPRESENTATIVE BUILDING ELEVATIONS

VICINITY MAP



PROJECT DATA

Name of Project:	Chapel Ridge North
Applicant/Developer:	High Street Residential 555 Fayetteville Street, Suite 300 Raleigh, NC 27601 202-337-1025
Prepared By:	McAdams 2905 Meridian Parkway Durham, NC 27713 919-361-5000
Current Zoning Designation:	RR
Proposed Zoning Designation:	PUD-CZ
Current 2045 Land Use Map Designation:	Medium Density Residential
Proposed 2045 Land Use Map Designation:	High Density Residential
Size of Project:	Approximately 22.71 acres
Property Identification Numbers:	0732352538, 0732343920, 0732249869, 0732354594, 0732347912, 0732256180, 0732340602, 0732356305 (the "Property")

PURPOSE STATEMENT

This document and the accompanying concept plan (the “Concept Plan”) (collectively, the “PUD”) are provided pursuant to the Town of Apex Unified Development Ordinance (“UDO”) Planned Unit Development Provisions. Chapel Ridge North will be a fully amenitized apartment community with interior corridors, an elevator, fitness centers, walking paths, and natural areas; it will be conveniently located near future transit and existing employment centers, restaurants, and retail. The Concept Plan offers an efficient site layout, with significant open space preserved in a unified area and appropriate buffers between adjacent uses. Required Resource Conservation Areas are set aside throughout the 22.71-acre property. This PUD is consistent with the Town’s goal to provide site-specific, high-quality neighborhoods that exhibit natural feature preservation and compatibility with surrounding land uses. This development will comply with the PUD Development Parameters outlined in UDO §2.3.4.F.1.a.i-vii. This PUD meets or exceeds the Development Parameters as follows:

- *The uses to be developed in the PD Plan for the PUD-CZ are those uses permitted in Section 4.2.2, Use Table.*
 - » **The uses permitted within the Chapel Ridge North PUD are permitted per §4.2.2 of the Town of Apex UDO.**
- *The uses proposed in the PD Plan for the PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of the non-residential land area is included in certain mixed-use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown on the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.*
 - » **Chapel Ridge North is an entirely residential development including a maximum of 370 multi-family units and one single-family unit.**
- *The dimensional standards in §5.1.3 Table of Intensity and Dimensional Standards, Planned Development Districts, may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.*
 - » **Any deviations from underlying UDO standards are contained in this PUD. Otherwise, Chapel Ridge North will comply with the base standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.**
- *The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways, and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the Town of Apex Standard Specifications and Details, and greenway improvements as required by the Town of Apex Parks, Recreation, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.*
 - » **Except the small northern portion of Chapel Ridge Road as shown on the Concept Plan, five-foot wide public sidewalks will be constructed along both sides of all internal streets per UDO standards. Pedestrian improvements along road frontages shall be consistent**

with the Transportation and Bike Ped System Map Plan. See Walkability section for specific details of sidewalk and sidepath locations. To encourage a healthy lifestyle and establish a walkable community, pedestrian greenways will also be incorporated throughout the development connecting residential areas to open space amenities and RCA areas. In addition, the Property is located within a mile of connections to the Beaver Creek Greenway which may be accessed from the Pearson Farms neighborhood south of Chapel Ridge North.

- *The design of development in the PD Plan for the PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing proposed or proposed street system in the surrounding area indicated that a through street is not essential in the location of the proposed cul-de-sacs, or where sensitive environmental features such as streams, floodplains, or wetlands would be substantially disturbed by making road connections.*
 - » Chapel Ridge North will create a walkable residential community connected by sidewalks, side paths, tree-lined streets, and greenways. Cul-de-sacs will be avoided to enhance the connectivity of the development. The northern extension of Chapel Ridge Road will allow residents to walk to the future transit stop on Beaver Creek Commons Drive identified in the Town of Apex Comprehensive Transportation Plan (the “Transportation Plan”). Additionally, residents will be able to walk and/or bike to existing shops, restaurants, and retail at the Beaver Creek Crossings shopping center.
- *The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.*
 - » The proposed development is compatible with the character of surrounding land uses and will enhance property values in the area. To the north of the Property is Beaver Creek Crossings, an existing shopping center with a mix of commercial uses. Adjacent to the east are the Hempstead Townhomes, a dense townhome community. The proposed apartment community will effectuate a transition down in intensity from the more intense commercial uses to the north to lower density single-family detached homes to the south. Appropriate buffering will be provided between Chapel Ridge North and existing single-family homes to the south.
- *The development proposed in the PD Plan for the PUD-CZ has architectural and design standards that are exceptional and provide a higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.*
 - » Multi-family buildings will be of high-quality construction. Architectural controls and sample elevations illustrating the high-quality appearance of buildings are included in this PUD.

All site-specific standards and conditions of this PUD shall be consistent with all Conditional Zoning (CZ) District standards set forth in the UDO Section 2.3.3, Conditional Zoning Districts.

PERMITTED USES

The Property may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations of this PUD.

Permitted uses include:

Residential
Multi-family or apartment
Condominiums
Single-family (1 dwelling unit, only permitted as shown on layout sheet)
Utilities
Utility, minor
Recreational Uses
Greenway
Park, Active
Park, Passive
Recreation Facility, private

AFFORDABLE HOUSING

A minimum of three and a half percent (3.5%) of the total residential units (as shown on the first site plan submittal) shall be designated as restricted low-income affordable housing rental units (the "Affordable Units") for a minimum affordability period of ten (10) years starting from the date of issuance of the first residential Certificate of Occupancy (the "Affordable Restriction Period"). The Affordable Units shall be occupied by low-income households earning no more than sixty percent (60%) of the Raleigh, NC Metropolitan Statistical Area (MSA) Area Median Income (AMI), adjusted for family size, as most recently published by the U.S. Department of Housing and Urban Development (HUD). The Affordable Units shall be one-bedroom units and rented to low-income households during the Affordable Restriction Period at maximum rent limits per bedroom size, no greater than sixty percent (60%) of the Raleigh, NC Area Median Income ("AMI") as most recently published by HUD and stipulated by the most recently published North Carolina Housing Finance Agency (NCHFA) Low-Income Housing Tax Credit (LIHTC) Multifamily Tax Subsidy Program (MTSP) income and rent limits for the Wake County Metropolitan Area. If the Affordable Units calculation results in a fraction between 0.00 and 0.49, the number of Affordable Units shall be rounded down to the nearest whole number. If the Affordable Units calculation results in a fraction between 0.50 and 0.99, the number of Affordable Units shall be rounded up to the nearest whole number. Prior to issuance of the first residential Certificate of Occupancy, a restrictive covenant between the Town and property owner shall be executed and recorded in the Wake County Registry to memorialize the affordable housing terms and conditions. During the Affordable Restriction Period, the property owner shall be responsible for performing all property management and administration duties to ensure compliance with this affordable housing condition and shall submit annual compliance reports to the Town verifying compliance with this affordable housing condition. Following expiration of the Affordable Restriction Period, this affordable housing condition shall expire, and the property owner shall be relieved of all obligations set forth in this affordable housing condition, and the Affordable Units may freely be marketed and leased at market-rate rents.

DESIGN CONTROLS

Total Project Area: 22.71 acres

- Maximum number of multi-family apartment units: 370
- Maximum number of single-family units: 1

Multi-Family Design Controls

- Maximum Building Height: 55 feet (5 stories)
 - » Building facades facing PINs 073243658, 0732340602, and 0732348711 shall be limited to a maximum of four stories.
 - » Any buildings located in Area C as shown on the Concept Plan shall be limited to a maximum of three stories.
- Minimum Building Setbacks
 - » Front: 10 feet
 - » Rear: 20 feet
 - » Side: 20 feet
 - » Alley: 5 feet
 - » Corner: 20 feet
 - » From buffer or RCA: 10 feet

Single-Family Design Controls

- Refer to RR Dimensional Standards set forth in UDO Section 5.1.

Physical Accessibility

The project shall comply with all applicable accessibility regulations and guidelines issued by the Department of Housing and Urban Development (HUD), the American National Standards Institute (ANSI), and the International Code Council (ICC) including providing braille and approximately 10-15 (final count to be determined at Site Plan) Type A units (the "Accessible Units") which provide reduced counter heights, door swing limitations, grab bar installation, and bathroom lavatory convertibility. Additionally, the Accessible Units shall include flashing strobe devices to aid in emergency notification for hearing impaired residents and additional electric capacity to allow installation of a bed shaker to awake hearing impaired residents in case of fire.

ARCHITECTURAL STANDARDS

The proposed development offers the following architectural controls to ensure consistency of character throughout the development. Conceptual elevation examples are included in Section 19 of this PUD. Elevations included are limited examples of multiple style options being considered. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Major Site Plan submittal. In an effort to reflect the unique nature of the existing neighborhood, the architectural style of the buildings shall be classic southern traditional architecture.

Additional features used as focal points or key terminus points shall be located within or around the development (i.e. a patio seating area, water feature, pedestrian plaza with benches, planters, public art, decorative bicycle parking, or focal feature) in order to meet the Community Amenities requirement of the UDO. Other features not mentioned may be considered with administrative staff approval.

Design Guidelines:

1. The project shall use full cutoff LED fixtures that have a maximum color temperature of 3500K for all exterior lighting, including, but not limited to, parking lot and building mounted fixtures.
2. The project shall be designed to meet the requirements for one of the following green building certifications: LEED, Energy Star, BREEAM, Green Globes, NGBS Green, or GreenGuard. Prior to the issuance of building permits, the developer shall hire a third-party consultant to evaluate the project and ensure the design conforms with green building certification requirements. Prior to the issuance of a certificate of occupancy for a building, the developer shall demonstrate to the Town that that building has been certified as a green building by providing a copy of the green building certification.
3. The project shall install at least three (3) pet waste stations across the development locations that are publicly accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.

Multi-family/Apartments/Condominiums:

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. Rear and side elevations of units that have right-of-way frontage shall have trim around the windows.
3. A minimum of four of the following decorative features shall be used on each building:
 - » Decorative shake
 - » Board and batten
 - » Decorative porch railing/posts
 - » Shutters
 - » Decorative/functional air vents on roof or foundation
 - » Recessed windows

- » Decorative windows
 - » Decorative brick/stone
 - » Decorative gables
 - » Decorative cornices
 - » Tin/metal roof
4. Garage doors must have windows, decorative details, or carriage-style adornments on them.
 5. Siding materials shall be varied in type and/or color on 30% of each façade on each building.
 6. Windows must vary in size and/or type.
 7. Windows that are not recessed must be trimmed.
 8. Solar conduit shall be provided on all buildings to accommodate the future installation of solar panels.

Proposed Residential Materials and Styles

Proposed materials and styles will be of a similar palette to provide consistency of character along with visual interest. Exterior materials that may be incorporated into any of the building products include:

- Cementitious lap, board and batten, and/or shake and shingle siding
- Stone or synthetic stone
- Brick

Additional building materials may be included with administrative staff approval. Substitute materials shall be allowed by staff as long as they are determined by the Director of Planning and Development to be substantially similar.

PARKING AND LOADING

Apartments/Multi-Family/Condominiums

Development shall provide the following minimum parking spaces per dwelling unit based on the number of bedrooms:

Bedrooms per unit	Minimum ratio
1 or 2	1.3 spaces per dwelling unit
3	1.8 spaces per dwelling unit

A minimum of 5% of the total parking spaces required by the UDO for the project shall be Electric Vehicle Charging spaces consistent with the standards of UDO Section 8.3.11. At least 6 bicycle parking spaces shall also be provided.

SIGNAGE

All signage for this PUD shall comply with Section 8.7, *Signs*, of the Town of Apex UDO.

LANDSCAPING

Minimum perimeter and streetscape landscape buffers are as follows (see PUD Plan Sheet C2.00 for details):

- 15-ft Type A adjacent to townhomes
- 25-ft Type A adjacent to single-family lots
- 20-ft Type A adjacent to church*
- 20-ft Type A adjacent to retail
- 10-ft Type A adjacent to Chapel Ridge Road**
- 20-ft Type B adjacent to PIN 0732266081
- No buffer shall be required between single-family parcels

*A fire access lane shall be permitted to encroach into the first 150 feet of the buffer as measured from Chapel Ridge Road west along the shared property line with the church.

**Only required along the public right-of-way fronting the Property. A buffer is not required along the public access easement. Developer shall only be responsible for providing the buffer on property adjacent to the public right-of-way which is within this rezoning.

The project shall select and install tree, shrub and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall.

The project will increase biodiversity in perimeter buffers and open space areas by providing a variety of species for the canopy, understory, and shrub levels. Native and adaptive plant species shall be provided within these areas to minimize death from disease and to provide increased habitat and food sources for insects and animals. A minimum of 75% of the species provided shall be native or a nativar of North Carolina. No invasive species shall be permitted. No single species of tree or shrub shall constitute more than 20% of the plant material of its type installed on a single development site.

No dumpster shall be located within 50 feet of the northern property line of PINs 0732343658 and 0732348711.

A 6-ft tall fence shall be provided along the southern facing property line adjacent to PINs 0732246637, 0732343658, and 0732348711.

NATURAL RESOURCES AND ENVIRONMENTAL DATA

River Basins and Watershed Protection Overlay Districts

This project is located within the Cape Fear River Basin. This project site is located within the Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Map. Accordingly, this PUD will comply with all built upon area, vegetated conveyances, structural SCMs and riparian stream buffer requirements of Section 6.1.7.

Resource Conservation Areas (RCA) - Required and Provided

This PUD will be subject to, and meet the requirements of, Section 8.1.2 of the UDO, *Resource Conservation Area* and Section 2.3.4, *Planned Development Districts*.

The PUD will provide a minimum of 20% of the gross project area as a Resource Conservation Area (RCA). Designated RCA areas will be consistent with the items listed in Section 8.1.2(B) of the Town's UDO. Preserved streams, wetlands, and associated riparian buffers provide the primary RCAs throughout the site. Additional RCA areas may include perimeter and streetfront buffers, stormwater management areas (as permitted by the UDO), and greenways.

The project shall install a minimum of one sign for each Resource Conservation area. The signage shall indicate that the area is RCA and is to be preserved in perpetuity and not disturbed. Signage shall be installed in locations that are publicly accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.

Six-foot wide private walking trails may be located throughout the development, including RCA areas. Locations of trails are to be determined at site plan.

Floodplain

The project site does not sit within a designated current or future 100-year floodplain as shown on the Town of Apex FEMA map and FIRM Panel 3720073200J, dated May 2, 2006.

Tree Canopy

Tree canopy areas in Chapel Ridge North are primarily concentrated around the wetland areas, stream features, and perimeter buffers.

Existing trees greater than 18" in diameter that are removed by site development shall be replaced by planting a 1.5" caliper native tree from the Town of Apex Design and Development Manual either on-site or at an alternative location approved by Town Planning Staff, above and beyond standard UDO requirements.

Historic Structures

As confirmed by the North Carolina State Historic Preservation Office there are no historic structures present within the project boundary.

Existing Pond

Pursuant to all applicable Town and State regulations, the developer shall work with the owner of PIN 0732258464 to drain the existing pond on the southern property line of PIN 0732258464 concurrently with the development and construction of the project.

Environmental Commitments Summary

The applicant team met with the Apex Environmental Advisory Board on February 17, 2022. Below is a summary of the environmental commitments for the Chapel Ridge North development:

- Increased stormwater quantity and quality control measures (see Stormwater Management section for details)
- The project shall install at least three (3) pet waste stations across the development in locations that are publicly accessible, but outside of public property and/or public easement(s), such as adjacent to amenity centers, sidewalks, greenways, or side paths.
- The project shall use full cutoff LED fixtures that have a maximum color temperature of 3500K for all exterior lighting, including, but not limited to, parking lot and building mounted fixtures.
- A minimum of 5% of the total parking spaces that the UDO would require for the project shall be Electric Vehicle Charging spaces. Final unit mix and amount of required parking shall be determined at site plan. The EV charging stations shall comply with the standards set forth in the UDO.
- The project shall select and install tree, shrub and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall.
- The project will increase biodiversity in perimeter buffers and open space areas by providing a variety of species for the canopy, understory, and shrub levels. Native and adaptive plant species shall be provided within these areas to minimize death from disease and to provide increased habitat and food sources for insects and animals. A minimum of 75% of the species provided shall be native or a nativar of North Carolina. No invasive species shall be permitted. No single species of tree or shrub shall constitute more than 20% of the plant material of its type installed on a single development site.
- The project shall install signage adjacent to wooded or natural condition Resource Conservation area. The signage shall indicate that the area is RCA and is to be preserved in perpetuity and not disturbed. Signage shall be installed in locations that are publically accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.
- The project shall be designed to meet the requirements for one of the following green building certifications: LEED, Energy Star, BREEAM, Green Globes, NGBS Green, or GreenGuard. A third-party consultant shall be hired to evaluate the project and certify to the Town of Apex that the project meets the standards for the certification. The applicant shall forward a copy of the certification application to the Town of Apex Planning Department to verify that the application has been submitted.
- Solar conduit shall be provided on all multi-family and/or condominium buildings to accommodate the future installation of solar panels.

STORMWATER MANAGEMENT

This PUD shall go above the stormwater management requirements for quality and quantity treatment outlined in Section 6.1.7 of the UDO such that:

- Post development peak runoff shall not exceed pre-development peak runoff conditions for the 1 year, 10-year, 25-year, and 24-hour storm events.
- Treatment for the first 1 inch of runoff will provide 85% removal of total suspended solids.

Acceptable stormwater structures shall include detention ponds, constructed wetlands, bio-retention areas, or other approved devices consistent with the NC DEQ Stormwater Design Manual and the Town of Apex UDO.

PARKS AND RECREATION

This project was reviewed by the Parks, Recreation and Cultural Resources Advisory Commission on April 27, 2022 and fee-in-lieu of dedication was recommended.

Number of Units*	Housing Type	Fee Per Unit**	Total Fees
370	Multi-Family	\$2,226.05	\$823,638.50
Total	-	-	\$823,638.50

*Final unit count will be determined at the time of Master Site Plan.

**Fees are based upon approval date and runs with project with exception of the increase in total unit count.

PUBLIC FACILITIES

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F)(1) (f) and be designed according to sound engineering standards. Road and utility infrastructure shall be as follows:

General Roadway Infrastructure

All proposed roadway infrastructure and right-of-way dedications will be consistent with the Town of Apex UDO and Transportation Plan, unless specifically set forth in the PUD Text.

Chapel Ridge Road shall be extended north to connect to Beaver Creek Commons Drive (the "Road Extension") in the approximate location shown on the Concept Plan. The Road Extension shall be constructed to Town of Apex standards and specifications. At the site plan stage, the portion of the Road Extension shown in pink on the Concept Plan and labeled "Public ROW" shall be dedicated to the Town as public right-of-way (the "Public ROW Section"). The portion of the Public ROW Section south of the shared property line with PIN 0732366134 shall have a minimum ROW width of 60 feet and be constructed to the Minor Collector Street standard. The portion of the Public ROW Section across PIN 0732258769 shall have a minimum ROW width of 50 feet. The portion of the Road Extension shown in orange on the Concept Plan and labeled "Private drive with minimum 45' public access easement" (the "Easement Section") shall be subject to a recorded public access and maintenance agreement with a minimum easement width of 45 feet. The public access and maintenance agreement shall be approved by the Planning Director as to form.

Water and Sanitary Sewer

Apartments within the project will be served by Town of Apex for water and sanitary sewer. The utility design will be finalized at the time of Construction Drawing and be based on available facilities adjacent to the site at that time. The design will meet the current Town of Apex master plans for water and sewer and standard specifications.

Water and sewer lines shall be extended for the length of the Property's frontage along Chapel Ridge Road, and they shall always be extended along any and all natural drainage courses/draws that are located within the property line boundaries of the proposed development. Sewer shall be extended to all adjacent upstream property lines. The portion of the Property fronting Clark Farm Road shall be served by the extension of water and sanitary sewer lines from the north, through the internal portion of the Property. At site plan, water and sewer line easements shall be dedicated to facilitate the extension.

The developer shall provide at least one sewer stub and one water stub to the eastern property line of PIN 0732258464 in locations to be determined at Site Plan and agreed to by the developer and owner of PIN 0732258464.

Walkability

The following facilities will be provided to contribute to a walkable community within and surrounding the Chapel Ridge North development:

- Five-foot wide public sidewalk along the western side of Chapel Ridge Road public right-of-way fronting the development.
- Ten-foot wide side path along the eastern and northern side of Chapel Ridge Rd adjacent to land that's a part of this rezoning application (as shown on the Concept Plan).
- Five-foot wide sidewalk along the south side of Ackerman Drive fronting the project.
- A crosswalk will be provided from the future sidewalk on the south side of Ackerman Drive to the existing sidewalk on the north side of Ackerman Drive.
- Six-foot wide private walking trails throughout the development, locations to be determined at site plan.

Transit

The developer shall design, construct and install a bus stop along the west side of Chapel Ridge Road in a location mutually agreed to by the developer and the Traffic Engineering Manager. The bus stop shall include an 8 x 30-foot pad, bench, and bike rack. Construction costs for the bus stop shall not exceed a maximum of \$25,000 (the "Cost Limit"). In the event construction costs exceed the Cost Limit, the developer may elect to either (a) pay a fee in lieu of \$25,000 for the bus stop, or (b) design and construct the bus stop despite construction costs exceeding the Cost Limit. The bus stop shall be shown on the overall site plan and designed, approved, and constructed concurrently with the project.

Other Utilities and Facilities

Electricity will be provided by Apex Electric. Phone, cable, and gas will be provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Streetscape features may be used to help with establishing a framework for the proposed development. These features may include street trees, benches, trash receptacles, and street and/or pedestrian lights compatible with their context.

Construction Traffic

Following construction of the Chapel Ridge Road extension, all heavy duty construction traffic shall enter and exit the site via Beaver Creek Commons Drive. "No Construction Traffic" signs shall be posted along Creekside Landing Drive south of its intersection with Beaver Creek Commons Drive, Ackerman Hill Drive, Chapel Ridge Road at the southern project boundary, and at the intersection of Chapel Ridge Road and Olive Chapel.

PHASING PLAN

The development will be completed in multiple phases, which will be determined during site or subdivision plan review.

CONSISTENCY WITH LAND USE PLAN

The proposed development is consistent with Advance Apex 2045: The Apex Comprehensive Plan, adopted February 2019. The 2045 Land Use Map designates the Property as Medium Density Residential. Given the high intensity commercial uses to the north, and the existing high density townhome community to the east, higher density is appropriate in this location. Accordingly, this PUD updates the FLUM designation to High Density Residential.

COMPLIANCE WITH UDO

The development standards adopted for this PUD comply with those set forth in the current version of the Town's Unified Development Ordinance (UDO).

TRANSPORTATION IMPROVEMENTS

The following transportation improvements are proposed:

- All proposed driveway access and improvements on state-maintained roadways are subject to both Apex and NCDOT review and approval. This includes proposed access to Chapel Ridge Road and any modifications to Chapel Ridge Road.
- Chapel Ridge Road shall be extended north to connect to Beaver Creek Commons Drive (the "Road Extension") in the approximate location shown on the Concept Plan. The Road Extension shall be constructed to Town of Apex standards and specifications. At the site plan stage, the portion of the Road Extension shown in pink on the Concept Plan and labeled "Public ROW" shall be dedicated to the Town as public right-of-way (the "Public ROW Section"). The portion of the Public ROW Section south of the shared property line with PIN 0732366134 shall have a minimum ROW width of 60 feet and be constructed to the Minor Collector Street standard. The portion of the Public ROW Section across PIN 0732258769 shall have a minimum ROW width of 50 feet. The portion of the Road Extension shown in orange on the Concept Plan and labeled "Private drive with minimum 45' public access easement" (the "Easement Section") shall be subject to a recorded public access and maintenance agreement with a minimum easement width of 45 feet. The public access and maintenance agreement shall be approved by the Planning Director as to form.
- The center turn lane on Beaver Creek Commons Drive shall be restriped to provide 75 feet of southbound left turn storage and 75 feet of taper at the site driveway.

REPRESENTATIVE BUILDING ELEVATIONS



SOUTHERN TRADITIONAL CLASSIC STYLE



Elevations are conceptual in nature.

SOUTHERN / MODERN FARMHOUSE TRANSITIONAL STYLE



Elevations are conceptual in nature.



MODERN FARMHOUSE STYLE



Elevations are conceptual in nature.

CHAPEL RIDGE NORTH

CHAPEL RIDGE ROAD
APEX, NORTH CAROLINA

PLANNED UNIT DEVELOPMENT PLAN FOR PUD-CZ

PROJECT NUMBER: 2021110513

DATE: SEPTEMBER 01, 2022



MCADAMS

The John R. McAdams Company, Inc.
One Glenwood Avenue
Suite 201
Raleigh, NC 27603
phone 919. 823. 4300
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CONTACT

JESSIE HARDESTY
hardesty@mcadamsco.com
PHONE: 919. 287. 0824
DERICK BLANKENSHIP
BLANKENSHIP@MCADAMSCO.COM
PHONE: 919. 287. 0836

CLIENT

HIGH STREET DISTRICT DEVELOPMENT, INC.
555 FAYETTEVILLE STREET SUITE 300
RALEIGH, NC 27601
CONTACT: JOSH DIX

SHEET INDEX

C0.00	COVER
C1.00	EXISTING CONDITIONS
C2.00	PRELIMINARY LAYOUT PLAN



VICINITY MAP & AERIAL IMAGE

1" = 500'

SITE DATA

PARCEL IDENTIFICATION NUMBER (PIN)	0732343920, 0732340602, 0732349869, 0732256180, 0732347912, 0732354594, 0732352538, 0732356305
EXISTING ZONING	RR
PROPOSED ZONING	PUD-CZ
CURRENT 2045 LAND USE MAP DESIGNATION	MEDIUM DENSITY RESIDENTIAL
PROPOSED 2045 LAND USE MAP DESIGNATION	HIGH DENSITY RESIDENTIAL
SITE AREA	APPROX. 22.71 AC - GROSS APPROX. 0.74 - INSIDE R/W APPROX. 21.97 AC - NET
EXISTING USE	SINGLE FAMILY LOTS
PROPOSED USE	HIGH DENSITY RESIDENTIAL - APARTMENTS RURAL RESIDENTIAL - SINGLE FAMILY DETACHED
DENSITY	MAXIMUM 370 UNITS (APARTMENTS) 1 UNIT (SINGLE-FAMILY)
BUILDING HEIGHT	MAXIMUM 55' (5 STORIES) *4 STORY MAX FACING PINS 0732343658, 0732340602 AND 0732348711
SETBACKS	FRONT 10' SIDE 20' REAR 20' ALLEY 5' CORNER 20'
SETBACKS FROM REQUIRED BUFFERS	10' (BUILDING) 5' (PARKING)
PARKING	MINIMUM 1.3 SPACES / 1 OR 2 BEDROOM UNITS MINIMUM 1.8 SPACES / 3 BEDROOM UNITS
BUILT-UPON AREA (IMPERVIOUS SURFACE)	MAXIMUM 15.38 AC (70%) PROPOSED LESS THAN 15.38 AC (70%)
RESOURCE CONSERVATION AREA	MINIMUM 4.39 AC (20%) PROPOSED MORE THAN 4.39 AC (20%)
WATERSHED PROTECTION OVERLAY	PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT
FEMA FLOODPLAIN	NONE (FIRM PANEL 3720073200, EFFECTIVE 05/02/2006)
HISTORIC STRUCTURES	NONE

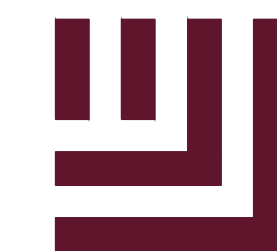


REVISIONS

NO. DATE

PLANNED UNIT DEVELOPMENT PLAN FOR:

CHAPEL RIDGE APARTMENTS
APEX, NC 27502
PROJECT NUMBER: 2021110513



McADAMS

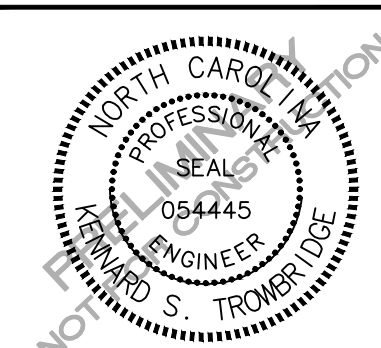
The John R. McAdams Company, Inc.
One Glenwood Avenue
Suite 201
Raleigh, NC 27603
phone 919. 823. 4300
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

HIGH STREET DISTRICT DEVELOPMENT, INC.
555 FAYETTEVILLE STREET SUITE 300
RALEIGH, NC 27601
CONTACT: JOSH DIX

CHAPEL RIDGE NORTH
PLANNED UNIT DEVELOPMENT PLAN
APEX, NORTH CAROLINA



REVISIONS

NO. DATE

PLAN INFORMATION

PROJECT NO. 2021110513
FILENAME 2021110513-PUD-OAS1
CHECKED BY KST
DRAWN BY KST
SCALE 1"=100'
DATE 09.01.2022

SHEET

PRELIMINARY LAYOUT
PLAN

C2.00

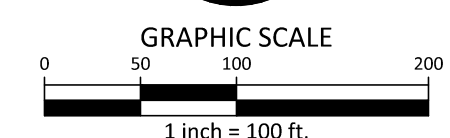
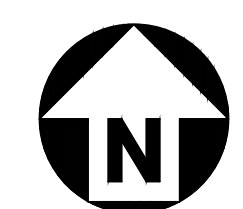
GENERAL NOTES

- REFER TO PUD DOCUMENT FOR COMPLETE LIST OF ALLOWABLE USES FOR EACH TRACT OR DEVELOPMENT AREA.
- SITE ELEMENTS REQUIRED TO SATISFY RECREATIONAL REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS FOUND IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PARKS AND RECREATION DEPARTMENT.
- SITE ITEMS SUCH AS BUT NOT LIMITED TO, LIGHTING, LANDSCAPING (INCLUDING MULCH), SCREENING (i.e. DUMPSTERS/TRASH, MECHANICAL/HVAC, ETC.), SITE STABILIZATION (SEEDING), AND PAVING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.
- NO SIGNS ARE APPROVED AS PART OF THE PUD-CZ PLAN APPROVAL. A SEPARATE SIGN PERMIT MUST BE OBTAINED. SIGNAGE WILL COMPLY WITH APEX'S UDO.
- EXACT ACCESS AND STUB LOCATIONS TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
- EXACT LOCATION OF RESOURCE CONSERVATION AREA TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
- THE PORTION OF THE INTERNAL STREET DESIGNATED AS A PUBLIC STREET SHALL BE DEDICATED TO THE TOWN OF APEX.
- ALL PARKING STANDARDS WITHIN THE PUD WILL COMPLY WITH THE TOWN OF APEX'S UDO.
- PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY.

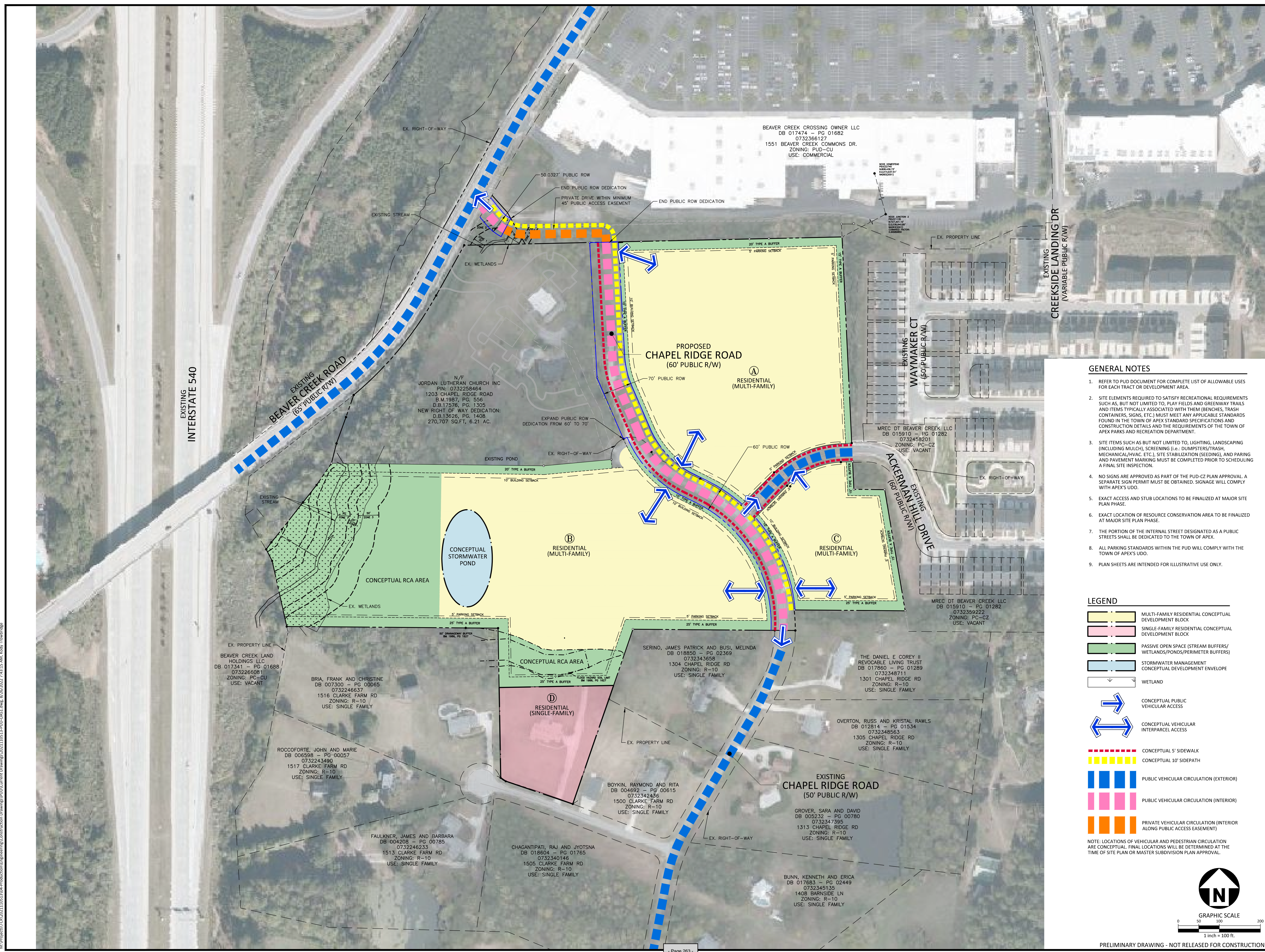
LEGEND

- MULTI-FAMILY RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- SINGLE-FAMILY RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- PASSIVE OPEN SPACE (STREAM BUFFERS/WETLANDS/PONDS/PERIMETER BUFFERS)
- STORMWATER MANAGEMENT CONCEPTUAL DEVELOPMENT ENVELOPE
- WETLAND
- CONCEPTUAL PUBLIC VEHICULAR ACCESS
- CONCEPTUAL VEHICULAR INTERPARCEL ACCESS
- CONCEPTUAL 5' SIDEWALK
- CONCEPTUAL 10' SIDEWALK
- PUBLIC VEHICULAR CIRCULATION (EXTERIOR)
- PUBLIC VEHICULAR CIRCULATION (INTERIOR)
- PRIVATE VEHICULAR CIRCULATION (INTERIOR ALONG PUBLIC ACCESS EASEMENT)

NOTE: LOCATIONS OF VEHICULAR AND PEDESTRIAN CIRCULATION ARE CONCEPTUAL. FINAL LOCATIONS WILL BE DETERMINED AT THE TIME OF SITE PLAN OR MASTER SUBDIVISION PLAN APPROVAL.



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



M:\Projects\VT\2021110513\04-Production\Engineering\Construction\Drawings\2021110513-PUD-OAS1.dwg, 8/26/2022 7:48:15 AM, kody.tromer@mcadamsco.com

Traffic Impact Analysis

Chapel Ridge Apartments Apex, NC

Prepared for:

Trammel Crow Company

Traffic Impact Analysis for
Chapel Ridge Apartments
Apex, North Carolina

Prepared for:
Trammell Crow Company
Raleigh, NC

Prepared by:
Kimley-Horn and Associates, Inc.
NC License #F-0102
300 S. Main Street, Suite 212
Holly Springs, NC 27540
(919) 677-2000



February 2022
011270040

2/22/2022

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Executive Summary

Kimley-Horn has completed a Traffic Impact Analysis (TIA) for the proposed Chapel Ridge Apartments development located along Chapel Ridge Road at Ackerman Hill Drive in Apex, North Carolina. The site is currently occupied by several single-family homes and as currently envisioned will include approximately 350 apartments. Full build-out of the development was assumed in 2025 for this analysis.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2021) traffic condition as well as the projected (2025) background and build-out traffic conditions.

As shown in Table ES-1, the proposed development has the potential to generate 117 new trips during the AM peak hour and 147 new trips during the PM peak hour on a typical weekday.

Table ES-1 ITE Traffic Generation (Vehicles)							
Land Use Code	Land Use	Intensity		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
221	Multifamily Housing (Mid-Rise)	350	d.u.	30	87	90	57

Capacity analyses were performed using Synchro Version 10 and Sidra Intersection 9 software. Table ES-2 summarizes the operation of the study intersections for the AM and PM peak hour traffic conditions.

Table ES-2 Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Kelly Road at Wendhurst Court/Beaver Creek Commons Drive (Signalized)		
Existing (2021) Traffic	B (11.7)	C (24.5)
Background (2025) Traffic	B (12.3)	C (28.7)
Build-Out (2025) Traffic	B (12.3)	C (28.4)

Table ES-2 (cont.) Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Olive Chapel Road at Chapel Ridge Road (Unsignalized)		
Existing (2021) Traffic	SB – B (12.7) EBL – A (8.3)	SB – B (13.6) EBL – A (8.7)
Background (2025) Traffic	SB – B (13.9) EBL – A (8.8)	SB – C (15.8) EBL – A (9.0)
Build-Out (2025) Traffic	SB – B (14.7) EBL – A (8.8)	SB – C (16.6) EBL – A (9.1)
Chapel Ridge Road at Ackerman Hill Drive (Unsignalized)		
Existing (2021) Traffic	WB – A (8.6) SBL – A (7.3)	WB – A (8.7) SBL – A (7.3)
Background (2025) Traffic	WB – A (8.7) SBL – A (7.3)	WB – A (8.7) SBL – A (7.3)
Build-Out (2025) Traffic	WB – A (8.9) SBL – A (7.3)	WB – A (9.2) SBL – A (7.4)
Beaver Creek Commons Drive at Creekside Landing Drive (Roundabout)^		
Existing (2021) Traffic	A (4.2) v/c = 0.16	A (8.5) v/c = 0.47
Background (2025) Traffic	A (4.5) v/c = 0.18	A (9.6) v/c = 0.52
Build-Out (2025) Traffic	A (4.7) v/c = 0.21	B (10.3) v/c = 0.55
Beaver Creek Commons Drive at Proposed Site Access (Unsignalized)		
Build-Out (2025) Traffic	WB – B (11.4) SBL – A (7.8)	WB – B (14.5) SBL – A (8.6)
Chapel Ridge Road at Proposed Site Access/North Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	NB – A (9.2) WBL – A (7.3)	NB – A (9.3) WBL – A (7.5)
Chapel Ridge Road at Central Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	NB – A (9.4) SB – A (9.4) EBL – A (7.4) WBL – A (7.3)	NB – A (9.6) SB – A (9.5) EBL – A (7.3) WBL – A (7.4)
Chapel Ridge Road at South Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	EB – A (9.0) WB – A (9.1) NBL – A (7.3) SBL – A (7.3)	EB – A (9.2) WB – B (9.4) NBL – A (7.3) SBL – A (7.4)
Ackerman Hill Drive at Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	NB – A (8.9) WBL – A (7.3)	NB – A (9.0) WBL – A (7.4)

^Note: Results reported from SIDRA software.

The following roadway improvements are recommended to be performed as part of this project:

Chapel Ridge Road Extension/Proposed Site Access:

- Realign and extend Chapel Ridge Road/Proposed Site Access to Beaver Creek Commons Drive as a two-lane undivided roadway

Beaver Creek Commons Drive at Proposed Site Access:

- Construct the Proposed Site Access with one ingress lane and one egress lane
- Restripe Beaver Creek Commons Drive to provide a southbound left-turn lane with 100 feet of storage

Chapel Ridge Road at Proposed Site Access/North Site Driveway:

- Construct the North Site Driveway with one ingress lane and one egress lane

Chapel Ridge Road at Central Site Driveway:

- Construct the Central Site Driveway with one ingress lane and one egress lane on both minor street approaches

Chapel Ridge Road at South Site Driveway:

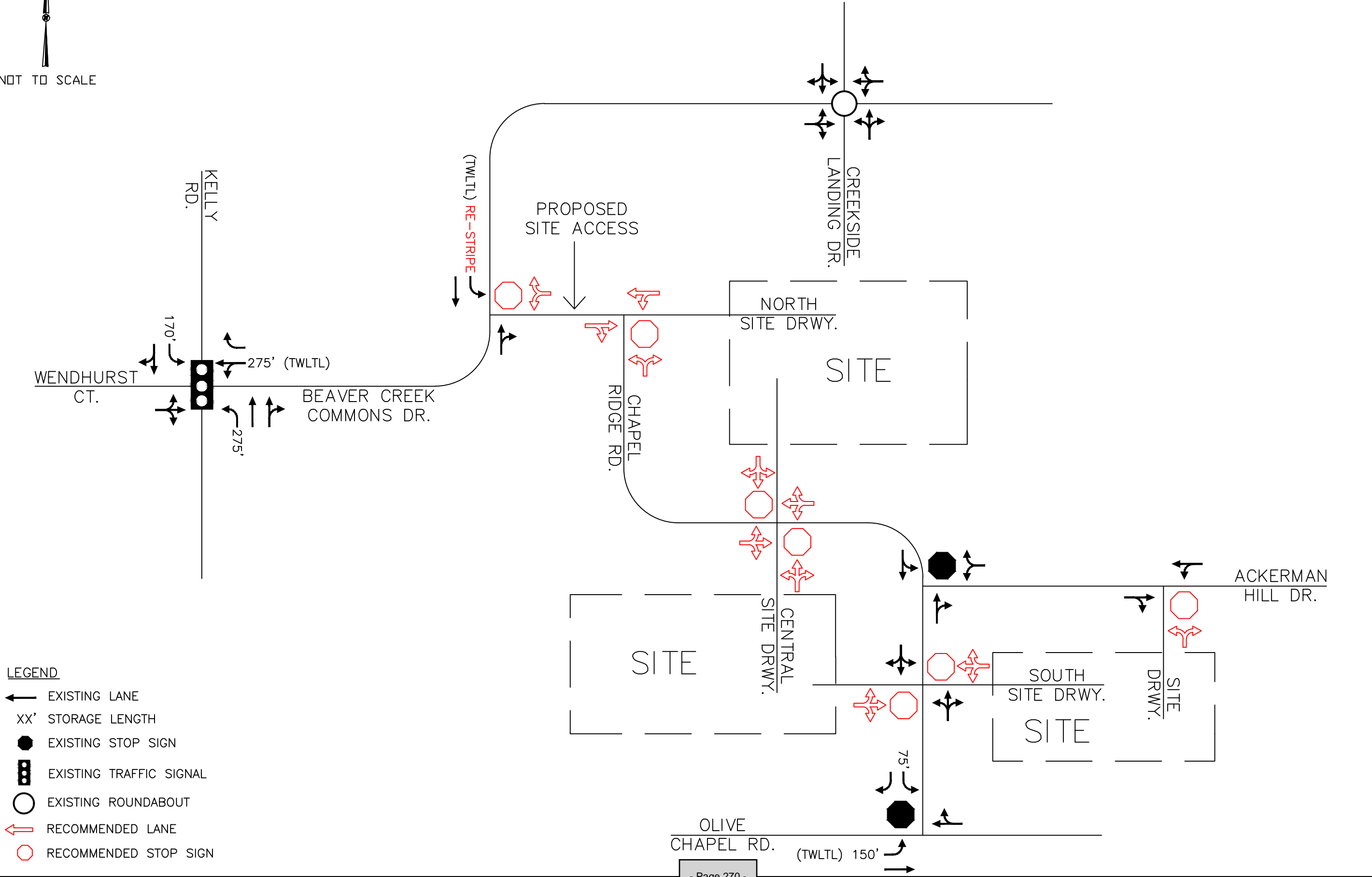
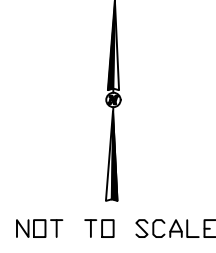
- Construct the South Site Driveway with one ingress lane and one egress lane on both minor street approaches

Ackerman Hill Drive at Site Driveway:

- Construct the Site Driveway with one ingress lane and one egress lane

These recommended improvements are shown on **Figure ES-1**.

Analyses indicate that with the recommended improvements in place, all of the study intersections will operate at acceptable LOS at project build-out. Only minor increases in intersection delays are anticipated between the background and build-out conditions, and no queuing issues are anticipated in the build-out traffic condition.



- LEGEND**
- ↑ EXISTING LANE
 - XX' STORAGE LENGTH
 - EXISTING STOP SIGN
 - ⬛ EXISTING TRAFFIC SIGNAL
 - EXISTING ROUNDABOUT
 - ↑ RECOMMENDED LANE
 - RECOMMENDED STOP SIGN

FIGURE ES-1

RECOMMENDED ROADWAY LANEAGE

CHAPEL RIDGE APARTMENTS APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

TABLE OF CONTENTS

		<u>Page No.</u>
1.0	INTRODUCTION.....	1
2.0	INVENTORY	2
2.1	<i>STUDY AREA</i>	<i>2</i>
2.2	<i>EXISTING CONDITIONS</i>	<i>2</i>
3.0	TRAFFIC GENERATION.....	7
4.0	SITE TRAFFIC DISTRIBUTION.....	8
5.0	PROJECTED TRAFFIC VOLUMES	10
5.1	<i>EXISTING TRAFFIC</i>	<i>10</i>
5.2	<i>HISTORIC GROWTH TRAFFIC.....</i>	<i>10</i>
5.3	<i>APPROVED DEVELOPMENT TRAFFIC</i>	<i>10</i>
5.4	<i>TOTAL BACKGROUND TRAFFIC</i>	<i>11</i>
5.5	<i>SITE TRAFFIC.....</i>	<i>11</i>
5.6	<i>BEAVER CREEK COMMONS DRIVE CONNECTION TRAFFIC IMPACTS.....</i>	<i>11</i>
5.7	<i>BUILD-OUT TRAFFIC.....</i>	<i>12</i>
6.0	CAPACITY ANALYSIS.....	17
6.1	<i>KELLY ROAD AT WENDHURST COURT/BEAVER CREEK COMMONS DRIVE.....</i>	<i>18</i>
6.2	<i>OLIVE CHAPEL ROAD AT CHAPEL RIDGE ROAD.....</i>	<i>19</i>
6.3	<i>CHAPEL RIDGE ROAD AT ACKERMAN HILL DRIVE</i>	<i>20</i>
6.4	<i>BEAVER CREEK COMMONS DRIVE AT CREEKSIDE LANDING DRIVE.....</i>	<i>21</i>
6.5	<i>BEAVER CREEK COMMONS DRIVE AT PROPOSED SITE ACCESS.....</i>	<i>22</i>
6.6	<i>CHAPEL RIDGE ROAD AT PROPOSED SITE ACCESS/NORTH SITE DRIVEWAY.....</i>	<i>23</i>
6.7	<i>CHAPEL RIDGE ROAD AT CENTRAL SITE DRIVEWAY.....</i>	<i>24</i>
6.8	<i>CHAPEL RIDGE ROAD AT SOUTH SITE DRIVEWAY</i>	<i>25</i>
6.9	<i>ACKERMAN HILL DRIVE AT SITE DRIVEWAY</i>	<i>26</i>
7.0	SUPPLEMENTAL ANALYSIS – WITH CHAPEL RIDGE TOWNES.....	27
7.1	<i>BACKGROUND VOLUME DEVELOPMENT</i>	<i>27</i>
7.2	<i>BEAVER CREEK COMMONS DRIVE TRAFFIC IMPACTS.....</i>	<i>28</i>
7.3	<i>CAPACITY ANALYSIS</i>	<i>28</i>
8.0	RECOMMENDATIONS.....	30

Appendices

- A. *APPROVED ASSUMPTIONS MEMORANDUM*
- B. *TRAFFIC COUNT DATA*
- C. *APPROVED DEVELOPMENT DATA - OLIVE CHAPEL PROFESSIONAL PARK*
- D. *TRIP GENERATION*
- E. *INTERSECTION SPREADSHEETS*
- F. *SYNCHRO & SIDRA OUTPUT: EXISTING (2021)*
- G. *SYNCHRO OUTPUT: BACKGROUND (2025)*
- H. *SYNCHRO OUTPUT: BUILD-OUT (2025)*
- I. *TRAFFIC SIGNAL WARRANT ANALYSIS: OLIVE CHAPEL ROAD AT CHAPEL RIDGE ROAD*
- J. *SUPPLEMENTAL ANALYSIS: CHAPEL RIDGE TOWNES DEVELOPMENT DATA*
- K. *SUPPLEMENTAL ANALYSIS: INTERSECTION SPREADSHEETS*
- L. *SUPPLEMENTAL ANALYSIS: SYNCHRO & SIDRA OUTPUT: BACKGROUND (2025)*
- M. *SUPPLEMENTAL ANALYSIS: SYNCHRO OUTPUT: BUILD-OUT (2025)*
- N. *TRAFFIC SIGNAL PLANS*

LIST OF TABLES

<u>Table No.</u>	<u>Title</u>	<u>Page No.</u>
Table 3.1	ITE Traffic Generation (Vehicles).....	7
Table 6.0	Level-of-Service Control Delay Thresholds.....	17
Table 6.1	Level-of-Service: Kelly Road at Wendhurst Court/Beaver Creek Commons Dr.	18
Table 6.2	Level-of-Service: Olive Chapel Road at Chapel Ridge Road.....	19
Table 6.3	Level-of-Service: Chapel Ridge Road at Ackerman Hill Drive.....	20
Table 6.4	Level-of-Service: Beaver Creek Commons Drive at Creekside Landing Drive ...	21
Table 6.5	Level-of-Service: Beaver Creek Commons Drive at Proposed Site Access	22
Table 6.6	Level-of-Service: Chapel Ridge Rd at Proposed Site Access/North Site Drwy ...	23
Table 6.7	Level-of-Service: Chapel Ridge Road at Central Site Driveway.....	24
Table 6.8	Level-of-Service: Chapel Ridge Road at South Site Driveway	25
Table 6.9	Level-of-Service: Ackerman Hill Drive at Site Driveway.....	26
Table 7.1	ITE Traffic Generation (Chapel Ridge Townes).....	27
Table 7.2	Level-of-Service Summary - Supplemental Analysis.....	28

LIST OF FIGURES

<u>Figure No.</u>	<u>Title</u>	<u>Page No.</u>
Figure 2.1	Site Location.....	4
Figure 2.2	Preliminary Layout Plan	5
Figure 2.3	Existing Roadway Laneage.....	6
Figure 4.1	Site Traffic Distribution and Percent Assignment	9
Figure 5.1	Existing and Projected (2025) Background AM Peak Hour Traffic Volumes.....	13
Figure 5.2	Existing and Projected (2025) Background PM Peak Hour Traffic Volumes	14
Figure 5.3	Projected (2025) Build-out AM Peak Hour Traffic Volumes.....	15
Figure 5.4	Projected (2025) Build-out PM Peak Hour Traffic Volumes.....	16
Figure 8.1	Recommended Roadway Laneage.....	31

1.0 Introduction

Kimley-Horn has completed a Traffic Impact Analysis (TIA) for the proposed Chapel Ridge Apartments development located along Chapel Ridge Road at Ackerman Hill Drive in Apex, North Carolina. The site is currently occupied by several single-family homes and as currently envisioned will include approximately 350 apartments. Full build-out of the development was assumed in 2025 for this analysis.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The traffic conditions studied include the existing (2021) traffic condition as well as the projected (2025) background and build-out traffic conditions.

North Carolina Department of Transportation (NCDOT) and Town of Apex staff provided background data and were consulted regarding the elements to be covered in this analysis. The approved Memorandum of Understanding is included in the Appendix of this report.

2.0 Inventory

2.1 Study Area

The study area for this development includes the following intersections:

- Kelly Road at Wendhurst Court/Beaver Creek Commons Drive
- Olive Chapel Road at Chapel Ridge Road
- Chapel Ridge Road at Ackerman Hill Drive
- Beaver Creek Commons Drive at Creekside Landing Drive
- Beaver Creek Commons Drive at Proposed Site Access
- Chapel Ridge Road at Proposed Site Access/North Site Driveway
- Chapel Ridge Road at Central Site Driveway
- Chapel Ridge Road at South Site Driveway
- Ackerman Hill Drive at Site Driveway

Figure 2.1 shows the site location, and **Figure 2.2** shows the preliminary layout plan.

2.2 Existing Conditions

The proposed Chapel Ridge Apartments development is located along Chapel Ridge Road at Ackerman Hill Drive in Apex, North Carolina. Roadways in the study area include Kelly Road, Olive Chapel Road, Beaver Creek Commons Drive, Creekside Landing Drive, Wendhurst Court, Chapel Ridge Road, and Ackerman Hill Drive. The existing roadway laneage is shown in **Figure 2.3**.

Kelly Road is generally a multi-lane undivided roadway in the vicinity of Beaver Creek Commons Drive with a posted speed limit of 45 mph. NCDOT reported a 2017 average daily traffic (ADT) volume of 14,000 vehicles per day (vpd) south of Beaver Creek Commons Drive.

Olive Chapel Road is generally a 2-lane undivided roadway with a posted speed limit of 45 mph in the vicinity of Chapel Ridge Road. NCDOT reported a 2019 average daily traffic (ADT) volume of 9,700 vehicles per day (vpd) east of Chapel Ridge Road.

Beaver Creek Commons Drive is generally a 3-lane undivided roadway with a posted speed limit of 35 mph. Based on December 2021 traffic count data, the ADT volume on Beaver Creek Commons Drive is approximately 7,000 vpd southwest of the Kohl's driveway.

Creekside Landing Drive is generally a 2-lane undivided roadway with a posted speed limit of 25 mph. Based on December 2021 traffic count data, the ADT volume is approximately 5,200 vpd north of Beaver Creek Commons Drive.

Wendhurst Court is generally a 2-lane undivided roadway with a posted speed limit of 25 mph and an estimated 2021 ADT volume of less than 1,000 vpd.

Chapel Ridge Road is generally a 2-lane undivided roadway with a posted speed limit of 25 mph. Based on December 2021 traffic count data, the ADT volume is estimated to less than 1,000 vpd.

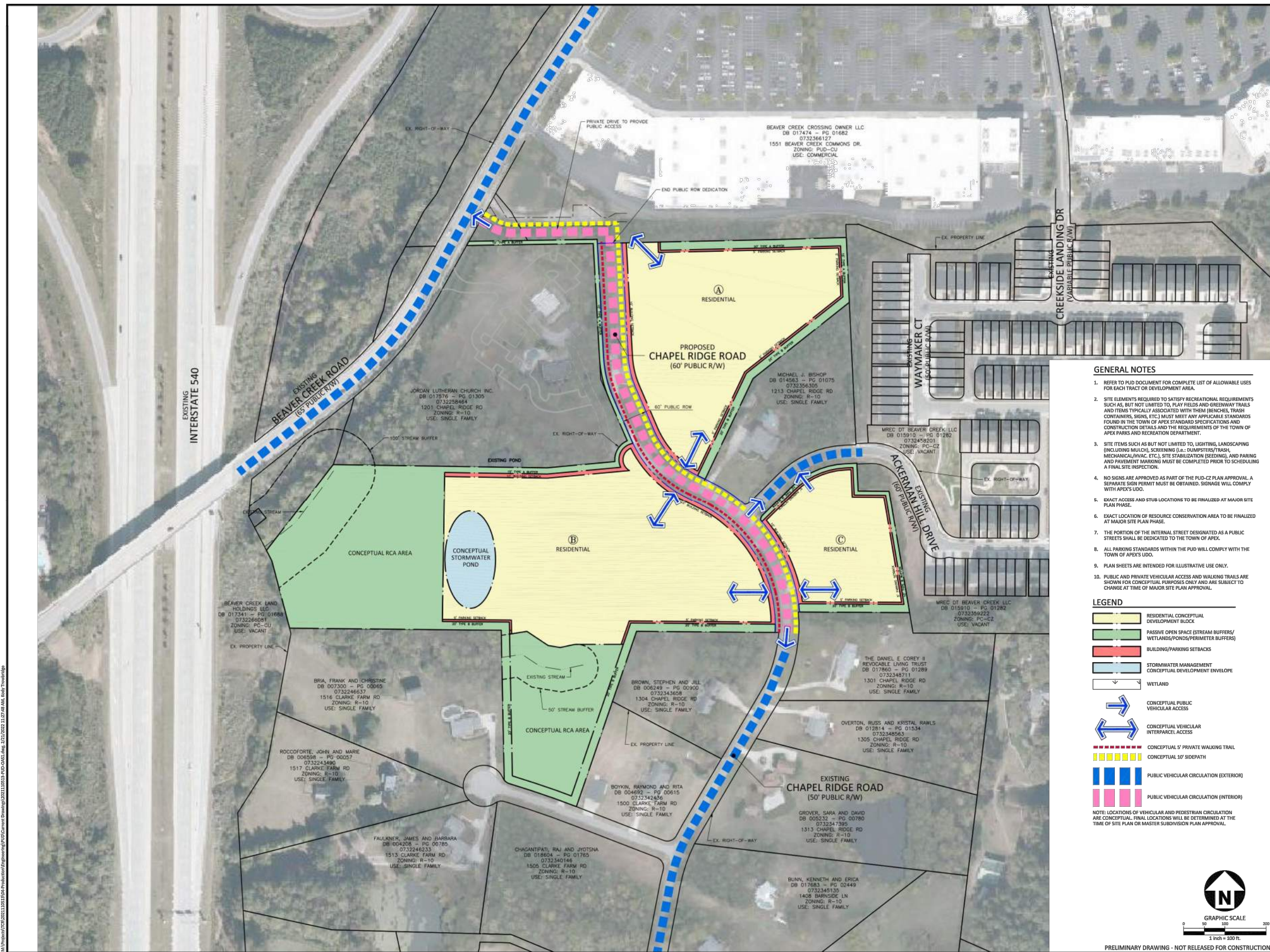
Ackerman Hill Drive is generally a 2-lane undivided roadway with a posted speed limit of 25 mph. Based on December 2021 traffic count data, the ADT volume on Ackerman Hill Drive is less than 1,000 vpd in the vicinity of Chapel Ridge Road.



CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS

SITE LOCATION

FIGURE
2.1



- GENERAL NOTES**
1. REFER TO PUD DOCUMENT FOR COMPLETE LIST OF ALLOWABLE USES FOR EACH TRACT OR DEVELOPMENT AREA.
 2. SITE ELEMENTS REQUIRED TO SATISFY RECREATIONAL REQUIREMENTS SUCH AS, BUT NOT LIMITED TO, PLAY FIELDS AND GREENWAY TRAILS AND ITEMS TYPICALLY ASSOCIATED WITH THEM (BENCHES, TRASH CONTAINERS, SIGNS, ETC.) MUST MEET ANY APPLICABLE STANDARDS FOUND IN THE TOWN OF APEX STANDARD SPECIFICATIONS AND CONSTRUCTION DETAILS AND THE REQUIREMENTS OF THE TOWN OF APEX PARKS AND RECREATION DEPARTMENT.
 3. SITE ITEMS SUCH AS BUT NOT LIMITED TO, LIGHTING, LANDSCAPING (INCLUDING MULCH), SCREENING (I.E.: DUMPSTERS/TRASH, MECHANICAL/HVAC, ETC.), SITE STABILIZATION (SEEDING), AND PAVING AND PAVEMENT MARKING MUST BE COMPLETED PRIOR TO SCHEDULING A FINAL SITE INSPECTION.
 4. NO SIGNS ARE APPROVED AS PART OF THE PUD-CZ PLAN APPROVAL. A SEPARATE SIGN PERMIT MUST BE OBTAINED. SIGNAGE WILL COMPLY WITH APEX'S UDD.
 5. EXACT ACCESS AND STUB LOCATIONS TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
 6. EXACT LOCATION OF RESOURCE CONSERVATION AREA TO BE FINALIZED AT MAJOR SITE PLAN PHASE.
 7. THE PORTION OF THE INTERNAL STREET DESIGNATED AS A PUBLIC STREET SHALL BE DEDICATED TO THE TOWN OF APEX.
 8. ALL PARKING STANDARDS WITHIN THE PUD WILL COMPLY WITH THE TOWN OF APEX'S UDD.
 9. PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY.
 10. PUBLIC AND PRIVATE VEHICULAR ACCESS AND WALKING TRAILS ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY AND ARE SUBJECT TO CHANGE AT TIME OF MAJOR SITE PLAN APPROVAL.

LEGEND

- RESIDENTIAL CONCEPTUAL DEVELOPMENT BLOCK
- PASSIVE OPEN SPACE (STREAM BUFFERS/ WETLANDS/PONDS/PERIMETER BUFFERS)
- BUILDING/PARKING SETBACKS
- STORMWATER MANAGEMENT CONCEPTUAL DEVELOPMENT ENVELOPE
- WETLAND
- CONCEPTUAL PUBLIC VEHICULAR ACCESS
- CONCEPTUAL VEHICULAR INTERPARCEL ACCESS
- CONCEPTUAL 5' PRIVATE WALKING TRAIL
- CONCEPTUAL 10' SIDEPATH
- PUBLIC VEHICULAR CIRCULATION (EXTERIOR)
- PUBLIC VEHICULAR CIRCULATION (INTERIOR)

NOTE: LOCATIONS OF VEHICULAR AND PEDESTRIAN CIRCULATION ARE CONCEPTUAL. FINAL LOCATIONS WILL BE DETERMINED AT THE TIME OF SITE PLAN OR MASTER SUBDIVISION PLAN APPROVAL.

McADAMS
The John R. McAdams Company, Inc.
One Glenwood Avenue
Suite 201
Raleigh, NC 27603
phone 919. 823. 4300
fax 919. 361. 2269
license number: C-0293, C-187
www.mcadamsco.com

CLIENT
TRAMMEL CROW

**CHAPEL RIDGE APARTMENTS
PRELIMINARY SITE PLAN**
APEX, NORTH CAROLINA

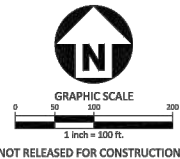
REVISIONS

NO.	DATE
1	
2	

PLAN INFORMATION

PROJECT NO. 2021110513
FILENAME 2021110513-PUD-OAS1
CHECKED BY DCB
DRAWN BY KST
SCALE 1"=100'
DATE 03.01.2022

SHEET
PRELIMINARY LAYOUT PLAN
C2.00



PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

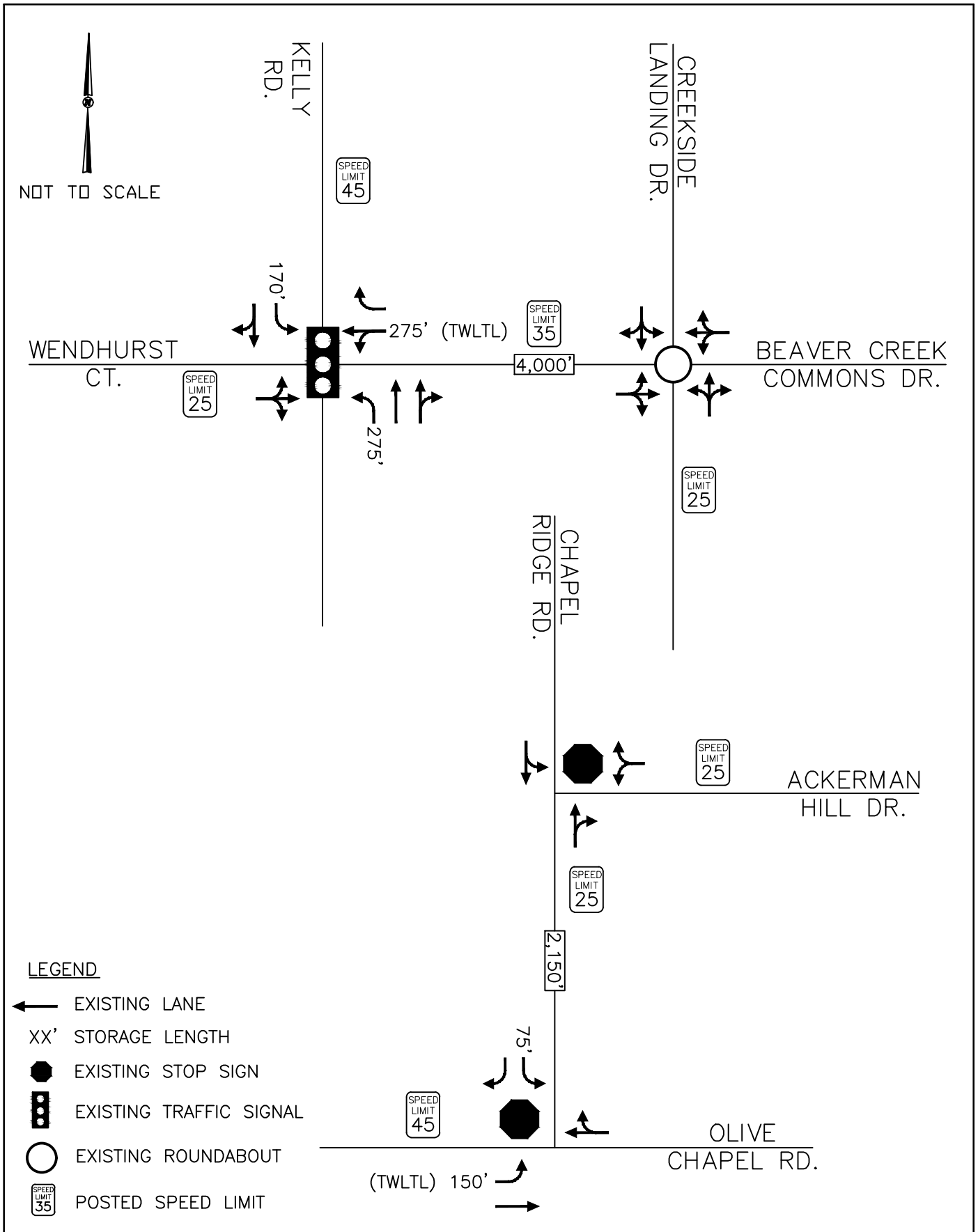
FIGURE 2.2

PRELIMINARY LAYOUT PLAN

CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS

EXISTING LANEAGE

FIGURE
2.3

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

3.0 Traffic Generation

The traffic generation potential of the proposed development was determined using the traffic generation data published in *ITE Trip Generation* (Institute of Transportation Engineers, Tenth Edition, 2017). The site is currently occupied by several single-family homes and as currently envisioned will include approximately 350 apartments.

The trip generation potential of the site is shown below in [Table 3.1](#).

Table 3.1 ITE Traffic Generation (Vehicles)							
Land Use Code	Land Use	Intensity		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
221	Multifamily Housing (Mid-Rise)	350	d.u.	30	87	90	57

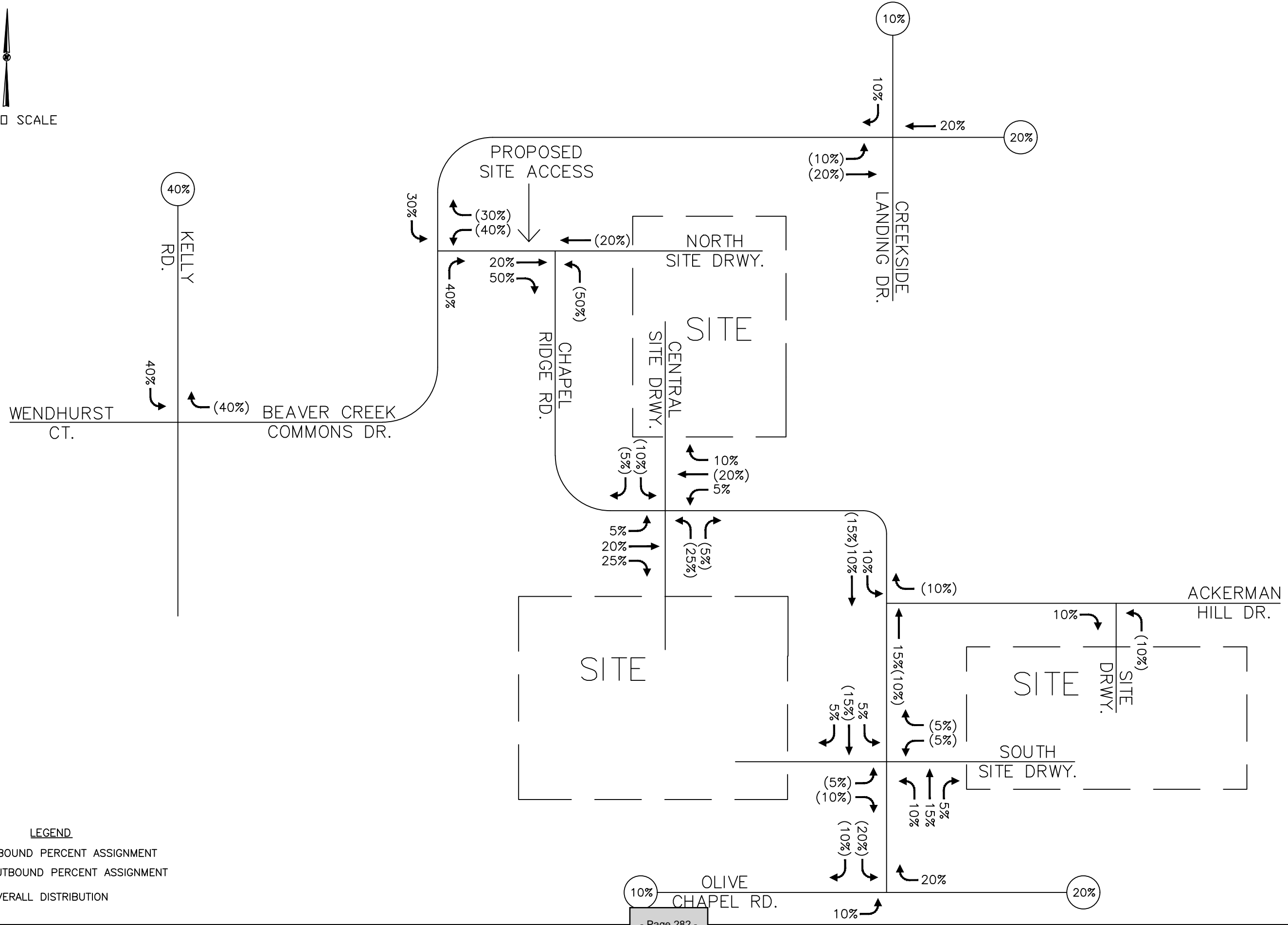
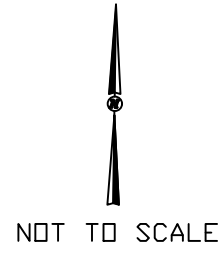
As shown in Table 3.1, the proposed development has the potential to generate 117 new trips during the AM peak hour and 147 new trips during the PM peak hour on a typical weekday. Detailed trip generation calculations are included in the Appendix.

4.0 Site Traffic Distribution

The proposed generated trips were assigned to the surrounding roadway network. The directional distribution and assignment are based on land uses in the area and existing travel patterns and confirmed as part of the TIA scoping discussions with the Town and NCDOT. Site trips were assigned to the network based on the following distribution:

- 40% to/from the north on Kelly Road (via Beaver Creek Commons Drive)
- 20% to/from the east on Beaver Creek Commons Drive
- 15% to/from the east on Olive Chapel Road
- 15% to/from the west on Olive Chapel Road
- 10% to/from the north on Creekside Landing Drive

The site traffic distribution and percent assignment are shown on **Figure 4.1**.



LEGEND

- XX% INBOUND PERCENT ASSIGNMENT
- (XX%) OUTBOUND PERCENT ASSIGNMENT
- (XX%) OVERALL DISTRIBUTION

FIGURE 4.1

SITE TRAFFIC DISTRIBUTION AND PERCENT ASSIGNMENT

CHAPEL RIDGE APARTMENTS APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

5.0 Projected Traffic Volumes

5.1 Existing Traffic

AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) turning movement counts were performed at the following intersections:

- Kelly Road at Wendhurst Court/Beaver Creek Commons Drive November 16, 2021
- Olive Chapel Road at Chapel Ridge Road November 16, 2021
- Chapel Ridge Road at Ackerman Hill Drive November 16, 2021
- Beaver Creek Commons Drive at Creekside Landing Drive November 16, 2021

Traffic counts were performed while Wake County Public Schools were in session. The existing AM and PM peak hour traffic volumes are shown on **Figures 5.1** and **5.2** respectively, and the traffic count data are included in the Appendix.

5.2 Historic Growth Traffic

Historic growth traffic is the increase in traffic due to non-specific growth throughout the area. Based on discussions with Town staff, an annual growth rate of 3% was applied to the intersections in the study area up to the build-out year 2025. No growth was applied to volumes onto/off of Wendhurst Court, Chapel Ridge Road, and the southern leg of Creekside Landing Drive as development along those roadways is either built-out or otherwise accounted for in approved development traffic.

5.3 Approved Development Traffic

Approved development traffic is generated by approved, but not yet constructed, projects in the vicinity of the proposed project. For this analysis, site trips from the Olive Chapel Professional Park development were included.

Per the *Olive Chapel Professional Park TIA* (Ramey-Kemp, October 2016), the Olive Chapel Professional Park development is anticipated to include up to approximately 80,000 square feet (SF) of general office space. This project was approximately 50% occupied at the time of this study, so only the remaining 50% of site traffic from this project was included in this analysis as background traffic.

It was also noted that while the Jordan Lutheran Church has been approved on an adjacent parcel along Beaver Creek Commons Drive, that project is expected to have a minimal impact on traffic volumes during the AM and PM peak hours on a typical weekday and as such was not included in this analysis.

5.4 Total Background Traffic

Total AM and PM peak hour traffic volumes, which include existing, historic growth, and approved development traffic, are shown on **Figures 5.1** and **5.2**, respectively.

5.5 Site Traffic

The proposed site traffic was generated and assigned to the adjacent roadway network according to the distribution discussed previously in *Section 4.0*. The site traffic volumes for the AM and PM peak hours are shown in **Figures 5.3** and **5.4**, respectively.

5.6 Beaver Creek Commons Drive Connection Traffic Impacts

As noted, this project will be required to construct a proposed site access that extends Chapel Ridge Road to connect with Beaver Creek Commons Drive and it is anticipated that this new connection will not be restricted to site traffic-use only.

In the existing condition, development traffic from the Hempstead at Beaver Creek Townhomes community has access to Beaver Creek Commons Drive via Creekside Landing Drive in addition to cross-access near the retail stores. However, the proposed connection to Beaver Creek Commons Drive constructed as part of this development is expected to be more direct and, while somewhat longer in terms of travel distance, may include fewer traffic calming measures than the Creekside Landing Drive route. It was conservatively estimated that 55% of traffic from the Hempstead development would use the proposed connection to Beaver Creek Commons Drive in the future, so site trips were generated and assigned to the network generally consistent with the distribution discussed in *Section 4.0*.

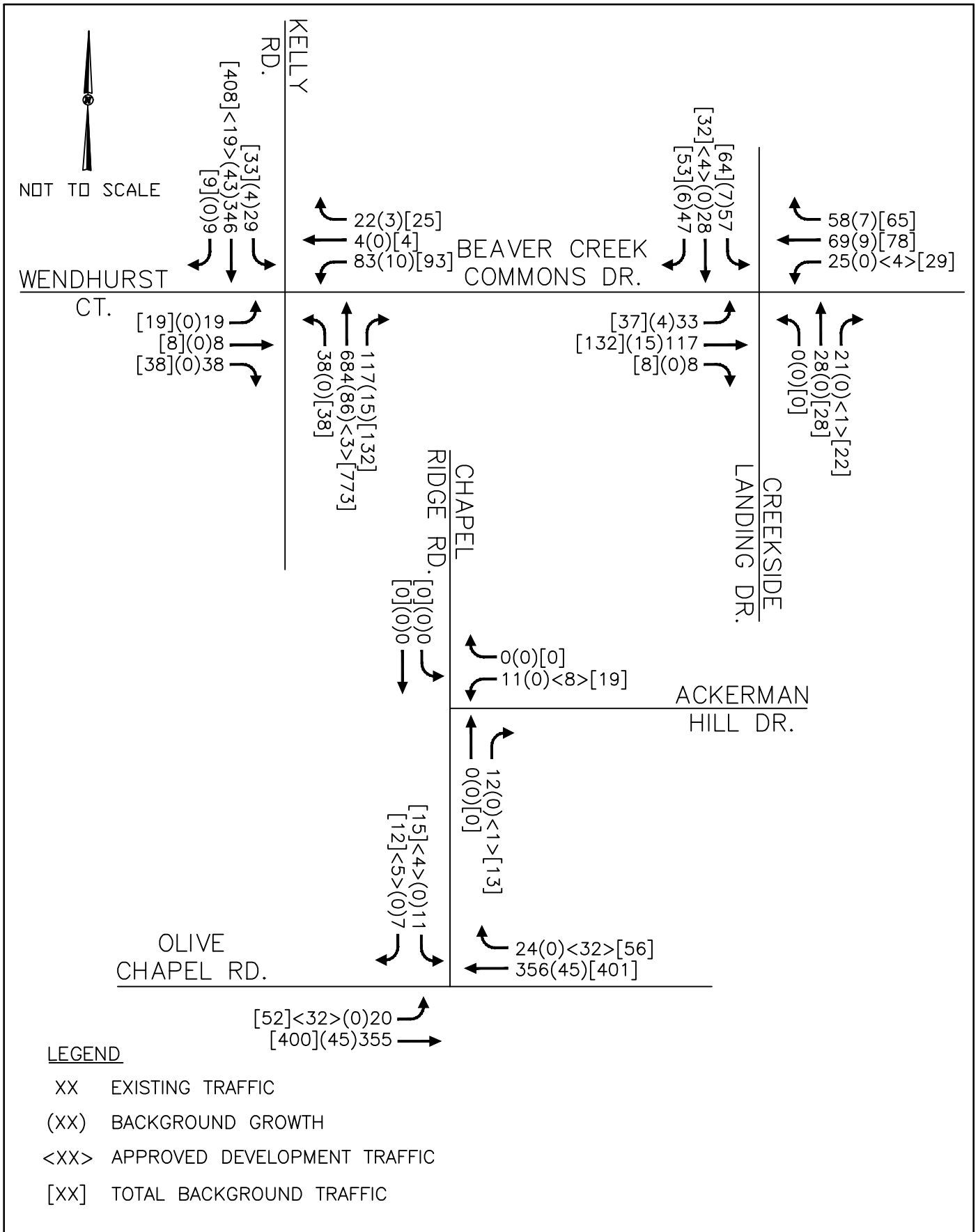
Traffic diversions were also assumed for the Olive Chapel Professional Park project, and while that project is currently 50% built-out, this analysis assumed that all of the site trips assigned to/from the north in the *Olive Chapel Professional Park TIA* would use the new connection to Beaver Creek Commons Drive as opposed to the existing travel path along Creekside Landing Drive through the Hempstead development.

The anticipated traffic diversions associated with the proposed site access construction are shown in **Figures 5.3** and **5.4** for the AM and PM peak hours, respectively.

It should be noted that no trip reductions were applied to existing or approved development volumes. The diversions discussed above for the Hempstead and Olive Chapel Professional Park projects were added to projected traffic volumes, which will result in a significant volume of double-counted trips and present very conservative results.

5.7 Build-Out Traffic

To obtain the projected (2025) build-out traffic volumes, the projected site traffic and Beaver Creek Commons Drive connection diversion trips were added to the projected (2025) background traffic. Traffic volume calculations are detailed in intersection spreadsheets in the Appendix of this report. **Figures 5.3** and **5.4** show the projected (2025) AM and PM peak hour build-out traffic volumes, respectively.

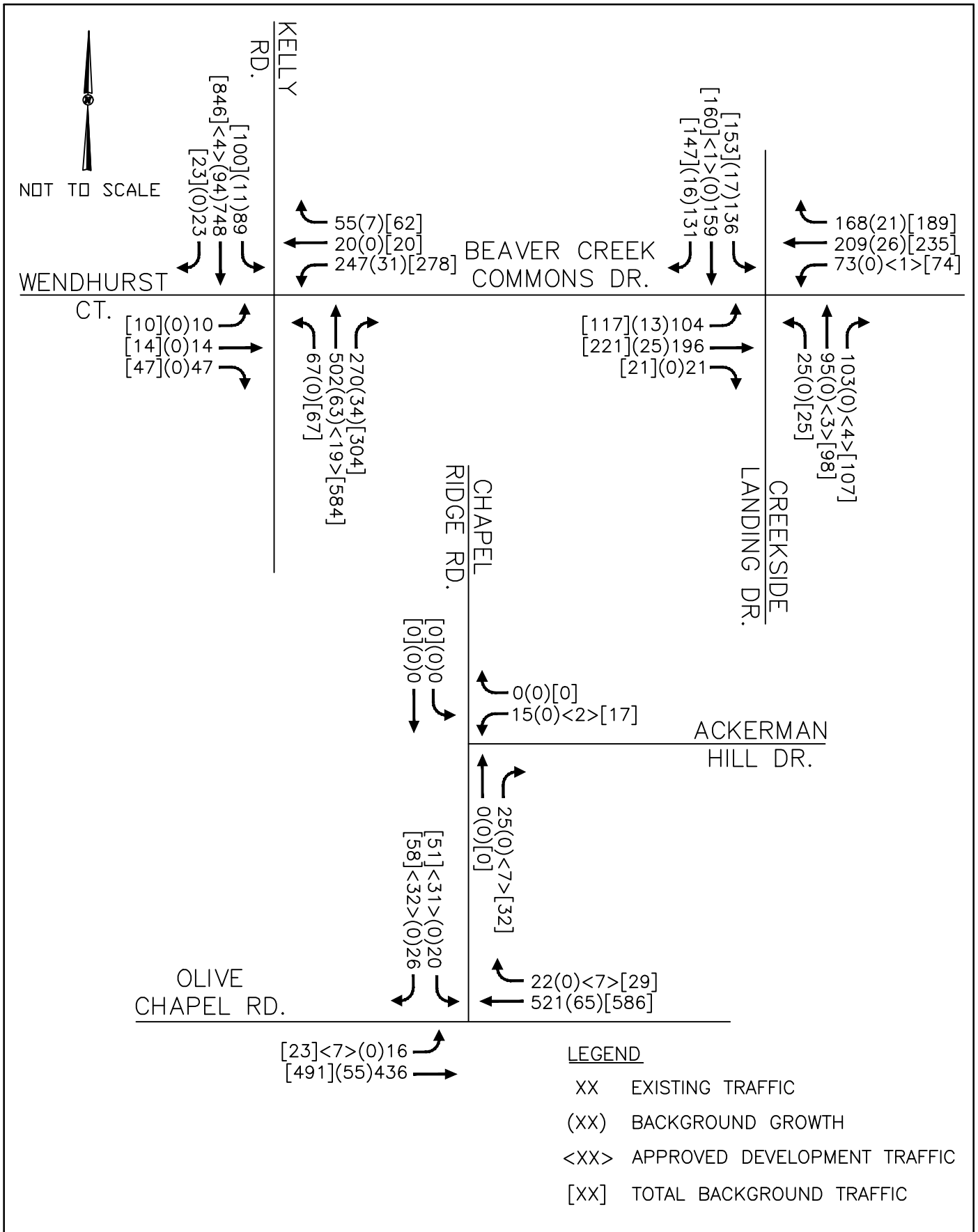


CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS

EXISTING AND PROJECTED
(2025) BACKGROUND AM
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5.1

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS

EXISTING AND PROJECTED
(2025) BACKGROUND PM
PEAK HOUR TRAFFIC VOLUMES

FIGURE
5.2

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

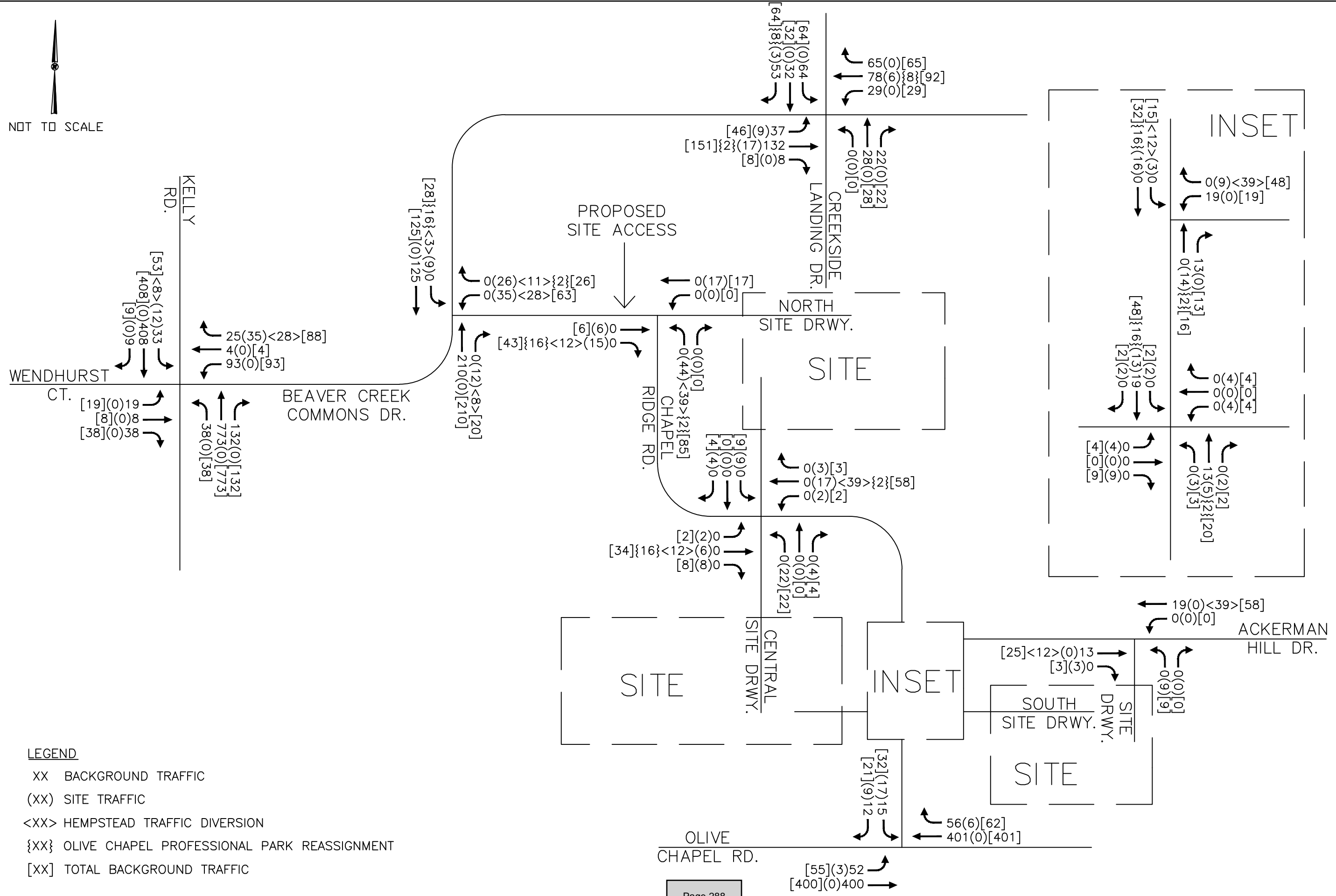


FIGURE 5.3

PROJECTED (2025) BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES

CHAPEL RIDGE APARTMENTS APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

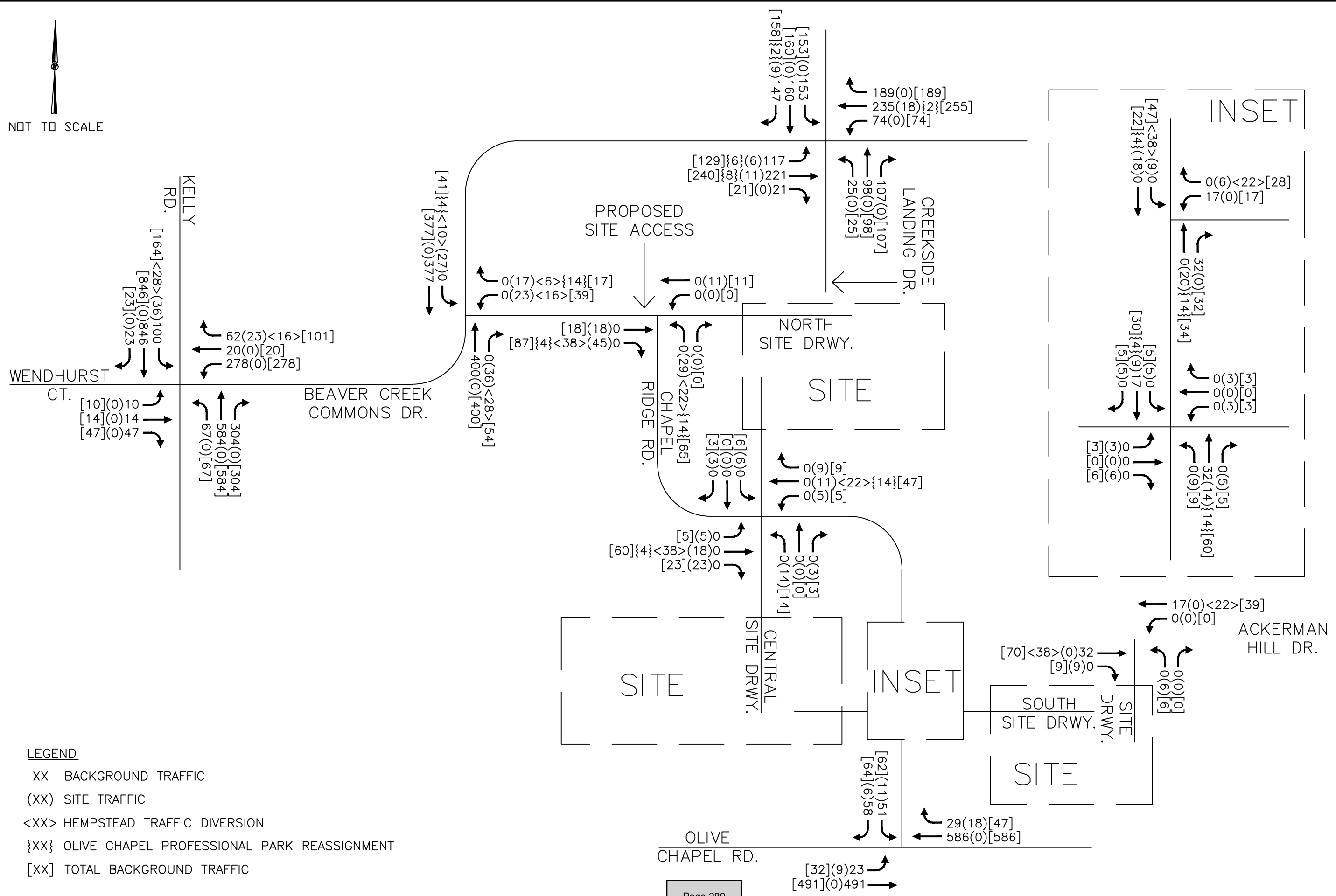


FIGURE 5.4

PROJECTED (2025) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES

CHAPEL RIDGE APARTMENTS APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

6.0 Capacity Analysis

Highway Capacity Manual LOS Thresholds

Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a set time duration. Capacity is combined with Level-of-Service (LOS) to describe the operating characteristics of a road segment or intersection. LOS is a qualitative measure that describes operational conditions and motorist perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A representing the shortest average delays and F representing the longest average delays. LOS D is the typically accepted standard for signalized intersections in urbanized areas. For signalized intersections, LOS is defined for the overall intersection.

For unsignalized intersections, only the movements that must yield right-of-way experience control delay. Therefore, LOS criteria for the overall intersection is not reported by Synchro or SimTraffic or computable using methodology published in the *Highway Capacity Manual*. It is typical for stop sign controlled side streets and driveways intersecting major streets to experience long delays during peak hours, while the majority of the traffic moving through the intersection on the major street experiences little or no delay. Table 6.0 lists the LOS control delay thresholds published in the *Highway Capacity Manual* for signalized and unsignalized intersections.

Table 6.0			
Level-of-Service Control Delay Thresholds			
Level-of-Service	Signalized Intersections – Control Delay Per Vehicle [sec/veh]	Unsignalized Intersections – Average Control Delay [sec/veh] & Qualitative Operational Description	
A	≤ 10	≤ 10	Short Delays
B	> 10 – 20	> 10 – 15	
C	> 20 – 35	> 15 – 25	
D	> 35 – 55	> 25 – 35	Moderate Delays
E	> 55 – 80	> 35 – 50	
F	> 80	> 50	Long Delays

Right-turns on red were allowed as currently permitted in the field. As there is no expectation that right-turns on red would be prohibited due to the addition of background or site traffic, field conditions were maintained for consistency. Additionally, existing peak hour factors (PHF) were used at existing intersections, while a 0.90 PHF was used at new intersections. As actual PHF were confirmed from field-collected data, and since it is typical for PHF to at least be maintained or increased with study area build-out, the use of actual PHF was determined to be appropriate.

Capacity analyses were performed for the AM and PM peak hours using Synchro/SimTraffic Version 10 and Sidra Intersection 9 software to determine the operating characteristics of the adjacent road network and the impacts of the proposed project. Those analyses are included in the Appendix and are briefly summarized in the following sub-sections.

6.1 Kelly Road at Wendhurst Court/Beaver Creek Commons Drive

Analyses indicate that the signalized intersection of Kelly Road at Wendhurst Court/Beaver Creek Commons Drive currently operates at LOS B in the AM peak hour and LOS C in the PM peak hour. The intersection is expected to continue operating at LOS B in the AM peak hour and LOS C in the PM peak hour in the study year 2025 with or without the proposed project in place. As only minor increases in delays are anticipated with the project in place, and since site traffic is anticipated to account for less than 3% of total intersection traffic at project build-out, no improvements are recommended to be performed at this intersection to accommodate site traffic. Note that the minor decrease in delay between the background and build-out conditions in the PM peak hour is likely due to the addition of site trips to movements already operating at acceptable levels of service and the associated weighted-average methodology for delay calculations. Such decreases are negligible and are not uncommon.

Table 6.1 summarizes operations at the intersection of Kelly Road at Wendhurst Court/Beaver Creek Commons Drive for the existing (2021) and projected (2025) background and build-out traffic conditions.

Table 6.1 Level-of-Service Kelly Road at Wendhurst Court/Beaver Creek Commons Drive (Signalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2021) Traffic	B (11.7)	C (24.5)
Background (2025) Traffic	B (12.3)	C (28.7)
Build-Out (2025) Traffic	B (12.3)	C (28.4)

6.2 Olive Chapel Road at Chapel Ridge Road

Analyses indicate that the unsignalized intersection of Olive Chapel Road at Chapel Ridge Road currently operates with short delays on the minor street approach (Chapel Ridge Road) in both peak hours. In the 2025 study year the intersection is expected to continue operating with short delays on the minor street approaches in both peak hours with or without the proposed project in place.

For reference, a signal warrant analysis was also performed at this intersection to determine if projected (2025) build-out traffic volumes met volume warrants in the Manual for Uniform Traffic Control Devices (MUTCD). Based on this analysis, projected (2025) build-out traffic volumes are not expected to meet peak, 4-hour, or 8-hour volume warrants. Traffic signal warrant data is included in the Appendix of this report.

Since only minor increases in delays and queues are anticipated with the addition of site traffic, no improvements are recommended to be performed at this intersection to accommodate site traffic.

Table 6.2 summarizes operations at the intersection of Olive Chapel Road at Chapel Ridge Road for the existing (2021) and projected (2025) background and build-out traffic conditions.

Table 6.2 Level-of-Service Olive Chapel Road at Chapel Ridge Road (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2021) Traffic	SB – B (12.7) EBL – A (8.3)	SB – B (13.6) EBL – A (8.7)
Background (2025) Traffic	SB – B (13.9) EBL – A (8.8)	SB – C (15.8) EBL – A (9.0)
Build-Out (2025) Traffic	SB – B (14.7) EBL – A (8.8)	SB – C (16.6) EBL – A (9.1)

6.3 Chapel Ridge Road at Ackerman Hill Drive

Analyses indicate that the unsignalized intersection of Chapel Ridge Road at Ackerman Hill Drive currently operates with short delays on the minor street approach (Ackerman Hill Drive) in both peak hours. In the 2025 study year, the intersection is expected to continue operating with short delays on the minor street approaches in both peak hours with or without the proposed project in place. Since only minor increases in delays and queues are anticipated with the addition of site traffic, no improvements are recommended to be performed at this intersection to accommodate site traffic.

Table 6.3 summarizes operations at the intersection of Chapel Ridge Road at Ackerman Hill Drive for the existing (2021) and projected (2025) background and build-out traffic conditions.

Table 6.3 Level-of-Service Chapel Ridge Road at Ackerman Hill Drive (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2021) Traffic	WB – A (8.6) SBL – A (7.3)	WB – A (8.7) SBL – A (7.3)
Background (2025) Traffic	WB – A (8.7) SBL – A (7.3)	WB – A (8.7) SBL – A (7.3)
Build-Out (2025) Traffic	WB – A (8.9) SBL – A (7.3)	WB – A (9.2) SBL – A (7.4)

6.4 Beaver Creek Commons Drive at Creekside Landing Drive

Analyses indicate that the roundabout intersection of Beaver Creek Commons Drive at Creekside Landing Drive currently operates at LOS A and low volume to capacity ratios in both peak hours. In the 2025 study year, the intersection is expected to continue operating at acceptable overall LOS and low volume to capacity ratios with or without the proposed project in place. No queuing issues are expected at this intersection. Therefore, no improvements are recommended to be performed to accommodate site traffic at this intersection.

Table 6.4 summarizes operations at the intersection of Beaver Creek Commons Drive at Creekside Landing Drive for the existing (2021) and projected (2025) background and build-out traffic conditions.

Table 6.4 Level-of-Service Beaver Creek Commons Drive at Creekside Landing Drive[^]		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Existing (2021) Traffic	A (4.2) v/c = 0.16	A (8.5) v/c = 0.47
Background (2025) Traffic	A (4.5) v/c = 0.18	A (9.6) v/c = 0.52
Build-Out (2025) Traffic	A (4.7) v/c = 0.21	B (10.3) v/c = 0.55

[^]Note: Results reported from SIDRA software.

6.5 Beaver Creek Commons Drive at Proposed Site Access

As required by the Town, site access is proposed along Beaver Creek Commons Drive. This connection is proposed as a full-movement site driveway approximately 1,800 feet southwest of Creekside Landing Drive, and it was assumed that Beaver Creek Commons Drive would be restriped to provide a left-turn lane into the Site Access. Analyses indicate that this intersection is expected to operate with short delays and queues on the minor street approach (Proposed Site Access) at project build-out.

Table 6.5 summarizes operations at the intersection of Beaver Creek Commons Drive at Proposed Site Access for the build-out (2025) traffic condition.

Table 6.5 Level-of-Service Beaver Creek Commons Drive at Proposed Site Access (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-Out (2025) Traffic	WB – B (11.4) SBL – A (7.8)	WB – B (14.5) SBL – A (8.6)

6.6 *Chapel Ridge Road at Proposed Site Access/North Site Driveway*

A full-movement site driveway with one ingress lane and one egress lane is proposed to be constructed on Chapel Ridge Road approximately 350 feet east of Beaver Creek Commons Drive and align with the Site Access connection to Beaver Creek Commons Driveway. This driveway is proposed to be constructed with one ingress and one egress lane, and analyses indicate that this intersection is expected to operate with short delays and queues on the minor street approach (Chapel Ridge Road) at project build-out.

Table 6.6 summarizes operations at the intersection of Chapel Ridge Road at Proposed Site Access/North Site Driveway for the projected (2025) build-out traffic condition.

Table 6.6 Level-of-Service Chapel Ridge Road at Proposed Site Access/North Site Driveway (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-Out (2025) Traffic	NB – A (9.2) WBL – A (7.3)	NB – A (9.3) WBL – A (7.5)

6.7 Chapel Ridge Road at Central Site Driveway

A full-movement site driveway with one ingress lane and one egress lane is proposed to be constructed on Chapel Ridge Road approximately 175 feet west of Ackerman Hill Drive. This intersection is proposed to be constructed with one ingress and one egress lane, and analyses indicate that this intersection is expected to operate with short delays and queues on the minor street approach (Central Site Driveway) at project build-out.

Table 6.7 summarizes operations at the intersection of Chapel Ridge Road at Central Site Driveway for the projected (2025) build-out traffic condition.

Table 6.7 Level-of-Service Chapel Ridge Road at Central Site Driveway (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-Out (2025) Traffic	NB – A (9.4)	NB – A (9.6)
	SB – A (9.4)	SB – A (9.5)
	EBL – A (7.4)	EBL – A (7.3)
	WBL – A (7.3)	WBL – A (7.4)

6.8 Chapel Ridge Road at South Site Driveway

A full-movement site driveway with one ingress lane and one egress lane is proposed to be constructed on Chapel Ridge Road approximately 250 feet south of Ackerman Hill Drive. Analyses indicate that this intersection is expected to operate with short delays and queues on the minor street approach (South Site Driveway) at project build-out.

Table 6.8 summarizes operations at the intersection of Chapel Ridge Road at South Site Driveway for the projected (2025) build-out traffic condition.

Table 6.8 Level-of-Service Chapel Ridge Road at South Site Driveway (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-Out (2025) Traffic	EB – A (9.0)	EB – A (9.2)
	WB – A (9.1)	WB – B (9.4)
	NBL – A (7.3)	NBL – A (7.3)
	SBL – A (7.3)	SBL – A (7.4)

6.9 Ackerman Hill Drive at Site Driveway

A full-movement site driveway with one ingress lane and one egress lane is proposed to be constructed on Ackerman Hill Drive approximately 175 feet east of Chapel Ridge Road. This intersection is proposed to be constructed with one ingress and one egress lane, and analyses indicate that this intersection is expected to operate with short delays and queues on the minor street approach (Site Driveway) at project build-out.

Table 6.9 summarizes operations at the intersection of Ackerman Hill Drive at Site Driveway for the projected (2025) build-out traffic condition.

Table 6.9 Level-of-Service Ackerman Hill Drive at Site Driveway (Unsignalized)		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Build-Out (2025) Traffic	NB – A (8.9) WBL – A (7.3)	NB – A (9.0) WBL – A (7.4)

7.0 Supplemental Analysis – With Chapel Ridge Townes

The Chapel Ridge Townes project, which envisioned the construction of 116 townhomes, was previously proposed for construction in the northeast corner of the intersection of the Olive Chapel Road at Chapel Ridge Road. While that proposed rezoning was denied through the public hearing process and therefore would not have any impacts on the network, Town staff indicated that supplemental analyses considering the potential impact of such a project on the network would provide helpful context with this study. It should be noted that the intent of this supplemental analysis was for information purposes only and not to identify additional improvements required of the Chapel Ridge Apartments project since the additional trip impact discussed in this section is associated with a project that was not approved.

7.1 Background Volume Development

No changes were made to existing AM and PM peak hour traffic volumes or historic growth traffic as discussed in Section 5. For this supplemental analysis, the trip generation for the Chapel Ridge Townes project was obtained from the “Chapel Ridge Tracts Residential Development Trip Generation Letter” (Exult Engineering, March 2021) and is shown below in Table 7.1.

Table 7.1 ITE Traffic Generation (Vehicles)							
Land Use Code	Land Use	Intensity		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out
220	Multifamily Housing (Low-Rise)	116	d.u.	13	42	43	25

The proposed generated trips were assigned to the surrounding roadway network. The directional distribution and assignment are based on land uses in the area and existing travel patterns generally consistent with the Chapel Ridge Apartments project. Site trips were assigned to the network based on the following distribution:

- 50% to/from the west on Olive Chapel Road
- 40% to/from the east on Olive Chapel Road
- 5% to/from the east on Beaver Creek Commons Drive
- 5% to/from the north on Creekside Landing Drive

Total background traffic volumes for this supplemental analysis included existing traffic and historic growth traffic volumes as well as approved development traffic volumes, which included the build-out of the Olive Chapel Professional Park project as well as the Chapel Ridge Townes project. These calculations are detailed on intersection spreadsheets in the Appendix of this report.

7.2 Beaver Creek Commons Drive Traffic Impacts

Similar to the Olive Chapel Professional Park diversion discussed in *Section 5*, it is anticipated that the proposed connection to Beaver Creek Commons Drive would also result in traffic diversion from this previously-proposed project. Chapel Ridge Townes site trips to/from the north on Ackerman Hill Drive included as approved development trips in the background condition were diverted to the new connection in the build-out condition of this supplemental analysis.

No changes to Chapel Ridge Apartments site traffic were made for this supplemental analysis.

To obtain the projected build-out traffic volumes for this supplemental analysis, the projected site traffic and Beaver Creek Commons Drive connection diversion trips were added to the projected background traffic noted in *Section 7.1*. Traffic volume calculations are detailed in intersection spreadsheets in the Appendix of this report.

7.3 Capacity Analysis

Capacity analyses were performed for the AM and PM peak hours using Synchro/SimTraffic Version 10 and Sidra Intersection 9 software to determine the operating characteristics of the adjacent road network and the impacts of the proposed project. As no changes were made to the existing traffic condition analyses summarized previously in this report, only results for the supplemental background and build-out conditions are reported below in Table 7.2.

Table 7.2 Level-of-Service Summary – Supplemental Analysis		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Kelly Road at Wendhurst Court/Beaver Creek Commons Drive (Signalized)		
Background (2025) Traffic	B (12.3)	C (28.7)
Build-Out (2025) Traffic	B (12.3)	C (28.4)
Olive Chapel Road at Chapel Ridge Road (Unsignalized)		
Background (2025) Traffic	SB – B (13.9) EBL – A (8.8)	SB – C (15.8) EBL – A (9.0)
Build-Out (2025) Traffic	SB – B (14.7) EBL – A (8.8)	SB – C (16.6) EBL – A (9.1)
Chapel Ridge Road at Ackerman Hill Drive (Unsignalized)		
Background (2025) Traffic	WB – A (8.7) SBL – A (7.3)	WB – A (8.8) SBL – A (7.3)
Build-Out (2025) Traffic	WB – A (8.9) SBL – A (7.3)	WB – A (9.2) SBL – A (7.4)

Table 7.2 (cont.) Level-of-Service Summary		
Condition	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
Beaver Creek Commons Drive at Creekside Landing Drive (Roundabout)		
Background (2025) Traffic	A (4.5) v/c = 0.19	A (9.7) v/c = 0.53
Build-Out (2025) Traffic	A (4.7) v/c = 0.22	B (10.3) v/c = 0.55
Beaver Creek Commons Drive at Proposed Site Access (Unsignalized)		
Build-Out (2025) Traffic	WB – B (11.4) SBL – A (7.8)	WB – B (14.5) SBL – A (8.6)
Chapel Ridge Road at Proposed Site Access/North Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	NB – A (9.3) WBL – A (7.3)	NB – A (9.3) WBL – A (7.5)
Chapel Ridge Road at Central Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	NB – A (9.5) SB – A (9.4) EBL – A (7.4) WBL – A (7.3)	NB – A (9.7) SB – A (9.5) EBL – A (7.3) WBL – A (7.4)
Chapel Ridge Road at South Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	EB – A (9.0) WB – A (9.1) NBL – A (7.3) SBL – A (7.3)	EB – A (9.2) WB – B (9.4) NBL – A (7.3) SBL – A (7.4)
Ackerman Hill Drive at Site Driveway (Unsignalized)		
Build-Out (2025) Traffic	WB – A (8.9) SBL – A (7.3)	WB – A (9.1) SBL – A (7.4)

8.0 Recommendations

The following roadway improvements are recommended to be performed as part of this project:

Chapel Ridge Road Extension/Proposed Site Access:

- Realign and extend Chapel Ridge Road/Proposed Site Access to Beaver Creek Commons Drive as a two-lane undivided roadway

Beaver Creek Commons Drive at Proposed Site Access:

- Construct the Proposed Site Access with one ingress lane and one egress lane
- Restripe Beaver Creek Commons Drive to provide a southbound left-turn lane with 100 feet of storage

Chapel Ridge Road at Proposed Site Access/North Site Driveway:

- Construct the North Site Driveway with one ingress lane and one egress lane
- Extend Chapel Ridge Road approximately 600 feet with one ingress lane and one egress lane

Chapel Ridge Road at Central Site Driveway:

- Construct the Central Site Driveway with one ingress lane and one egress lane

Chapel Ridge Road at South Site Driveway:

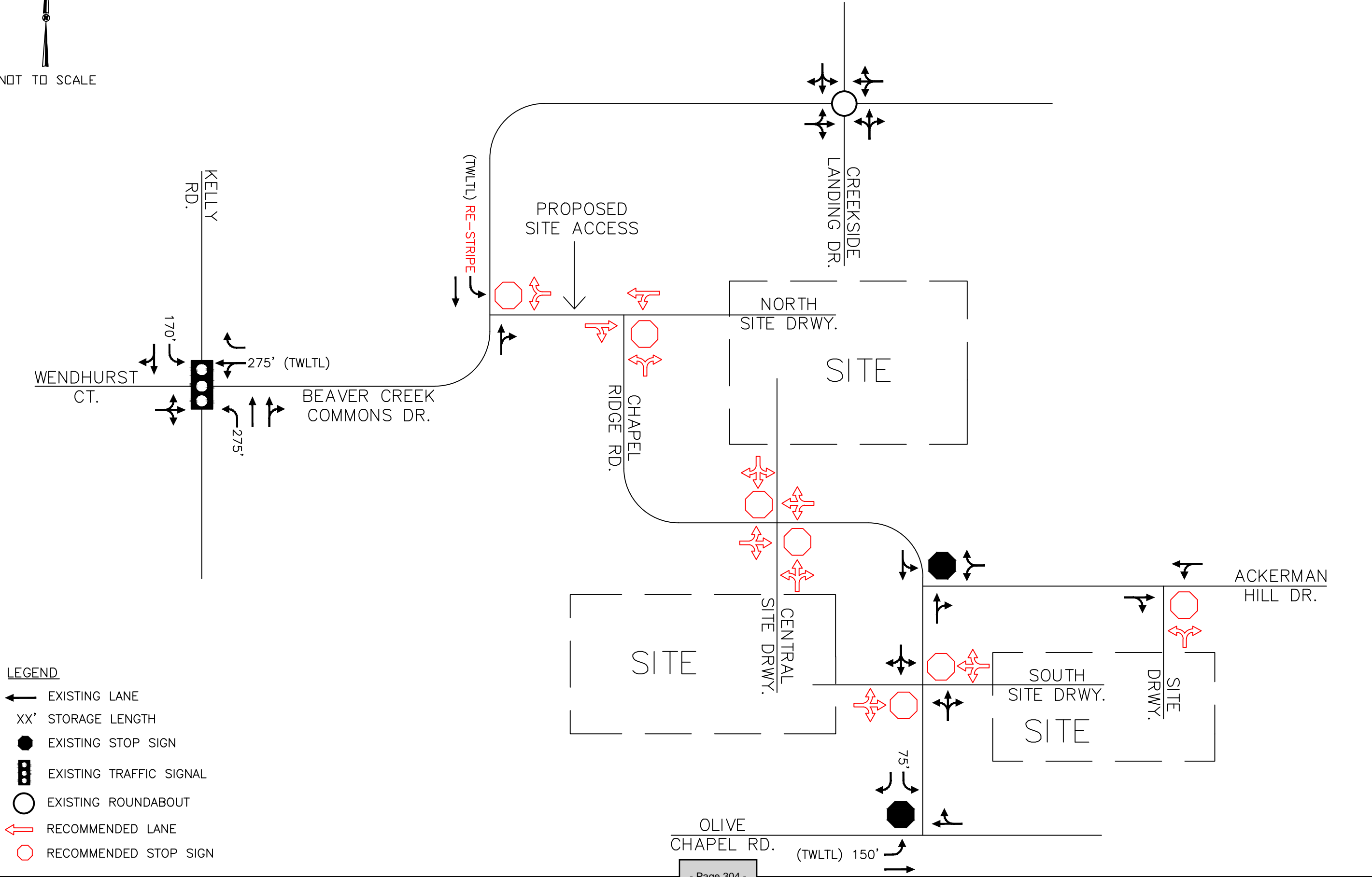
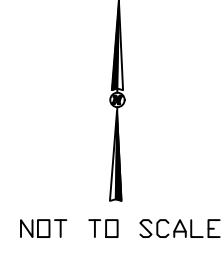
- Construct the South Site Driveway with one ingress lane and one egress lane

Ackerman Hill Drive at Site Driveway:

- Construct the Site Driveway with one ingress lane and one egress lane

These recommended improvements are also shown on **Figure 8.1**.

Analyses indicate that with the recommended improvements in place, all of the study intersections will operate at acceptable LOS at project build-out. Only minor increases in intersection delays are anticipated between the background and build-out conditions, and no queuing issues are anticipated in the build-out traffic condition.



- LEGEND**
- ↑ EXISTING LANE
 - XX' STORAGE LENGTH
 - EXISTING STOP SIGN
 - ⬛ EXISTING TRAFFIC SIGNAL
 - EXISTING ROUNDABOUT
 - ↑ RECOMMENDED LANE
 - RECOMMENDED STOP SIGN

FIGURE 8.1

RECOMMENDED ROADWAY LANEAGE

CHAPEL RIDGE APARTMENTS
APEX, NC
TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

Appendix

Appendix A:
Approved TIA Assumptions Memo

Preliminary Assumptions
Chapel Ridge Apartments - Traffic Impact Analysis
Apex, North Carolina

KHA will perform an analysis for the proposed Chapel Ridge Apartments project, which is proposed to be located along Chapel Ridge Road at Ackerman Hill Drive in Apex, North Carolina. The site is currently occupied by several single-family parcels and as currently envisioned will include approximately 350 apartments. Build-out is anticipated in the year 2025. The following assumptions will be used in the analysis based on a TIA scoping meeting conducted with the Town of Apex on November 29, 2021.

Study Scenarios

The study scenarios will consist of:

- Existing (2021)
- Background (2025)
- Build-out (2025)
- Supplemental Background (2025): with Chapel Ridge Tracts Residential
- Supplemental Build-out (2025): with Chapel Ridge Tracts Residential

Study Intersections

The study area will consist of the following intersections:

- Kelly Road at Beaver Creek Commons Drive/Wendhurst Court
- Beaver Creek Commons Drive at Creekside Landing Drive
- Olive Chapel Road at Chapel Ridge Road
- Beaver Creek Commons at Proposed Site Access

Existing Volume Development

Existing traffic counts will be collected in 15-minute intervals for the AM peak hour (7:00 to 9:00 AM) and PM peak hour (4:00 to 6:00 PM) at each of the existing study intersections while Wake County Public Schools are in session. No volume adjustments will be applied to existing traffic counts.

Background Volume Development

A 3% annual growth rate will be applied to existing traffic volumes up to the study year 2025 except for trips onto/off of Wendhurst Court, Chapel Ridge Road, and the southern leg of Creekside Landing Drive as development along those roadways is either built-out or otherwise accounted for in approved development traffic (discussed below).

Two developments were identified for inclusion in this analysis as background.

The Olive Chapel Professional Park, located generally northwest of the Olive Chapel Road – Chapel Ridge Road intersection, is currently partially built-out. It is assumed that this project will reach full build-out by the study year 2025, so the remaining site traffic will be included in this analysis as background traffic.

Per the “Chapel Ridge Tracts Residential Development Trip Generation Letter”, that project proposed the construction of 116 townhomes generally northeast of the Olive Chapel Road – Chapel Ridge Road intersection. While that rezoning was not approved, site traffic from that project will be included in this analysis to account for potential development on that parcel. As a formal TIA was not required for that project, site trip generation will be obtained from the Trip

Generation and assigned to the Olive Chapel Road – Chapel Ridge Road intersection based on an assigned site traffic assignment.

Based on discussions with Town staff, no development or roadway projects in the area are anticipated to result in traffic diversions that would impact any of the study intersections.

Trip Generation

Trip generation for this project will be performed using data from the 10th Edition of the ITE Trip Generation Manual. Trip generation calculations are attached. To be conservative, no reduction will be applied to account for trips generated by the existing single-family residences that will be replaced as part of this project.

Site Traffic Distribution

The following distribution will be used for project site traffic as shown on the attached sketch:

- 40% to/from the north on Kelly Road (via Beaver Creek Commons Drive)
- 20% to/from the east on Beaver Creek Commons Drive
- 15% to/from the east on Olive Chapel Road
- 15% to/from the west on Olive Chapel Road
- 10% to/from the north on Creekside Landing Drive

Other Study Assumptions

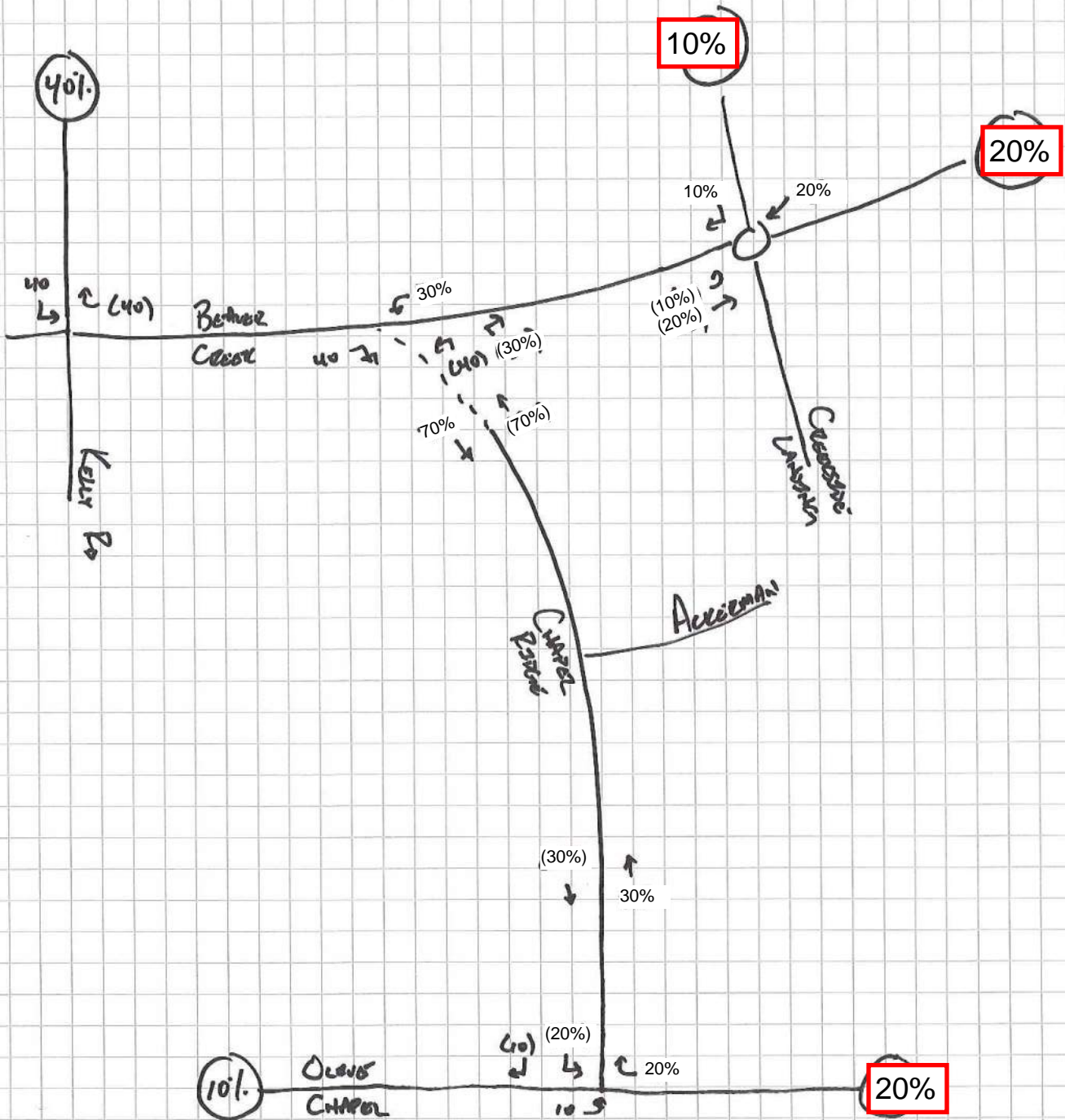
- Existing peak hour factors (PHF's) will be used at existing intersections, while a PHF of 0.90 will be used at new intersections.
- Right-turns on red (RTOR) will be included in the analysis where currently permitted in the field.
- Existing signal timings will be used in the existing condition, though timings may be optimized in the future traffic conditions.
- Analyses will be performed using Synchro/SimTraffic version 10.

Chapel Ridge Apartments

Table 1 - Trip Generation

Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
		Total	Total	In	Out	Total	In	Out
221 Multifamily Housing (Mid-Rise)	350 d.u.	1,906	117	30	87	147	90	57
Total Net New External Trips		1,906	117	30	87	147	90	57

S116 Test Distribution



* ASSIGNMENT AT S116 DOWNS WILL BE DEVELOPED AS PART OF T2A BASED ON STUDY S116 PLAN.

- ASSUMES FUTURE DRY. CONNECTION OVER CREEK COMMON DR. (DASHED LINE)



TECHNICAL MEMORANDUM

Date: Friday, March 26, 2021

To: Russell Dalton, P.E.
Town of Apex
Senior Transportation Engineer

From: Lisa Lundeen, P.E.
Traffic Engineer
Exult Engineering

Subject: Proposed Chapel Ridge Tracts Residential Development
Trip Generation Letter

BACKGROUND

Exult Engineering has been contracted by Toll Brothers, Inc. to perform traffic engineering services for the proposed Chapel Ridge Tracts Residential Development located in Apex, North Carolina. The proposed site is located in the northeast quadrant of Olive Chapel Road and Chapel Ridge Road and consists of 116 residential townhomes. The site is currently zoned as Rural Residential and does require PUD rezoning. The access for the proposed site consists of two full movement driveways on Chapel Ridge Road and one full movement driveway on Olive Chapel Road. The purpose of this letter, as requested by Town Engineering staff, is to discuss the trip generation, proposed access for the site, and roadway improvement requirements.

TRIP GENERATION

The proposed development is to consist of 116 residential townhomes. The trip generation was based on rates and equations published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. NCDOT Congestion Management Rates vs. Equations spreadsheet was used for guidance. As shown in Table 1, the proposed development is expected to generate 838 daily trips, 55 AM peak hour trips (13 entering, 42 exiting), and 68 PM peak hour trips (43 entering, 25 exiting).

Table 1: Trip Generation

Land Use			Daily	AM Peak Hour			PM Peak Hour		
				Total	Enter	Exit	Total	Enter	Exit
220: Multifamily Housing (Low-Rise)	116	d.u.	838	55	13	42	68	43	25
Total			838	55	13	42	68	43	25

References: *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers, September 2017

According to the *NCDOT Policy on Street and Driveway Access to North Carolina Highways*, the threshold for a Traffic Impact Analysis (TIA) to be required by NCDOT is 3,000 new vehicles per day. According to the *Town of Apex Unified Development Ordinance*, the Town’s threshold for a TIA is 1,000 new vehicle trips

March 26, 2021

per day or 100 peak hour trips. Based on the low trip generation and discussions with NCDOT and the Town, a TIA will not be required for the proposed Chapel Ridge Tracts Residential Development.

ACCESS AND ROADWAY REQUIREMENTS

As shown on the conceptual plan for the proposed Chapel Ridge Tracts Residential Development, the proposed access for the site consists of two full movement driveways on Chapel Ridge Road and one full movement driveway on Olive Chapel Road. The southern driveway along Chapel Ridge Road is located approximately 380 feet north of the intersection with Olive Chapel Road, and the northern driveway is located approximately 400 feet north of the southern driveway. The driveway along Olive Chapel Road aligns with Ashley Downs Drive and is located approximately 1,000 feet east of the intersection with Chapel Ridge Road.

Based on discussions with NCDOT and the Town, the requirements for this development are as follows:

- An exclusive right turn lane on Olive Chapel Road with 50 feet of storage with appropriate deceleration length and taper at the site driveway
- A requirement to reinforce the pavement structure on Chapel Ridge Road from Olive Chapel Road to the northern site driveway.
- Provide adequate sight distance at the project driveways.

Please let me know if you have any questions or comments.

Sincerely,

Lisa Lundeen, P.E.
Exult Engineering



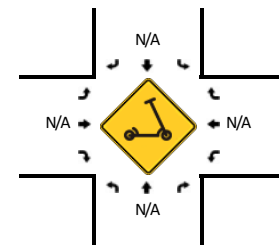
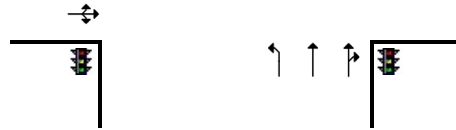
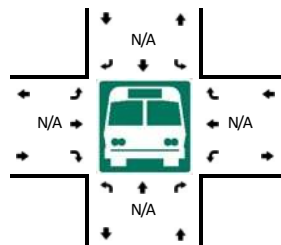
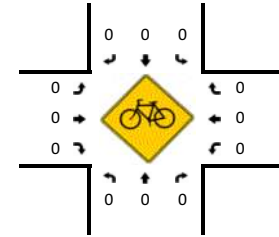
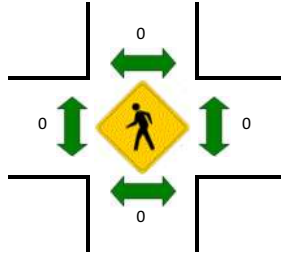
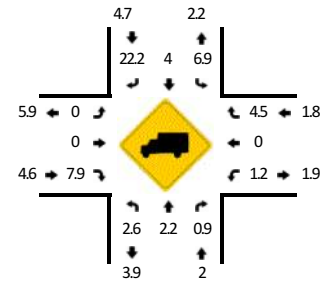
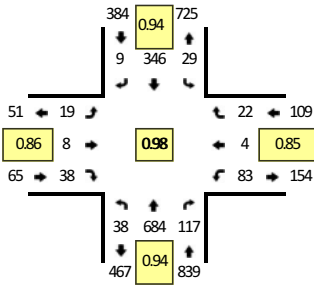
cc: Sean Brennan, NCDOT
Jeff Westmoreland, Toll Brothers
Brendie Vega, WithersRavenel

Appendix B: Traffic Count Data

LOCATION: Kelly Rd -- Beaver Creek Commons Dr
CITY/STATE: Apex, NC

QC JOB #: 15646901
DATE: Tue, Dec 7 2021

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



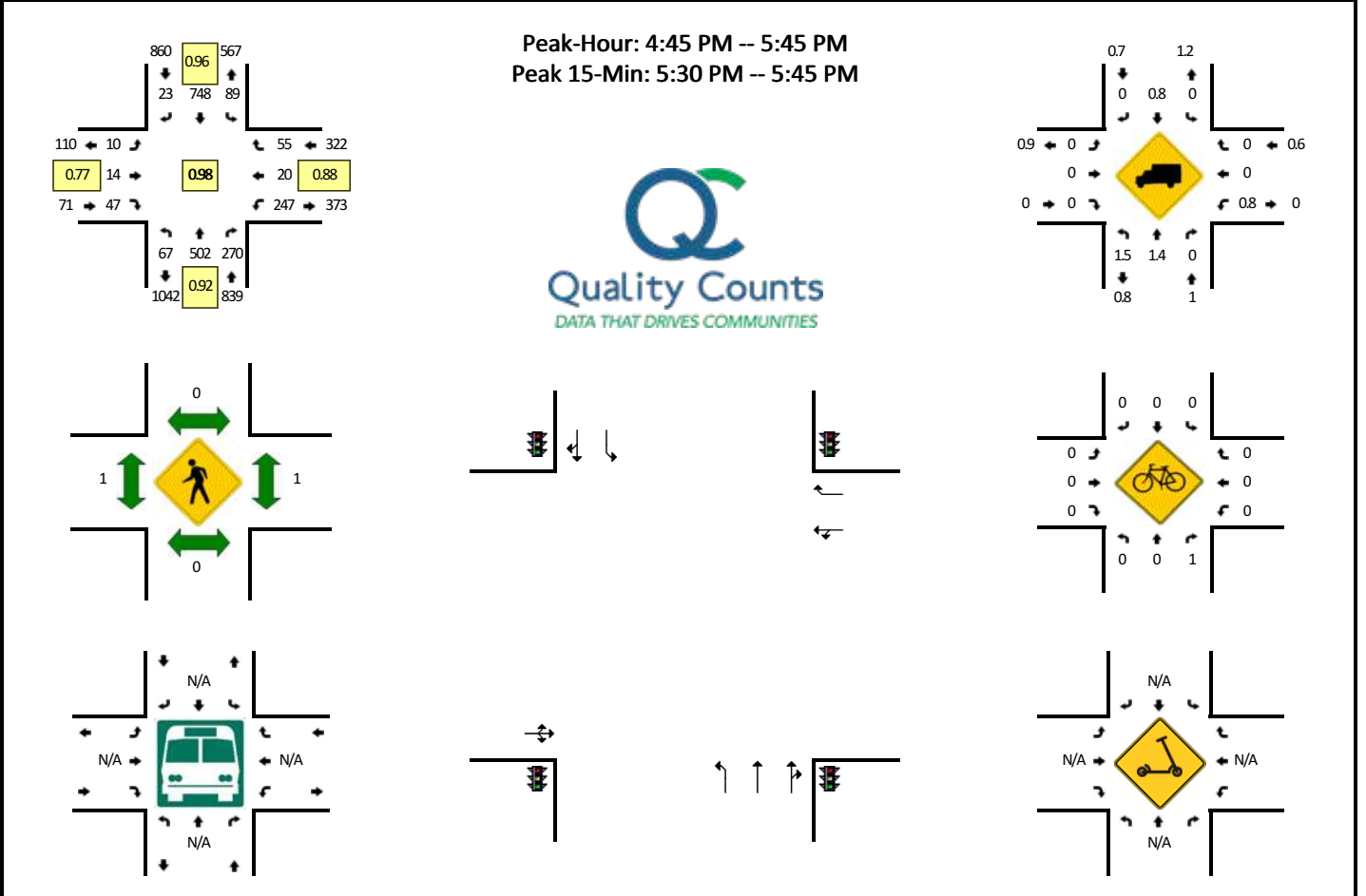
15-Min Count Period Beginning At	Kelly Rd (Northbound)				Kelly Rd (Southbound)				Beaver Creek Commons Dr (Eastbound)				Beaver Creek Commons Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	141	14	0	1	42	2	0	3	0	17	0	12	0	4	0	240	
7:15 AM	9	194	23	0	4	53	1	0	3	0	14	0	16	0	2	0	319	
7:30 AM	8	193	22	0	7	87	2	0	4	4	11	0	14	0	6	0	358	
7:45 AM	7	163	29	0	4	96	2	0	2	2	11	0	18	2	7	0	343	1260
8:00 AM	12	166	33	0	9	78	3	0	8	2	7	0	28	1	3	0	350	1370
8:15 AM	11	162	33	0	9	85	2	0	5	0	9	0	23	1	6	0	346	1397
8:30 AM	4	148	26	0	12	82	4	0	1	2	17	0	20	2	8	0	326	1365
8:45 AM	12	145	46	0	6	94	1	0	0	1	18	0	21	1	9	0	354	1376

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	32	772	88	0	28	348	8	0	16	16	44	0	56	0	24	0	1432
Heavy Trucks	0	16	0		4	4	4		0	0	4		4	0	4		40
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

LOCATION: Kelly Rd -- Beaver Creek Commons Dr
CITY/STATE: Apex, NC

QC JOB #: 15646902
DATE: Tue, Dec 7 2021



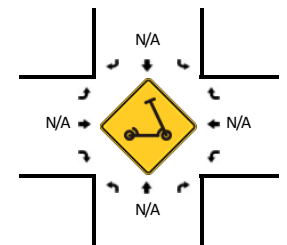
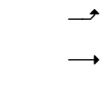
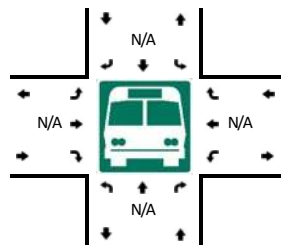
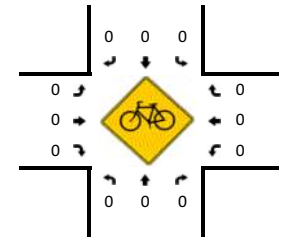
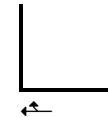
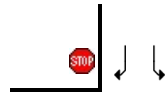
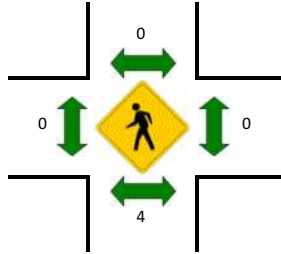
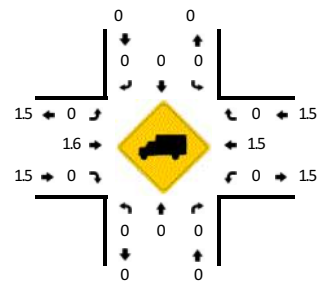
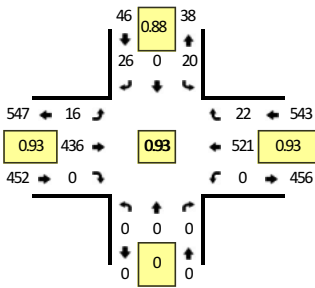
15-Min Count Period Beginning At	Kelly Rd (Northbound)				Kelly Rd (Southbound)				Beaver Creek Commons Dr (Eastbound)				Beaver Creek Commons Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	26	117	52	0	23	149	3	0	4	3	13	0	47	5	17	0	459	
4:15 PM	18	127	59	0	25	178	7	0	4	4	14	0	59	3	13	0	511	
4:30 PM	10	127	53	0	26	151	7	0	2	2	11	0	79	4	12	0	484	
4:45 PM	21	115	67	0	23	197	5	0	4	1	16	0	59	6	13	0	527	1981
5:00 PM	13	149	66	0	20	177	6	0	0	2	7	0	56	5	11	0	512	2034
5:15 PM	18	102	71	0	25	182	7	0	3	6	14	0	75	5	11	0	519	2042
5:30 PM	15	136	66	0	21	192	5	0	3	5	10	0	57	4	20	0	534	2092
5:45 PM	8	121	53	0	20	189	2	0	0	4	9	0	60	8	20	0	494	2059
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	60	544	264	0	84	768	20	0	12	20	40	0	228	16	80	0	2136	
Heavy Trucks	0	16	0		0	4	0		0	0	0		0	0	0		20	
Buses																		
Pedestrians		0				0				4				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Chapel Ridge Rd -- Olive Chapel Rd
CITY/STATE: Apex, NC

QC JOB #: 15646905
DATE: Tue, Dec 7 2021

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



15-Min Count Period Beginning At	Chapel Ridge Rd (Northbound)				Chapel Ridge Rd (Southbound)				Olive Chapel Rd (Eastbound)				Olive Chapel Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	0	0	1	0	2	0	0	12	0	0	0	8	3	0	26	
6:15 AM	0	0	0	0	0	0	0	0	0	21	0	0	0	17	0	0	38	
6:30 AM	0	0	0	0	0	0	2	0	2	20	0	0	0	42	3	0	69	
6:45 AM	0	0	0	0	2	0	7	0	5	22	0	0	0	62	2	0	100	233
7:00 AM	0	0	0	0	8	0	6	0	2	48	0	0	0	58	1	0	123	330
7:15 AM	0	0	0	0	3	0	3	0	1	92	0	0	0	68	0	0	167	459
7:30 AM	0	0	0	0	3	0	4	0	2	76	0	0	0	89	5	0	179	569
7:45 AM	0	0	0	0	4	0	4	0	5	77	0	0	0	87	6	0	183	652
8:00 AM	0	0	0	0	1	0	1	0	2	76	0	0	0	91	10	0	181	710
8:15 AM	0	0	0	0	3	0	2	0	7	76	0	0	0	89	1	0	178	721
8:30 AM	0	0	0	0	5	0	1	0	4	100	0	0	0	68	8	0	186	728
8:45 AM	0	0	0	0	2	0	3	0	7	103	0	0	0	108	5	0	228	773
9:00 AM	0	0	0	0	3	0	1	0	6	87	0	0	0	99	5	0	201	793
9:15 AM	0	0	0	0	4	0	2	0	4	77	0	0	0	71	4	0	162	777
9:30 AM	0	0	0	0	1	0	1	0	3	54	0	0	0	71	1	0	131	722
9:45 AM	0	0	0	0	3	0	7	0	6	63	0	0	0	73	6	0	158	652
10:00 AM	0	0	0	0	2	0	2	0	1	49	0	0	0	50	2	0	106	557
10:15 AM	0	0	0	0	4	0	2	0	4	62	0	0	0	62	2	0	136	531
10:30 AM	0	0	0	0	0	0	4	0	6	59	0	0	0	69	3	0	141	541
10:45 AM	0	0	0	0	3	0	7	0	4	78	0	0	0	65	3	0	160	543
11:00 AM	0	0	0	0	5	0	5	0	5	62	0	0	0	74	2	0	153	590
11:15 AM	0	0	0	0	2	0	4	0	3	62	0	0	0	81	2	0	154	608
11:30 AM	0	0	0	0	4	0	3	0	1	48	0	0	0	79	7	0	142	609
11:45 AM	0	0	0	0	3	0	9	0	6	81	0	0	0	105	7	0	211	660
12:00 PM	0	0	0	0	6	0	5	0	6	68	0	0	0	77	3	0	165	672
12:15 PM	0	0	0	0	5	0	2	0	8	93	0	0	0	115	2	0	225	743
12:30 PM	0	0	0	0	2	0	4	0	2	82	0	0	0	94	4	0	188	789
12:45 PM	0	0	0	0	4	0	6	0	10	93	0	0	0	96	3	0	212	790
1:00 PM	0	0	0	0	2	0	5	0	3	72	0	0	0	99	1	0	182	807
1:15 PM	0	0	0	0	6	0	7	0	7	61	0	0	0	89	3	0	173	755
1:30 PM	0	0	0	0	5	0	7	0	6	60	0	0	0	66	8	0	152	719
1:45 PM	0	0	0	0	6	0	3	0	7	56	0	0	0	75	5	0	152	659
2:00 PM	0	0	0	0	3	0	4	0	4	55	0	0	0	68	7	0	141	618
2:15 PM	0	0	0	0	3	0	6	0	5	60	0	0	0	71	4	0	149	594
2:30 PM	0	0	0	0	7	0	4	0	7	85	0	0	0	68	3	0	174	616
2:45 PM	0	0	0	0	5	0	11	0	5	104	0	0	0	94	6	0	225	689
3:00 PM	0	0	0	0	6	0	5	0	3	78	0	0	0	100	5	0	197	745
3:15 PM	0	0	0	0	2	0	7	0	8	82	0	0	0	112	0	0	208	804
3:30 PM	0	0	0	0	2	0	5	0	8	89	0	0	0	126	7	0	233	863

15-Min Count Period Beginning At	Chapel Ridge Rd (Northbound)				Chapel Ridge Rd (Southbound)				Olive Chapel Rd (Eastbound)				Olive Chapel Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:45 PM	0	0	0	0	1	0	4	0	7	90	0	0	0	128	3	0	233	871
4:00 PM	0	0	0	0	3	0	3	0	5	112	0	0	0	127	6	0	256	930
4:15 PM	0	0	0	0	3	0	7	0	7	95	0	0	0	126	6	0	244	966
4:30 PM	0	0	0	0	5	0	11	0	3	100	0	0	0	101	13	0	233	966
4:45 PM	0	0	0	0	4	0	8	0	1	121	0	0	0	138	8	0	280	1013
5:00 PM	0	0	0	0	6	0	6	0	6	103	0	0	0	117	4	0	242	999
5:15 PM	0	0	0	0	5	0	8	0	4	114	0	0	0	140	3	0	274	1029
5:30 PM	0	0	0	0	5	0	4	0	5	98	0	0	0	126	7	0	245	1041
5:45 PM	0	0	0	0	6	0	11	0	4	90	0	0	0	116	5	0	232	993
6:00 PM	0	0	0	0	3	0	2	0	5	74	0	0	0	107	4	0	195	946
6:15 PM	0	0	0	0	7	0	5	0	3	79	0	0	0	122	7	0	223	895
6:30 PM	0	0	0	0	5	0	4	0	1	90	0	0	0	75	5	0	180	830
6:45 PM	0	0	0	0	6	0	11	0	3	58	0	0	0	104	3	0	185	783
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	32	0	4	484	0	0	0	552	32	0	1120	
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	12	0	0	20	
Buses																		
Pedestrians		12				0				0				0			12	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

Report generated on 12/13/2021 8:15 AM

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

LOCATION: Ackerman Hill Dr btwn Chapel Ridge Rd and Drayman Pl							QC JOB #: 15646906			
SPECIFIC LOCATION:							DIRECTION: NB, SB			
CITY/STATE: Apex, NC							DATE: Dec 7 2021 - Dec 7 2021			
Start Time	Mon	Tue 7 Dec 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		3				3			3	
06:15 AM		0				0			0	
06:30 AM		3				3			3	
06:45 AM		6				6			6	
07:00 AM		5				5			5	
07:15 AM		2				2			2	
07:30 AM		8				8			8	
07:45 AM		3				3			3	
08:00 AM		4				4			4	
08:15 AM		2				2			2	
08:30 AM		7				7			7	
08:45 AM		10				10			10	
09:00 AM		4				4			4	
09:15 AM		4				4			4	
09:30 AM		2				2			2	
09:45 AM		4				4			4	
10:00 AM		3				3			3	
10:15 AM		6				6			6	
10:30 AM		3				3			3	
10:45 AM		7				7			7	
11:00 AM		7				7			7	
11:15 AM		3				3			3	
11:30 AM		1				1			1	
11:45 AM		13				13			13	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										
Comments:										

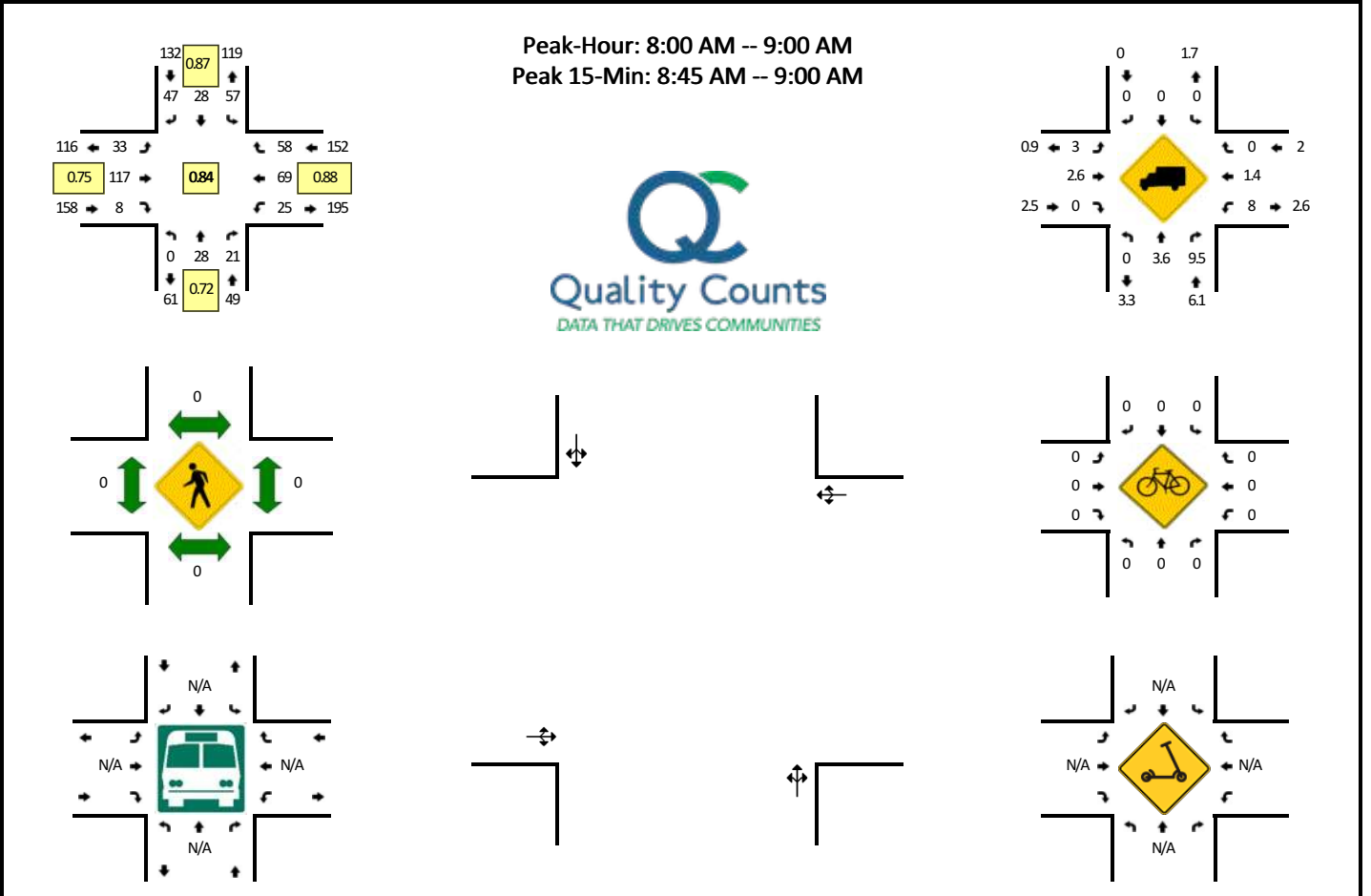
LOCATION: Ackerman Hill Dr btwn Chapel Ridge Rd and Drayman Pl **QC JOB #:** 15646906
SPECIFIC LOCATION: **DIRECTION:** NB, SB
CITY/STATE: Apex, NC **DATE:** Dec 7 2021 - Dec 7 2021

Start Time	Mon	Tue 7 Dec 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		4				4			4	
12:15 PM		3				3			3	
12:30 PM		5				5			5	
12:45 PM		6				6			6	
01:00 PM		4				4			4	
01:15 PM		10				10			10	
01:30 PM		12				12			12	
01:45 PM		7				7			7	
02:00 PM		5				5			5	
02:15 PM		5				5			5	
02:30 PM		8				8			8	
02:45 PM		6				6			6	
03:00 PM		4				4			4	
03:15 PM		3				3			3	
03:30 PM		6				6			6	
03:45 PM		6				6			6	
04:00 PM		8				8			8	
04:15 PM		7				7			7	
04:30 PM		12				12			12	
04:45 PM		10				10			10	
05:00 PM		11				11			11	
05:15 PM		6				6			6	
05:30 PM		8				8			8	
05:45 PM		8				8			8	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

LOCATION: Creekside Landing Dr -- Beaver Creek Commons Dr
CITY/STATE: Apex, NC

QC JOB #: 15646903
DATE: Tue, Dec 7 2021



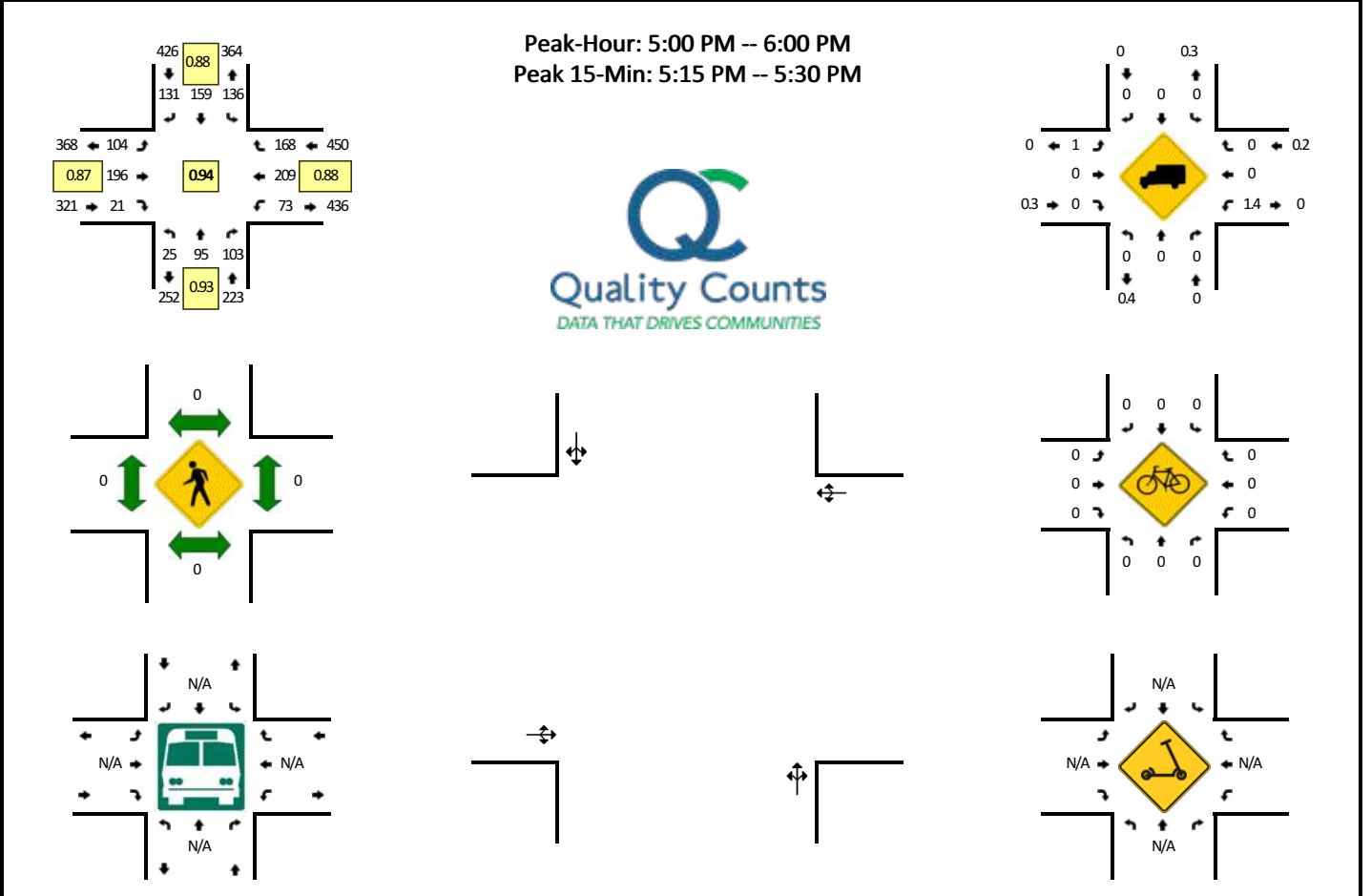
15-Min Count Period Beginning At	Creekside Landing Dr (Northbound)				Creekside Landing Dr (Southbound)				Beaver Creek Commons Dr (Eastbound)				Beaver Creek Commons Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	8	3	0	4	3	6	0	2	13	0	0	2	9	4	0	54	
7:15 AM	1	3	8	0	7	4	4	0	3	18	2	0	1	4	7	0	62	
7:30 AM	0	6	6	0	12	2	11	0	7	23	2	0	3	9	4	0	85	
7:45 AM	0	7	1	0	15	9	10	0	8	18	0	0	2	18	7	0	95	296
8:00 AM	0	12	5	0	15	8	9	0	6	28	1	0	4	22	14	0	124	366
8:15 AM	0	5	2	0	15	7	11	0	9	24	2	0	5	15	11	0	106	410
8:30 AM	0	6	7	0	9	3	17	0	9	24	2	0	9	13	16	0	115	440
8:45 AM	0	5	7	0	18	10	10	0	9	41	3	0	7	19	17	0	146	491

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	20	28	0	72	40	40	0	36	164	12	0	28	76	68	0	584
Heavy Trucks	0	4	4		0	0	0		0	4	0		0	0	0		12
Buses																	0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	0

Comments:

LOCATION: Creekside Landing Dr -- Beaver Creek Commons Dr
CITY/STATE: Apex, NC

QC JOB #: 15646904
DATE: Tue, Dec 7 2021



15-Min Count Period Beginning At	Creekside Landing Dr (Northbound)				Creekside Landing Dr (Southbound)				Beaver Creek Commons Dr (Eastbound)				Beaver Creek Commons Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	22	19	0	24	28	30	0	21	42	4	0	19	48	41	0	299	
4:15 PM	2	24	22	0	29	28	24	0	18	55	5	0	16	57	35	2	317	
4:30 PM	4	18	21	1	35	25	27	0	17	50	3	0	19	69	35	0	324	
4:45 PM	3	25	20	0	39	37	28	1	19	52	8	0	12	51	40	0	335	1275
5:00 PM	4	28	28	0	30	34	32	0	26	44	4	0	24	50	54	0	358	1334
5:15 PM	9	25	25	0	31	47	33	0	23	64	5	0	14	63	37	1	377	1394
5:30 PM	6	24	22	0	37	27	34	0	27	46	6	2	15	46	36	0	328	1398
5:45 PM	6	18	28	0	38	51	32	0	25	42	6	1	19	50	41	0	357	1420
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	36	100	100	0	124	188	132	0	92	256	20	0	56	252	148	4	1508	
Heavy Trucks	0	0	0		0	0	0		4	0	0		4	0	0		8	
Buses																		
Pedestrians		0				0				0				0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

Appendix C:
Approved Development Data –
Olive Chapel Professional Park

TRAFFIC IMPACT ANALYSIS

FOR

OLIVE CHAPEL PROFESSIONAL PARK

LOCATED

IN

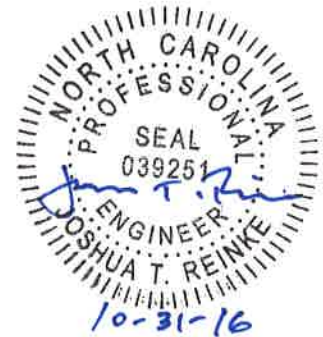
APEX, NORTH CAROLINA

Prepared For:
Olive Chapel Professional Park, LLC
1121 Pemberton Hill Road
Apex, NC

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

October 2016

RKA Project No. 16246



Prepared By: DL

Reviewed By: JR

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of approximately 80,000 sq. ft. of general office space. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 9th Edition. Table 1 provides a summary of the trip generation potential for the site.

Table 1: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
General Office Building (710)	80,000 sq. ft.	1,110	141	19	29	139

It is estimated that the proposed development will generate approximately 1,110 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 160 trips (141 entering and 19 exiting) will occur during the AM peak hour and 168 (29 entering and 139 exiting) will occur during the PM peak hour.

4.2. Site Trip Distribution and Assignment

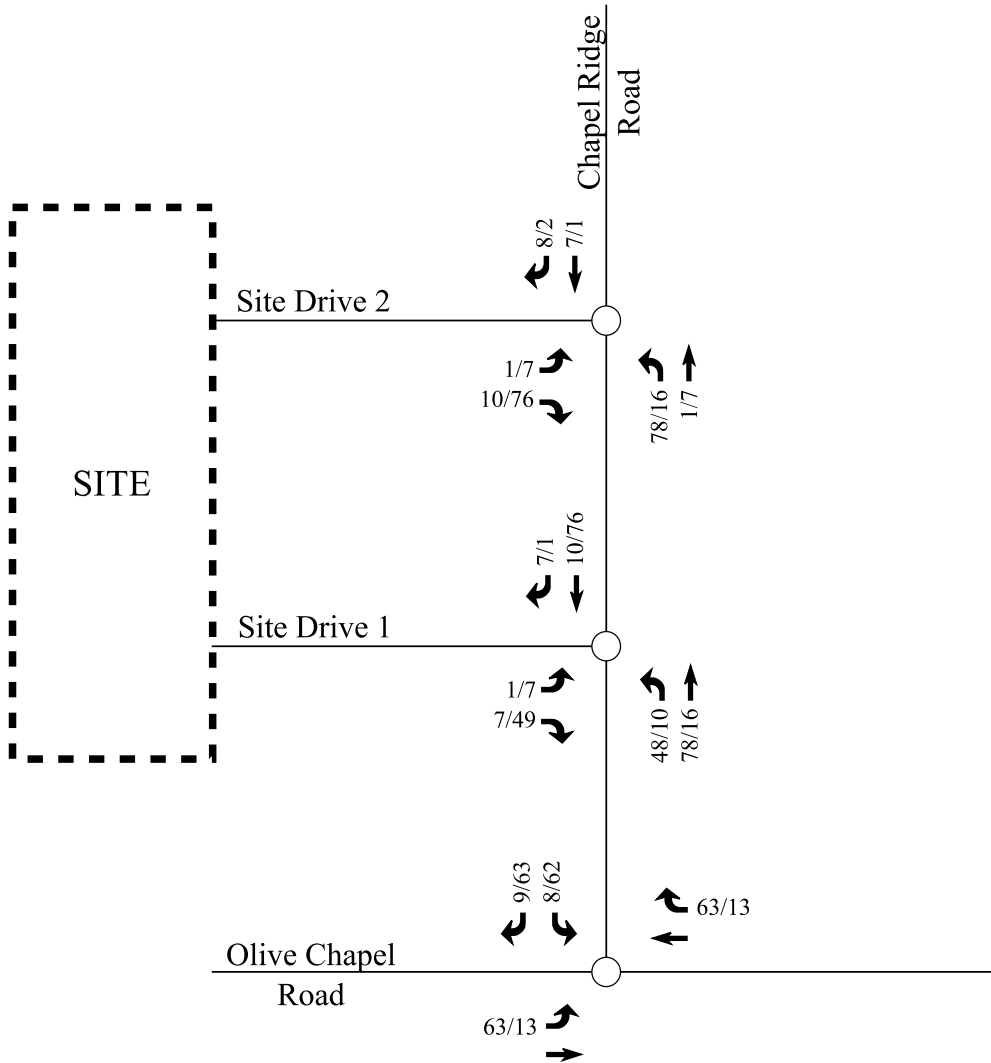
Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. It is estimated that trips will be distributed as follows:

- 45% to/from the west via Olive Chapel Road
- 45% to/from the east via Olive Chapel Road
- 10% to/from the north via Chapel Ridge Road (utilizing the proposed connection to the Beaver Creek Crossing Shopping Center, which is being constructed as part of the Hempstead at Beaver Creek development).

The site trip distribution, which has been reviewed and approved by the Town, is shown in Figure 9. Refer to Figure 10 for the site trip assignment.

LEGEND

- Unsignalized Intersection
- X/Y → AM / PM Peak Hour Site Trips



Olive Chapel Office Park
Apex, NC

Site Trip Assignment

Scale: Not to Scale

Figure 10

LEGEND

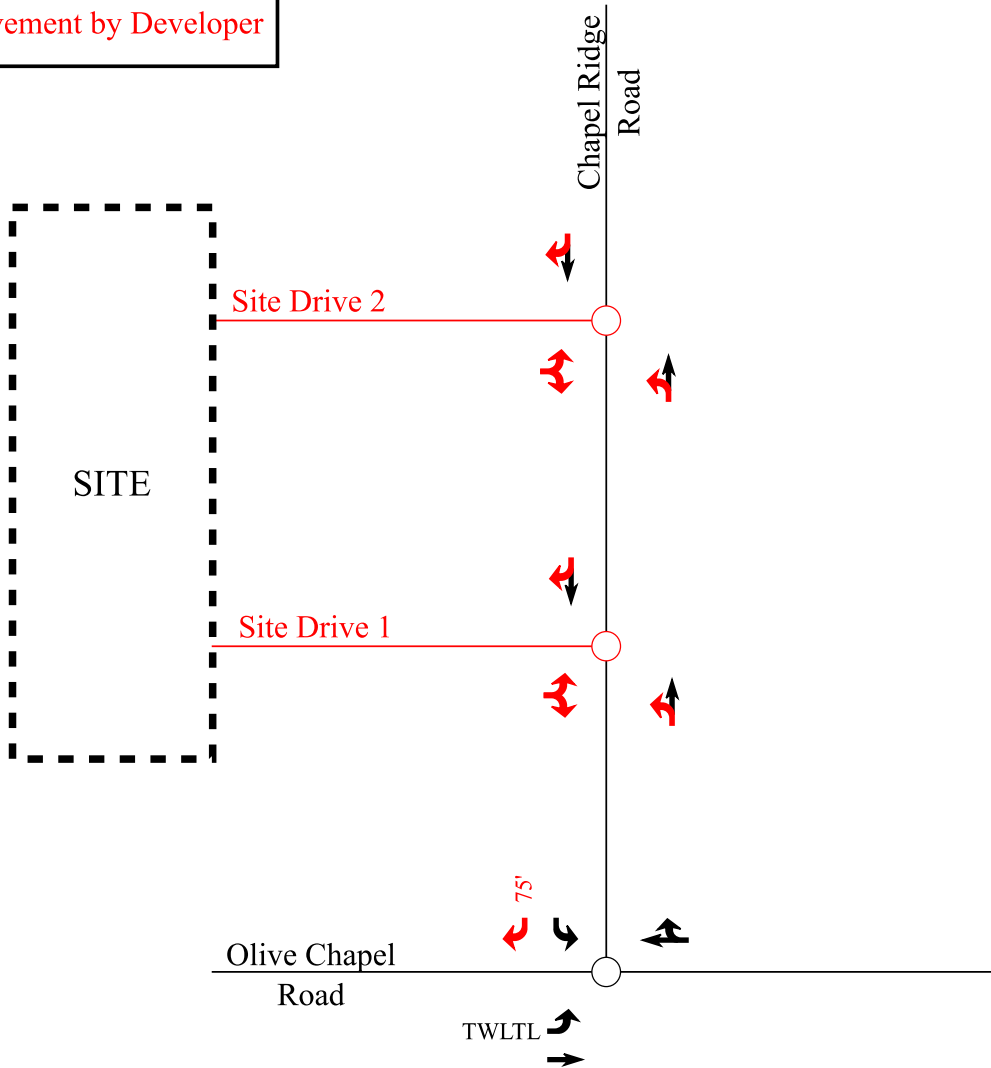
○ Unsignalized Intersection

➔ Existing Lane

X' Storage (In Feet)

TWLTL Two Way Left Turn Lane

➔ Improvement by Developer



Olive Chapel Office Park
Apex, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure 12

Appendix D: Trip Generation

Chapel Ridge Apartments

Table 1 - Trip Generation

Land Use	Intensity	Daily	AM Peak Hour			PM Peak Hour		
		Total	Total	In	Out	Total	In	Out
221 Multifamily Housing (Mid-Rise)	350 d.u.	1,906	117	30	87	147	90	57
Total Net New External Trips		1,906	117	30	87	147	90	57

Appendix E: Intersection Spreadsheets

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	12/7/2021
N/S Street:	Kelly Road
E/W Street:	Wendhurst Ct/Beaver Creek Commons Dr

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.98**

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	19	8	38	83	4	22	38	684	117	29	346	9
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	19	8	38	83	4	22	38	684	117	29	346	9
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.126	0.000	0.126	0.000	0.126	0.126	0.126	0.126	0.000
2025 Background Growth	0	0	0	10	0	3	0	86	15	4	43	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	3	0	0	19	0
Total Committed Traffic	0	0	0	0	0	0	0	3	0	0	19	0
2025 Background Traffic	19	8	38	93	4	25	38	773	132	33	408	9
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	12	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	35	0	0	0	0	0	0
Total External Site Traffic	0	0	0	0	0	35	0	0	0	12	0	0
Total Project Traffic	0	0	0	0	0	35	0	0	0	12	0	0
Hempstead Traffic Diversion	0	0	0	0	0	28	0	0	0	8	0	0
2025 Buildout Total	19	8	38	93	4	88	38	773	132	53	408	9
Percent Impact (Approach)		0.0%			18.9%			0.0%			2.6%	
Overall Percent Impact	2.8%											

**PM PEAK HOUR
PM PHF = 0.98**

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	10	14	47	247	20	55	67	502	270	89	748	23
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	10	14	47	247	20	55	67	502	270	89	748	23
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.126	0.000	0.126	0.000	0.126	0.126	0.126	0.126	0.000
2025 Background Growth	0	0	0	31	0	7	0	63	34	11	94	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	19	0	0	4	0
Total Committed Traffic	0	0	0	0	0	0	0	19	0	0	4	0
2025 Background Traffic	10	14	47	278	20	62	67	584	304	100	846	23
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	36	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	23	0	0	0	0	0	0
Total External Site Traffic	0	0	0	0	0	23	0	0	0	36	0	0
Total Project Traffic	0	0	0	0	0	23	0	0	0	36	0	0
Hempstead Traffic Diversion	0	0	0	0	0	16	0	0	0	28	0	0
2025 Buildout Total	10	14	47	278	20	101	67	584	304	164	846	23
Percent Impact (Approach)		0.0%			5.8%			0.0%			3.5%	
Overall Percent Impact	2.4%											

k:\dur_idev\011270040 chapel ridge apex\4 - analysis\chapelridgeapartments-tiadata.xls\int. #1

2/9/22

INTERSECTION ANALYSIS SHEET

Project: **Chapel Ridge Apartments**
 Location: **Apex, NC**
 Scenario: **Without Chapel Ridge Townhomes**
 Ct. Date: **12/7/2021**
 N/S Street: **Chapel Ridge Road**
 E/W Street: **Olive Chapel Road**

Net New Trips:

AM In	AM Out	PM In	PM Out
30	87	90	57

Annual Growth Rate:

3.0%

 Existing Year:

2021

 Growth Factor:

0.125509

 Buildout Year:

2025

AM PEAK HOUR
AM PHF = 0.85

Description	Olive Chapel Road Eastbound			Olive Chapel Road Westbound			Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	20	355	0	0	356	24	0	0	0	11	0	7
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	20	355	0	0	356	24	0	0	0	11	0	7
Growth Factor (0.03 per year)	0.000	0.126	0.000	0.000	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	45	0	0	45	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	32	0	0	0	0	32	0	0	0	4	0	5
Total Committed Traffic	32	0	0	0	0	32	0	0	0	4	0	5
2025 Background Traffic	52	400	0	0	401	56	0	0	0	15	0	12
Project Traffic												
Percent Assignment Inbound	10%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	3	0	0	0	0	6	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	10%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	17	0	9
Total External Site Traffic	3	0	0	0	0	6	0	0	0	17	0	9
Total Project Traffic	3	0	0	0	0	6	0	0	0	17	0	9
2025 Buildout Total	55	400	0	0	401	62	0	0	0	32	0	21
Percent Impact (Approach)		0.7%			1.3%						49.1%	
Overall Percent Impact	3.6%											

PM PEAK HOUR
PM PHF = 0.93

Description	Olive Chapel Road Eastbound			Olive Chapel Road Westbound			Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	16	436	0	0	521	22	0	0	0	20	0	26
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	16	436	0	0	521	22	0	0	0	20	0	26
Growth Factor (0.03 per year)	0.000	0.126	0.000	0.000	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	55	0	0	65	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	7	0	0	0	0	7	0	0	0	31	0	32
Total Committed Traffic	7	0	0	0	0	7	0	0	0	31	0	32
2025 Background Traffic	23	491	0	0	586	29	0	0	0	51	0	58
Project Traffic												
Percent Assignment Inbound	10%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	9	0	0	0	0	18	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	10%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	11	0	6
Total External Site Traffic	9	0	0	0	0	18	0	0	0	11	0	6
Total Project Traffic	9	0	0	0	0	18	0	0	0	11	0	6
2025 Buildout Total	32	491	0	0	586	47	0	0	0	62	0	64
Percent Impact (Approach)		1.7%			2.8%						13.5%	
Overall Percent Impact	3.4%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	12/7/2021
N/S Street:	Chapel Ridge Road
E/W Street:	Ackerman Hill Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	11	0	0	0	0	12	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	11	0	0	0	0	12	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	8	0	0	0	0	1	0	0	0
Total Committed Traffic	0	0	0	8	0	0	0	0	1	0	0	0
2025 Background Traffic	0	0	0	19	0	0	0	0	13	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	15%	0%	10%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	5	0	3	3	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	10%	0%	10%	0%	0%	15%	0%
Outbound Project Traffic	0	0	0	0	0	9	0	9	0	0	13	0
Total External Site Traffic	0	0	0	0	0	9	0	14	0	3	16	0
Total Project Traffic	0	0	0	0	0	9	0	14	0	3	16	0
Hempstead Traffic Diversion	0	0	0	0	0	39	0	0	0	12	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	2	0	0	16	0
2025 Buildout Total	0	0	0	19	0	48	0	16	13	15	32	0
Percent Impact (Approach)	-	-	-	-	13.4%	-	-	48.3%	-	-	40.4%	-
Overall Percent Impact	29.4%											

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	15	0	0	0	0	25	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	15	0	0	0	0	25	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	2	0	0	0	0	7	0	0	0
Total Committed Traffic	0	0	0	2	0	0	0	0	7	0	0	0
2025 Background Traffic	0	0	0	17	0	0	0	0	32	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	15%	0%	10%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	14	0	9	9	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	10%	0%	10%	0%	0%	15%	0%
Outbound Project Traffic	0	0	0	0	0	6	0	6	0	0	9	0
Total External Site Traffic	0	0	0	0	0	6	0	20	0	9	18	0
Total Project Traffic	0	0	0	0	0	6	0	20	0	9	18	0
Hempstead Traffic Diversion	0	0	0	0	0	22	0	0	0	38	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	14	0	0	4	0
2025 Buildout Total	0	0	0	17	0	28	0	34	32	47	22	0
Percent Impact (Approach)	-	-	-	-	13.3%	-	-	30.3%	-	-	39.1%	-
Overall Percent Impact	29.4%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	12/7/2021
N/S Street:	Creekside Landing Drive
E/W Street:	Beaver Creek Commons Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

AM PEAK HOUR AM PHF = 0.84

Description	Beaver Creek Commons Drive Eastbound			Beaver Creek Commons Drive Westbound			Creekside Landing Drive Northbound			Creekside Landing Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	33	117	8	25	69	58	0	28	21	57	28	47
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	33	117	8	25	69	58	0	28	21	57	28	47
Growth Factor (0.03 per year)	0.126	0.126	0.000	0.000	0.126	0.126	0.000	0.000	0.000	0.126	0.000	0.126
2025 Background Growth	4	15	0	0	9	7	0	0	0	7	0	6
Committed Projects												
Olive Chapel Professional Park	0	0	0	4	0	0	0	0	1	0	4	0
Total Committed Traffic	0	0	0	4	0	0	0	0	1	0	4	0
2025 Background Traffic	37	132	8	29	78	65	0	28	22	64	32	53
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	6	0	0	0	0	0	0	3
Percent Assignment Outbound	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	9	17	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	9	17	0	0	6	0	0	0	0	0	0	3
Total Project Traffic	9	17	0	0	6	0	0	0	0	0	0	3
OliveChapProfPark Reassign	0	2	0	0	8	0	0	0	0	0	0	8
2025 Buildout Total	46	151	8	29	92	65	0	28	22	64	32	64
Percent Impact (Approach)		12.7%			3.2%			0.0%			1.9%	
Overall Percent Impact	5.8%											

PM PEAK HOUR PM PHF = 0.94

Description	Beaver Creek Commons Drive Eastbound			Beaver Creek Commons Drive Westbound			Creekside Landing Drive Northbound			Creekside Landing Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	104	196	21	73	209	168	25	95	103	136	159	131
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	104	196	21	73	209	168	25	95	103	136	159	131
Growth Factor (0.03 per year)	0.126	0.126	0.000	0.000	0.126	0.126	0.000	0.000	0.000	0.126	0.000	0.126
2025 Background Growth	13	25	0	0	26	21	0	0	0	17	0	16
Committed Projects												
Olive Chapel Professional Park	0	0	0	1	0	0	0	3	4	0	1	0
Total Committed Traffic	0	0	0	1	0	0	0	3	4	0	1	0
2025 Background Traffic	117	221	21	74	235	189	25	98	107	153	160	147
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	18	0	0	0	0	0	0	9
Percent Assignment Outbound	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	6	11	0	0	0	0	0	0	0	0	0	0
Total External Site Traffic	6	11	0	0	18	0	0	0	0	0	0	9
Total Project Traffic	6	11	0	0	18	0	0	0	0	0	0	9
OliveChapProfPark Reassign	6	8	0	0	2	0	0	0	0	0	0	2
2025 Buildout Total	129	240	21	74	255	189	25	98	107	153	160	158
Percent Impact (Approach)		4.4%			3.5%			0.0%			1.9%	
Overall Percent Impact	2.7%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	12/7/2021
N/S Street:	Beaver Creek Commons Drive
E/W Street:	Proposed Site Access

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	187	0	0	111	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	187	0	0	111	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.126	0.000	0.000	0.126	0.000
2025 Background Growth	0	0	0	0	0	0	0	23	0	0	14	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	210	0	0	125	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	40%	30%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	12	9	0	0
Percent Assignment Outbound	0%	0%	0%	40%	0%	30%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	35	0	26	0	0	0	0	0	0
Total External Site Traffic	0	0	0	35	0	26	0	0	12	9	0	0
Total Project Traffic	0	0	0	35	0	26	0	0	12	9	0	0
Hempstead Traffic Diversion	0	0	0	28	0	11	0	0	8	3	0	0
OliveChapProfPark Reassign	0	0	0	0	0	2	0	0	0	16	0	0
2025 Buildout Total	0	0	0	63	0	39	0	210	20	28	125	0
Percent Impact (Approach)					59.8%			5.2%			5.9%	

Overall Percent Impact 16.9%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	355	0	0	335	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	355	0	0	335	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.126	0.000	0.000	0.126	0.000
2025 Background Growth	0	0	0	0	0	0	0	45	0	0	42	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	400	0	0	377	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	40%	30%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	36	27	0	0
Percent Assignment Outbound	0%	0%	0%	40%	0%	30%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	23	0	17	0	0	0	0	0	0
Total External Site Traffic	0	0	0	23	0	17	0	0	36	27	0	0
Total Project Traffic	0	0	0	23	0	17	0	0	36	27	0	0
Hempstead Traffic Diversion	0	0	0	16	0	6	0	0	28	10	0	0
OliveChapProfPark Reassign	0	0	0	0	0	14	0	0	0	4	0	0
2025 Buildout Total	0	0	0	39	0	37	0	400	64	41	377	0
Percent Impact (Approach)					52.6%			7.8%			6.5%	

Overall Percent Impact 10.8%

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	-
N/S Street:	Chapel Ridge Road
E/W Street:	Proposed Site Access/North Site Driveway

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Proposed Site Access			North Site Driveway			Chapel Ridge Road			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	20%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	6	15	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	50%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	17	0	44	0	0	0	0	0
Total External Site Traffic	0	6	15	0	17	0	44	0	0	0	0	0
Total Project Traffic	0	6	15	0	17	0	44	0	0	0	0	0
Hempstead Traffic Diversion	0	0	12	0	0	0	39	0	0	0	0	0
OliveChapProfPark Reassign	0	0	16	0	0	0	2	0	0	0	0	0
2025 Buildout Total	0	6	43	0	17	0	85	0	0	0	0	0
Percent Impact (Approach)	42.9%			100.0%			51.8%			-		

Overall Percent Impact 54.3%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Proposed Site Access			North Site Driveway			Chapel Ridge Road			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	20%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	18	45	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	50%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	11	0	29	0	0	0	0	0
Total External Site Traffic	0	18	45	0	11	0	29	0	0	0	0	0
Total Project Traffic	0	18	45	0	11	0	29	0	0	0	0	0
Hempstead Traffic Diversion	0	0	38	0	0	0	22	0	0	0	0	0
OliveChapProfPark Reassign	0	0	4	0	0	0	14	0	0	0	0	0
2025 Buildout Total	0	18	87	0	11	0	65	0	0	0	0	0
Percent Impact (Approach)	60.0%			100.0%			44.6%			-		

Overall Percent Impact 56.9%

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	-
N/S Street:	Central Site Driveway
E/W Street:	Chapel Ridge Road

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Chapel Ridge Road Eastbound			Chapel Ridge Road Westbound			Central Site Driveway Northbound			Central Site Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	5%	20%	25%	5%	0%	10%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	2	6	8	2	0	3	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	25%	0%	5%	10%	0%	5%
Outbound Project Traffic	0	0	0	0	17	0	22	0	4	9	0	4
Total External Site Traffic	2	6	8	2	17	3	22	0	4	9	0	4
Total Project Traffic	2	6	8	2	17	3	22	0	4	9	0	4
Hempstead Traffic Diversion	0	12	0	0	39	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	16	0	0	2	0	0	0	0	0	0	0
2025 Buildout Total	2	34	8	2	58	3	22	0	4	9	0	4
Percent Impact (Approach)		36.4%			34.9%			100.0%			100.0%	

Overall Percent Impact 52.7%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Chapel Ridge Road Eastbound			Chapel Ridge Road Westbound			Central Site Driveway Northbound			Central Site Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	5%	20%	25%	5%	0%	10%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	5	18	23	5	0	9	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	25%	0%	5%	10%	0%	5%
Outbound Project Traffic	0	0	0	0	11	0	14	0	3	6	0	3
Total External Site Traffic	5	18	23	5	11	9	14	0	3	6	0	3
Total Project Traffic	5	18	23	5	11	9	14	0	3	6	0	3
Hempstead Traffic Diversion	0	38	0	0	22	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	4	0	0	14	0	0	0	0	0	0	0
2025 Buildout Total	5	60	23	5	47	9	14	0	3	6	0	3
Percent Impact (Approach)		52.3%			41.0%			100.0%			100.0%	

Overall Percent Impact 55.4%

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	Balanced with Ackerman Hill
N/S Street:	Chapel Ridge Road
E/W Street:	South Site Driveway

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	South Site Driveway Eastbound			South Site Driveway Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	12	0	0	11	0
2021 Existing Traffic	0	0	0	0	0	0	0	12	0	0	11	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	1	0	0	8	0
Total Committed Traffic	0	0	0	0	0	0	0	1	0	0	8	0
2025 Background Traffic	0	0	0	0	0	0	0	13	0	0	19	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	10%	15%	5%	5%	0%	5%
Inbound Project Traffic	0	0	0	0	0	0	3	5	2	2	0	2
Percent Assignment Outbound	5%	0%	10%	5%	0%	5%	0%	0%	0%	0%	15%	0%
Outbound Project Traffic	4	0	9	4	0	4	0	0	0	0	13	0
Total External Site Traffic	4	0	9	4	0	4	3	5	2	2	13	2
Total Project Traffic	4	0	9	4	0	4	3	5	2	2	13	2
OliveChapProfPark Reassign	0	0	0	0	0	0	0	2	0	0	16	0
2025 Buildout Total	4	0	9	4	0	4	3	20	2	2	48	2
Percent Impact (Approach)		100.0%			100.0%			40.0%			32.7%	
Overall Percent Impact	49.0%											

**PM PEAK HOUR
PM PHF = 0.90**

Description	South Site Driveway Eastbound			South Site Driveway Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	25	0	0	15	0
2021 Existing Traffic	0	0	0	0	0	0	0	25	0	0	15	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	7	0	0	2	0
Total Committed Traffic	0	0	0	0	0	0	0	7	0	0	2	0
2025 Background Traffic	0	0	0	0	0	0	0	32	0	0	17	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	10%	15%	5%	5%	0%	5%
Inbound Project Traffic	0	0	0	0	0	0	9	14	5	5	0	5
Percent Assignment Outbound	5%	0%	10%	5%	0%	5%	0%	0%	0%	0%	15%	0%
Outbound Project Traffic	3	0	6	3	0	3	0	0	0	0	9	0
Total External Site Traffic	3	0	6	3	0	3	9	14	5	5	9	5
Total Project Traffic	3	0	6	3	0	3	9	14	5	5	9	5
OliveChapProfPark Reassign	0	0	0	0	0	0	0	14	0	0	4	0
2025 Buildout Total	3	0	6	3	0	3	9	60	5	5	30	5
Percent Impact (Approach)		100.0%			100.0%			37.8%			47.5%	
Overall Percent Impact	48.1%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Without Chapel Ridge Townhomes
Ct. Date:	Balanced with Ackerman Hill
N/S Street:	Site Driveway
E/W Street:	Ackerman Hill Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Ackerman Hill Drive Eastbound			Ackerman Hill Drive Westbound			Site Driveway Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	12	0	0	11	0	0	0	0	0	0	0
2021 Existing Traffic	0	12	0	0	11	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	1	0	0	8	0	0	0	0	0	0	0
Total Committed Traffic	0	1	0	0	8	0	0	0	0	0	0	0
2025 Background Traffic	0	13	0	0	19	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	3	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	9	0	0	0	0	0
Total External Site Traffic	0	0	3	0	0	0	9	0	0	0	0	0
Total Project Traffic	0	0	3	0	0	0	9	0	0	0	0	0
Hempstead Traffic Diversion	0	12	0	0	39	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	0	0	0	0	0
2025 Buildout Total	0	25	3	0	58	0	9	0	0	0	0	0
Percent Impact (Approach)		10.7%			0.0%			100.0%			-	

Overall Percent Impact 12.6%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Ackerman Hill Drive Eastbound			Ackerman Hill Drive Westbound			Site Driveway Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	25	0	0	15	0	0	0	0	0	0	0
2021 Existing Traffic	0	25	0	0	15	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	7	0	0	2	0	0	0	0	0	0	0
Total Committed Traffic	0	7	0	0	2	0	0	0	0	0	0	0
2025 Background Traffic	0	32	0	0	17	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	9	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	6	0	0	0	0	0
Total External Site Traffic	0	0	9	0	0	0	6	0	0	0	0	0
Total Project Traffic	0	0	9	0	0	0	6	0	0	0	0	0
Hempstead Traffic Diversion	0	38	0	0	22	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	0	0	0	0	0
2025 Buildout Total	0	70	9	0	39	0	6	0	0	0	0	0
Percent Impact (Approach)		11.4%			0.0%			100.0%			-	

Overall Percent Impact 12.1%

Appendix F:
Synchro & SIDRA Output:
Existing (2021)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	19	8	38	83	4	22	38	684	117	29	346	9	
Future Volume (vph)	19	8	38	83	4	22	38	684	117	29	346	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		1%			3%			-4%				
Storage Length (ft)	0		0	275		0	275		0	170		0	
Storage Lanes	0		0	1		1	1		0	1		0	
Taper Length (ft)	25			50			125			170			
Satd. Flow (prot)	0	1641	0	0	1768	1575	1743	3409	0	1753	1838	0	
Flt Permitted	0.887		0.699			0.524			0.320				
Satd. Flow (perm)	0	1477	0	0	1296	1575	961	3409	0	591	1838	0	
Right Turn on Red	Yes			Yes			Yes			Yes			
Satd. Flow (RTOR)	39		32			25			2				
Link Speed (mph)	25		35			45			45				
Link Distance (ft)	513		641			1004			905				
Travel Time (s)	14.0		12.5			15.2			13.7				
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	5%	5%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)	0%		0%			0%			0%				
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	66	0	0	89	22	39	817	0	30	362	0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA		
Protected Phases	4		3			8			1			6	
Permitted Phases	4		8			8			6			2	
Detector Phase	4	4		3	8	1	5	2		1	6		
Switch Phase													
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0		
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0		
Total Split (s)	20.0	20.0		15.0	35.0	15.0	15.0	70.0		15.0	70.0		
Total Split (%)	16.7%	16.7%		12.5%	29.2%	12.5%	12.5%	58.3%		12.5%	58.3%		
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9		
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6		
Lost Time Adjust (s)	-0.8		-0.8			-0.4			-1.5			-0.8	
Total Lost Time (s)	5.0		5.0			5.0			5.0			5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max		
Act Effct Green (s)	13.3		13.3			26.1			93.7			86.4	
Actuated g/C Ratio	0.11		0.11			0.22			0.78			0.72	
v/c Ratio	0.33		0.62			0.06			0.05			0.33	
Control Delay	27.6		68.5			7.4			3.2			7.3	
Queue Delay	0.0		0.0			0.0			0.0			0.0	
Total Delay	27.6		68.5			7.4			3.2			7.3	
LOS	C		E			A			A			A	
Approach Delay	27.6		56.4			7.1			6.5				
Approach LOS	C		E			A			A				
Queue Length 50th (ft)	19		67			0			5			113	
Queue Length 95th (ft)	60		118			15			15			173	
Internal Link Dist (ft)	433		561			924			825				
Turn Bay Length (ft)						275			170				
Base Capacity (vph)	230		324			396			827			2462	
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	0.29		0.27			0.06			0.05			0.33	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 11.7 Intersection LOS: B
 Intersection Capacity Utilization 51.4% ICU Level of Service A
 Analysis Period (min) 15
 Description: Signal No. 052254

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	355	356	24	11	7
Future Volume (vph)	20	355	356	24	11	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1736	1827	1812	0	1703	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1736	1827	1812	0	1703	1524
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	418	447	0	13	8
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	30.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	355	356	24	11	7
Future Vol, veh/h	20	355	356	24	11	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	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	4	4	4	6	6
Mvmt Flow	24	418	419	28	13	8

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	447	0	-	0	899 433
Stage 1	-	-	-	-	433 -
Stage 2	-	-	-	-	466 -
Critical Hdwy	4.14	-	-	-	6.46 6.26
Critical Hdwy Stg 1	-	-	-	-	5.46 -
Critical Hdwy Stg 2	-	-	-	-	5.46 -
Follow-up Hdwy	2.236	-	-	-	3.554 3.354
Pot Cap-1 Maneuver	1103	-	-	-	304 614
Stage 1	-	-	-	-	646 -
Stage 2	-	-	-	-	623 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1103	-	-	-	297 614
Mov Cap-2 Maneuver	-	-	-	-	422 -
Stage 1	-	-	-	-	632 -
Stage 2	-	-	-	-	623 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1103	-	-	-	422	614
HCM Lane V/C Ratio	0.021	-	-	-	0.031	0.013
HCM Control Delay (s)	8.3	-	-	-	13.8	10.9
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	11	4	4	12	4	4
Future Volume (vph)	11	4	4	12	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1735	0	1671	0	0	1818
Flt Permitted	0.964					0.976
Satd. Flow (perm)	1735	0	1671	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	17	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	4	4	12	4	4
Future Vol, veh/h	11	4	4	12	4	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	2	2
Mvmt Flow	12	4	4	13	4	4

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	23	11	0	0	17	0
Stage 1	11	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	993	1070	-	-	1600	-
Stage 1	1012	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	990	1070	-	-	1600	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1010	1600	-
HCM Lane V/C Ratio	-	-	0.017	0.003	-
HCM Control Delay (s)	-	-	8.6	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

MOVEMENT SUMMARY

Site: 4 [Existing AM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive

Site Category: Chapel Ridge Apartments

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Creekside Landing Drive														
3	L2	4	6.0	5	6.0	0.063	4.1	LOS A	0.3	6.6	0.38	0.24	0.38	21.2
8	T1	28	6.0	33	6.0	0.063	4.1	LOS A	0.3	6.6	0.38	0.24	0.38	19.6
18	R2	21	6.0	25	6.0	0.063	4.1	LOS A	0.3	6.6	0.38	0.24	0.38	18.0
Approach		53	6.0	63	6.0	0.063	4.1	LOS A	0.3	6.6	0.38	0.24	0.38	19.1
East: Beaver Creek Commons Drive														
1	L2	25	2.0	30	2.0	0.145	4.1	LOS A	0.7	17.3	0.22	0.10	0.22	16.6
6	T1	69	2.0	82	2.0	0.145	4.1	LOS A	0.7	17.3	0.22	0.10	0.22	21.3
16	R2	58	2.0	69	2.0	0.145	4.1	LOS A	0.7	17.3	0.22	0.10	0.22	18.8
Approach		152	2.0	181	2.0	0.145	4.1	LOS A	0.7	17.3	0.22	0.10	0.22	19.7
North: Creekside Landing Drive														
7	L2	57	2.0	68	2.0	0.131	4.1	LOS A	0.6	15.2	0.27	0.14	0.27	19.8
4	T1	28	2.0	33	2.0	0.131	4.1	LOS A	0.6	15.2	0.27	0.14	0.27	16.3
14	R2	47	2.0	56	2.0	0.131	4.1	LOS A	0.6	15.2	0.27	0.14	0.27	19.2
Approach		132	2.0	157	2.0	0.131	4.1	LOS A	0.6	15.2	0.27	0.14	0.27	18.9
West: Beaver Creek Commons Drive														
5	L2	33	3.0	39	3.0	0.161	4.5	LOS A	0.7	19.0	0.30	0.16	0.30	21.1
2	T1	117	3.0	139	3.0	0.161	4.5	LOS A	0.7	19.0	0.30	0.16	0.30	21.0
12	R2	8	3.0	10	3.0	0.161	4.5	LOS A	0.7	19.0	0.30	0.16	0.30	18.9
Approach		158	3.0	188	3.0	0.161	4.5	LOS A	0.7	19.0	0.30	0.16	0.30	20.9
All Vehicles		495	2.7	589	2.7	0.161	4.2	LOS A	0.7	19.0	0.28	0.15	0.28	19.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:38:59 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	14	47	247	20	55	67	502	270	89	748	23
Future Volume (vph)	10	14	47	247	20	55	67	502	270	89	748	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			1%			3%				-4%
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1683	0	0	1772	1575	1743	3275	0	1805	1891	0
Flt Permitted		0.945			0.709		0.174			0.293		
Satd. Flow (perm)	0	1602	0	0	1314	1575	319	3275	0	556	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				56		102			2	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	272	56	68	788	0	91	786	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	25.0	25.0		20.0	45.0	20.0	15.0	55.0		20.0	60.0	
Total Split (%)	20.8%	20.8%		16.7%	37.5%	16.7%	12.5%	45.8%		16.7%	50.0%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		30.7			30.7	44.0	75.3	66.0		74.3	69.1	
Actuated g/C Ratio		0.26			0.26	0.37	0.63	0.55		0.62	0.58	
v/c Ratio		0.16			0.81	0.09	0.23	0.43		0.21	0.72	
Control Delay		13.7			59.7	5.4	11.0	15.6		10.1	26.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		13.7			59.7	5.4	11.0	15.6		10.1	26.3	
LOS		B			E	A	B	B		B	C	
Approach Delay		13.7			50.5			15.3			24.6	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		14			197	0	17	155		23	444	
Queue Length 95th (ft)		46			274	23	42	249		53	#797	
Internal Link Dist (ft)		433			561			924			825	
Turn Bay Length (ft)							275			170		
Base Capacity (vph)		445			438	697	323	1846		523	1089	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.16			0.62	0.08	0.21	0.43		0.17	0.72	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	16	436	521	22	20	26
Future Volume (vph)	16	436	521	22	20	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1770	1863	1852	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1852	0	1770	1583
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	469	584	0	22	28
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	38.8%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	436	521	22	20	26
Future Vol, veh/h	16	436	521	22	20	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	469	560	24	22	28

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	584	0	-	0	1075	572
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	503	-
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	991	-	-	-	243	520
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	991	-	-	-	239	520
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	607	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	991	-	-	-	373	520
HCM Lane V/C Ratio	0.017	-	-	-	0.058	0.054
HCM Control Delay (s)	8.7	-	-	-	15.2	12.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0.2

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	4	4	25	4	4
Future Volume (vph)	15	4	4	25	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1744	0	1643	0	0	1818
Flt Permitted	0.961					0.976
Satd. Flow (perm)	1744	0	1643	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	0	32	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	4	4	25	4	4
Future Vol, veh/h	15	4	4	25	4	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	2	2
Mvmt Flow	17	4	4	28	4	4
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	30	18	0	0	32	0
Stage 1	18	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	984	1061	-	-	1580	-
Stage 1	1005	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	981	1061	-	-	1580	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1005	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.7	0		3.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	997	1580	-	
HCM Lane V/C Ratio	-	-	0.021	0.003	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

MOVEMENT SUMMARY

Site: 4 [Existing PM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive

Site Category: Chapel Ridge Apartments

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Creekside Landing Drive														
3	L2	25	2.0	27	2.0	0.284	7.4	LOS A	1.3	33.3	0.59	0.55	0.59	23.2
8	T1	95	2.0	101	2.0	0.284	7.4	LOS A	1.3	33.3	0.59	0.55	0.59	23.1
18	R2	103	2.0	110	2.0	0.284	7.4	LOS A	1.3	33.3	0.59	0.55	0.59	22.7
Approach		223	2.0	237	2.0	0.284	7.4	LOS A	1.3	33.3	0.59	0.55	0.59	22.9
East: Beaver Creek Commons Drive														
1	L2	73	2.0	78	2.0	0.453	8.5	LOS A	2.8	69.9	0.54	0.42	0.54	22.9
6	T1	209	2.0	222	2.0	0.453	8.5	LOS A	2.8	69.9	0.54	0.42	0.54	22.8
16	R2	168	2.0	179	2.0	0.453	8.5	LOS A	2.8	69.9	0.54	0.42	0.54	22.4
Approach		450	2.0	479	2.0	0.453	8.5	LOS A	2.8	69.9	0.54	0.42	0.54	22.7
North: Creekside Landing Drive														
7	L2	136	2.0	145	2.0	0.471	9.4	LOS A	2.9	74.4	0.62	0.56	0.66	22.6
4	T1	159	2.0	169	2.0	0.471	9.4	LOS A	2.9	74.4	0.62	0.56	0.66	22.5
14	R2	131	2.0	139	2.0	0.471	9.4	LOS A	2.9	74.4	0.62	0.56	0.66	22.1
Approach		426	2.0	453	2.0	0.471	9.4	LOS A	2.9	74.4	0.62	0.56	0.66	22.4
West: Beaver Creek Commons Drive														
5	L2	104	2.0	111	2.0	0.379	8.3	LOS A	2.0	49.5	0.60	0.54	0.60	22.9
2	T1	196	2.0	209	2.0	0.379	8.3	LOS A	2.0	49.5	0.60	0.54	0.60	22.8
12	R2	21	2.0	22	2.0	0.379	8.3	LOS A	2.0	49.5	0.60	0.54	0.60	22.3
Approach		321	2.0	341	2.0	0.379	8.3	LOS A	2.0	49.5	0.60	0.54	0.60	22.8
All Vehicles		1420	2.0	1511	2.0	0.471	8.5	LOS A	2.9	74.4	0.59	0.51	0.60	22.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:39:01 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Appendix G:
Synchro & SIDRA Output:
Background (2025)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	19	8	38	93	4	25	38	773	132	33	408	9	
Future Volume (vph)	19	8	38	93	4	25	38	773	132	33	408	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		1%				3%			-4%			
Storage Length (ft)	0		0	275		0	275		0	170		0	
Storage Lanes	0		0	1		1	1		0	1		0	
Taper Length (ft)	25			50			125			170			
Satd. Flow (prot)	0	1641	0	0	1768	1575	1743	3409	0	1753	1840	0	
Flt Permitted	0.888		0.700				0.481			0.279			
Satd. Flow (perm)	0	1478	0	0	1297	1575	883	3409	0	515	1840	0	
Right Turn on Red	Yes			Yes				Yes			Yes		
Satd. Flow (RTOR)	39		32				25			1			
Link Speed (mph)	25		35				45			45			
Link Distance (ft)	513		641				1004			905			
Travel Time (s)	14.0		12.5				15.2			13.7			
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	5%	5%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)	0%		0%				0%			0%			
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	66	0	0	99	26	39	924	0	34	425	0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA		
Protected Phases	4		3		8	1	5	2		1	6		
Permitted Phases	4		8		8	6				2			
Detector Phase	4	4		3	8	1	5	2		1	6		
Switch Phase													
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0		
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0		
Total Split (s)	20.0	20.0		15.0	35.0	15.0	15.0	70.0		15.0	70.0		
Total Split (%)	16.7%	16.7%		12.5%	29.2%	12.5%	12.5%	58.3%		12.5%	58.3%		
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9		
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6		
Lost Time Adjust (s)	-0.8		-0.8				-0.4			-1.5			
Total Lost Time (s)	5.0		5.0				5.0			5.0			
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max		
Act Effct Green (s)	14.4		14.4				27.2			85.3			
Actuated g/C Ratio	0.12		0.12				0.23			0.77			
v/c Ratio	0.31		0.64				0.07			0.38			
Control Delay	26.2		67.5				9.3			3.6			
Queue Delay	0.0		0.0				0.0			0.0			
Total Delay	26.2		67.5				9.3			3.6			
LOS	C		E				A			A			
Approach Delay	26.2		55.4				8.0			7.4			
Approach LOS	C		E				A			A			
Queue Length 50th (ft)	19		74				0			5			
Queue Length 95th (ft)	59		126				19			16			
Internal Link Dist (ft)	433		561				924			825			
Turn Bay Length (ft)							275			170			
Base Capacity (vph)	238		324				410			764			
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	0.28		0.31				0.06			0.05			

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 12.3

Intersection LOS: B

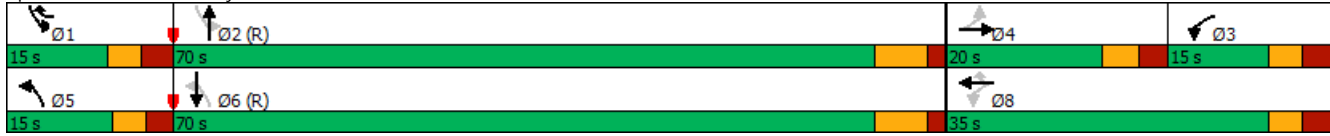
Intersection Capacity Utilization 51.9%

ICU Level of Service A

Analysis Period (min) 15

Description: Signal No. 052254

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	52	400	401	56	15	12
Future Volume (vph)	52	400	401	56	15	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1736	1827	1796	0	1703	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1736	1827	1796	0	1703	1524
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	471	538	0	18	14
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.2%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	400	401	56	15	12
Future Vol, veh/h	52	400	401	56	15	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	4	4	4	6	6
Mvmt Flow	61	471	472	66	18	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	538	0	-	0	1098 505
Stage 1	-	-	-	-	505 -
Stage 2	-	-	-	-	593 -
Critical Hdwy	4.14	-	-	-	6.46 6.26
Critical Hdwy Stg 1	-	-	-	-	5.46 -
Critical Hdwy Stg 2	-	-	-	-	5.46 -
Follow-up Hdwy	2.236	-	-	-	3.554 3.354
Pot Cap-1 Maneuver	1020	-	-	-	231 559
Stage 1	-	-	-	-	598 -
Stage 2	-	-	-	-	544 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1020	-	-	-	217 559
Mov Cap-2 Maneuver	-	-	-	-	351 -
Stage 1	-	-	-	-	562 -
Stage 2	-	-	-	-	544 -

Approach	EB	WB	SB
HCM Control Delay, s	1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1020	-	-	-	351	559
HCM Lane V/C Ratio	0.06	-	-	-	0.05	0.025
HCM Control Delay (s)	8.8	-	-	-	15.8	11.6
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	4	4	13	4	4
Future Volume (vph)	19	4	4	13	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1749	0	1667	0	0	1818
Flt Permitted	0.960					0.976
Satd. Flow (perm)	1749	0	1667	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	0	18	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	4	4	13	4	4
Future Vol, veh/h	19	4	4	13	4	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	2	2
Mvmt Flow	21	4	4	14	4	4

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	23	11	0	0	18	0
Stage 1	11	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	993	1070	-	-	1599	-
Stage 1	1012	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	990	1070	-	-	1599	-
Mov Cap-2 Maneuver	990	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1003	1599	-
HCM Lane V/C Ratio	-	-	0.025	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

MOVEMENT SUMMARY

 Site: 4 [Background AM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive

Site Category: Chapel Ridge Apartments

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Creekside Landing Drive														
3	L2	4	6.0	5	6.0	0.066	4.3	LOS A	0.3	6.9	0.40	0.27	0.40	24.0
8	T1	28	6.0	33	6.0	0.066	4.3	LOS A	0.3	6.9	0.40	0.27	0.40	23.9
18	R2	22	6.0	26	6.0	0.066	4.3	LOS A	0.3	6.9	0.40	0.27	0.40	23.5
Approach		54	6.0	64	6.0	0.066	4.3	LOS A	0.3	6.9	0.40	0.27	0.40	23.7
East: Beaver Creek Commons Drive														
1	L2	29	2.0	35	2.0	0.165	4.3	LOS A	0.8	20.0	0.24	0.11	0.24	24.0
6	T1	78	2.0	93	2.0	0.165	4.3	LOS A	0.8	20.0	0.24	0.11	0.24	23.8
16	R2	65	2.0	77	2.0	0.165	4.3	LOS A	0.8	20.0	0.24	0.11	0.24	23.4
Approach		172	2.0	205	2.0	0.165	4.3	LOS A	0.8	20.0	0.24	0.11	0.24	23.7
North: Creekside Landing Drive														
7	L2	64	2.0	76	2.0	0.150	4.3	LOS A	0.7	17.7	0.30	0.16	0.30	23.7
4	T1	32	2.0	38	2.0	0.150	4.3	LOS A	0.7	17.7	0.30	0.16	0.30	23.6
14	R2	53	2.0	63	2.0	0.150	4.3	LOS A	0.7	17.7	0.30	0.16	0.30	23.1
Approach		149	2.0	177	2.0	0.150	4.3	LOS A	0.7	17.7	0.30	0.16	0.30	23.5
West: Beaver Creek Commons Drive														
5	L2	37	3.0	44	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.8
2	T1	132	3.0	157	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.7
12	R2	8	3.0	10	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.3
Approach		177	3.0	211	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.7
All Vehicles		552	2.7	657	2.7	0.184	4.5	LOS A	0.9	22.1	0.30	0.17	0.30	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:39:00 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	14	47	278	20	62	67	584	304	100	846	23
Future Volume (vph)	10	14	47	278	20	62	67	584	304	100	846	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		1%				3%			-4%		
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1683	0	0	1770	1575	1743	3283	0	1805	1891	0
Flt Permitted		0.943			0.710		0.087			0.237		
Satd. Flow (perm)	0	1598	0	0	1316	1575	160	3283	0	450	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				63		95			1	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	304	63	68	906	0	102	886	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	25.0	25.0		20.0	45.0	20.0	15.0	55.0		20.0	60.0	
Total Split (%)	20.8%	20.8%		16.7%	37.5%	16.7%	12.5%	45.8%		16.7%	50.0%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		33.0			33.0	46.6	73.0	63.4		72.0	66.7	
Actuated g/C Ratio		0.28			0.28	0.39	0.61	0.53		0.60	0.56	
v/c Ratio		0.15			0.84	0.10	0.34	0.51		0.28	0.84	
Control Delay		13.1			60.9	4.9	14.5	18.5		11.6	34.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		13.1			60.9	4.9	14.5	18.5		11.6	34.0	
LOS		B			E	A	B	B		B	C	
Approach Delay		13.1				51.3		18.2			31.7	
Approach LOS		B				D		B			C	
Queue Length 50th (ft)		14				219	0	19	206	29	586	
Queue Length 95th (ft)		46				312	25	42	307	59	#968	
Internal Link Dist (ft)		433				561			924		825	
Turn Bay Length (ft)								275		170		
Base Capacity (vph)		473			438	730	231	1778		457	1051	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.15			0.69	0.09	0.29	0.51		0.22	0.84	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 28.7 Intersection LOS: C
 Intersection Capacity Utilization 87.4% ICU Level of Service E
 Analysis Period (min) 15
 Description: Signal No. 052254
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	23	491	586	29	51	58
Future Volume (vph)	23	491	586	29	51	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1770	1863	1852	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1852	0	1770	1583
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	528	661	0	55	62
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	491	586	29	51	58
Future Vol, veh/h	23	491	586	29	51	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	528	630	31	55	62

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	661	0	-	0	1224 646
Stage 1	-	-	-	-	646 -
Stage 2	-	-	-	-	578 -
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	927	-	-	-	198 472
Stage 1	-	-	-	-	522 -
Stage 2	-	-	-	-	561 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	927	-	-	-	193 472
Mov Cap-2 Maneuver	-	-	-	-	331 -
Stage 1	-	-	-	-	508 -
Stage 2	-	-	-	-	561 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	927	-	-	-	331	472
HCM Lane V/C Ratio	0.027	-	-	-	0.166	0.132
HCM Control Delay (s)	9	-	-	-	18	13.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6	0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	4	4	32	4	4
Future Volume (vph)	17	4	4	32	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1747	0	1635	0	0	1818
Flt Permitted	0.960					0.976
Satd. Flow (perm)	1747	0	1635	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	40	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	4	4	32	4	4
Future Vol, veh/h	17	4	4	32	4	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	2	2
Mvmt Flow	19	4	4	36	4	4
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	34	22	0	0	40	0
Stage 1	22	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	979	1055	-	-	1570	-
Stage 1	1001	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	976	1055	-	-	1570	-
Mov Cap-2 Maneuver	976	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	8.7	0	3.6			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	990	1570	-	
HCM Lane V/C Ratio	-	-	0.024	0.003	-	
HCM Control Delay (s)	-	-	8.7	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

MOVEMENT SUMMARY

 Site: 4 [Background PM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive

Site Category: Chapel Ridge Apartments

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] ft				
South: Creekside Landing Drive														
3	L2	25	2.0	27	2.0	0.311	8.2	LOS A	1.4	36.4	0.62	0.61	0.62	23.0
8	T1	98	2.0	104	2.0	0.311	8.2	LOS A	1.4	36.4	0.62	0.61	0.62	22.9
18	R2	107	2.0	114	2.0	0.311	8.2	LOS A	1.4	36.4	0.62	0.61	0.62	22.5
Approach		230	2.0	245	2.0	0.311	8.2	LOS A	1.4	36.4	0.62	0.61	0.62	22.7
East: Beaver Creek Commons Drive														
1	L2	74	2.0	79	2.0	0.511	9.6	LOS A	3.3	83.3	0.60	0.47	0.60	22.7
6	T1	235	2.0	250	2.0	0.511	9.6	LOS A	3.3	83.3	0.60	0.47	0.60	22.6
16	R2	189	2.0	201	2.0	0.511	9.6	LOS A	3.3	83.3	0.60	0.47	0.60	22.2
Approach		498	2.0	530	2.0	0.511	9.6	LOS A	3.3	83.3	0.60	0.47	0.60	22.4
North: Creekside Landing Drive														
7	L2	153	2.0	163	2.0	0.523	10.6	LOS B	4.1	104.7	0.67	0.72	0.85	22.3
4	T1	160	2.0	170	2.0	0.523	10.6	LOS B	4.1	104.7	0.67	0.72	0.85	22.2
14	R2	147	2.0	156	2.0	0.523	10.6	LOS B	4.1	104.7	0.67	0.72	0.85	21.8
Approach		460	2.0	489	2.0	0.523	10.6	LOS B	4.1	104.7	0.67	0.72	0.85	22.1
West: Beaver Creek Commons Drive														
5	L2	117	2.0	124	2.0	0.433	9.3	LOS A	2.5	64.4	0.64	0.63	0.71	22.6
2	T1	221	2.0	235	2.0	0.433	9.3	LOS A	2.5	64.4	0.64	0.63	0.71	22.5
12	R2	21	2.0	22	2.0	0.433	9.3	LOS A	2.5	64.4	0.64	0.63	0.71	22.1
Approach		359	2.0	382	2.0	0.433	9.3	LOS A	2.5	64.4	0.64	0.63	0.71	22.5
All Vehicles		1547	2.0	1646	2.0	0.523	9.6	LOS A	4.1	104.7	0.63	0.60	0.70	22.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:39:01 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Appendix H:
Synchro & SIDRA Output:
Build-Out (2025)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	19	8	38	93	4	88	38	773	132	53	408	9	
Future Volume (vph)	19	8	38	93	4	88	38	773	132	53	408	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		1%			3%			-4%				
Storage Length (ft)	0		0	275		0	275		0	170		0	
Storage Lanes	0		0	1		1	1		0	1		0	
Taper Length (ft)	25			50			125			170			
Satd. Flow (prot)	0	1641	0	0	1768	1575	1743	3409	0	1753	1840	0	
Flt Permitted	0.888		0.700			0.481			0.276				
Satd. Flow (perm)	0	1478	0	0	1297	1575	883	3409	0	509	1840	0	
Right Turn on Red	Yes			Yes			Yes			Yes			
Satd. Flow (RTOR)	39		90			25			1				
Link Speed (mph)	25		35			45			45				
Link Distance (ft)	513		641			1004			905				
Travel Time (s)	14.0		12.5			15.2			13.7				
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	5%	5%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)	0%		0%			0%			0%				
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	66	0	0	99	90	39	924	0	54	425	0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA		
Protected Phases	4		3			8			1			6	
Permitted Phases	4		8			8			6			2	
Detector Phase	4	4		3	8	1	5	2		1	6		
Switch Phase													
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0		
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0		
Total Split (s)	20.0	20.0		15.0	35.0	15.0	15.0	70.0		15.0	70.0		
Total Split (%)	16.7%	16.7%		12.5%	29.2%	12.5%	12.5%	58.3%		12.5%	58.3%		
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9		
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6		
Lost Time Adjust (s)	-0.8		-0.8			-0.4			-1.5				
Total Lost Time (s)	5.0		5.0			5.0			5.0				
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes		
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max		
Act Effct Green (s)	14.4		14.4			27.2			82.8				
Actuated g/C Ratio	0.12		0.12			0.23			0.69				
v/c Ratio	0.31		0.64			0.21			0.39				
Control Delay	26.2		67.5			8.0			8.8				
Queue Delay	0.0		0.0			0.0			0.0				
Total Delay	26.2		67.5			8.0			8.8				
LOS	C		E			A			A				
Approach Delay	26.2		39.2			8.5			7.3				
Approach LOS	C		D			A			A				
Queue Length 50th (ft)	19		74			0			140				
Queue Length 95th (ft)	59		126			40			212				
Internal Link Dist (ft)	433		561			924			825				
Turn Bay Length (ft)						275			170				
Base Capacity (vph)	238		324			454			2359				
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	0.28		0.31			0.20			0.05				

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 12.3 Intersection LOS: B
 Intersection Capacity Utilization 55.9% ICU Level of Service B
 Analysis Period (min) 15
 Description: Signal No. 052254

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	400	401	62	32	21
Future Volume (vph)	55	400	401	62	32	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1736	1827	1794	0	1703	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1736	1827	1794	0	1703	1524
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	65	471	545	0	38	25
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.5%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.3					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	400	401	62	32	21
Future Vol, veh/h	55	400	401	62	32	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	4	4	4	6	6
Mvmt Flow	65	471	472	73	38	25

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	545	0	-	0	1110 509
Stage 1	-	-	-	-	509 -
Stage 2	-	-	-	-	601 -
Critical Hdwy	4.14	-	-	-	6.46 6.26
Critical Hdwy Stg 1	-	-	-	-	5.46 -
Critical Hdwy Stg 2	-	-	-	-	5.46 -
Follow-up Hdwy	2.236	-	-	-	3.554 3.354
Pot Cap-1 Maneuver	1014	-	-	-	227 556
Stage 1	-	-	-	-	595 -
Stage 2	-	-	-	-	540 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1014	-	-	-	212 556
Mov Cap-2 Maneuver	-	-	-	-	347 -
Stage 1	-	-	-	-	557 -
Stage 2	-	-	-	-	540 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1014	-	-	-	347	556
HCM Lane V/C Ratio	0.064	-	-	-	0.108	0.044
HCM Control Delay (s)	8.8	-	-	-	16.6	11.8
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	48	16	13	15	32
Future Volume (vph)	19	48	16	13	15	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1659	0	1753	0	0	1833
Flt Permitted	0.986					0.984
Satd. Flow (perm)	1659	0	1753	0	0	1833
Link Speed (mph)	25		25			25
Link Distance (ft)	292		213			210
Travel Time (s)	8.0		5.8			5.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	32	0	0	53
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.9%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 4.9

Movement WBL WBR NBT NBR SBL SBT

Lane Configurations						
Traffic Vol, veh/h	19	48	16	13	15	32
Future Vol, veh/h	19	48	16	13	15	32
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	2	2
Mvmt Flow	21	53	18	14	17	36

Major/Minor Minor1 Major1 Major2

Conflicting Flow All	95	25	0	0	32	0
Stage 1	25	-	-	-	-	-
Stage 2	70	-	-	-	-	-
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	905	1051	-	-	1580	-
Stage 1	998	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	895	1051	-	-	1580	-
Mov Cap-2 Maneuver	895	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	943	-	-	-	-	-

Approach WB NB SB

HCM Control Delay, s	8.9	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt NBT NBR WBLn1 SBL SBT

Capacity (veh/h)	-	-	1001	1580	-
HCM Lane V/C Ratio	-	-	0.074	0.011	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

MOVEMENT SUMMARY

 Site: 4 [Build-Out AM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Chapel Ridge Apartments
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] ft				
South: Creekside Landing Drive														
3	L2	4	6.0	5	6.0	0.068	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	24.0
8	T1	28	6.0	33	6.0	0.068	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.9
18	R2	22	6.0	26	6.0	0.068	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.4
Approach		54	6.0	64	6.0	0.068	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.7
East: Beaver Creek Commons Drive														
1	L2	29	2.0	35	2.0	0.181	4.5	LOS A	0.9	22.2	0.26	0.13	0.26	23.9
6	T1	92	2.0	110	2.0	0.181	4.5	LOS A	0.9	22.2	0.26	0.13	0.26	23.8
16	R2	65	2.0	77	2.0	0.181	4.5	LOS A	0.9	22.2	0.26	0.13	0.26	23.4
Approach		186	2.0	221	2.0	0.181	4.5	LOS A	0.9	22.2	0.26	0.13	0.26	23.7
North: Creekside Landing Drive														
7	L2	64	2.0	76	2.0	0.164	4.5	LOS A	0.8	19.5	0.32	0.19	0.32	23.7
4	T1	32	2.0	38	2.0	0.164	4.5	LOS A	0.8	19.5	0.32	0.19	0.32	23.6
14	R2	64	2.0	76	2.0	0.164	4.5	LOS A	0.8	19.5	0.32	0.19	0.32	23.1
Approach		160	2.0	190	2.0	0.164	4.5	LOS A	0.8	19.5	0.32	0.19	0.32	23.4
West: Beaver Creek Commons Drive														
5	L2	46	3.0	55	3.0	0.213	5.0	LOS A	1.0	26.3	0.34	0.20	0.34	23.7
2	T1	151	3.0	180	3.0	0.213	5.0	LOS A	1.0	26.3	0.34	0.20	0.34	23.6
12	R2	8	3.0	10	3.0	0.213	5.0	LOS A	1.0	26.3	0.34	0.20	0.34	23.2
Approach		205	3.0	244	3.0	0.213	5.0	LOS A	1.0	26.3	0.34	0.20	0.34	23.6
All Vehicles		605	2.7	720	2.7	0.213	4.7	LOS A	1.0	26.3	0.32	0.18	0.32	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:39:00 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	39	210	20	28	125
Future Volume (vph)	63	39	210	20	28	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				100	
Satd. Flow (prot)	1715	0	1840	0	1770	1863
Flt Permitted	0.970				0.950	
Satd. Flow (perm)	1715	0	1840	0	1770	1863
Link Speed (mph)	25		35			35
Link Distance (ft)	432		357			558
Travel Time (s)	11.8		7.0			10.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	113	0	255	0	31	139
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.5%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	2.8					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	39	210	20	28	125
Future Vol, veh/h	63	39	210	20	28	125
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	-	-	-	100	-
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	70	43	233	22	31	139

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	445	244	0	0	255	0
Stage 1	244	-	-	-	-	-
Stage 2	201	-	-	-	-	-
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	571	795	-	-	1310	-
Stage 1	797	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	557	795	-	-	1310	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	813	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	678	1310	-
HCM Lane V/C Ratio	-	-	0.167	0.024	-
HCM Control Delay (s)	-	-	11.4	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	6	43	4	17	85	4
Future Volume (vph)	6	43	4	17	85	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0		0		0	
Storage Lanes	0		0		1	
Taper Length (ft)	25			25		
Satd. Flow (prot)	1643	0	0	1846	1766	0
Flt Permitted				0.991	0.954	
Satd. Flow (perm)	1643	0	0	1846	1766	0
Link Speed (mph)	25		25		25	
Link Distance (ft)	432			273		553
Travel Time (s)	11.8			7.4		15.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	0	0	23	98	0
Sign Control	Free			Free		Stop

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.0%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	43	4	17	85	4
Future Vol, veh/h	6	43	4	17	85	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	2	2	2	2
Mvmt Flow	7	48	4	19	94	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	55	0	58
Stage 1	-	-	-	-	31
Stage 2	-	-	-	-	27
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1550	-	949
Stage 1	-	-	-	-	992
Stage 2	-	-	-	-	996
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1550	-	946
Mov Cap-2 Maneuver	-	-	-	-	946
Stage 1	-	-	-	-	992
Stage 2	-	-	-	-	993

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	950	-	-	1550	-
HCM Lane V/C Ratio	0.104	-	-	0.003	-
HCM Control Delay (s)	9.2	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	34	8	4	58	4	22	4	4	9	4	4
Future Volume (vph)	4	34	8	4	58	4	22	4	4	9	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%		0%		0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1811	0	0	1842	0	0	1765	0	0	1758	0
Flt Permitted		0.996			0.997			0.964			0.973	
Satd. Flow (perm)	0	1811	0	0	1842	0	0	1765	0	0	1758	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		553			210			358			340	
Travel Time (s)		15.1			5.7			9.8			9.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	72	0	0	32	0	0	18	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	14.3%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	34	8	4	58	4	22	4	4	9	4	4
Future Vol, veh/h	4	34	8	4	58	4	22	4	4	9	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	38	9	4	64	4	24	4	4	10	4	4
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	47	0	0	129	127	43	129	129	66
Stage 1	-	-	-	-	-	-	51	51	-	74	74	-
Stage 2	-	-	-	-	-	-	78	76	-	55	55	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1560	-	-	844	764	1027	844	762	998
Stage 1	-	-	-	-	-	-	962	852	-	935	833	-
Stage 2	-	-	-	-	-	-	931	832	-	957	849	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1533	-	-	1560	-	-	833	759	1027	833	757	998
Mov Cap-2 Maneuver	-	-	-	-	-	-	833	759	-	833	757	-
Stage 1	-	-	-	-	-	-	959	849	-	932	831	-
Stage 2	-	-	-	-	-	-	919	830	-	945	846	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.4			9.4			9.4		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	843	1533	-	-	1560	-	-	846				
HCM Lane V/C Ratio	0.04	0.003	-	-	0.003	-	-	0.022				
HCM Control Delay (s)	9.4	7.4	0	-	7.3	0	-	9.4				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	9	4	4	4	4	20	4	4	48	4
Future Volume (vph)	4	4	9	4	4	4	4	20	4	4	48	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1704	0	0	1750	0	0	1816	0	0	1840	0
Flt Permitted		0.989			0.984			0.993			0.997	
Satd. Flow (perm)	0	1704	0	0	1750	0	0	1816	0	0	1840	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			378			405			213	
Travel Time (s)		6.8			10.3			11.0			5.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	12	0	0	30	0	0	61	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	13.4%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	9	4	4	4	4	20	4	4	48	4
Future Vol, veh/h	4	4	9	4	4	4	4	20	4	4	48	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	10	4	4	4	4	22	4	4	53	4

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	99	97	55	102	97	24	57	0	0	26	0	0
Stage 1	63	63	-	32	32	-	-	-	-	-	-	-
Stage 2	36	34	-	70	65	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	883	793	1012	879	793	1052	1547	-	-	1588	-	-
Stage 1	948	842	-	984	868	-	-	-	-	-	-	-
Stage 2	980	867	-	940	841	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	872	788	1012	862	788	1052	1547	-	-	1588	-	-
Mov Cap-2 Maneuver	872	788	-	862	788	-	-	-	-	-	-	-
Stage 1	945	839	-	981	865	-	-	-	-	-	-	-
Stage 2	968	864	-	923	838	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9	9.1	1	0.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1547	-	-	916	888	1588	-	-
HCM Lane V/C Ratio	0.003	-	-	0.021	0.015	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	4	4	58	9	4
Future Volume (vph)	25	4	4	58	9	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0		0		0	
Storage Lanes	0		0		1	
Taper Length (ft)	25			25		
Satd. Flow (prot)	1831	0	0	1857	1729	0
Flt Permitted				0.997	0.966	
Satd. Flow (perm)	1831	0	0	1857	1729	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	292			367	225	
Travel Time (s)	8.0			10.0	6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	68	14	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	4	4	58	9	4
Future Vol, veh/h	25	4	4	58	9	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	2	2	2	2
Mvmt Flow	28	4	4	64	10	4

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	32	0	102	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	72	-
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	-	-	1580	-	896	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	951	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1580	-	893	1044
Mov Cap-2 Maneuver	-	-	-	-	893	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	948	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	935	-	-	1580	-
HCM Lane V/C Ratio	0.015	-	-	0.003	-
HCM Control Delay (s)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	14	47	278	20	101	67	584	304	164	846	23
Future Volume (vph)	10	14	47	278	20	101	67	584	304	164	846	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		1%				3%			-4%		
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1683	0	0	1770	1575	1743	3283	0	1805	1891	0
Flt Permitted		0.943			0.710		0.087			0.232		
Satd. Flow (perm)	0	1598	0	0	1316	1575	160	3283	0	441	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				103		95			1	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	304	103	68	906	0	167	886	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	25.0	25.0		20.0	45.0	20.0	15.0	55.0		20.0	60.0	
Total Split (%)	20.8%	20.8%		16.7%	37.5%	16.7%	12.5%	45.8%		16.7%	50.0%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		33.0			33.0	48.2	73.0	61.8		72.0	66.7	
Actuated g/C Ratio		0.28			0.28	0.40	0.61	0.52		0.60	0.56	
v/c Ratio		0.15			0.84	0.15	0.34	0.52		0.44	0.84	
Control Delay		13.1			60.9	3.7	14.5	19.8		13.6	34.0	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		13.1			60.9	3.7	14.5	19.8		13.6	34.0	
LOS		B			E	A	B	B		B	C	
Approach Delay		13.1				46.4		19.4			30.8	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		14			219	0	19	214		49	586	
Queue Length 95th (ft)		46			312	29	42	322		91	#968	
Internal Link Dist (ft)		433			561			924			825	
Turn Bay Length (ft)							275			170		
Base Capacity (vph)		473			438	752	231	1737		449	1051	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.15			0.69	0.14	0.29	0.52		0.37	0.84	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 28.4 Intersection LOS: C
 Intersection Capacity Utilization 87.4% ICU Level of Service E
 Analysis Period (min) 15
 Description: Signal No. 052254
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	32	491	586	47	62	64
Future Volume (vph)	32	491	586	47	62	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1770	1863	1844	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1844	0	1770	1583
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	528	681	0	67	69
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.3%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	491	586	47	62	64
Future Vol, veh/h	32	491	586	47	62	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	528	630	51	67	69

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	681	0	-	0	1252 656
Stage 1	-	-	-	-	656 -
Stage 2	-	-	-	-	596 -
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	912	-	-	-	190 465
Stage 1	-	-	-	-	516 -
Stage 2	-	-	-	-	550 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	912	-	-	-	183 465
Mov Cap-2 Maneuver	-	-	-	-	322 -
Stage 1	-	-	-	-	497 -
Stage 2	-	-	-	-	550 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	912	-	-	-	322	465
HCM Lane V/C Ratio	0.038	-	-	-	0.207	0.148
HCM Control Delay (s)	9.1	-	-	-	19.1	14.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8	0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	28	34	32	47	22
Future Volume (vph)	17	28	34	32	47	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1674	0	1740	0	0	1801
Flt Permitted	0.981					0.967
Satd. Flow (perm)	1674	0	1740	0	0	1801
Link Speed (mph)	25		25			25
Link Distance (ft)	292		213			210
Travel Time (s)	8.0		5.8			5.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	74	0	0	76
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.4%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	28	34	32	47	22
Future Vol, veh/h	17	28	34	32	47	22
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	2	2
Mvmt Flow	19	31	38	36	52	24

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	184	56	0	0	74
Stage 1	56	-	-	-	-
Stage 2	128	-	-	-	-
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	805	1011	-	-	1526
Stage 1	967	-	-	-	-
Stage 2	898	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	777	1011	-	-	1526
Mov Cap-2 Maneuver	777	-	-	-	-
Stage 1	967	-	-	-	-
Stage 2	867	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	5.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	908	1526	-
HCM Lane V/C Ratio	-	-	0.055	0.034	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

MOVEMENT SUMMARY

 Site: 4 [Build-Out PM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Chapel Ridge Apartments
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV] %	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] ft				
South: Creekside Landing Drive														
3	L2	25	2.0	27	2.0	0.322	8.6	LOS A	1.5	37.5	0.64	0.64	0.64	22.9
8	T1	98	2.0	104	2.0	0.322	8.6	LOS A	1.5	37.5	0.64	0.64	0.64	22.8
18	R2	107	2.0	114	2.0	0.322	8.6	LOS A	1.5	37.5	0.64	0.64	0.64	22.4
Approach		230	2.0	245	2.0	0.322	8.6	LOS A	1.5	37.5	0.64	0.64	0.64	22.7
East: Beaver Creek Commons Drive														
1	L2	74	2.0	79	2.0	0.538	10.2	LOS B	4.1	104.5	0.63	0.56	0.70	22.5
6	T1	255	2.0	271	2.0	0.538	10.2	LOS B	4.1	104.5	0.63	0.56	0.70	22.4
16	R2	189	2.0	201	2.0	0.538	10.2	LOS B	4.1	104.5	0.63	0.56	0.70	22.0
Approach		518	2.0	551	2.0	0.538	10.2	LOS B	4.1	104.5	0.63	0.56	0.70	22.3
North: Creekside Landing Drive														
7	L2	153	2.0	163	2.0	0.548	11.3	LOS B	4.7	118.9	0.70	0.80	0.96	22.2
4	T1	160	2.0	170	2.0	0.548	11.3	LOS B	4.7	118.9	0.70	0.80	0.96	22.1
14	R2	158	2.0	168	2.0	0.548	11.3	LOS B	4.7	118.9	0.70	0.80	0.96	21.7
Approach		471	2.0	501	2.0	0.548	11.3	LOS B	4.7	118.9	0.70	0.80	0.96	22.0
West: Beaver Creek Commons Drive														
5	L2	129	2.0	137	2.0	0.471	10.0	LOS B	3.1	79.3	0.66	0.70	0.80	22.5
2	T1	240	2.0	255	2.0	0.471	10.0	LOS B	3.1	79.3	0.66	0.70	0.80	22.4
12	R2	21	2.0	22	2.0	0.471	10.0	LOS B	3.1	79.3	0.66	0.70	0.80	22.0
Approach		390	2.0	415	2.0	0.471	10.0	LOS B	3.1	79.3	0.66	0.70	0.80	22.4
All Vehicles		1609	2.0	1712	2.0	0.548	10.3	LOS B	4.7	118.9	0.66	0.68	0.79	22.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Tuesday, February 8, 2022 2:39:02 PM

Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	37	400	64	41	377
Future Volume (vph)	39	37	400	64	41	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				100	
Satd. Flow (prot)	1696	0	1827	0	0	1853
Flt Permitted	0.975					0.995
Satd. Flow (perm)	1696	0	1827	0	0	1853
Link Speed (mph)	25		35			35
Link Distance (ft)	432		357			558
Travel Time (s)	11.8		7.0			10.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	84	0	515	0	0	465
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.5%
ICU Level of Service	B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.5					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	37	400	64	41	377
Future Vol, veh/h	39	37	400	64	41	377
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	2	2
Mvmt Flow	43	41	444	71	46	419

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	991	480	0	0	515	0
Stage 1	480	-	-	-	-	-
Stage 2	511	-	-	-	-	-
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	273	586	-	-	1051	-
Stage 1	622	-	-	-	-	-
Stage 2	602	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	257	586	-	-	1051	-
Mov Cap-2 Maneuver	388	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	568	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	464	1051	-
HCM Lane V/C Ratio	-	-	0.182	0.043	-
HCM Control Delay (s)	-	-	14.5	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	18	87	4	11	65	4
Future Volume (vph)	18	87	4	11	65	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Satd. Flow (prot)	1654	0	0	1840	1766	0
Flt Permitted				0.988	0.955	
Satd. Flow (perm)	1654	0	0	1840	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	432			273	553	
Travel Time (s)	11.8			7.4	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	0	0	16	76	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 3.6

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations						
Traffic Vol, veh/h	18	87	4	11	65	4
Future Vol, veh/h	18	87	4	11	65	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	2	2	2	2
Mvmt Flow	20	97	4	12	72	4

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	117	0	89	69
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	20	-
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	-	-	1471	-	912	994
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1471	-	909	994
Mov Cap-2 Maneuver	-	-	-	-	909	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	1000	-

Approach EB WB NB

HCM Control Delay, s	0	2	9.3
HCM LOS			A

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	914	-	-	1471	-
HCM Lane V/C Ratio	0.084	-	-	0.003	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	60	23	5	47	9	14	4	4	6	4	4
Future Volume (vph)	5	60	23	5	47	9	14	4	4	6	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1792	0	0	1818	0	0	1762	0	0	1754	0
Flt Permitted		0.997			0.996			0.968			0.977	
Satd. Flow (perm)	0	1792	0	0	1818	0	0	1762	0	0	1754	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		553			210			358			340	
Travel Time (s)		15.1			5.7			9.8			9.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	99	0	0	68	0	0	24	0	0	15	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	15.8%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	60	23	5	47	9	14	4	4	6	4	4
Future Vol, veh/h	5	60	23	5	47	9	14	4	4	6	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	67	26	6	52	10	16	4	4	7	4	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	62	0	0	93
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1541	-	-	1501
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1541	-	-	1501
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	9.6	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	803	1541	-	-	1501	-	-	814
HCM Lane V/C Ratio	0.03	0.004	-	-	0.004	-	-	0.019
HCM Control Delay (s)	9.6	7.3	0	-	7.4	0	-	9.5
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	4	4	4	9	60	5	5	30	5
Future Volume (vph)	4	4	6	4	4	4	9	60	5	5	30	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1723	0	0	1750	0	0	1833	0	0	1816	0
Flt Permitted		0.987			0.984			0.994			0.993	
Satd. Flow (perm)	0	1723	0	0	1750	0	0	1833	0	0	1816	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			378			405			213	
Travel Time (s)		6.8			10.3			11.0			5.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	12	0	0	83	0	0	45	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	15.2%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	6	4	4	4	9	60	5	5	30	5
Future Vol, veh/h	4	4	6	4	4	4	9	60	5	5	30	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	7	4	4	4	10	67	6	6	33	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	142	141	36	144	141	70	39	0	0	73	0	0
Stage 1	48	48	-	90	90	-	-	-	-	-	-	-
Stage 2	94	93	-	54	51	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	828	750	1037	825	750	993	1571	-	-	1527	-	-
Stage 1	965	855	-	917	820	-	-	-	-	-	-	-
Stage 2	913	818	-	958	852	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	814	742	1037	809	742	993	1571	-	-	1527	-	-
Mov Cap-2 Maneuver	814	742	-	809	742	-	-	-	-	-	-	-
Stage 1	958	852	-	911	814	-	-	-	-	-	-	-
Stage 2	898	812	-	943	849	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.2		9.4		0.9		0.9	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	870	835	1527	-	-
HCM Lane V/C Ratio	0.006	-	-	0.018	0.016	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.2	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	70	9	4	39	6	4
Future Volume (vph)	70	9	4	39	6	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0		0		0	
Storage Lanes	0		0		1	
Taper Length (ft)	25			25		
Satd. Flow (prot)	1835	0	0	1855	1717	0
Flt Permitted				0.996	0.969	
Satd. Flow (perm)	1835	0	0	1855	1717	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	292			367	225	
Travel Time (s)	8.0			10.0	6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	0	47	11	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.4%
	ICU Level of Service A
Analysis Period (min)	15

Intersection

Int Delay, s/veh 0.9

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations						
Traffic Vol, veh/h	70	9	4	39	6	4
Future Vol, veh/h	70	9	4	39	6	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	2	2	2	2
Mvmt Flow	78	10	4	43	7	4

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	88	0	134	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	51	-
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	-	-	1508	-	860	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1508	-	857	976
Mov Cap-2 Maneuver	-	-	-	-	857	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	968	-

Approach EB WB NB

HCM Control Delay, s 0 0.7 9
 HCM LOS A

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	901	-	-	1508	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Appendix I:
Supplemental Analysis:
Chapel Ridge Townes Development Data

Appendix I:
Traffic Signal Warrant Analysis:
Olive Chapel Road at Chapel Ridge Road

Raw Count Volumes (15-minute intervals)

Start	TO	End	Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	06:15 AM	1	0	2	0	12	0	0	8	3
06:15 AM	TO	06:30 AM	0	0	0	0	21	0	0	17	0
06:30 AM	TO	06:45 AM	0	0	2	2	20	0	0	42	3
06:45 AM	TO	07:00 AM	2	0	7	5	22	0	0	62	2
07:00 AM	TO	07:15 AM	8	0	6	2	48	0	0	58	1
07:15 AM	TO	07:30 AM	3	0	3	1	92	0	0	68	0
07:30 AM	TO	07:45 AM	3	0	4	2	76	0	0	89	5
07:45 AM	TO	08:00 AM	4	0	4	5	77	0	0	87	6
08:00 AM	TO	08:15 AM	1	0	1	2	76	0	0	91	10
08:15 AM	TO	08:30 AM	3	0	2	7	76	0	0	89	1
08:30 AM	TO	08:45 AM	5	0	1	4	100	0	0	68	8
08:45 AM	TO	09:00 AM	2	0	3	7	103	0	0	108	5
09:00 AM	TO	09:15 AM	3	0	1	6	87	0	0	99	5
09:15 AM	TO	09:30 AM	4	0	2	4	77	0	0	71	4
09:30 AM	TO	09:45 AM	1	0	1	3	54	0	0	71	1
09:45 AM	TO	10:00 AM	3	0	7	6	63	0	0	73	6
10:00 AM	TO	10:15 AM	2	0	2	1	49	0	0	50	2
10:15 AM	TO	10:30 AM	4	0	2	4	62	0	0	62	2
10:30 AM	TO	10:45 AM	0	0	4	6	59	0	0	69	3
10:45 AM	TO	11:00 AM	3	0	7	4	78	0	0	65	3
11:00 AM	TO	11:15 AM	5	0	5	5	62	0	0	74	2
11:15 AM	TO	11:30 AM	2	0	4	3	62	0	0	81	2
11:30 AM	TO	11:45 AM	4	0	3	1	48	0	0	79	7
11:45 AM	TO	12:00 PM	3	0	9	6	81	0	0	105	7
12:00 PM	TO	12:15 PM	6	0	5	6	68	0	0	77	3
12:15 PM	TO	12:30 PM	5	0	2	8	93	0	0	115	2
12:30 PM	TO	12:45 PM	2	0	4	2	82	0	0	94	4
12:45 PM	TO	01:00 PM	4	0	6	10	93	0	0	96	3
01:00 PM	TO	01:15 PM	2	0	5	3	72	0	0	99	1
01:15 PM	TO	01:30 PM	6	0	7	7	61	0	0	89	3
01:30 PM	TO	01:45 PM	5	0	7	6	60	0	0	66	8
01:45 PM	TO	02:00 PM	6	0	3	7	56	0	0	75	5
02:00 PM	TO	02:15 PM	3	0	4	4	55	0	0	68	7
02:15 PM	TO	02:30 PM	3	0	6	5	60	0	0	71	4
02:30 PM	TO	02:45 PM	7	0	4	7	85	0	0	68	3
02:45 PM	TO	03:00 PM	5	0	11	5	104	0	0	94	6
03:00 PM	TO	03:15 PM	6	0	5	3	78	0	0	100	5
03:15 PM	TO	03:30 PM	2	0	7	5	82	0	0	112	0
03:30 PM	TO	03:45 PM	2	0	5	4	89	0	0	126	7
03:45 PM	TO	04:00 PM	1	0	4	7	90	0	0	128	3
04:00 PM	TO	04:15 PM	3	0	3	5	112	0	0	127	6
04:15 PM	TO	04:30 PM	3	0	7	7	95	0	0	126	6
04:30 PM	TO	04:45 PM	5	0	11	3	100	0	0	101	13
04:45 PM	TO	05:00 PM	4	0	8	1	121	0	0	138	8
05:00 PM	TO	05:15 PM	6	0	6	6	103	0	0	117	4
05:15 PM	TO	05:30 PM	5	0	8	4	114	0	0	140	3
05:30 PM	TO	05:45 PM	5	0	4	5	98	0	0	126	7
05:45 PM	TO	06:00 PM	6	0	11	4	90	0	0	116	5
06:00 PM	TO	06:15 PM	3	0	2	5	74	0	0	107	4
06:15 PM	TO	06:30 PM	7	0	5	3	79	0	0	122	7
06:30 PM	TO	06:45 PM	5	0	4	1	90	0	0	75	5
06:45 PM	TO	07:00 PM	6	0	11	3	58	0	0	104	3

Hourly Count Volumes

Start Time	TO	End Time	Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	3	0	11	7	75	0	0	129	8
07:00 AM	TO	08:00 AM	18	0	17	10	293	0	0	302	12
08:00 AM	TO	09:00 AM	11	0	7	20	355	0	0	356	24
09:00 AM	TO	10:00 AM	11	0	11	19	281	0	0	314	16
10:00 AM	TO	11:00 AM	9	0	15	15	248	0	0	246	10
11:00 AM	TO	12:00 PM	14	0	21	15	253	0	0	339	18
12:00 PM	TO	01:00 PM	17	0	17	26	336	0	0	382	12
01:00 PM	TO	02:00 PM	19	0	22	23	249	0	0	329	17
02:00 PM	TO	03:00 PM	18	0	25	21	304	0	0	301	20
03:00 PM	TO	04:00 PM	11	0	21	19	339	0	0	466	15
04:00 PM	TO	05:00 PM	15	0	29	16	428	0	0	492	33
05:00 PM	TO	06:00 PM	22	0	29	19	405	0	0	499	19
06:00 PM	TO	07:00 PM	21	0	22	12	301	0	0	408	19

Existing Volumes

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	3	0	11	7	75	0	0	129	8
07:00 AM	TO	08:00 AM	18	0	17	10	293	0	0	302	12
08:00 AM	TO	09:00 AM	11	0	7	20	355	0	0	356	24
09:00 AM	TO	10:00 AM	11	0	11	19	281	0	0	314	16
10:00 AM	TO	11:00 AM	9	0	15	15	248	0	0	246	10
11:00 AM	TO	12:00 PM	14	0	21	15	253	0	0	339	18
12:00 PM	TO	01:00 PM	17	0	17	26	336	0	0	382	12
01:00 PM	TO	02:00 PM	19	0	22	23	249	0	0	329	17
02:00 PM	TO	03:00 PM	18	0	25	21	304	0	0	301	20
03:00 PM	TO	04:00 PM	11	0	21	19	339	0	0	466	15
04:00 PM	TO	05:00 PM	15	0	29	16	428	0	0	492	33
05:00 PM	TO	06:00 PM	22	0	29	19	405	0	0	499	19
06:00 PM	TO	07:00 PM	21	0	22	12	301	0	0	408	19

Existing Right-turn Volumes Adjusted

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	3	0	0	7	75	0	0	129	8
07:00 AM	TO	08:00 AM	18	0	0	10	293	0	0	302	12
08:00 AM	TO	09:00 AM	11	0	0	20	355	0	0	356	24
09:00 AM	TO	10:00 AM	11	0	0	19	281	0	0	314	16
10:00 AM	TO	11:00 AM	9	0	0	15	248	0	0	246	10
11:00 AM	TO	12:00 PM	14	0	0	15	253	0	0	339	18
12:00 PM	TO	01:00 PM	17	0	0	26	336	0	0	382	12
01:00 PM	TO	02:00 PM	19	0	0	23	249	0	0	329	17
02:00 PM	TO	03:00 PM	18	0	0	21	304	0	0	301	20
03:00 PM	TO	04:00 PM	11	0	0	19	339	0	0	466	15
04:00 PM	TO	05:00 PM	15	0	0	16	428	0	0	492	33
05:00 PM	TO	06:00 PM	22	0	0	19	405	0	0	499	19
06:00 PM	TO	07:00 PM	21	0	0	12	301	0	0	408	19

Chapel Ridge Apartments

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Olive Chapel Road at Chapel Ridge

COUNT DATE: 1-Jan-10

INTERSECTION CONDITION: Existing

MAJOR STREET: Olive Chapel Road

OF APPROACH LANES: 1

MINOR STREET: Chapel Ridge Road/Chapel Ridge Road

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		280	84		420	42			
06:00 AM TO 07:00 AM	219	3														
07:00 AM TO 08:00 AM	617	18	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	755	11	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	630	11	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	519	9	Y						Y			Y				
11:00 AM TO 12:00 PM	625	14	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	756	17	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	618	19	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	646	18	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	839	11	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	969	15	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	942	22	Y			Y			Y			Y				
06:00 PM TO 07:00 PM	740	21	Y			Y			Y			Y				
	8,875	189	0			0			0						0	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Chapel Ridge Apartments

Table 1 - Trip Generation (Approved Development #1)

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
710 General Office Building ³	80,000 s.f.	1,110	555	555	160	141	19	168	29	139
Total Net New External Trips (50% occupied)		555	278	278	80	71	10	84	15	70

Approved Development Volumes: Remaining Build-out of Olive Chapel Professional Park

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	1	0	0	6	0	0	0	0	6
07:00 AM	TO	08:00 AM	4	0	0	32	0	0	0	0	32
08:00 AM	TO	09:00 AM	4	0	0	18	0	0	0	0	18
09:00 AM	TO	10:00 AM	5	0	0	8	0	0	0	0	8
10:00 AM	TO	11:00 AM	7	0	0	7	0	0	0	0	7
11:00 AM	TO	12:00 PM	13	0	0	8	0	0	0	0	8
12:00 PM	TO	01:00 PM	13	0	0	13	0	0	0	0	13
01:00 PM	TO	02:00 PM	8	0	0	11	0	0	0	0	11
02:00 PM	TO	03:00 PM	8	0	0	10	0	0	0	0	10
03:00 PM	TO	04:00 PM	11	0	0	9	0	0	0	0	9
04:00 PM	TO	05:00 PM	19	0	0	7	0	0	0	0	7
05:00 PM	TO	06:00 PM	31	0	0	7	0	0	0	0	7
06:00 PM	TO	07:00 PM	4	0	0	2	0	0	0	0	2

Approved Development Right-turn Volumes Adjusted: Remaining Build-out of Olive Chapel Professional Park

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	1	0	0	6	0	0	0	0	6
07:00 AM	TO	08:00 AM	4	0	0	32	0	0	0	0	32
08:00 AM	TO	09:00 AM	4	0	0	18	0	0	0	0	18
09:00 AM	TO	10:00 AM	5	0	0	8	0	0	0	0	8
10:00 AM	TO	11:00 AM	7	0	0	7	0	0	0	0	7
11:00 AM	TO	12:00 PM	13	0	0	8	0	0	0	0	8
12:00 PM	TO	01:00 PM	13	0	0	13	0	0	0	0	13
01:00 PM	TO	02:00 PM	8	0	0	11	0	0	0	0	11
02:00 PM	TO	03:00 PM	8	0	0	10	0	0	0	0	10
03:00 PM	TO	04:00 PM	11	0	0	9	0	0	0	0	9
04:00 PM	TO	05:00 PM	19	0	0	7	0	0	0	0	7
05:00 PM	TO	06:00 PM	31	0	0	7	0	0	0	0	7
06:00 PM	TO	07:00 PM	4	0	0	2	0	0	0	0	2

No-Build Traffic Volumes (Existing + Growth + Approved Developments)

			Chapel Ridge Road			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			NB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	4	0	11	0	0	0	13	84	0	0	145	14
07:00 AM	TO	08:00 AM	22	0	17	0	0	0	42	330	0	0	340	44
08:00 AM	TO	09:00 AM	15	0	7	0	0	0	38	400	0	0	401	42
09:00 AM	TO	10:00 AM	16	0	11	0	0	0	27	316	0	0	353	24
10:00 AM	TO	11:00 AM	16	0	15	0	0	0	22	279	0	0	277	17
11:00 AM	TO	12:00 PM	27	0	21	0	0	0	23	285	0	0	382	26
12:00 PM	TO	01:00 PM	30	0	17	0	0	0	39	378	0	0	430	25
01:00 PM	TO	02:00 PM	27	0	22	0	0	0	34	280	0	0	370	28
02:00 PM	TO	03:00 PM	26	0	25	0	0	0	31	342	0	0	339	30
03:00 PM	TO	04:00 PM	22	0	21	0	0	0	28	382	0	0	524	24
04:00 PM	TO	05:00 PM	34	0	29	0	0	0	23	482	0	0	554	40
05:00 PM	TO	06:00 PM	53	0	29	0	0	0	26	456	0	0	562	26
06:00 PM	TO	07:00 PM	25	0	22	0	0	0	14	339	0	0	459	21

No-Build Right-Turn Volumes Adjusted

			Chapel Ridge Road			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			NB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	4	0	0	0	0	0	13	84	0	0	145	14
07:00 AM	TO	08:00 AM	22	0	0	0	0	0	42	330	0	0	340	44
08:00 AM	TO	09:00 AM	15	0	0	0	0	0	38	400	0	0	401	42
09:00 AM	TO	10:00 AM	16	0	0	0	0	0	27	316	0	0	353	24
10:00 AM	TO	11:00 AM	16	0	0	0	0	0	22	279	0	0	277	17
11:00 AM	TO	12:00 PM	27	0	0	0	0	0	23	285	0	0	382	26
12:00 PM	TO	01:00 PM	30	0	0	0	0	0	39	378	0	0	430	25
01:00 PM	TO	02:00 PM	27	0	0	0	0	0	34	280	0	0	370	28
02:00 PM	TO	03:00 PM	26	0	0	0	0	0	31	342	0	0	339	30
03:00 PM	TO	04:00 PM	22	0	0	0	0	0	28	382	0	0	524	24
04:00 PM	TO	05:00 PM	34	0	0	0	0	0	23	482	0	0	554	40
05:00 PM	TO	06:00 PM	53	0	0	0	0	0	26	456	0	0	562	26
06:00 PM	TO	07:00 PM	25	0	0	0	0	0	14	339	0	0	459	21

Chapel Ridge Apartments

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Olive Chapel Road at Chapel Ridge

COUNT DATE: 1-Jan-10

INTERSECTION CONDITION: No-Build

MAJOR STREET: Olive Chapel Road

OF APPROACH LANES: 1

MINOR STREET: Chapel Ridge Road/Chapel Ridge Road

OF APPROACH LANES: 1

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B				
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET		
THRESHOLD VALUES			350	105		525	53		280	84		420	42			
06:00 AM TO 07:00 AM	256	4														
07:00 AM TO 08:00 AM	756	22	Y			Y			Y			Y				
08:00 AM TO 09:00 AM	881	15	Y			Y			Y			Y				
09:00 AM TO 10:00 AM	720	16	Y			Y			Y			Y				
10:00 AM TO 11:00 AM	595	16	Y			Y			Y			Y				
11:00 AM TO 12:00 PM	716	27	Y			Y			Y			Y				
12:00 PM TO 01:00 PM	872	30	Y			Y			Y			Y				
01:00 PM TO 02:00 PM	712	27	Y			Y			Y			Y				
02:00 PM TO 03:00 PM	742	26	Y			Y			Y			Y				
03:00 PM TO 04:00 PM	958	22	Y			Y			Y			Y				
04:00 PM TO 05:00 PM	1,099	34	Y			Y			Y			Y				
05:00 PM TO 06:00 PM	1,070	53	Y			Y	Y	Y	Y			Y	Y	Y		
06:00 PM TO 07:00 PM	833	25	Y			Y			Y			Y				
	10,216	324	0			1			0						1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Chapel Ridge Apartments

Table 1 - Trip Generation

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
221 Multifamily Housing (Mid-Rise)	350 d.u.	1,906	953	953	117	30	87	147	90	57
Total Net New External Trips		1,906	953	953	117	30	87	147	90	57

Site Volumes

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	12	0	0	1	0	0	0	0	3
07:00 AM	TO	08:00 AM	17	0	0	3	0	0	0	0	6
08:00 AM	TO	09:00 AM	17	0	0	3	0	0	0	0	7
09:00 AM	TO	10:00 AM	11	0	0	3	0	0	0	0	5
10:00 AM	TO	11:00 AM	9	0	0	3	0	0	0	0	5
11:00 AM	TO	12:00 PM	9	0	0	4	0	0	0	0	9
12:00 PM	TO	01:00 PM	9	0	0	5	0	0	0	0	9
01:00 PM	TO	02:00 PM	9	0	0	4	0	0	0	0	8
02:00 PM	TO	03:00 PM	10	0	0	6	0	0	0	0	11
03:00 PM	TO	04:00 PM	9	0	0	6	0	0	0	0	13
04:00 PM	TO	05:00 PM	12	0	0	10	0	0	0	0	20
05:00 PM	TO	06:00 PM	11	0	0	9	0	0	0	0	18
06:00 PM	TO	07:00 PM	13	0	0	9	0	0	0	0	18

Site Volumes Right-turn Volumes Adjusted

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	12	0	0	1	0	0	0	0	3
07:00 AM	TO	08:00 AM	17	0	0	3	0	0	0	0	6
08:00 AM	TO	09:00 AM	17	0	0	3	0	0	0	0	7
09:00 AM	TO	10:00 AM	11	0	0	3	0	0	0	0	5
10:00 AM	TO	11:00 AM	9	0	0	3	0	0	0	0	5
11:00 AM	TO	12:00 PM	9	0	0	4	0	0	0	0	9
12:00 PM	TO	01:00 PM	9	0	0	5	0	0	0	0	9
01:00 PM	TO	02:00 PM	9	0	0	4	0	0	0	0	8
02:00 PM	TO	03:00 PM	10	0	0	6	0	0	0	0	11
03:00 PM	TO	04:00 PM	9	0	0	6	0	0	0	0	13
04:00 PM	TO	05:00 PM	12	0	0	10	0	0	0	0	20
05:00 PM	TO	06:00 PM	11	0	0	9	0	0	0	0	18
06:00 PM	TO	07:00 PM	13	0	0	9	0	0	0	0	18

Build Traffic Volumes (Existing + Growth + Approved Developments + Project Site)

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	16	0	11	14	84	0	0	145	17
07:00 AM	TO	08:00 AM	39	0	17	45	330	0	0	340	50
08:00 AM	TO	09:00 AM	32	0	7	41	400	0	0	401	49
09:00 AM	TO	10:00 AM	27	0	11	30	316	0	0	353	29
10:00 AM	TO	11:00 AM	25	0	15	25	279	0	0	277	22
11:00 AM	TO	12:00 PM	36	0	21	27	285	0	0	382	35
12:00 PM	TO	01:00 PM	39	0	17	44	378	0	0	430	34
01:00 PM	TO	02:00 PM	36	0	22	38	280	0	0	370	36
02:00 PM	TO	03:00 PM	36	0	25	37	342	0	0	339	41
03:00 PM	TO	04:00 PM	31	0	21	34	382	0	0	524	37
04:00 PM	TO	05:00 PM	46	0	29	33	482	0	0	554	60
05:00 PM	TO	06:00 PM	64	0	29	35	456	0	0	562	44
06:00 PM	TO	07:00 PM	38	0	22	23	339	0	0	459	39

Build Right-Turn Volumes Adjusted

			Chapel Ridge Road			Olive Chapel Road			Olive Chapel Road		
			SB			EB			WB		
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
06:00 AM	TO	07:00 AM	16	0	0	14	84	0	0	145	17
07:00 AM	TO	08:00 AM	39	0	0	45	330	0	0	340	50
08:00 AM	TO	09:00 AM	32	0	0	41	400	0	0	401	49
09:00 AM	TO	10:00 AM	27	0	0	30	316	0	0	353	29
10:00 AM	TO	11:00 AM	25	0	0	25	279	0	0	277	22
11:00 AM	TO	12:00 PM	36	0	0	27	285	0	0	382	35
12:00 PM	TO	01:00 PM	39	0	0	44	378	0	0	430	34
01:00 PM	TO	02:00 PM	36	0	0	38	280	0	0	370	36
02:00 PM	TO	03:00 PM	36	0	0	37	342	0	0	339	41
03:00 PM	TO	04:00 PM	31	0	0	34	382	0	0	524	37
04:00 PM	TO	05:00 PM	46	0	0	33	482	0	0	554	60
05:00 PM	TO	06:00 PM	64	0	0	35	456	0	0	562	44
06:00 PM	TO	07:00 PM	38	0	0	23	339	0	0	459	39

Chapel Ridge Apartments

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS

INTERSECTION NAME: Olive Chapel Road at Chapel Ridge

COUNT DATE: 1-Jan-10

INTERSECTION CONDITION: Build

MAJOR STREET: Olive Chapel Road

OF APPROACH LANES: 1

MINOR STREET: Chapel Ridge Road/Chapel Ridge Road

OF APPROACH LANES: 1

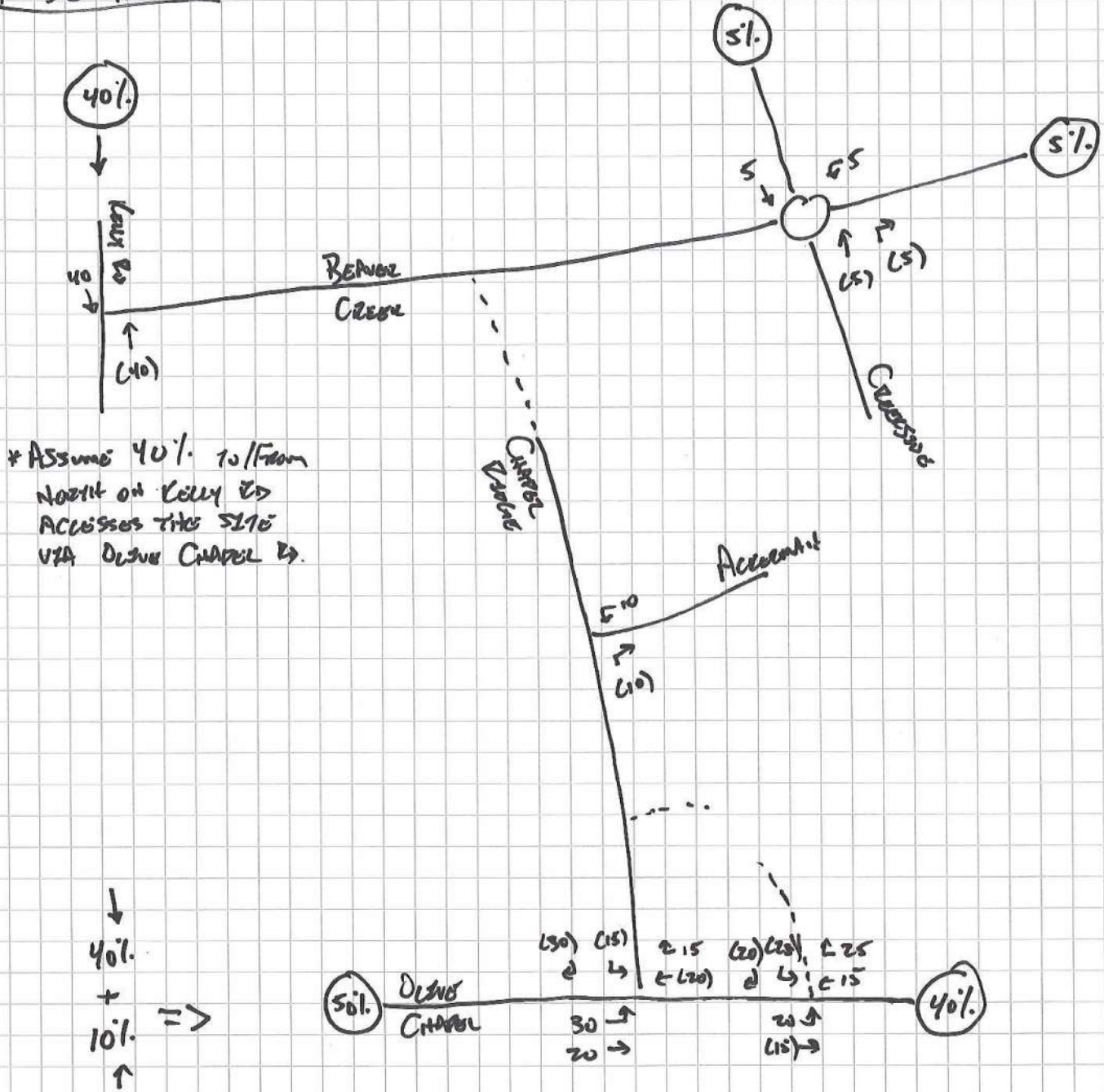
ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): N
 85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N): Y

	MAJOR ST BOTH APPROACHES	HIGHEST HOUR MINOR ST HIGHEST APPROACH	WARRANT 1, Condition A			WARRANT 1, Condition B			WARRANT 1, Combination Warrant						WARRANT 2	WARRANT 3	
			MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET	CONDITION A			CONDITION B					
									MAJOR STREET	MINOR STREET	BOTH MET	MAJOR STREET	MINOR STREET	BOTH MET			
THRESHOLD VALUES			350	105		525	53		280	84		420	42				
06:00 AM TO 07:00 AM	260	16															
07:00 AM TO 08:00 AM	765	39	Y			Y			Y			Y					
08:00 AM TO 09:00 AM	891	32	Y			Y			Y			Y					
09:00 AM TO 10:00 AM	728	27	Y			Y			Y			Y					
10:00 AM TO 11:00 AM	603	25	Y			Y			Y			Y					
11:00 AM TO 12:00 PM	729	36	Y			Y			Y			Y					
12:00 PM TO 01:00 PM	886	39	Y			Y			Y			Y					
01:00 PM TO 02:00 PM	724	36	Y			Y			Y			Y					
02:00 PM TO 03:00 PM	759	36	Y			Y			Y			Y					
03:00 PM TO 04:00 PM	977	31	Y			Y			Y			Y					
04:00 PM TO 05:00 PM	1,129	46	Y			Y			Y			Y	Y	Y			
05:00 PM TO 06:00 PM	1,097	64	Y			Y	Y	Y	Y			Y	Y	Y	Y		
06:00 PM TO 07:00 PM	860	38	Y			Y			Y			Y					
	10,472	491	0			1			0						2	1	0
			8 HOURS NEEDED NOT SATISFIED			8 HOURS NEEDED NOT SATISFIED			8 HOURS OF BOTH COND. A AND COND. B NEEDED NOT SATISFIED						4 HRS NEEDED NOT SATISFIED	1 HR NEEDED NOT SATISFIED	

WARRANT 1 -- Eight-Hour Vehicular Volume Warrant
 Condition A : Minimum Vehicular Volume
 Condition B : Interruption of Continuous Traffic
 Combination : Combination of Condition A and Condition B
 WARRANT 2 -- Four-Hour Vehicular Volume Warrant
 WARRANT 3 -- Peak Hour Warrant

Appendix J:
Supplemental Analysis:
Chapel Ridge Townes Development Data

APP DEV TEST DIST



* Assume 40% to/from North on Kelly to Access the SLT0 via Olive Chapel to.

↓ 40%
+ 10% ⇒
↑

* Assumes 1 FM DEPT on Olive Chapel to ; 2 on Chapel Radgie consistency w/ previous plans

NOTE: WHILE THIS REASONING WAS DENIED, TRIPS WILL BE ASSIGNED AS SHOWN ABOVE TO REFLECT POTENTIAL IMPACTS.

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	12/7/2021
N/S Street:	Kelly Road
E/W Street:	Wendhurst Ct/Beaver Creek Commons Dr

Net New Trips:	AM In	AM Out	PM In	PM Out
	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

AM PEAK HOUR AM PHF = 0.98

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	5	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	17	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	17	0	0	5	0

PM PEAK HOUR PM PHF = 0.98

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	17	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	10	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	10	0	0	17	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #1

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	12/7/2021
N/S Street:	Chapel Ridge Road
E/W Street:	Olive Chapel Road

Net New Trips:	AM In	AM Out	PM In	PM Out
	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.85**

Description	Olive Chapel Road <u>Eastbound</u>			Olive Chapel Road <u>Westbound</u>			<u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	30%	20%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	4	3	0	0	0	2	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	15%	0%	30%
Outbound Project Traffic	0	0	0	0	8	0	0	0	0	6	0	13
Total Project Traffic	4	3	0	0	8	2	0	0	0	6	0	13

**PM PEAK HOUR
PM PHF = 0.93**

Description	Olive Chapel Road <u>Eastbound</u>			Olive Chapel Road <u>Westbound</u>			<u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	30%	20%	0%	0%	0%	15%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	13	9	0	0	0	6	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	15%	0%	30%
Outbound Project Traffic	0	0	0	0	5	0	0	0	0	4	0	7
Total Project Traffic	13	9	0	0	5	6	0	0	0	4	0	7

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #2

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	12/7/2021
N/S Street:	Chapel Ridge Road
E/W Street:	Ackerman Hill Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	1	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	4	0	0	0
Total Project Traffic	0	0	0	1	0	0	0	0	4	0	0	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	4	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	2	0	0	0
Total Project Traffic	0	0	0	4	0	0	0	0	2	0	0	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #3

2/9/22

INTERSECTION ANALYSIS SHEET

Project: **Supp. Analysis-Chapel Ridge Townes Trips**
 Location: **Apex, NC**
 Scenario: **Chapel Ridge Townhomes Trip Calcs**
 Ct. Date: **12/7/2021**
 N/S Street: **Creekside Landing Drive**
 E/W Street: **Beaver Creek Commons Drive**

	AM In	AM Out	PM In	PM Out
Net New Trips:	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

AM PEAK HOUR
AM PHF = 0.84

Description	Beaver Creek Commons Drive <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Creekside Landing Drive <u>Northbound</u>			Creekside Landing Drive <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	5%	0%
Inbound Project Traffic	0	0	0	1	0	0	0	0	0	0	1	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	5%	5%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	2	2	0	0	0
Total Project Traffic	0	0	0	1	0	0	0	2	2	0	1	0

PM PEAK HOUR
PM PHF = 0.94

Description	Beaver Creek Commons Drive <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Creekside Landing Drive <u>Northbound</u>			Creekside Landing Drive <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	5%	0%
Inbound Project Traffic	0	0	0	2	0	0	0	0	0	0	2	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	5%	5%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	1	1	0	0	0
Total Project Traffic	0	0	0	2	0	0	0	1	1	0	2	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #4

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	12/7/2021
N/S Street:	Beaver Creek Commons Drive
E/W Street:	Proposed Site Access

Net New Trips:	AM In	AM Out	PM In	PM Out
	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #5

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date:	-
N/S Street:	Chapel Ridge Road
E/W Street:	Proposed Site Access/North Site Driveway

Net New Trips:	AM In	AM Out	PM In	PM Out
	13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Proposed Site Access <u>Eastbound</u>			North Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	Proposed Site Access <u>Eastbound</u>			North Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #6

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	-
N/S Street:	Central Site Driveway
E/W Street:	Chapel Ridge Road

AM In	AM Out	PM In	PM Out
13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Chapel Ridge Road <u>Eastbound</u>			Chapel Ridge Road <u>Westbound</u>			Central Site Driveway <u>Northbound</u>			Central Site Driveway <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	Chapel Ridge Road <u>Eastbound</u>			Chapel Ridge Road <u>Westbound</u>			Central Site Driveway <u>Northbound</u>			Central Site Driveway <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	0	0	0	0	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #7

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	Balanced with Ackerman Hill
N/S Street:	Chapel Ridge Road
E/W Street:	South Site Driveway

AM In	AM Out	PM In	PM Out
13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	South Site Driveway <u>Eastbound</u>			South Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	1	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	4	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	4	0	0	1	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	South Site Driveway <u>Eastbound</u>			South Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	0	4	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	2	0	0	0	0
Total Project Traffic	0	0	0	0	0	0	0	2	0	0	4	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\supplementalanalysis-appdevtrips-chapelridgetownes.xls\int. #8

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Supp. Analysis-Chapel Ridge Townes Trips
Location:	Apex, NC
Scenario:	Chapel Ridge Townhomes Trip Calcs
Ct. Date	Balanced with Ackerman Hill
N/S Street:	Site Driveway
E/W Street:	Ackerman Hill Drive

AM In	AM Out	PM In	PM Out
13	42	43	25

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Ackerman Hill Drive <u>Eastbound</u>			Ackerman Hill Drive <u>Westbound</u>			Site Driveway <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	1	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	4	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	4	0	0	1	0	0	0	0	0	0	0

**PM PEAK HOUR
PM PHF = 0.90**

Description	Ackerman Hill Drive <u>Eastbound</u>			Ackerman Hill Drive <u>Westbound</u>			Site Driveway <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	4	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	2	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	2	0	0	4	0	0	0	0	0	0	0

k:\dur_1dev\011270040 chapel ridge apex\t3 - background data\approved development\[supplementalanalysis-appdevtrips-chapelridgetownes.xls]int. #9

2/9/22

Appendix K:
Supplemental Analysis:
Intersection Spreadsheets

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	12/7/2021
N/S Street:	Kelly Road
E/W Street:	Wendhurst Ct/Beaver Creek Commons Dr

AM In	AM Out	PM In	PM Out
30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.98**

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	19	8	38	83	4	22	38	684	117	29	346	9
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	19	8	38	83	4	22	38	684	117	29	346	9
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.126	0.000	0.126	0.000	0.126	0.126	0.126	0.126	0.000
2025 Background Growth	0	0	0	10	0	3	0	86	15	4	43	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	3	0	0	19	0
Chapel Ridge Townes	0	0	0	0	0	0	0	17	0	0	5	0
Total Committed Traffic	0	0	0	0	0	0	0	20	0	0	24	0
2025 Background Traffic	19	8	38	93	4	25	38	790	132	33	413	9
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	12	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	35	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	35	0	0	0	12	0	0
Hempstead Traffic Diversion	0	0	0	0	0	28	0	0	0	8	0	0
2025 Buildout Total	19	8	38	93	4	88	38	790	132	53	413	9
Percent Impact (Approach)	0.0%			18.9%			0.0%			2.5%		
Overall Percent Impact	2.8%											

**PM PEAK HOUR
PM PHF = 0.98**

Description	Wendhurst Court <u>Eastbound</u>			Beaver Creek Commons Drive <u>Westbound</u>			Kelly Road <u>Northbound</u>			Kelly Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	10	14	47	247	20	55	67	502	270	89	748	23
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	10	14	47	247	20	55	67	502	270	89	748	23
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.126	0.000	0.126	0.000	0.126	0.126	0.126	0.126	0.000
2025 Background Growth	0	0	0	31	0	7	0	63	34	11	94	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	19	0	0	4	0
Chapel Ridge Townes	0	0	0	0	0	0	0	10	0	0	17	0
Total Committed Traffic	0	0	0	0	0	0	0	29	0	0	21	0
2025 Background Traffic	10	14	47	278	20	62	67	594	304	100	863	23
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	0	36	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	23	0	0	0	0	0	0
Total Project Traffic	0	0	0	0	0	23	0	0	0	36	0	0
Hempstead Traffic Diversion	0	0	0	0	0	16	0	0	0	28	0	0
2025 Buildout Total	10	14	47	278	20	101	67	594	304	164	863	23
Percent Impact (Approach)	0.0%			5.8%			0.0%			3.4%		
Overall Percent Impact	2.4%											

k:\dur_idev\011270040 chapel ridge apex\4 - analysis\supplemental analysis - with chapel ridge townes\[addend-chapelridgeapts-withchapridgetownes-tiadata.xls]int. #1

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	12/7/2021
N/S Street:	Chapel Ridge Road
E/W Street:	Olive Chapel Road

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.85**

Description	Olive Chapel Road Eastbound			Olive Chapel Road Westbound			Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	20	355	0	0	356	24	0	0	0	11	0	7
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	20	355	0	0	356	24	0	0	0	11	0	7
Growth Factor (0.03 per year)	0.000	0.126	0.000	0.000	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	45	0	0	45	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	32	0	0	0	0	32	0	0	0	4	0	5
Chapel Ridge Townes	4	3	0	0	8	2	0	0	0	6	0	13
Total Committed Traffic	36	3	0	0	8	34	0	0	0	10	0	18
2025 Background Traffic	56	403	0	0	409	58	0	0	0	21	0	25
Project Traffic												
Percent Assignment Inbound	10%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	3	0	0	0	0	6	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	10%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	17	0	9
Total Project Traffic	3	0	0	0	0	6	0	0	0	17	0	9
2025 Buildout Total	59	403	0	0	409	64	0	0	0	38	0	34
Percent Impact (Approach)		0.6%			1.3%							36.1%
Overall Percent Impact	3.5%											

**PM PEAK HOUR
PM PHF = 0.93**

Description	Olive Chapel Road Eastbound			Olive Chapel Road Westbound			Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	16	436	0	0	521	22	0	0	0	20	0	26
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	16	436	0	0	521	22	0	0	0	20	0	26
Growth Factor (0.03 per year)	0.000	0.126	0.000	0.000	0.126	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	55	0	0	65	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	7	0	0	0	0	7	0	0	0	31	0	32
Chapel Ridge Townes	13	9	0	0	5	6	0	0	0	4	0	7
Total Committed Traffic	20	9	0	0	5	13	0	0	0	35	0	39
2025 Background Traffic	36	500	0	0	591	35	0	0	0	55	0	65
Project Traffic												
Percent Assignment Inbound	10%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	9	0	0	0	0	18	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	10%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	11	0	6
Total Project Traffic	9	0	0	0	0	18	0	0	0	11	0	6
2025 Buildout Total	45	500	0	0	591	53	0	0	0	66	0	71
Percent Impact (Approach)		1.7%			2.8%							12.4%
Overall Percent Impact	3.3%											

k:\dur_dev\011270040 chapel ridge apex\4 - analysis\supplemental analysis - with chapel ridge townes\addend-chapelridgeapts-withchapelridgetownes-tiadata.xls#int.#2

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	12/7/2021
N/S Street:	Chapel Ridge Road
E/W Street:	Ackerman Hill Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	11	0	0	0	0	12	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	11	0	0	0	0	12	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	8	0	0	0	0	1	0	0	0
Chapel Ridge Townes	0	0	0	1	0	0	0	0	4	0	0	0
Total Committed Traffic	0	0	0	9	0	0	0	0	5	0	0	0
2025 Background Traffic	0	0	0	20	0	0	0	0	17	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	15%	0%	10%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	5	0	3	3	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	10%	0%	10%	0%	0%	15%	0%
Outbound Project Traffic	0	0	0	0	0	9	0	9	0	0	13	0
Total Project Traffic	0	0	0	0	0	9	0	14	0	3	16	0
Hempstead Traffic Diversion	0	0	0	0	0	39	0	0	0	12	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	2	0	0	16	0
ChapelRidgeTownes Divers.	0	0	0	-1	0	0	0	4	-4	0	1	0
2025 Buildout Total	0	0	0	19	0	48	0	20	13	15	33	0
Percent Impact (Approach)					13.4%			42.4%			39.6%	
Overall Percent Impact	28.4%											

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Ackerman Hill Drive Westbound			Chapel Ridge Road Northbound			Chapel Ridge Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	15	0	0	0	0	25	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	15	0	0	0	0	25	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	2	0	0	0	0	7	0	0	0
Chapel Ridge Townes	0	0	0	4	0	0	0	0	2	0	0	0
Total Committed Traffic	0	0	0	6	0	0	0	0	9	0	0	0
2025 Background Traffic	0	0	0	21	0	0	0	0	34	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	15%	0%	10%	10%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	14	0	9	9	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	10%	0%	10%	0%	0%	15%	0%
Outbound Project Traffic	0	0	0	0	0	6	0	6	0	0	9	0
Total Project Traffic	0	0	0	0	0	6	0	20	0	9	18	0
Hempstead Traffic Diversion	0	0	0	0	0	22	0	0	0	38	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	14	0	0	4	0
ChapelRidgeTownes Divers.	0	0	0	-4	0	0	0	2	-2	0	4	0
2025 Buildout Total	0	0	0	17	0	28	0	36	32	47	26	0
Percent Impact (Approach)					13.3%			29.4%			37.0%	
Overall Percent Impact	28.5%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	12/7/2021
N/S Street:	Creekside Landing Drive
E/W Street:	Beaver Creek Commons Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

AM PEAK HOUR AM PHF = 0.84

Description	Beaver Creek Commons Drive Eastbound			Beaver Creek Commons Drive Westbound			Creekside Landing Drive Northbound			Creekside Landing Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	33	117	8	25	69	58	0	28	21	57	28	47
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	33	117	8	25	69	58	0	28	21	57	28	47
Growth Factor (0.03 per year)	0.126	0.126	0.000	0.000	0.126	0.126	0.000	0.000	0.000	0.126	0.000	0.126
2025 Background Growth	4	15	0	0	9	7	0	0	0	7	0	6
Committed Projects												
Olive Chapel Professional Park	0	0	0	4	0	0	0	0	1	0	4	0
Chapel Ridge Townes	0	0	0	1	0	0	0	2	2	0	1	0
Total Committed Traffic	0	0	0	5	0	0	0	2	3	0	5	0
2025 Background Traffic	37	132	8	30	78	65	0	30	24	64	33	53
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	6	0	0	0	0	0	0	3
Percent Assignment Outbound	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	9	17	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	9	17	0	0	6	0	0	0	0	0	0	3
OliveChapProfPark Reassign	0	2	0	0	8	0	0	0	0	0	0	8
ChapelRidgeTownes Divers.	2	2	0	-1	1	0	0	-2	-2	0	-1	1
2025 Buildout Total	48	153	8	29	93	65	0	28	22	64	32	65
Percent Impact (Approach)		12.4%			3.2%			0.0%			1.9%	
Overall Percent Impact	5.8%											

PM PEAK HOUR PM PHF = 0.94

Description	Beaver Creek Commons Drive Eastbound			Beaver Creek Commons Drive Westbound			Creekside Landing Drive Northbound			Creekside Landing Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	104	196	21	73	209	168	25	95	103	136	159	131
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	104	196	21	73	209	168	25	95	103	136	159	131
Growth Factor (0.03 per year)	0.126	0.126	0.000	0.000	0.126	0.126	0.000	0.000	0.000	0.126	0.000	0.126
2025 Background Growth	13	25	0	0	26	21	0	0	0	17	0	16
Committed Projects												
Olive Chapel Professional Park	0	0	0	1	0	0	0	3	4	0	1	0
Chapel Ridge Townes	0	0	0	2	0	0	0	1	1	0	2	0
Total Committed Traffic	0	0	0	3	0	0	0	4	5	0	3	0
2025 Background Traffic	117	221	21	76	235	189	25	99	108	153	162	147
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	18	0	0	0	0	0	0	9
Percent Assignment Outbound	10%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	6	11	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	6	11	0	0	18	0	0	0	0	0	0	9
OliveChapProfPark Reassign	6	8	0	0	2	0	0	0	0	0	0	2
ChapelRidgeTownes Divers.	1	1	0	-2	2	0	0	-1	-1	0	-2	2
2025 Buildout Total	130	241	21	74	257	189	25	98	107	153	160	160
Percent Impact (Approach)		4.3%			3.5%			0.0%			1.9%	
Overall Percent Impact	2.7%											

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	12/7/2021
N/S Street:	Beaver Creek Commons Drive
E/W Street:	Proposed Site Access

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	187	0	0	111	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	187	0	0	111	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.126	0.000	0.000	0.126	0.000
2025 Background Growth	0	0	0	0	0	0	0	23	0	0	14	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	210	0	0	125	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	40%	30%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	12	9	0	0
Percent Assignment Outbound	0%	0%	0%	40%	0%	30%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	35	0	26	0	0	0	0	0	0
Total Project Traffic	0	0	0	35	0	26	0	0	12	9	0	0
Hempstead Traffic Diversion	0	0	0	28	0	11	0	0	8	3	0	0
OliveChapProfPark Reassign	0	0	0	0	0	2	0	0	0	16	0	0
ChapelRidgeTownes Divers.	0	0	0	0	0	4	0	0	0	2	0	0
2025 Buildout Total	0	0	0	63	0	43	0	210	20	30	125	0
Percent Impact (Approach)	-	-	-	-	57.5%	-	-	5.2%	-	-	5.8%	-

Overall Percent Impact 16.7%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Eastbound			Proposed Site Access Westbound			Beaver Creek Commons Drive Northbound			Beaver Creek Commons Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	355	0	0	335	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	355	0	0	335	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.126	0.000	0.000	0.126	0.000
2025 Background Growth	0	0	0	0	0	0	0	45	0	0	42	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	400	0	0	377	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	40%	30%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	36	27	0	0
Percent Assignment Outbound	0%	0%	0%	40%	0%	30%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	23	0	17	0	0	0	0	0	0
Total Project Traffic	0	0	0	23	0	17	0	0	36	27	0	0
Hempstead Traffic Diversion	0	0	0	16	0	6	0	0	28	10	0	0
OliveChapProfPark Reassign	0	0	0	0	0	14	0	0	0	4	0	0
ChapelRidgeTownes Divers.	0	0	0	0	0	2	0	0	0	4	0	0
2025 Buildout Total	0	0	0	39	0	39	0	400	64	45	377	0
Percent Impact (Approach)	-	-	-	-	51.3%	-	-	7.8%	-	-	6.4%	-

Overall Percent Impact 10.7%

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	-
N/S Street:	Chapel Ridge Road
E/W Street:	Proposed Site Access/North Site Driveway

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Proposed Site Access			North Site Driveway			Chapel Ridge Road			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	20%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	6	15	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	50%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	17	0	44	0	0	0	0	0
Total Project Traffic	0	6	15	0	17	0	44	0	0	0	0	0
Hempstead Traffic Diversion	0	0	12	0	0	0	39	0	0	0	0	0
OliveChapProfPark Reassign	0	0	16	0	0	0	2	0	0	0	0	0
ChapelRidgeTownes Divers.	0	0	2	0	0	0	4	0	0	0	0	0
2025 Buildout Total	0	6	45	0	17	0	89	0	0	0	0	0
Percent Impact (Approach)		41.2%			100.0%			49.4%				

Overall Percent Impact 52.2%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Proposed Site Access			North Site Driveway			Chapel Ridge Road			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	20%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	18	45	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	50%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	11	0	29	0	0	0	0	0
Total Project Traffic	0	18	45	0	11	0	29	0	0	0	0	0
Hempstead Traffic Diversion	0	0	38	0	0	0	22	0	0	0	0	0
OliveChapProfPark Reassign	0	0	4	0	0	0	14	0	0	0	0	0
ChapelRidgeTownes Divers.	0	0	4	0	0	0	2	0	0	0	0	0
2025 Buildout Total	0	18	91	0	11	0	67	0	0	0	0	0
Percent Impact (Approach)		57.8%			100.0%			43.3%				

Overall Percent Impact 55.1%

k:\dur_idev\011270040 chapel ridge apex\4 - analysis\supplemental analysis - with chapel ridge townes\addend-chapelridgeapts-withchapidgetownes-tiadata.xls\int. #6

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date:	-
N/S Street:	Central Site Driveway
E/W Street:	Chapel Ridge Road

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Chapel Ridge Road Eastbound			Chapel Ridge Road Westbound			Central Site Driveway Northbound			Central Site Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	5%	20%	25%	5%	0%	10%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	2	6	8	2	0	3	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	25%	0%	5%	10%	0%	5%
Outbound Project Traffic	0	0	0	0	17	0	22	0	4	9	0	4
Total Project Traffic	2	6	8	2	17	3	22	0	4	9	0	4
Hempstead Traffic Diversion	0	12	0	0	39	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	16	0	0	2	0	0	0	0	0	0	0
ChapelRidgeTownes Divers.	0	2	0	0	4	0	0	0	0	0	0	0
2025 Buildout Total	2	36	8	2	62	3	22	0	4	9	0	4
Percent Impact (Approach)		34.8%			32.8%			100.0%			100.0%	

Overall Percent Impact 50.7%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Chapel Ridge Road Eastbound			Chapel Ridge Road Westbound			Central Site Driveway Northbound			Central Site Driveway Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2021 Existing Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	0	0	0	0	0
Chapel Ridge Townes	0	0	0	0	0	0	0	0	0	0	0	0
Total Committed Traffic	0	0	0	0	0	0	0	0	0	0	0	0
2025 Background Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	5%	20%	25%	5%	0%	10%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	5	18	23	5	0	9	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	20%	0%	25%	0%	5%	10%	0%	5%
Outbound Project Traffic	0	0	0	0	11	0	14	0	3	6	0	3
Total Project Traffic	5	18	23	5	11	9	14	0	3	6	0	3
Hempstead Traffic Diversion	0	38	0	0	22	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	4	0	0	14	0	0	0	0	0	0	0
ChapelRidgeTownes Divers.	0	4	0	0	2	0	0	0	0	0	0	0
2025 Buildout Total	5	64	23	5	49	9	14	0	3	6	0	3
Percent Impact (Approach)		50.0%			39.7%			100.0%			100.0%	

Overall Percent Impact 53.6%

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date	Balanced with Ackerman Hill
N/S Street:	Chapel Ridge Road
E/W Street:	South Site Driveway

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	South Site Driveway <u>Eastbound</u>			South Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	12	0	0	11	0
2021 Existing Traffic	0	0	0	0	0	0	0	12	0	0	11	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	5	0	0	9	0
Chapel Ridge Townes	0	0	0	0	0	0	0	4	0	0	1	0
Total Committed Traffic	0	0	0	0	0	0	0	9	0	0	10	0
2025 Background Traffic	0	0	0	0	0	0	0	21	0	0	21	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	10%	15%	5%	5%	0%	5%
Inbound Project Traffic	0	0	0	0	0	0	3	5	2	2	0	2
Percent Assignment Outbound	5%	0%	10%	5%	0%	5%	0%	0%	0%	0%	15%	0%
Outbound Project Traffic	4	0	9	4	0	4	0	0	0	0	13	0
Total Project Traffic	4	0	9	4	0	4	3	5	2	2	13	2
OliveChapProfPark Reassign	0	0	0	0	0	0	0	2	0	0	16	0
2025 Buildout Total	4	0	9	4	0	4	3	28	2	2	50	2
Percent Impact (Approach)	100.0%			100.0%			30.3%			31.5%		
Overall Percent Impact	44.4%											

**PM PEAK HOUR
PM PHF = 0.90**

Description	South Site Driveway <u>Eastbound</u>			South Site Driveway <u>Westbound</u>			Chapel Ridge Road <u>Northbound</u>			Chapel Ridge Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	0	0	0	0	0	0	25	0	0	15	0
2021 Existing Traffic	0	0	0	0	0	0	0	25	0	0	15	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	0	0	0	0	0	0	9	0	0	6	0
Chapel Ridge Townes	0	0	0	0	0	0	0	2	0	0	4	0
Total Committed Traffic	0	0	0	0	0	0	0	11	0	0	10	0
2025 Background Traffic	0	0	0	0	0	0	0	36	0	0	25	0
Project Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	10%	15%	5%	5%	0%	5%
Inbound Project Traffic	0	0	0	0	0	0	9	14	5	5	0	5
Percent Assignment Outbound	5%	0%	10%	5%	0%	5%	0%	0%	0%	0%	15%	0%
Outbound Project Traffic	3	0	6	3	0	3	0	0	0	0	9	0
Total Project Traffic	3	0	6	3	0	3	9	14	5	5	9	5
OliveChapProfPark Reassign	0	0	0	0	0	0	0	14	0	0	4	0
2025 Buildout Total	3	0	6	3	0	3	9	64	5	5	38	5
Percent Impact (Approach)	100.0%			100.0%			35.9%			39.6%		
Overall Percent Impact	44.0%											

k:\dur_idev\011270040 chapel ridge apex\14 - analysis\supplemental analysis - with chapel ridge townes\1addend-chapelridgeapts-withchapidgetownes-tiadata.xls\int. #8

2/9/22

INTERSECTION ANALYSIS SHEET

Project:	Chapel Ridge Apartments
Location:	Apex, NC
Scenario:	Supp. Analysis: With Chapel Ridge Townes
Ct. Date	Balanced with Ackerman Hill
N/S Street:	Site Driveway
E/W Street:	Ackerman Hill Drive

Net New Trips:	AM In	AM Out	PM In	PM Out
	30	87	90	57

Annual Growth Rate:	3.0%	Existing Year:	2021
Growth Factor:	0.125509	Buildout Year:	2025

**AM PEAK HOUR
AM PHF = 0.90**

Description	Ackerman Hill Drive <u>Eastbound</u>			Ackerman Hill Drive <u>Westbound</u>			Site Driveway <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	12	0	0	11	0	0	0	0	0	0	0
2021 Existing Traffic	0	12	0	0	11	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	5	0	0	9	0	0	0	0	0	0	0
Chapel Ridge Townes	0	4	0	0	1	0	0	0	0	0	0	0
Total Committed Traffic	0	9	0	0	10	0	0	0	0	0	0	0
2025 Background Traffic	0	21	0	0	21	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	3	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	9	0	0	0	0	0
Total Project Traffic	0	0	3	0	0	0	9	0	0	0	0	0
Hempstead Traffic Diversion	0	12	0	0	39	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	0	0	0	0	0
ChapelRidgeTownes Divers.	0	-4	0	0	-1	0	0	0	0	0	0	0
2025 Buildout Total	0	29	3	0	59	0	9	0	0	0	0	0
Percent Impact (Approach)		9.4%			0.0%			100.0%			-	

Overall Percent Impact 12.0%

**PM PEAK HOUR
PM PHF = 0.90**

Description	Ackerman Hill Drive <u>Eastbound</u>			Ackerman Hill Drive <u>Westbound</u>			Site Driveway <u>Northbound</u>			<u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
2021 Traffic Count	0	0	0	0	0	0	0	0	0	0	0	0
Count Balancing	0	25	0	0	15	0	0	0	0	0	0	0
2021 Existing Traffic	0	25	0	0	15	0	0	0	0	0	0	0
Growth Factor (0.03 per year)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2025 Background Growth	0	0	0	0	0	0	0	0	0	0	0	0
Committed Projects												
Olive Chapel Professional Park	0	9	0	0	6	0	0	0	0	0	0	0
Chapel Ridge Townes	0	2	0	0	4	0	0	0	0	0	0	0
Total Committed Traffic	0	11	0	0	10	0	0	0	0	0	0	0
2025 Background Traffic	0	36	0	0	25	0	0	0	0	0	0	0
Project Traffic												
Percent Assignment Inbound	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	9	0	0	0	0	0	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	6	0	0	0	0	0
Total Project Traffic	0	0	9	0	0	0	6	0	0	0	0	0
Hempstead Traffic Diversion	0	38	0	0	22	0	0	0	0	0	0	0
OliveChapProfPark Reassign	0	0	0	0	0	0	0	0	0	0	0	0
ChapelRidgeTownes Divers.	0	-2	0	0	-4	0	0	0	0	0	0	0
2025 Buildout Total	0	72	9	0	43	0	6	0	0	0	0	0
Percent Impact (Approach)		11.1%			0.0%			100.0%			-	

Overall Percent Impact 11.5%

k:\dur_idev\011270040 chapel ridge apex\4 - analysis\supplemental analysis - with chapel ridge townes\addend-chapelridgeapts-withchapidgetownes-tiadata.xls\int. #9

Appendix L:
Supplemental Analysis:
Synchro & SIDRA Output:
Background (2025)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	19	8	38	93	4	25	38	790	132	33	413	9	
Future Volume (vph)	19	8	38	93	4	25	38	790	132	33	413	9	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12	
Grade (%)	0%		1%				3%			-4%			
Storage Length (ft)	0	0		275	0		275	0		170	0		
Storage Lanes	0	0		1	1		1	0		1	0		
Taper Length (ft)	25	50			125			170			170		
Satd. Flow (prot)	0	1641	0	0	1768	1575	1743	3409	0	1753	1840	0	
Flt Permitted	0.888			0.700			0.478			0.273			
Satd. Flow (perm)	0	1478	0	0	1297	1575	877	3409	0	504	1840	0	
Right Turn on Red	Yes				Yes				Yes				
Satd. Flow (RTOR)	39				32				25				
Link Speed (mph)	25				35				45				
Link Distance (ft)	513				641				1004				
Travel Time (s)	14.0				12.5				15.2				
Confl. Peds. (#/hr)													
Confl. Bikes (#/hr)													
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	5%	5%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)	0%				0%				0%				
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	66	0	0	99	26	39	941	0	34	430	0	
Turn Type	Perm	NA	pm+pt		NA	pm+ov	D.P+P	NA	D.P+P		NA		
Protected Phases	4		3		8	1	5	2	1		6		
Permitted Phases	4		8		8	6	2		2		6		
Detector Phase	4	4	3	8	1	5	2	1		6			
Switch Phase													
Minimum Initial (s)	7.0	7.0	7.0		7.0	7.0	7.0	12.0	7.0		12.0		
Minimum Split (s)	30.0	30.0	14.0		30.0	14.0	14.0	30.0	14.0		25.0		
Total Split (s)	20.0	20.0	15.0		35.0	15.0	15.0	70.0	15.0		70.0		
Total Split (%)	16.7%	16.7%	12.5%		29.2%	12.5%	12.5%	58.3%	12.5%		58.3%		
Yellow Time (s)	3.2	3.2	3.0		3.1	3.0	3.0	4.9	3.0		4.9		
All-Red Time (s)	2.6	2.6	2.8		2.7	2.8	2.4	1.6	2.8		1.6		
Lost Time Adjust (s)	-0.8		-0.8				-0.8	-0.4	-1.5	-0.8		-1.5	
Total Lost Time (s)	5.0		5.0				5.0	5.0	5.0	5.0		5.0	
Lead/Lag	Lead	Lead	Lag		Lead	Lead	Lag	Lag	Lead		Lag		
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Recall Mode	None	None	None		None	None	None	C-Max	None		C-Max		
Act Effct Green (s)	14.4		14.4				27.2	85.3	91.6		88.1		
Actuated g/C Ratio	0.12		0.12				0.23	0.77	0.71	0.76		0.73	
v/c Ratio	0.31		0.64				0.07	0.05	0.39	0.07		0.32	
Control Delay	26.2		67.5				9.3	3.6	8.3	3.8		7.8	
Queue Delay	0.0		0.0				0.0	0.0	0.0	0.0		0.0	
Total Delay	26.2		67.5				9.3	3.6	8.3	3.8		7.8	
LOS	C		E		A	A	A	A	A		A		
Approach Delay	26.2		55.4				8.1		7.5				
Approach LOS	C		E				A		A				
Queue Length 50th (ft)	19		74				0	5	143	4		120	
Queue Length 95th (ft)	59		126				19	16	217	14		206	
Internal Link Dist (ft)	433		561				924		825				
Turn Bay Length (ft)							275			170			
Base Capacity (vph)	238				324		410	760	2431	496		1351	
Starvation Cap Reductn	0				0		0	0	0	0		0	
Spillback Cap Reductn	0				0		0	0	0	0		0	
Storage Cap Reductn	0				0		0	0	0	0		0	
Reduced v/c Ratio	0.28				0.31		0.06	0.05	0.39	0.07		0.32	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 51.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	56	403	409	58	21	25
Future Volume (vph)	56	403	409	58	21	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1736	1827	1796	0	1703	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1736	1827	1796	0	1703	1524
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	474	549	0	25	29
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.7%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	403	409	58	21	25
Future Vol, veh/h	56	403	409	58	21	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	4	4	4	6	6
Mvmt Flow	66	474	481	68	25	29

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	549	0	-	0	1121	515
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	4.14	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.236	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1011	-	-	-	224	552
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	537	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1011	-	-	-	209	552
Mov Cap-2 Maneuver	-	-	-	-	344	-
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	537	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1011	-	-	-	344	552
HCM Lane V/C Ratio	0.065	-	-	-	0.072	0.053
HCM Control Delay (s)	8.8	-	-	-	16.3	11.9
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.2

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	4	4	17	4	4
Future Volume (vph)	20	4	4	17	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1749	0	1654	0	0	1818
Flt Permitted	0.959					0.976
Satd. Flow (perm)	1749	0	1654	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	26	0	23	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	4	4	17	4	4
Future Vol, veh/h	20	4	4	17	4	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	2	2
Mvmt Flow	22	4	4	19	4	4

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2
Conflicting Flow All	26	14	0	0	23	0
Stage 1	14	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	989	1066	-	-	1592	-
Stage 1	1009	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	986	1066	-	-	1592	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1009	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	3.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	998	1592	-
HCM Lane V/C Ratio	-	-	0.027	0.003	-
HCM Control Delay (s)	-	-	8.7	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

MOVEMENT SUMMARY

Site: 4 [Background AM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Supp. Analysis - With Chapel Ridge Townhomes
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV] %	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] ft				
South: Creekside Landing Drive														
3	L2	4	6.0	5	6.0	0.071	4.3	LOS A	0.3	7.4	0.40	0.27	0.40	24.0
8	T1	30	6.0	36	6.0	0.071	4.3	LOS A	0.3	7.4	0.40	0.27	0.40	23.9
18	R2	24	6.0	29	6.0	0.071	4.3	LOS A	0.3	7.4	0.40	0.27	0.40	23.5
Approach		58	6.0	69	6.0	0.071	4.3	LOS A	0.3	7.4	0.40	0.27	0.40	23.7
East: Beaver Creek Commons Drive														
1	L2	30	2.0	36	2.0	0.167	4.3	LOS A	0.8	20.2	0.24	0.11	0.24	23.9
6	T1	78	2.0	93	2.0	0.167	4.3	LOS A	0.8	20.2	0.24	0.11	0.24	23.8
16	R2	65	2.0	77	2.0	0.167	4.3	LOS A	0.8	20.2	0.24	0.11	0.24	23.4
Approach		173	2.0	206	2.0	0.167	4.3	LOS A	0.8	20.2	0.24	0.11	0.24	23.7
North: Creekside Landing Drive														
7	L2	64	2.0	76	2.0	0.152	4.4	LOS A	0.7	17.8	0.30	0.17	0.30	23.7
4	T1	33	2.0	39	2.0	0.152	4.4	LOS A	0.7	17.8	0.30	0.17	0.30	23.6
14	R2	53	2.0	63	2.0	0.152	4.4	LOS A	0.7	17.8	0.30	0.17	0.30	23.1
Approach		150	2.0	179	2.0	0.152	4.4	LOS A	0.7	17.8	0.30	0.17	0.30	23.5
West: Beaver Creek Commons Drive														
5	L2	37	3.0	44	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.8
2	T1	132	3.0	157	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.7
12	R2	8	3.0	10	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.3
Approach		177	3.0	211	3.0	0.184	4.8	LOS A	0.9	22.1	0.33	0.19	0.33	23.7
All Vehicles		558	2.7	664	2.7	0.184	4.5	LOS A	0.9	22.1	0.30	0.17	0.30	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Wednesday, February 9, 2022 2:20:12 PM
 Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Supplemental Analysis - with Chapel Ridge Townes\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	14	47	278	20	62	67	594	304	100	863	23
Future Volume (vph)	10	14	47	278	20	62	67	594	304	100	863	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			1%			3%				-4%
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1683	0	0	1770	1575	1743	3283	0	1805	1891	0
Flt Permitted		0.943			0.710		0.075			0.233		
Satd. Flow (perm)	0	1598	0	0	1316	1575	138	3283	0	443	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				63		93			1	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	304	63	68	916	0	102	904	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	25.0	25.0		20.0	45.0	20.0	15.0	55.0		20.0	60.0	
Total Split (%)	20.8%	20.8%		16.7%	37.5%	16.7%	12.5%	45.8%		16.7%	50.0%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		33.0			33.0	46.6	73.0	63.4		72.0	66.7	
Actuated g/C Ratio		0.28			0.28	0.39	0.61	0.53		0.60	0.56	
v/c Ratio		0.15			0.84	0.10	0.36	0.52		0.28	0.86	
Control Delay		13.1			60.9	4.9	15.6	18.7		11.7	35.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		13.1			60.9	4.9	15.6	18.7		11.7	35.4	
LOS		B			E	A	B	B		B	D	
Approach Delay		13.1			51.3			18.5			33.0	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		14			219	0	19	210		29	608	
Queue Length 95th (ft)		46			312	25	43	312		59	#999	
Internal Link Dist (ft)		433			561			924			825	
Turn Bay Length (ft)							275			170		
Base Capacity (vph)		473			438	730	219	1778		454	1051	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.15			0.69	0.09	0.31	0.52		0.22	0.86	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 29.3 Intersection LOS: C
 Intersection Capacity Utilization 88.3% ICU Level of Service E
 Analysis Period (min) 15
 Description: Signal No. 052254
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	500	591	35	55	65
Future Volume (vph)	36	500	591	35	55	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1770	1863	1848	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1848	0	1770	1583
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	538	673	0	59	70
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.9%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	500	591	35	55	65
Future Vol, veh/h	36	500	591	35	55	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	538	635	38	59	70

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	673	0	-	0	1270 654
Stage 1	-	-	-	-	654 -
Stage 2	-	-	-	-	616 -
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	918	-	-	-	186 467
Stage 1	-	-	-	-	517 -
Stage 2	-	-	-	-	539 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	918	-	-	-	178 467
Mov Cap-2 Maneuver	-	-	-	-	317 -
Stage 1	-	-	-	-	495 -
Stage 2	-	-	-	-	539 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	918	-	-	-	317	467
HCM Lane V/C Ratio	0.042	-	-	-	0.187	0.15
HCM Control Delay (s)	9.1	-	-	-	18.9	14.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7	0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	21	4	4	34	4	4
Future Volume (vph)	21	4	4	34	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1751	0	1635	0	0	1818
Flt Permitted	0.959					0.976
Satd. Flow (perm)	1751	0	1635	0	0	1818
Link Speed (mph)	25		25			25
Link Distance (ft)	289		696			330
Travel Time (s)	7.9		19.0			9.0
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	42	0	0	8
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	13.8%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	4	4	34	4	4
Future Vol, veh/h	21	4	4	34	4	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	2	2
Mvmt Flow	23	4	4	38	4	4
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	35	23	0	0	42	0
Stage 1	23	-	-	-	-	-
Stage 2	12	-	-	-	-	-
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	978	1054	-	-	1567	-
Stage 1	1000	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	975	1054	-	-	1567	-
Mov Cap-2 Maneuver	975	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		3.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	987	1567	-	
HCM Lane V/C Ratio	-	-	0.028	0.003	-	
HCM Control Delay (s)	-	-	8.8	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

MOVEMENT SUMMARY

Site: 4 [Background PM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Supp. Analysis - With Chapel Ridge Townhomes
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV] %	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] ft				
South: Creekside Landing Drive														
3	L2	25	2.0	27	2.0	0.314	8.2	LOS A	1.4	36.8	0.63	0.61	0.63	23.0
8	T1	99	2.0	105	2.0	0.314	8.2	LOS A	1.4	36.8	0.63	0.61	0.63	22.9
18	R2	108	2.0	115	2.0	0.314	8.2	LOS A	1.4	36.8	0.63	0.61	0.63	22.5
Approach		232	2.0	247	2.0	0.314	8.2	LOS A	1.4	36.8	0.63	0.61	0.63	22.7
East: Beaver Creek Commons Drive														
1	L2	76	2.0	81	2.0	0.513	9.6	LOS A	3.3	83.9	0.60	0.48	0.60	22.7
6	T1	235	2.0	250	2.0	0.513	9.6	LOS A	3.3	83.9	0.60	0.48	0.60	22.6
16	R2	189	2.0	201	2.0	0.513	9.6	LOS A	3.3	83.9	0.60	0.48	0.60	22.2
Approach		500	2.0	532	2.0	0.513	9.6	LOS A	3.3	83.9	0.60	0.48	0.60	22.4
North: Creekside Landing Drive														
7	L2	153	2.0	163	2.0	0.527	10.7	LOS B	4.2	106.7	0.67	0.73	0.87	22.3
4	T1	162	2.0	172	2.0	0.527	10.7	LOS B	4.2	106.7	0.67	0.73	0.87	22.2
14	R2	147	2.0	156	2.0	0.527	10.7	LOS B	4.2	106.7	0.67	0.73	0.87	21.8
Approach		462	2.0	491	2.0	0.527	10.7	LOS B	4.2	106.7	0.67	0.73	0.87	22.1
West: Beaver Creek Commons Drive														
5	L2	117	2.0	124	2.0	0.435	9.4	LOS A	2.6	65.2	0.64	0.64	0.72	22.6
2	T1	221	2.0	235	2.0	0.435	9.4	LOS A	2.6	65.2	0.64	0.64	0.72	22.5
12	R2	21	2.0	22	2.0	0.435	9.4	LOS A	2.6	65.2	0.64	0.64	0.72	22.1
Approach		359	2.0	382	2.0	0.435	9.4	LOS A	2.6	65.2	0.64	0.64	0.72	22.5
All Vehicles		1553	2.0	1652	2.0	0.527	9.7	LOS A	4.2	106.7	0.64	0.61	0.71	22.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Wednesday, February 9, 2022 2:20:10 PM
 Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Supplemental Analysis - with Chapel Ridge Townes\Sidra\BC Commons @ Creekside Landing.sip9

**Appendix M:
Supplemental Analysis:
Synchro & SIDRA Output:
Build-out (2025)**

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	8	38	93	4	88	38	790	132	53	413	9
Future Volume (vph)	19	8	38	93	4	88	38	790	132	53	413	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		1%				3%			-4%		
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1641	0	0	1768	1575	1743	3409	0	1753	1840	0
Flt Permitted		0.888			0.700		0.478			0.270		
Satd. Flow (perm)	0	1478	0	0	1297	1575	877	3409	0	498	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39				90		25			1	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	99	90	39	941	0	54	430	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	20.0	20.0		15.0	35.0	15.0	15.0	70.0		15.0	70.0	
Total Split (%)	16.7%	16.7%		12.5%	29.2%	12.5%	12.5%	58.3%		12.5%	58.3%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		14.4			14.4	27.2	92.6	82.8		90.6	88.1	
Actuated g/C Ratio		0.12			0.12	0.23	0.77	0.69		0.76	0.73	
v/c Ratio		0.31			0.64	0.21	0.05	0.40		0.12	0.32	
Control Delay		26.2			67.5	8.0	3.6	8.8		4.0	7.8	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		26.2			67.5	8.0	3.6	8.8		4.0	7.8	
LOS		C			E	A	A	A		A	A	
Approach Delay		26.2			39.2			8.6			7.4	
Approach LOS		C			D			A			A	
Queue Length 50th (ft)		19			74	0	5	143		7	120	
Queue Length 95th (ft)		59			126	40	16	217		20	206	
Internal Link Dist (ft)		433			561			924			825	
Turn Bay Length (ft)							275			170		
Base Capacity (vph)		238			324	454	760	2359		489	1351	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.28			0.31	0.20	0.05	0.40		0.11	0.32	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 12.3 Intersection LOS: B
 Intersection Capacity Utilization 56.4% ICU Level of Service B
 Analysis Period (min) 15
 Description: Signal No. 052254

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	59	403	409	64	38	34
Future Volume (vph)	59	403	409	64	38	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1736	1827	1794	0	1703	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1736	1827	1794	0	1703	1524
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	69	474	556	0	45	40
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.1%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	403	409	64	38	34
Future Vol, veh/h	59	403	409	64	38	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	4	4	4	4	6	6
Mvmt Flow	69	474	481	75	45	40

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	556	0	-	0	1131 519
Stage 1	-	-	-	-	519 -
Stage 2	-	-	-	-	612 -
Critical Hdwy	4.14	-	-	-	6.46 6.26
Critical Hdwy Stg 1	-	-	-	-	5.46 -
Critical Hdwy Stg 2	-	-	-	-	5.46 -
Follow-up Hdwy	2.236	-	-	-	3.554 3.354
Pot Cap-1 Maneuver	1005	-	-	-	221 549
Stage 1	-	-	-	-	589 -
Stage 2	-	-	-	-	533 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1005	-	-	-	206 549
Mov Cap-2 Maneuver	-	-	-	-	341 -
Stage 1	-	-	-	-	548 -
Stage 2	-	-	-	-	533 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1005	-	-	-	341	549
HCM Lane V/C Ratio	0.069	-	-	-	0.131	0.073
HCM Control Delay (s)	8.8	-	-	-	17.1	12.1
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.2

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	48	20	13	15	33
Future Volume (vph)	19	48	20	13	15	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1659	0	1764	0	0	1835
Flt Permitted	0.986					0.985
Satd. Flow (perm)	1659	0	1764	0	0	1835
Link Speed (mph)	25		25			25
Link Distance (ft)	292		213			210
Travel Time (s)	8.0		5.8			5.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	74	0	36	0	0	54
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	19.9%
	ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	48	20	13	15	33
Future Vol, veh/h	19	48	20	13	15	33
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	2	2
Mvmt Flow	21	53	22	14	17	37

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	100	29	0	0	36
Stage 1	29	-	-	-	-
Stage 2	71	-	-	-	-
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	899	1046	-	-	1575
Stage 1	994	-	-	-	-
Stage 2	952	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	889	1046	-	-	1575
Mov Cap-2 Maneuver	889	-	-	-	-
Stage 1	994	-	-	-	-
Stage 2	942	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	2.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1575	-
HCM Lane V/C Ratio	-	-	0.075	0.011	-
HCM Control Delay (s)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

MOVEMENT SUMMARY

Site: 4 [Build-Out AM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Supp. Analysis - With Chapel Ridge Townhomes
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV] %	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] ft				
South: Creekside Landing Drive														
3	L2	4	6.0	5	6.0	0.069	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	24.0
8	T1	28	6.0	33	6.0	0.069	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.9
18	R2	22	6.0	26	6.0	0.069	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.4
Approach		54	6.0	64	6.0	0.069	4.5	LOS A	0.3	7.1	0.43	0.30	0.43	23.7
East: Beaver Creek Commons Drive														
1	L2	29	2.0	35	2.0	0.182	4.5	LOS A	0.9	22.4	0.26	0.13	0.26	23.9
6	T1	93	2.0	111	2.0	0.182	4.5	LOS A	0.9	22.4	0.26	0.13	0.26	23.8
16	R2	65	2.0	77	2.0	0.182	4.5	LOS A	0.9	22.4	0.26	0.13	0.26	23.3
Approach		187	2.0	223	2.0	0.182	4.5	LOS A	0.9	22.4	0.26	0.13	0.26	23.7
North: Creekside Landing Drive														
7	L2	64	2.0	76	2.0	0.166	4.6	LOS A	0.8	19.6	0.32	0.19	0.32	23.7
4	T1	32	2.0	38	2.0	0.166	4.6	LOS A	0.8	19.6	0.32	0.19	0.32	23.6
14	R2	65	2.0	77	2.0	0.166	4.6	LOS A	0.8	19.6	0.32	0.19	0.32	23.1
Approach		161	2.0	192	2.0	0.166	4.6	LOS A	0.8	19.6	0.32	0.19	0.32	23.4
West: Beaver Creek Commons Drive														
5	L2	48	3.0	57	3.0	0.217	5.1	LOS A	1.1	27.0	0.34	0.20	0.34	23.7
2	T1	153	3.0	182	3.0	0.217	5.1	LOS A	1.1	27.0	0.34	0.20	0.34	23.6
12	R2	8	3.0	10	3.0	0.217	5.1	LOS A	1.1	27.0	0.34	0.20	0.34	23.2
Approach		209	3.0	249	3.0	0.217	5.1	LOS A	1.1	27.0	0.34	0.20	0.34	23.6
All Vehicles		611	2.7	727	2.7	0.217	4.7	LOS A	1.1	27.0	0.32	0.19	0.32	23.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Wednesday, February 9, 2022 2:20:11 PM
 Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Supplemental Analysis - with Chapel Ridge Townes\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	63	43	210	20	30	125
Future Volume (vph)	63	43	210	20	30	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				100	
Satd. Flow (prot)	1709	0	1840	0	1770	1863
Flt Permitted	0.971				0.950	
Satd. Flow (perm)	1709	0	1840	0	1770	1863
Link Speed (mph)	25		35			35
Link Distance (ft)	432		357			558
Travel Time (s)	11.8		7.0			10.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	255	0	33	139
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.7%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	63	43	210	20	30	125
Future Vol, veh/h	63	43	210	20	30	125
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	-	-	-	100	-
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	70	48	233	22	33	139

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	449	244	0	0	255
Stage 1	244	-	-	-	-
Stage 2	205	-	-	-	-
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	568	795	-	-	1310
Stage 1	797	-	-	-	-
Stage 2	829	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	554	795	-	-	1310
Mov Cap-2 Maneuver	619	-	-	-	-
Stage 1	797	-	-	-	-
Stage 2	808	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	1310	-
HCM Lane V/C Ratio	-	-	0.173	0.025	-
HCM Control Delay (s)	-	-	11.4	7.8	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	6	45	4	17	89	4
Future Volume (vph)	6	45	4	17	89	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Satd. Flow (prot)	1643	0	0	1846	1768	0
Flt Permitted				0.991	0.954	
Satd. Flow (perm)	1643	0	0	1846	1768	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	432			273	553	
Travel Time (s)	11.8			7.4	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	0	0	23	103	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	16.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	5.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	45	4	17	89	4
Future Vol, veh/h	6	45	4	17	89	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	2	2	2	2
Mvmt Flow	7	50	4	19	99	4
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	57	0	59	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	27	-
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	-	-	1547	-	948	1042
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	996	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1547	-	945	1042
Mov Cap-2 Maneuver	-	-	-	-	945	-
Stage 1	-	-	-	-	991	-
Stage 2	-	-	-	-	993	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.4	9.3			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	949	-	-	1547	-	
HCM Lane V/C Ratio	0.109	-	-	0.003	-	
HCM Control Delay (s)	9.3	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.4	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	36	8	4	62	4	22	4	4	9	4	4
Future Volume (vph)	4	36	8	4	62	4	22	4	4	9	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1813	0	0	1844	0	0	1765	0	0	1758	0
Flt Permitted		0.996			0.997			0.964			0.973	
Satd. Flow (perm)	0	1813	0	0	1844	0	0	1765	0	0	1758	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		553			210			358			340	
Travel Time (s)		15.1			5.7			9.8			9.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	77	0	0	32	0	0	18	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	14.5%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	36	8	4	62	4	22	4	4	9	4	4
Future Vol, veh/h	4	36	8	4	62	4	22	4	4	9	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	40	9	4	69	4	24	4	4	10	4	4
Major/Minor	Major1	Major2			Minor1			Minor2				
Conflicting Flow All	73	0	0	49	0	0	136	134	45	136	136	71
Stage 1	-	-	-	-	-	-	53	53	-	79	79	-
Stage 2	-	-	-	-	-	-	83	81	-	57	57	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1527	-	-	1558	-	-	835	757	1025	835	755	991
Stage 1	-	-	-	-	-	-	960	851	-	930	829	-
Stage 2	-	-	-	-	-	-	925	828	-	955	847	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1527	-	-	1558	-	-	823	752	1025	824	750	991
Mov Cap-2 Maneuver	-	-	-	-	-	-	823	752	-	824	750	-
Stage 1	-	-	-	-	-	-	957	848	-	927	827	-
Stage 2	-	-	-	-	-	-	913	826	-	943	844	-
Approach	EB	WB			NB			SB				
HCM Control Delay, s	0.6	0.4			9.5			9.4				
HCM LOS				A			A					
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	834	1527	-	-	1558	-	-	838				
HCM Lane V/C Ratio	0.04	0.003	-	-	0.003	-	-	0.023				
HCM Control Delay (s)	9.5	7.4	0	-	7.3	0	-	9.4				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	9	4	4	4	4	28	4	4	50	4
Future Volume (vph)	4	4	9	4	4	4	4	28	4	4	50	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%		0%		0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1704	0	0	1750	0	0	1827	0	0	1842	0
Flt Permitted		0.989			0.984			0.995			0.997	
Satd. Flow (perm)	0	1704	0	0	1750	0	0	1827	0	0	1842	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			378			405			213	
Travel Time (s)		6.8			10.3			11.0			5.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	12	0	0	39	0	0	64	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	13.7%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	9	4	4	4	4	28	4	4	50	4
Future Vol, veh/h	4	4	9	4	4	4	4	28	4	4	50	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	10	4	4	4	4	31	4	4	56	4

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	111	109	58	114	109	33	60	0	0	35	0	0
Stage 1	66	66	-	41	41	-	-	-	-	-	-	-
Stage 2	45	43	-	73	68	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	867	781	1008	863	781	1041	1544	-	-	1576	-	-
Stage 1	945	840	-	974	861	-	-	-	-	-	-	-
Stage 2	969	859	-	937	838	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	856	776	1008	847	776	1041	1544	-	-	1576	-	-
Mov Cap-2 Maneuver	856	776	-	847	776	-	-	-	-	-	-	-
Stage 1	942	837	-	971	858	-	-	-	-	-	-	-
Stage 2	957	856	-	920	835	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.1		9.2		0.8		0.5	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1544	-	-	906	875	1576	-	-
HCM Lane V/C Ratio	0.003	-	-	0.021	0.015	0.003	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.2	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	29	4	4	59	9	4
Future Volume (vph)	29	4	4	59	9	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0		0		0	
Storage Lanes	0		0		1	
Taper Length (ft)	25			25		
Satd. Flow (prot)	1835	0	0	1857	1729	0
Flt Permitted				0.997	0.966	
Satd. Flow (perm)	1835	0	0	1857	1729	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	292			367	225	
Travel Time (s)	8.0			10.0	6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	36	0	0	70	14	0
Sign Control	Free			Free	Stop	

Intersection Summary

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

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	29	4	4	59	9	4
Future Vol, veh/h	29	4	4	59	9	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	2	2	2	2
Mvmt Flow	32	4	4	66	10	4
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	36	0	108	34
Stage 1	-	-	-	-	34	-
Stage 2	-	-	-	-	74	-
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	-	-	1575	-	889	1039
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1575	-	886	1039
Mov Cap-2 Maneuver	-	-	-	-	886	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	946	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.5	8.9			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	928	-	-	1575	-	
HCM Lane V/C Ratio	0.016	-	-	0.003	-	
HCM Control Delay (s)	8.9	-	-	7.3	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	14	47	278	20	101	67	594	304	164	863	23
Future Volume (vph)	10	14	47	278	20	101	67	594	304	164	863	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			1%			3%				-4%
Storage Length (ft)	0		0	275		0	275		0	170		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			125			170		
Satd. Flow (prot)	0	1683	0	0	1770	1575	1743	3283	0	1805	1891	0
Flt Permitted		0.943			0.710		0.075			0.228		
Satd. Flow (perm)	0	1598	0	0	1316	1575	138	3283	0	433	1891	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48				103		93			1	
Link Speed (mph)		25			35			45			45	
Link Distance (ft)		513			641			1004			905	
Travel Time (s)		14.0			12.5			15.2			13.7	
Confl. Peds. (#/hr)							1		1	1		1
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	304	103	68	916	0	167	904	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	D.P+P	NA		D.P+P	NA	
Protected Phases		4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	6			2		
Detector Phase	4	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	7.0	12.0		7.0	12.0	
Minimum Split (s)	30.0	30.0		14.0	30.0	14.0	14.0	30.0		14.0	25.0	
Total Split (s)	25.0	25.0		20.0	45.0	20.0	15.0	55.0		20.0	60.0	
Total Split (%)	20.8%	20.8%		16.7%	37.5%	16.7%	12.5%	45.8%		16.7%	50.0%	
Yellow Time (s)	3.2	3.2		3.0	3.1	3.0	3.0	4.9		3.0	4.9	
All-Red Time (s)	2.6	2.6		2.8	2.7	2.8	2.4	1.6		2.8	1.6	
Lost Time Adjust (s)		-0.8			-0.8	-0.8	-0.4	-1.5		-0.8	-1.5	
Total Lost Time (s)		5.0			5.0	5.0	5.0	5.0		5.0	5.0	
Lead/Lag	Lead	Lead		Lag		Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Act Effct Green (s)		33.0			33.0	48.2	73.0	61.8		72.0	66.7	
Actuated g/C Ratio		0.28			0.28	0.40	0.61	0.52		0.60	0.56	
v/c Ratio		0.15			0.84	0.15	0.36	0.53		0.44	0.86	
Control Delay		13.1			60.9	3.7	15.6	20.0		13.7	35.4	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		13.1			60.9	3.7	15.6	20.0		13.7	35.4	
LOS		B			E	A	B	B		B	D	
Approach Delay		13.1			46.4			19.7			32.0	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		14			219	0	19	218		49	608	
Queue Length 95th (ft)		46			312	29	43	328		91	#999	
Internal Link Dist (ft)		433			561			924			825	
Turn Bay Length (ft)							275			170		
Base Capacity (vph)		473			438	752	219	1737		445	1051	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.15			0.69	0.14	0.31	0.53		0.38	0.86	

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 29.0 Intersection LOS: C
 Intersection Capacity Utilization 88.3% ICU Level of Service E
 Analysis Period (min) 15
 Description: Signal No. 052254
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: Kelly Road & Wendhurst Court/Beaver Creek Commons Drive



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	45	500	591	53	66	71
Future Volume (vph)	45	500	591	53	66	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	75	0
Storage Lanes	1			0	1	1
Taper Length (ft)	300				25	
Satd. Flow (prot)	1770	1863	1842	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1863	1842	0	1770	1583
Link Speed (mph)		45	45		25	
Link Distance (ft)		797	812		509	
Travel Time (s)		12.1	12.3		13.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	538	692	0	71	76
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	47.7%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	500	591	53	66	71
Future Vol, veh/h	45	500	591	53	66	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	538	635	57	71	76

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	692	0	-	0	1298 664
Stage 1	-	-	-	-	664 -
Stage 2	-	-	-	-	634 -
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	903	-	-	-	178 461
Stage 1	-	-	-	-	512 -
Stage 2	-	-	-	-	529 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	903	-	-	-	169 461
Mov Cap-2 Maneuver	-	-	-	-	308 -
Stage 1	-	-	-	-	485 -
Stage 2	-	-	-	-	529 -

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	903	-	-	-	308	461
HCM Lane V/C Ratio	0.054	-	-	-	0.23	0.166
HCM Control Delay (s)	9.2	-	-	-	20.2	14.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9	0.6

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	28	36	32	47	26
Future Volume (vph)	17	28	36	32	47	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Satd. Flow (prot)	1674	0	1744	0	0	1805
Flt Permitted	0.981					0.969
Satd. Flow (perm)	1674	0	1744	0	0	1805
Link Speed (mph)	25		25			25
Link Distance (ft)	292		213			210
Travel Time (s)	8.0		5.8			5.7
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	50	0	76	0	0	81
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	20.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.1					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	28	36	32	47	26
Future Vol, veh/h	17	28	36	32	47	26
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	2	2
Mvmt Flow	19	31	40	36	52	29

Major/Minor	Minor1	Major1	Major2	Major3	Major4	Major5
Conflicting Flow All	191	58	0	0	76	0
Stage 1	58	-	-	-	-	-
Stage 2	133	-	-	-	-	-
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	798	1008	-	-	1523	-
Stage 1	965	-	-	-	-	-
Stage 2	893	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	770	1008	-	-	1523	-
Mov Cap-2 Maneuver	770	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	4.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	903	1523	-
HCM Lane V/C Ratio	-	-	0.055	0.034	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

MOVEMENT SUMMARY

Site: 4 [Build-Out PM (Site Folder: General)]

Beaver Creek Commons Drive at Creekside Landing Drive
 Site Category: Supp. Analysis - With Chapel Ridge Townhomes
 Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
		[Total veh/h]	[HV] %	[Total veh/h]	[HV] %				[Veh. veh]	[Dist] ft				
South: Creekside Landing Drive														
3	L2	25	2.0	27	2.0	0.323	8.6	LOS A	1.5	37.6	0.64	0.64	0.64	22.9
8	T1	98	2.0	104	2.0	0.323	8.6	LOS A	1.5	37.6	0.64	0.64	0.64	22.8
18	R2	107	2.0	114	2.0	0.323	8.6	LOS A	1.5	37.6	0.64	0.64	0.64	22.4
Approach		230	2.0	245	2.0	0.323	8.6	LOS A	1.5	37.6	0.64	0.64	0.64	22.6
East: Beaver Creek Commons Drive														
1	L2	74	2.0	79	2.0	0.541	10.3	LOS B	4.2	106.7	0.63	0.57	0.71	22.5
6	T1	257	2.0	273	2.0	0.541	10.3	LOS B	4.2	106.7	0.63	0.57	0.71	22.4
16	R2	189	2.0	201	2.0	0.541	10.3	LOS B	4.2	106.7	0.63	0.57	0.71	22.0
Approach		520	2.0	553	2.0	0.541	10.3	LOS B	4.2	106.7	0.63	0.57	0.71	22.3
North: Creekside Landing Drive														
7	L2	153	2.0	163	2.0	0.552	11.4	LOS B	4.8	121.0	0.70	0.81	0.97	22.1
4	T1	160	2.0	170	2.0	0.552	11.4	LOS B	4.8	121.0	0.70	0.81	0.97	22.0
14	R2	160	2.0	170	2.0	0.552	11.4	LOS B	4.8	121.0	0.70	0.81	0.97	21.6
Approach		473	2.0	503	2.0	0.552	11.4	LOS B	4.8	121.0	0.70	0.81	0.97	21.9
West: Beaver Creek Commons Drive														
5	L2	130	2.0	138	2.0	0.473	10.1	LOS B	3.2	80.3	0.66	0.71	0.81	22.5
2	T1	241	2.0	256	2.0	0.473	10.1	LOS B	3.2	80.3	0.66	0.71	0.81	22.4
12	R2	21	2.0	22	2.0	0.473	10.1	LOS B	3.2	80.3	0.66	0.71	0.81	22.0
Approach		392	2.0	417	2.0	0.473	10.1	LOS B	3.2	80.3	0.66	0.71	0.81	22.4
All Vehicles		1615	2.0	1718	2.0	0.552	10.3	LOS B	4.8	121.0	0.66	0.68	0.80	22.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Geometric Delay is not included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 9.0 | Copyright © 2000-2020 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: KIMLEY-HORN & ASSOCIATES INC | Licence: NETWORK / Enterprise | Processed: Wednesday, February 9, 2022 2:20:11 PM
 Project: K:\DUR_LDEV\011270040 Chapel Ridge Apex\T4 - Analysis\Supplemental Analysis - with Chapel Ridge Townes\Sidra\BC Commons @ Creekside Landing.sip9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	39	400	64	45	377
Future Volume (vph)	39	39	400	64	45	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	100	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				100	
Satd. Flow (prot)	1694	0	1827	0	0	1853
Flt Permitted	0.976					0.995
Satd. Flow (perm)	1694	0	1827	0	0	1853
Link Speed (mph)	25		35			35
Link Distance (ft)	432		357			558
Travel Time (s)	11.8		7.0			10.9
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	515	0	0	469
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	61.8%
Analysis Period (min)	15
	ICU Level of Service B

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	39	400	64	45	377
Future Vol, veh/h	39	39	400	64	45	377
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	2	2
Mvmt Flow	43	43	444	71	50	419

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	999	480	0	0	515
Stage 1	480	-	-	-	-
Stage 2	519	-	-	-	-
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	270	586	-	-	1051
Stage 1	622	-	-	-	-
Stage 2	597	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	253	586	-	-	1051
Mov Cap-2 Maneuver	384	-	-	-	-
Stage 1	622	-	-	-	-
Stage 2	560	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	464	1051	-
HCM Lane V/C Ratio	-	-	0.187	0.048	-
HCM Control Delay (s)	-	-	14.5	8.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	18	91	4	11	67	4
Future Volume (vph)	18	91	4	11	67	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Satd. Flow (prot)	1652	0	0	1840	1766	0
Flt Permitted				0.988	0.955	
Satd. Flow (perm)	1652	0	0	1840	1766	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	432			273	553	
Travel Time (s)	11.8			7.4	15.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	0	0	16	78	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	17.2%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	18	91	4	11	67	4
Future Vol, veh/h	18	91	4	11	67	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	2	2	2	2
Mvmt Flow	20	101	4	12	74	4
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	121	0	91	71
Stage 1	-	-	-	-	71	-
Stage 2	-	-	-	-	20	-
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	-	-	1467	-	909	991
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	1003	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1467	-	906	991
Mov Cap-2 Maneuver	-	-	-	-	906	-
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	1000	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	2	9.3			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	910	-	-	1467	-	
HCM Lane V/C Ratio	0.087	-	-	0.003	-	
HCM Control Delay (s)	9.3	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0	-	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	64	23	5	49	9	14	4	4	6	4	4
Future Volume (vph)	5	64	23	5	49	9	14	4	4	6	4	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1794	0	0	1820	0	0	1762	0	0	1754	0
Flt Permitted		0.997			0.996			0.968			0.977	
Satd. Flow (perm)	0	1794	0	0	1820	0	0	1762	0	0	1754	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		553			210			358			340	
Travel Time (s)		15.1			5.7			9.8			9.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	70	0	0	24	0	0	15	0
Sign Control		Free			Free			Stop			Stop	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	16.1%			ICU Level of Service A								
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	64	23	5	49	9	14	4	4	6	4	4
Future Vol, veh/h	5	64	23	5	49	9	14	4	4	6	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	71	26	6	54	10	16	4	4	7	4	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	64	0	0	97
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1538	-	-	1496
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1538	-	-	1496
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.6	9.7	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	796	1538	-	-	1496	-	-	809
HCM Lane V/C Ratio	0.031	0.004	-	-	0.004	-	-	0.019
HCM Control Delay (s)	9.7	7.3	0	-	7.4	0	-	9.5
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	4	6	4	4	4	9	64	5	5	38	5
Future Volume (vph)	4	4	6	4	4	4	9	64	5	5	38	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%				0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1723	0	0	1750	0	0	1835	0	0	1824	0
Flt Permitted		0.987			0.984			0.994			0.994	
Satd. Flow (perm)	0	1723	0	0	1750	0	0	1835	0	0	1824	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			378			405			213	
Travel Time (s)		6.8			10.3			11.0			5.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	0	0	12	0	0	87	0	0	54	0
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	15.7%						ICU Level of Service A					
Analysis Period (min)	15											

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	4	6	4	4	4	9	64	5	5	38	5
Future Vol, veh/h	4	4	6	4	4	4	9	64	5	5	38	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	7	4	4	4	10	71	6	6	42	6

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	155	154	45	157	154	74	48	0	0	77	0	0
Stage 1	57	57	-	94	94	-	-	-	-	-	-	-
Stage 2	98	97	-	63	60	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	812	738	1025	809	738	988	1559	-	-	1522	-	-
Stage 1	955	847	-	913	817	-	-	-	-	-	-	-
Stage 2	908	815	-	948	845	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	798	730	1025	794	730	988	1559	-	-	1522	-	-
Mov Cap-2 Maneuver	798	730	-	794	730	-	-	-	-	-	-	-
Stage 1	948	844	-	907	811	-	-	-	-	-	-	-
Stage 2	893	809	-	933	842	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	9.3		9.4		0.8		0.8	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1559	-	-	856	824	1522	-	-
HCM Lane V/C Ratio	0.006	-	-	0.018	0.016	0.004	-	-
HCM Control Delay (s)	7.3	0	-	9.3	9.4	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	72	9	4	43	6	4
Future Volume (vph)	72	9	4	43	6	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%		0%	
Storage Length (ft)	0		0		0	
Storage Lanes	0		0		1	
Taper Length (ft)	25			25		
Satd. Flow (prot)	1835	0	0	1855	1717	0
Flt Permitted				0.996	0.969	
Satd. Flow (perm)	1835	0	0	1855	1717	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	292			367	225	
Travel Time (s)	8.0			10.0	6.1	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	90	0	0	52	11	0
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	15.6%
ICU Level of Service	A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	72	9	4	43	6	4
Future Vol, veh/h	72	9	4	43	6	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	2	2	2	2
Mvmt Flow	80	10	4	48	7	4
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	90	0	141	85
Stage 1	-	-	-	-	85	-
Stage 2	-	-	-	-	56	-
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	-	-	1505	-	852	974
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1505	-	849	974
Mov Cap-2 Maneuver	-	-	-	-	849	-
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	964	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.6	9.1			
HCM LOS						A
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	895	-	-	1505	-	
HCM Lane V/C Ratio	0.012	-	-	0.003	-	
HCM Control Delay (s)	9.1	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Appendix N: Traffic Signal Plans

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ07 Chapel Ridge North PUD

Planning Board Meeting Date: October 10, 2022



Report Requirements:

Per NCGS §160D-604(b), all proposed amendments to the zoning ordinance or zoning map shall be submitted to the Planning Board for review and comment. If no written report is received from the Planning Board within 30 days of referral of the amendment to the Planning Board, the Town Council may act on the amendment without the Planning Board report. The Town Council is not bound by the recommendations, if any, of the Planning Board.

Per NCGS §160D-604(d), the Planning Board shall advise and comment on whether the proposed action is consistent with all applicable officially adopted plans, and provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Town Council.

PROJECT DESCRIPTION:

Acreage: +/- 22.71 acres

PIN(s): 0732340602, 0732347912, 0732343920, 0732354594, 0732352538, 0732249869, 0732256180, & 0732356305

Current Zoning: Rural Residential (RR)

Proposed Zoning: Planned Unit Development–Conditional Zoning (PUD-CZ)

Current 2045 Land Use Map: Medium Density Residential

If rezoned as proposed, the 2045 Land Use Map Designation will change to: High Density Residential

Town Limits: ETJ

Applicable Officially Adopted Plans:

The Board must state whether the project is consistent or inconsistent with the following officially adopted plans, if applicable. Applicable plans have a check mark next to them.

2045 Land Use Map
 Consistent Inconsistent Reason: _____

Apex Transportation Plan
 Consistent Inconsistent Reason: _____

Parks, Recreation, Open Space, and Greenways Plan
 Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ07 Chapel Ridge North PUD

Planning Board Meeting Date: October 10, 2022



Legislative Considerations:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1. *Consistency with 2045 Land Use Plan.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Plan.

Consistent Inconsistent Reason: _____

2. *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

Consistent Inconsistent Reason: _____

3. *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 *Supplemental Standards*, if applicable.

Consistent Inconsistent Reason: _____

4. *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

Consistent Inconsistent Reason: _____

5. *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ07 Chapel Ridge North PUD

Planning Board Meeting Date: October 10, 2022



6. *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

Consistent Inconsistent Reason: _____

7. *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

Consistent Inconsistent Reason: _____

8. *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

Consistent Inconsistent Reason: _____

9. *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

Consistent Inconsistent Reason: _____

10. *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ07 Chapel Ridge North PUD

Planning Board Meeting Date: October 10, 2022



Planning Board Recommendation:

Motion: To recommend approval as presented.

Introduced by Planning Board member: Keith Braswell

Seconded by Planning Board member: Steven Rhodes

Approval: the project is consistent with all applicable officially adopted plans and the applicable legislative considerations listed above.

Approval with conditions: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above, so the following conditions are recommended to be included in the project in order to make it fully consistent:

Denial: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above.

With 3 Planning Board Member(s) voting "aye"

With 3 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

Motion failed due to tie vote. See attached forms from the Planning Board members who voted "no". Ryan Akers was recused due to a conflict.

This report reflects the recommendation of the Planning Board, this the 10th day of October 2022.

Attest:



Reginald Skinner, Planning Board Chair

Dianne Khin Digitally signed by Dianne Khin
Date: 2022.10.10 17:38:29
-04'00'

Dianne Khin, Director of Planning and
Community Development

PLANNING BOARD REPORT TO TOWN COUNCIL
Dissenting Member Comments



Planning Board Member Name: Sarah Soh

Meeting Date: 10/10/2022

Rezoning # 22CZ07

Long Range Plan amendment(s) _____

Other _____

Reason(s) for dissenting vote:

The proposed project seems persuasive and promising to move Apex forward in updating and modernizing the region to make it pedestrian and transportation friendly, and considering the additional affordable housing units.

However, the proposed area change from medium density to high density seems out of context, scale and proportion to what is existing on the east side of townhomes and to the south of existing single dwellings on large parcel lots, esp. the total development size of the total project.

The drastic change of scale to rural to high density seems forced, unless all parcels are acquired. Lastly, there are no promising updates from WCPSS.

PLANNING BOARD REPORT TO TOWN COUNCIL
Dissenting Member Comments



Planning Board Member Name: Tim Royal

Meeting Date: 10/10/2022

Rezoning # 22CZ07 Chapel Ridge North PUD

Long Range Plan amendment(s) _____

Other _____

Reason(s) for dissenting vote:

Changing from the current future land use map of Medium Density to High Density.

Does not provide adequate buffers for remaining single family residential.

A more inclusive approach to this area is needed where a larger project may be proposed. This will help to avoid potential pockets where undeveloped single family areas may exist.

PLANNING BOARD REPORT TO TOWN COUNCIL
Dissenting Member Comments



Planning Board Member Name: Tina

Meeting Date: 10/10/2022

Rezoning # 22CZ07 Chapel Ridge North PUD

Long Range Plan amendment(s) _____

Other _____

Reason(s) for dissenting vote:

While the 2045 Land Use Map is fluid, we as a Town should have originally adopted the parcels as high density. Given that we did not, I oppose this rezoning application.

**TOWN OF APEX**POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426**PUBLIC NOTIFICATION
OF PUBLIC HEARINGS
CONDITIONAL ZONING #22C207
Chapel Ridge North PUD**

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: High Street District Development, Inc.

Authorized Agent: Joshua Dix

Property Addresses: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd

Acreage: ±22.71 acres

Property Identification Numbers (PINs): 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Current 2045 Land Use Map Designation: Medium Density Residential

If rezoned as proposed, the 2045 Land Use Map Designation will change to: High Density Residential

Existing Zoning of Properties: Rural Residential (RR)

Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Planning Board Public Hearing Date and Time: October 10, 2022 4:30 PM

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: <https://www.youtube.com/t/townofapexjov>.

If you are unable to attend, you may provide a written statement by email to public_hearing@apexnc.org or submit it to the clerk of the Planning Board, Jeri Pederson (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Planning Board vote. You must provide your name and address for the record. The written statements will be delivered to the Planning Board prior to their vote. Please include the Public Hearing name in the subject line.

A separate notice of the Town Council public hearing on this project will be mailed and posted in order to comply with State public notice requirements.

Vicinity Map:

Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.caldwellinc.com/bnmaps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/4172. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents on-line: <https://www.apexnc.org/DocumentCenter/View/38524>.

Dianne F. Khan, AICP
Director of Planning and Community Development

Published Dates: September 23 – October 10, 2022

- Page 498 -

Published Dates: September 23 – October 10, 2022



TOWN OF APEX
PO BOX 250
APEX, NORTH CAROLINA 27502
TELEFONO 919-269-3626

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ07
Chapel Ridge North PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.13 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante la Junta de Planificación de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: High Street District Development, Inc.

Agente autorizado: Joshua Dix

Dirección de las propiedades: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd
Superficie: ±22.71 acres

Números de identificación de las propiedades: 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Designación actual en el Mapa de Uso Territorial para 2045: Medium Density Residential

Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a: High Density Residential

Ordenamiento territorial existente de las propiedades: Rural Residential (RR)

Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública de la Junta de Planificación: 10 de octubre de 2022 4:30 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/live/nofafzsejgq>

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearings@apexnc.org, o presentarla a la secretaría de la Junta de Planificación, Jen Pederson (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación de la Junta de Planificación. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán a la Junta de Planificación antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

De conformidad con los requisitos estatales de notificaciones públicas, se enviará por correo y se publicará por separado una notificación de la audiencia pública del Consejo Municipal sobre este proyecto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.rankintec.gov/imaps>. Puede obtener más información sobre el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas, comuníquese con el Departamento de Planificación y Desarrollo Comunitario a través de los números de teléfono o los documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/478>.



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS CONDITIONAL ZONING #22CZ07 Chapel Ridge North PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: High Street District Development, Inc.

Authorized Agent: Joshua Dix

Property Addresses: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd

Acreage: ±22.71 acres

Property Identification Numbers (PINs): 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Current 2045 Land Use Map Designation: Medium Density Residential

If rezoned as proposed, the 2045 Land Use Map Designation will change to: High Density Residential

Existing Zoning of Properties: Rural Residential (RR)

Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Planning Board Public Hearing Date and Time: October 10, 2022 4:30 PM

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: <https://www.youtube.com/c/townofapexgov>.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the clerk of the Planning Board, Jeri Pederson (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Planning Board vote. You must provide your name and address for the record. The written statements will be delivered to the Planning Board prior to their vote. Please include the Public Hearing name in the subject line.

A separate notice of the Town Council public hearing on this project will be mailed and posted in order to comply with State public notice requirements.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighnc.gov/imaps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents on-line: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX

PO BOX 250
APEX, NORTH CAROLINA 27502
TELÉFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ07
Chapel Ridge North PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante la Junta de Planificación de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: High Street District Development, Inc.

Agente autorizado: Joshua Dix

Dirección de las propiedades: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd

Superficie: ±22.71 acres

Números de identificación de las propiedades: 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Designación actual en el Mapa de Uso Territorial para 2045: Medium Density Residential

Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a: High Density Residential

Ordenamiento territorial existente de las propiedades: Rural Residential (RR)

Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex

Cámara del Consejo, 2º piso

73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública de la Junta de Planificación: 10 de octubre de 2022 4:30 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la secretaria de la Junta de Planificación, Jeri Pederson (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación de la Junta de Planificación. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán a la Junta de Planificación antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

De conformidad con los requisitos estatales de notificaciones públicas, se enviará por correo y se publicará por separado una notificación de la audiencia pública del Consejo Municipal sobre este proyecto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.raleighnc.gov/imaps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP

Directora de Planificación y Desarrollo Comunitario



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice**
Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name: Conditional Zoning #22CZ07
Chapel Ridge North PUD
Project Location: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd and 1512 Clark Farm Rd
Applicant or Authorized Agent: Joshua Dix
Firm: High Street District Development, Inc.

This is to certify that I, as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on September 23, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300' of the land subject to notification. I further certify that I relied on information from the Wake County Tax Assessor and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.

10/5/2022
Date

Maiane F. Khun
Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Joshua Killian, a Notary Public for the above

State and County, this the 5 day of October, 202 2.



Joshua Killian
Notary Public

My Commission Expires: 6/17/2027



TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**PUBLIC NOTIFICATION
OF PUBLIC HEARINGS**
CONDITIONAL ZONING #22CZ07
Chapel Ridge North PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: High Street District Development, Inc.
Authorized Agent: Joshua Dix
Property Addresses: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd
Acres: 122.71 acres
Property Identification Numbers (PINs): 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.
Current 2045 Land Use Map Designation: Medium Density Residential
If rezoned as proposed, the 2045 Land Use Map Designation will change to: High Density Residential
Existing Zoning of Properties: Rural Residential (RR)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Comments received prior to the Planning Board public hearing will not be provided to the Town Council. Separate comments for the Town Council public hearing must be provided by the deadline specified below.

Town Council Public Hearing Date and Time: **October 25, 2022 6:00 PM**
You may attend the meeting in person or view the meeting through the Town's YouTube livestream at:
<https://www.youtube.com/c/townofapexgov>

If you are unable to attend, you may provide a written statement by email to public_hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighnc.gov/imap>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX
PO BOX 250
APEX, NORTH CAROLINA 27502
TELEFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ07
Chapel Ridge North PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

- Solicitante:** High Street District Development, Inc.
- Agente autorizado:** Joshua Dix
- Dirección de las propiedades:** 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd
- Superficie:** ±22.71 acres
- Números de identificación de las propiedades:** 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.
- Designación actual en el Mapa de Uso Territorial para 2045:** Medium Density Residential
- Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a:** High Density Residential
- Ordenamiento territorial existente de las propiedades:** Rural Residential (RR)
- Ordenamiento territorial propuesto para las propiedades:** Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

Fecha y hora de la audiencia pública del Consejo Municipal: 25 de octubre de 2022 6:00 P.M.
Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps Raleighnc.gov/maps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP
Directora de Planificación y Desarrollo Comunitario

Fechas de publicación: 3 de octubre - 25 de octubre



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS CONDITIONAL ZONING #22CZ07 Chapel Ridge North PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: High Street District Development, Inc.

Authorized Agent: Joshua Dix

Property Addresses: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd

Acreage: ±22.71 acres

Property Identification Numbers (PINs): 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Current 2045 Land Use Map Designation: Medium Density Residential

If rezoned as proposed, the 2045 Land Use Map Designation will change to: High Density Residential

Existing Zoning of Properties: Rural Residential (RR)

Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Comments received prior to the Planning Board public hearing will not be provided to the Town Council. Separate comments for the Town Council public hearing must be provided by the deadline specified below.

Town Council Public Hearing Date and Time: **October 25, 2022 6:00 PM**

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: <https://www.youtube.com/c/townofapexgov>.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighnc.gov/imaps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX

PO BOX 250
APEX, NORTH CAROLINA 27502
TELÉFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ07
Chapel Ridge North PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: High Street District Development, Inc.

Agente autorizado: Joshua Dix

Dirección de las propiedades: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd, and 1512 Clark Farm Rd

Superficie: ±22.71 acres

Números de identificación de las propiedades: 0732340602, 0732347912, 0732343920, 0732354594, 0732356305, 0732352538, 0732249869, & 0732256180.

Designación actual en el Mapa de Uso Territorial para 2045: Medium Density Residential

Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a: High Density Residential

Ordenamiento territorial existente de las propiedades: Rural Residential (RR)

Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex

Cámara del Consejo, 2º piso

73 Hunter Street, Apex, Carolina del Norte

Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

Fecha y hora de la audiencia pública del Consejo Municipal: 25 de octubre de 2022 6:00 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.raleighnc.gov/imaps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/38521>.

Dianne F. Khin, AICP

Directora de Planificación y Desarrollo Comunitario



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice**
Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name: Conditional Zoning #22CZ07
Chapel Ridge North PUD
Project Location: 1200, 1204, 1205, 1209, 1213, 1220, 1225 Chapel Ridge Rd and 1512 Clark Farm Rd
Applicant or Authorized Agent: Joshua Dix
Firm: High Street District Development, Inc.

This is to certify that I, as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on October 3, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300' of the land subject to notification. I further certify that I relied on information from the Wake County Tax Assessor and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.

10/3/2022
Date

Sharon Ikher
Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

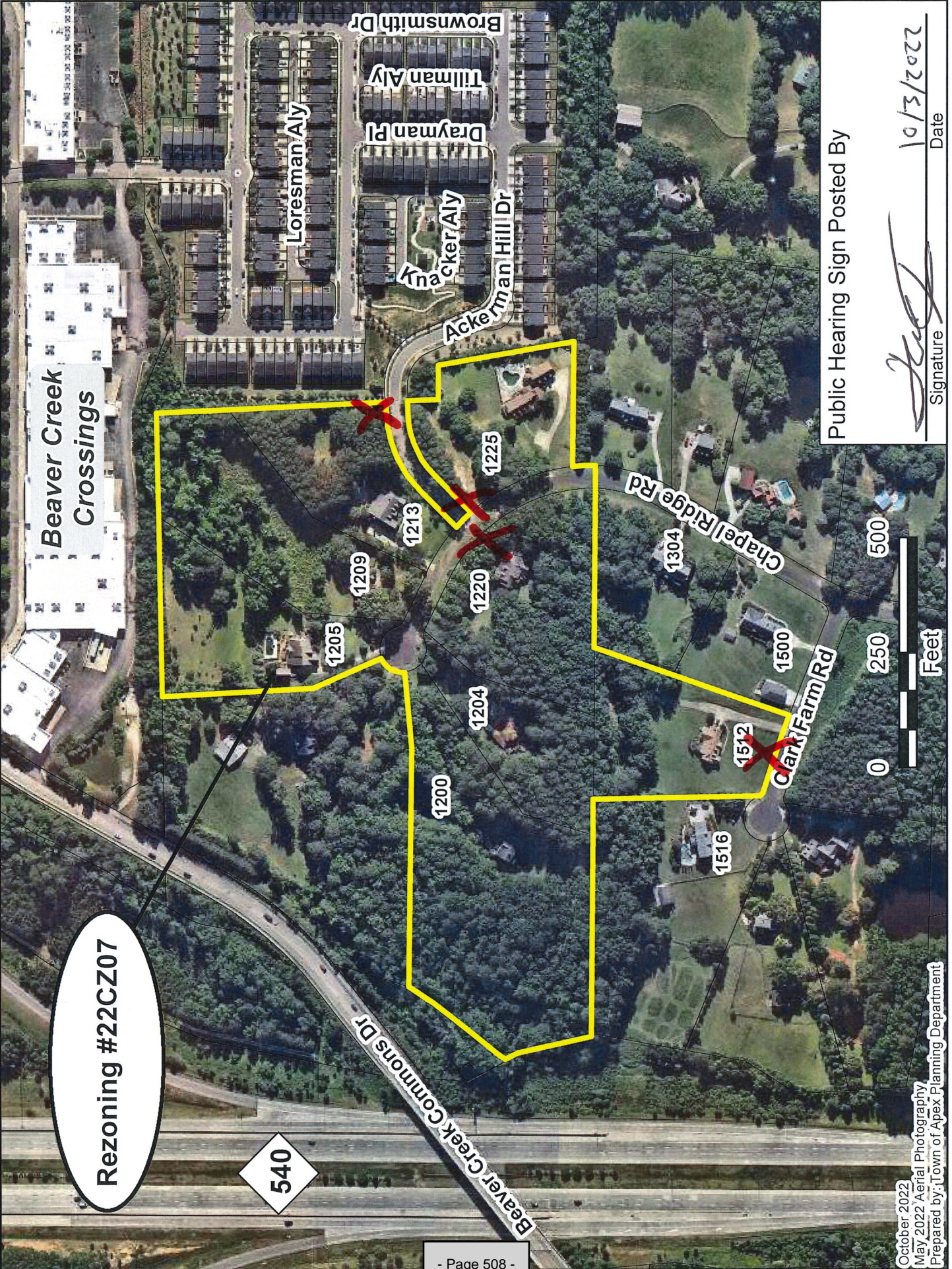
Sworn and subscribed before me, Joshua Killian, a Notary Public for the above

State and County, this the 3 day of October, 202 2.



Joshua Killian
Notary Public

My Commission Expires: 6 / 17 / 2027



Rezoning #22CZ07

540

Public Hearing Sign Posted By

[Signature]
Signature

10/3/2022
Date

October 2022
May 2022 Aerial Photography
Prepared by: Town of Apex Planning Department



Student Assignment
5625 Dillard Drive
Cary, NC, 27518
Email: studentassignment@wcpss.net

tel: (919) 431-7333
fax: (919) 694-7753

April 13, 2022

Dianne Khin, AICP
Director, Department of Planning and Community Development
Town of Apex
Dianne.Khin@apexnc.org

Dear Dianne,

The Wake County Public School System (WCPSS) Office of School Assignment received information about a proposed rezoning/development within the Town of Apex planning area. We are providing this letter to share information about WCPSS's capacity related to the proposal. The following information about the proposed rezoning/development was provided through the Wake County Residential Development Notification database:

- Date of application: March 1, 2022
- Name of development: 22CZ07 Chapel Ridge Apartments PUD
- Address of rezoning: 1200, 1204, 1205, 1209, 1220, & 1225 Chapel Ridge Rd; 1512 Clark Farm Rd
- Total number of proposed residential units: 370
- Type(s) of residential units proposed: Apartments

Based on the information received at the time of application, the Office of School Assignment is providing the following assessment of possible impacts to the Wake County Public School System:

- Schools at all grade levels within the current assignment area for the proposed rezoning/development are anticipated to have sufficient capacity for future students.
- Schools at the following grade levels within the current assignment area for the proposed rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated:
 - Elementary Middle High

The following mitigation of capacity concerns due to school construction or expansion is anticipated:

- Not applicable – existing school capacity is anticipated to be sufficient.
- School expansion or construction within the next five years is not anticipated to address concerns.
- School expansion or construction within the next five years may address concerns at these grade levels:
 - Elementary Middle High

Thank you for sharing this information with the Town of Apex Planning Board and Town Council as they consider the proposed rezoning/development.

Sincerely,
Glenn Carrozza

| Agenda Item | cover sheet

for consideration by the Apex Town Council

Item Type: PUBLIC HEARING

Meeting Date: October 25, 2022

Item Details

Presenter(s): Lauren Staudenmaier, Planner II

Department(s): Planning and Community Development

Requested Motion

Public Hearing and possible motion to approve Rezoning Application #22CZ09 Utley Farms PUD and Ordinance. The applicant, Thurm Bowen, KB Home, Inc. Carolinas Division, seeks to rezone approximately 56.59 acres from Wake County Residential-40 (R-40W) and Wake County Residential-80W (R-80W) to Planned Unit Development -Conditional Zoning (PUD-CZ). The proposed rezoning is located at 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road.

Approval Recommended?

The Planning and Community Development Department recommends approval.

The Planning Board held a public hearing on October 11, 2022 and unanimously recommended approval with the conditions offered by the applicant.

Item Details

The properties to be rezoned are identified as PINs 0710714834 and 0710736732.

Attachments

- Staff Report
- Vicinity Map
- Application
- Statement of Town Council and Ordinance



STAFF REPORT

Rezoning #22CZ09 Utley Farms PUD

October 25, 2022 Town Council Meeting



All property owners, tenants, and neighborhood associations within 300 feet of this rezoning have been notified per UDO Sec. 2.2.11 *Public Notification*.

BACKGROUND INFORMATION:

Location: 3720 Old US 1 Highway & 0 New Hill Olive Chapel Road
Applicant/Agent: Thurm Bowen, KB Home, Inc. Carolinas Division/Jeff Roach, Peak Engineering & Design, LLC.
Owners: Myrtle H. Horton, Helon Joy Wellons, & Ray E. Johnson

PROJECT DESCRIPTION:

Acreage: ±56.59 acres
PINs: 0710714834 & 0710736732
Current Zoning: Wake County Residential-40W (R-40W) & Wake County Residential-80W (R-80W)
Proposed Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ)
2045 Land Use Map: Low Density Residential & Low Density Residential/Office Employment
Town Limits: Currently in Wake County jurisdiction; to be annexed with rezoning

Adjacent Zoning & Land Uses:

	Zoning	Land Use
North:	Planned Unit Development-Conditional Zoning (PUD-CZ #18CZ17)	Single-family Residential (Belterra Subdivision)
South:	Wake County Residential-40W (R-40W)	Single-family Residential; Old US 1 Highway
East:	Wake County Residential-40W (R-40W); Mixed Office-Residential-Retail-Conditional Zoning (MORR-CZ #19CZ19)	Single-family Residential; Place of Worship and Cemetery
West:	Planned Unit Development-Conditional Zoning (PUD-CZ #13CZ30 & #18CZ05); Wake County Residential-40W (R-40W)	Single-family Residential (Country Acres, Jordan Pointe and Jordan Oaks Subdivisions)

EXISTING CONDITIONS:

The properties are situated on the north side of Old US 1 Highway and west of New Hill Olive Chapel Road. The properties are south of the Belterra subdivision and east of the Jordan Pointe subdivision. The northern property is vacant with existing vegetation and a stream that bisects the property from north to south. The southern property contains existing historic structures and residential structures, a stream that bisects the property from north to south, and existing vegetation.

NEIGHBORHOOD MEETING:

The applicant conducted a neighborhood meeting on April 27, 2022. The neighborhood meeting report is attached.

WCPSS Coordination:

A Letter of Impact from Wake County Public School System (WCPSS) was received for this rezoning and is included in the staff report packet. WCPSS indicates that elementary, middle, and high schools within the current assignment area for this rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated.

STAFF REPORT

Rezoning #22CZ09 Utley Farms PUD

October 25, 2022 Town Council Meeting



School expansion or construction within the next five years may address concerns at the elementary, middle, and high school grade level.

2045 LAND USE MAP:

The 2045 Land Use Map designates the subject properties as Low Density Residential and Low Density Residential/Office Employment. The proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) is consistent with those Land Use Map designations.

PLANNED UNIT DEVELOPMENT PLAN:

The applicant is proposing a Planned Unit Development Plan with uses and development standards as follows:

Permitted Uses:

The development will include residential uses. The Rezoned Lands may be used for, and only for, the uses listed below. The permitted uses are subject to the limitation and regulations stated in the UDO and any additional limitation or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

- Single-family
- Greenway
- Recreation facility, private
- Accessory apartment
- Park, active
- Park, passive
- Utility, minor

Proposed Design Controls:

Maximum Density: 2.0 units per acre

Maximum Number of units: 113 units

Minimum Lot Size: 6,000 sf

Maximum Built-Upon Area: 60%

Minimum Lot Width: 50 feet

Maximum Building Height: 36 feet, no more than 2 stories

Setbacks

	Proposed Minimum Setbacks	
Single-family	Front	10'
	Front (garage) (from sidewalk or back-of-curb where no sidewalk exists)	20'
	Side	5'
	Side (corner)	10'
	Rear	10'
	Building to buffer/RCA	10'
	Parking to buffer/RCA	5'
Private Recreation Facility	Front	10'
	Front (garage)	N/A
	Side	10'
	Side (corner)	10'

STAFF REPORT

Rezoning #22CZ09 Utley Farms PUD

October 25, 2022 Town Council Meeting



	Proposed Minimum Setbacks	
	Rear	10'
	Building to buffer/RCA	10'
	Parking to buffer/RCA	5'

Proposed RCA & Buffers

Per UDO Sec. 8.1.2.C *Size of the RCA*, this development is exempt from initially providing RCA since the proposed low density single-family development has a maximum density of two (2) dwelling units per gross acre. However, per UDO Sec. 7.2.5.B.8, if any mass grading is proposed in the single-family sections of the PUD, the development shall provide an additional five percent (5%) RCA.

Residential Buffers:

Perimeter Buffers:	UDO Required	Proposed
North (Belterra)	10' Type B	10' Type B
Northern boundary (along existing properties Miller, Vitek, & Burroughs)	20' Type B	10' Type B & 20' Type B
West (Jordan Pointe & Country Acres Lane)	10' Type B & 20' Type B	10' Type B
East (along existing properties, existing church, and cemetery)	20' Type B & 20' Type A	10' Type B
Old US 1 Highway	30' Type B	30' Type B
New Hill Olive Chapel Road	30' Type B	30' Type B

Adjacent property redevelopment buffer:

The buffer can be removed in those locations along the following parcels or portion of parcels if the Wellons property (identified as the "Future Development Area" within the PUD Drawings) is redeveloped in conjunction with the adjacent N/F Andrew Martin (PIN 0710-83-5242), the N/F Ralph Miller property (PIN 0710-83-0487), and/or the N/F Richard Vitek property (PIN 0710-72-4872) as the Wellons property is too narrow to develop independent of such properties.

ZONING CONDITIONS

The following conditions shall also apply:

- A) A maximum of 113 residential units shall be permitted upon the property.
- B) No covenant shall be placed on the property which prohibits accessory apartment as a use.
- C) All residential dwellings and any amenity constructed on the property shall provide solar conduit for the installation of rooftop solar panels.
- D) Stormwater controls for development shall be increased to the 25-year storm as provided for in this PUD.
- E) There shall not be any tree clearing, stormwater control measures (SCM), or other infrastructure in either zone of riparian buffers except for UDO permitted crossings and utilities.
- F) Signage shall be provided by any homeowner's association regarding the need to reduce pet waste and eliminate fertilizer near SCMs. The project shall install at least one (1) sign per SCM about not using fertilizer near an SCM drainage area to reduce pet waste and eliminate fertilizer near SCMs. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to amenity centers, sidewalks, greenways, or side paths.
- G) The project shall provide diverse and abundant pollinator sources and install pollinator-friendly



flora within SCM Planting areas.

- H) The project shall include plantings within perimeter buffers and along streetscapes; the selected species shall be native species chosen from the Apex Design & Development Manual or approved by Planning staff.
- I) Deciduous shade trees shall be planted along southern sides of building elevations and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- J) Evergreen trees shall be planted along northern elevations of buildings and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- K) A minimum of three (3) native hardwood tree species shall be planted throughout the development.
- L) The project shall increase biodiversity within the amenity area and recreational areas within the development by selecting and installing tree, shrub, and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall. Subject to Condition K above, no single species shall constitute more than 20% of the selected plants for each landscaping type (trees, shrubs and perennials.)
- M) The project shall include landscaping that requires less irrigation and chemical use by planting warm season grasses and drought tolerant species for drought-resistance within perimeter buffers, SCMs, and along streets.
- N) The exterior lighting for all non-residential buildings, parking lots, and amenity areas will consist of entirely of LED fixtures. The project shall install light timers, motion sensors, or other smart lighting technology for all lighting within the parking lots and private amenity areas.
 - a. The project within an amenity area shall use full cutoff LED fixtures that have a maximum color temperature of 3000K for all exterior lighting located within parking lot, private amenity areas, and building mounted fixtures on non-residential buildings.
- O) A minimum of three (3) pet waste stations shall be installed within the development located around the SCMs, play lawns, and gathering areas.
- P) A minimum 4kW solar PV system shall be installed on at least 3 homes within the development. All solar installation required by this condition shall be completed or under construction prior to 90% of the building permits being issued for the development. The lots on which these homes are located shall be identified on Master Subdivision Final Plat, which may be amended from time to time.
- Q) Of the permitted residential single family detached dwellings, at least two (2) restricted median-income affordable housing single family detached ownership units (Affordable Housing Units) shall be constructed on-site and sold at a mutually agreeable maximum affordable housing median-income ownership sales price (includes unit price and lot price) that is calculated based upon the one-hundred percent (100%) of the Raleigh, NC Metropolitan Statistical Area (MSA) Area Median Income (AMI) as most recently published by the U.S. Department of Housing and Urban Development (HUD). The Affordable Housing Units shall be occupied by households earning no more than one hundred percent (100% - Median-Income) of the Raleigh, NC MSA AMI, adjusted for family size as most recently published by HUD. The two (2) Affordable Housing Unit lots shall be identified on the Master Subdivision Final Plat, which may be amended from time to time. A restrictive covenant (i.e. lot reservation agreement) shall be recorded against the two (2) Affordable Housing Unit lots prior to the issuance of a building permit for such lots and a separate restrictive covenant (i.e. resale deed restriction) with a minimum affordability period of twenty (20) years shall be recorded against each of the Affordable Housing Units at purchase closing to memorialize the affordable housing terms and conditions of the approved zoning condition. Final



Affordable Housing Unit floor plan selection which includes the unit size and bedroom size will be at the discretion of the developer.

Architectural Standards

The proposed development offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Master Subdivision submittal. Except with respect to the existing historic home, the following conditions shall apply:

- A. Vinyl siding is not permitted; however, vinyl windows, decorative elements, and trim are permitted.
- B. Primary building materials shall be brick, stone, and fiber cement siding.
- C. Windows that are not recessed shall be trimmed. Windows shall vary in size and/or type.
- D. At least four of the following decorative features shall be used on each building: decorative shake, board and batten siding, decorative porch rails and posts, shutters, decorative functional foundation and roof vents, recessed windows, decorative windows, decorative brick or stone, decorative gables, decorative cornices, or metal roofing.
- E. A varied color palette shall be utilized throughout the development to include a minimum of three-color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
- F. The rear and side elevations of the units that can be seen from the right-of-way shall have trim around the windows.
- G. Front facing garage doors must have windows, decorative details, or carriage-style adornments.
- H. Entrances for units with front-facing garages shall have a prominent covered porch/stoop area leading to the front door.
- I. Porches constructed with a dwelling unit shall be a minimum of six feet (6') deep.
- J. The front façade of any front-loaded garage shall not protrude farther than one (1) foot forward of (i) the front façade of the dwelling unit, or (ii) the front porch of the dwelling unit, whichever is closer to the right-of-way from which the dwelling unit is addressed.

HISTORIC STRUCTURES

The North Carolina State Historic Preservation Office (SHPO) shows the properties are located within the New Hill Historic District and include the existing Utley-Horton Farm (Nommie Horton Farm – SHPO ID WA1098). In coordination with Capital Area Preservation, the PUD proposes to retain and preserve the historic home (in its current location) and two barns on the property (one relocation and one preservation).

NATURAL RESOURCE AND ENVIRONMENTAL DATA

The project is located within the Little Beaver Creek Basin and Cape Fear River Basin. The Town’s Watershed Protection Overlay District Map shows the site is within the Primary Watershed Protection Overlay District and contains FEMA designated 100-year floodplain.

PARKING

Parking for the development shall meet the requirements of UDO Section 8.3.



SIGNAGE

All signage for this PUD shall comply with Apex UDO Section 8.7 *Signs*.

PUBLIC FACILITIES:

The proposed PUD shall be designed to comply with the Town’s Sewer and Water Master Plan and Standards and Specifications. The development will be served water and sewer by the Town of Apex.

STORMWATER MANAGEMENT:

The PUD stormwater control devices shall be designed and constructed to exceed UDO standards so that the post development peak runoff rate shall be limited to the pre-development peak runoff rate for the 2-year, 10-year, and 25-year, 24-hour storm events. The development shall meet all stormwater management requirements for quality and quantity treatment in accordance with UDO Section 6.1.7.

APEX TRANSPORTATION PLAN/ACCESS and CIRCULATION:

The proposed PUD is consistent with the Apex Transportation Plan and Bicycle Pedestrian System Plan.

- **Potential Access Points:**

Potential Access Points shown on the Conceptual Site Plan / Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections can only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.

- **Transportation Improvements**

All proposed driveway access and improvements on state-maintained roadways are subject to NCDOT review and approval. Roadway improvements are subject to modification and final approval by the Town of Apex and NCDOT as part of the Master Subdivision Plan and Construction Document approval process. A Traffic Impact Analysis (TIA) has been performed as part of this PUD rezoning consistent with the Town’s standards for the same. Based upon the TIA and staff review, the following traffic improvements are proposed for this development:

Old US 1 and New Hill Olive Chapel Road/New-Hill Holleman Road:

- Developer shall construct an eastbound right turn lane with 175 feet of storage and appropriate deceleration length and taper. In the event there is insufficient right-of-way for this off-site transportation improvement, Developer shall use commercially reasonable efforts to acquire the right-of-way through good faith negotiations starting with an offer to the third party land owner(s) based upon an appraised value of the right-of-way to be acquired. In the event such negotiations are unsuccessful and the Town of Apex is unable or unwilling to assist Developer in acquiring the requisite right-of-way, Developer shall pay a fee-in-lieu in the amount of the appraised cost of the required right-of-way plus estimated construction cost of the turn lane.

Old US 1 and Site Driveways:

The Developer shall construct two access points on Old US 1 consisting of:

- Site Drive 1: A full-movement stop-controlled public street intersection approximately 1,200 feet west of the intersection of New Hill Olive Chapel Road, including an eastbound



left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.

- Site Drive 2: A full-movement stop-controlled public street intersection approximately 1,050 feet west of the intersection of Old US 1 and Site Drive 1, including an eastbound left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.

ENVIROMENTAL ADVISORY BOARD:

The Apex Environmental Advisory Board (EAB) held a pre-application meeting for this rezoning on April 21, 2022. The zoning conditions suggested by the EAB are listed below along with the applicant’s response to each condition.

EAB Suggested Condition	Applicant’s Response
Recommend that all homes be pre-wired for solar PV systems	Added
Recommend the storm water management system provide for the minimum 25-year storm with preference for managing the 100-year storm	Added
Twenty homes each have a solar PV system of minimum 4kw (about 12 panels)	Added; zoning condition references at least three (3) homes.
Increase design storm pre- and post-attenuation requirement to the 25-year storm	Added
Add a permit condition which does not allow for tree clearing, stormwater control measures (SCM), or infrastructure in either zone of the riparian buffer	Added
Install signage near environmental sensitive areas in order to: <ul style="list-style-type: none"> o Reduce pet waste near SCM drainage areas o Eliminate fertilizer near SCM drainage areas 	Added
Plant trees as designed for efficiency <ul style="list-style-type: none"> o Plant deciduous shade trees on southern side of buildings o Plant evergreen trees as a windbreak on northern side of buildings 	Added
Increase biodiversity <ul style="list-style-type: none"> o Plant pollinator-friendly flora o Plant native flora (Refer to the Apex Design & Development Manual for approved native species) 	Added
Increase landscaping that requires less irrigation and chemical use <ul style="list-style-type: none"> o Plant warm season grasses for drought-resistance 	Added
Increase the number of native hardwood tree species planted to 3	Added
Add information signage or other marking at the boundary of lots when they are adjacent to a wooded or natural condition resource conservation area (RCA) indicating that the area beyond the sign is RCA and is not to be disturbed	Not added
Install pet waste stations in neighborhoods	Added
Include International Dark Sky Association compliance standards <ul style="list-style-type: none"> o Outdoor lighting shall be shielded in a way that focuses lighting to the ground o Lighting that minimizes the emission of blue light to reduce glare shall be used 	Added

STAFF REPORT

Rezoning #22CZ09 Utley Farms PUD

October 25, 2022 Town Council Meeting



EAB Suggested Condition	Applicant's Response
○ Lighting with a color temperature of 3000K or less shall be used for outside installations	

PARKS, RECREATION, AND CULTURAL RESOURCES ADVISORY COMMISSION:

The Parks, Recreation, and Cultural Resources Advisory Commission reviewed the Utley Farms PUD project at their August 31, 2022 meeting. The Commission made a recommendation for a fee-in-lieu of dedication for 122 single-family detached units. The current 2022 rate of \$3,753.89 per single family detached unit would be deposited with the Town at the time the first final subdivision plat is approved for the units within each phase.

PLANNING BOARD RECOMMENDATION:

The Planning Board held a public hearing on October 10, 2022 and unanimously recommended approval with conditions as proposed by the applicant.

PLANNING STAFF RECOMMENDATION:

Planning staff recommends approval of Rezoning #22CZ09 Utley Farms PUD as proposed by the applicant.

ANALYSIS STATEMENT OF THE REASONABLENESS OF THE PROPOSED REZONING:

This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness, and effect on public interest:

The 2045 Land Use Map designates the subject properties as Low Density Residential and Low Density Residential/Office Employment. The proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) is consistent with that Land Use Map designation.

Approval of the proposed rezoning is reasonable and in the public interest because it will allow development for single-family residential uses in a manner to be generally consistent with the surrounding properties. The proposed rezoning also provides additional environmental conditions and a minimum of two affordable housing units.

PLANNED UNIT DEVELOPMENT DISTRICT AND CONDITIONAL ZONING STANDARDS:

Standards

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments.

1. *Planned Unit Development (PUD-CZ) District*

In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:

a) *Development parameters*



- (i) The uses proposed to be developed in the PD Plan for PUD-CZ are those uses permitted in Sec. 4.2.2 *Use Table*.
 - (ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely non-residential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.
 - (iii) The dimensional standards in Sec. 5.1.3 *Table of Intensity and Dimensional Standards, Planned Development Districts* may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.
 - (iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details*, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.
 - (v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-de-sac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.
 - (vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.
 - (vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.
- b) *Off-street parking and loading*. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.3 *Off-Street Parking and Loading*, except that variations from these standards may be permitted if a comprehensive parking and loading plan for the PUD-CZ is submitted as part of the PD Plan that is determined to be suitable for the PUD-CZ, and generally consistent with the intent and purpose of the off-street parking and loading standards.
- c) *RCA*. The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 *Resource Conservation Area*, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than 10% provided that the PD Plan for PUD-CZ includes one or more of the following:
- (i) A non-residential component;
 - (ii) An overall density of 7 residential units per acre or more; or
 - (iii) Environmental measures including but not limited to the following:



- a. The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on a certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to 90% of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;
 - b. The installation of a geothermal system for a certain number or percentage of units within the development; or
 - c. Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).
- d) *Landscaping.* The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.2 *Landscaping, Buffering and Screening*, except that variations from these standards may be permitted where it is demonstrated that the proposed landscaping sufficiently buffers uses from each other, ensures compatibility with land uses on surrounding properties, creates attractive streetscapes and parking areas and is consistent with the character of the area. In no case shall a buffer be less than one half of the width required by Sec. 8.2 or 10 feet in width, whichever is greater.
- e) *Signs.* Signage in the PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.7 *Signs*, except that the standards can be varied if a master signage plan is submitted for review and approval concurrent with the PD plan and is determined by the Town Council to be suitable for the PUD-CZ and generally consistent with the intent and purpose of the sign standards of the UDO. The master signage plan shall have design standards that are exceptional and provide for higher quality signs than those in routine developments and shall comply with Sec. 8.7.2 *Prohibited Signs*.
- f) *Public facilities.* The improvements standards and guarantees applicable to the public facilities that will serve the site shall comply with Article 7: *Subdivision* and Article 14: *Parks, Recreation, Greenways, and Open Space*.
- (i) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site transportation circulation system. The on-site transportation circulation system shall be integrated with the off-site transportation circulation system of the Town. The PD Plan for PUD-CZ shall be consistent with the Apex Transportation Plan and the *Town of Apex Standard Specifications and Standard Details* and show required right-of-way widths and road sections. A Traffic Impact Analysis (TIA) shall be required per Sec. 13.19.
 - (ii) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site system of potable water and wastewater lines that can accommodate the proposed development, and are efficiently integrated into off-site potable water and wastewater public improvement plans. The PD Plan shall include a proposed water and wastewater plan.
 - (iii) Adequate off-site facilities for potable water supply, sewage disposal, solid waste disposal, electrical supply, fire protection and roads shall be planned and programmed for the development proposed in the PD Plan for PUD-CZ, and the development is conveniently located in relation to schools and police protection services.
 - (iv) The PD Plan shall demonstrate compliance with the parks and recreation requirements of Sec. Article 14: *Parks, Recreation, Greenways, and Open Space* and Sec. 7.3.1 *Privately-owned Play Lawns* if there is a residential component in the PUD-CZ.
- g) *Natural resource and environmental protection.* The PD Plan for PUD-CZ demonstrates compliance with the current regulatory standards of this Ordinance related to natural resource



and environmental protection in Sec. 6.1 *Watershed Protection Overlay District*, Sec. 6.2 *Flood Damage Prevention Overlay District*, and Sec. 8.1 *Resource Conservation*.

- h) *Storm water management*. The PD Plan shall demonstrate that the post-development rate of on-site storm water discharge from the entire site shall not exceed pre-development levels in accordance with Sec. 6.1.7 of the UDO.
- i) *Phasing*. The PD Plan for PUD-CZ shall include a phasing plan for the development. If development of the PUD-CZ is proposed to occur in more than one phase, then guarantees shall be provided that project improvements and amenities that are necessary and desirable for residents of the project, or that are of benefit to the Town, are constructed with the first phase of the project, or, if this is not possible, then as early in the project as is technically feasible.
- j) *Consistency with 2045 Land Use Map*. The PD Plan for PUD-CZ demonstrates consistency with the goals and policies established in the Town's 2045 Land Use.
- k) *Complies with the UDO*. The PD Plan for PUD-CZ demonstrates compliance with all other relevant portions of the UDO.

CONDITIONAL ZONING STANDARDS:

The Town Council shall find the PUD-CZ designation demonstrates compliance with the following standards.
2.3.3.F:

Legislative Considerations

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

- 1) *Consistency with 2045 Land Use Map*. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.
- 2) *Compatibility*. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
- 3) *Zoning district supplemental standards*. The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 *Supplemental Standards*, if applicable.
- 4) *Design minimizes adverse impact*. The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.
- 5) *Design minimizes environmental impact*. The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
- 6) *Impact on public facilities*. The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
- 7) *Health, safety, and welfare*. The proposed Conditional Zoning (CZ) District use's effect on the health,



safety, or welfare of the residents of the Town or its ETJ.

- 8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
- 9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
- 10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.



Public Works & Transportation

September 9, 2022

Danielle Troutman, E.I.
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609

Subject: **Staff summary and comments for the Utlely Farms TIA (04/29/2022).**

Ms. Troutman:

Please review the following summary of my comments and recommendations. You may schedule a meeting with me and your client to discuss at your convenience.

Study Area

The TIA includes analysis of two (2) new full movement access driveways off of Old US Hwy 1 as well as the intersection of Old US Hwy 1 and New Hill Olive Chapel Road/New Hill Holleman Road.

Trip Generation

The proposed development is proposed to consist of 140 single-family detached homes. The projected trip generation is approximately 26 new trips entering and 75 new trips exiting the site during the weekday A.M. peak hour and 86 new trips entering and 50 new trips exiting the site during the weekday P.M. peak hour. The development is expected to add a total of 1,380 new weekday trips to the adjacent roadway network.

Background traffic

Background traffic consists of 3% annual background traffic growth from base year (2022) compounded to projected build out year (2026), and traffic from the following approved developments:

- Gracewood PUD
- Belterra
- Olive Ridge
- Jordan Manors (20% of remaining build-out traffic)

TOWN OF APEX

The Peak of Good Living

PO Box 250 Apex, NC 27502 - Page 523 - 919-3400 | www.apexnc.org

Trip Distribution and Assignment

Trip distribution to and from the development is as follows:

- 10% to/from the north via New Hill Olive Chapel Road
- 50% to/from the south via New Hill-Holleman Road
- 35% to/from the east via Old US Hwy 1
- 5% to/from the west via Old US Hwy 1

Traffic Capacity Analysis and Recommendations

Level of Service (LOS) is a grade of A through F assigned to an intersection, approach, or movement to describe how well or how poorly it operates. LOS A through D is considered acceptable for peak hour operation. LOS E or F describes potentially unacceptable operation and developers may be required to mitigate their anticipated traffic impact to improve LOS based on the Apex Unified Development Ordinance (UDO).

Tables 1 through 3 describe the levels of service (LOS) for the scenarios analyzed in the TIA. "NA" is shown when the scenario does not apply. The scenarios are as follows:

- **Existing 2022** - Existing year 2022 traffic.
- **No Build 2026** - Projected year (2026) with background growth and background improvements.
- **Build 2026** - Projected year (2026) with background traffic, background improvements, site build-out traffic, and recommended improvements.

Old US Hwy 1 and Site Drive 1

Table 1: Weekday A.M. / P.M. Unsignalized Peak Hour Levels of Service Old US Hwy 1 and Site Drive 1	
	Build 2026
<u>Overall</u>	<u>NA</u>
<i>Eastbound (Old US Hwy 1)</i>	<i>A / A¹</i>
<i>Westbound (Old US Hwy 1)</i>	<i>NA</i>
<i>Southbound (Site Drive 1)</i>	<i>C / C²</i>

1. Level of service for major-street left turning vehicles
2. Level of service for stop controlled minor-street

TIA recommendations:

- The TIA recommends the construction of a full movement stop-controlled southbound approach with a single lane of ingress and a single lane of egress on Old US Hwy 1, approximately 1,200 feet west of the intersection of Old US Hwy 1 and New Hill Olive Chapel Road/New Hill Holleman Road. Additionally, the TIA recommends construction of a westbound right turn lane with 50 feet of storage and appropriate deceleration length and taper as it's warranted per NCDOT turn lane warrants. Alternatively, the TIA recommends construction of an eastbound left turn lane with 50 feet of storage and appropriate deceleration length and taper. Even though it's not warranted per NCDOT turn lane warrants, it's common safety practice to provide a left turn lane on rural type major thoroughfares with higher speed limits.

Apex staff recommendations:

- Apex staff recommends providing an eastbound left turn lane at Site Drive 1 in lieu of the westbound right turn lane, as recommended in the TIA.
- With the recommended improvements the stop-controlled minor street approach will operate at LOS C during both peak hours. Queues are projected to be minimal.

Old US Hwy 1 and Site Drive 2

Table 2: Weekday A.M. / P.M. Unsignalized Peak Hour Levels of Service Old US Hwy 1 and Site Drive 2	
	Build 2026
Overall	<u>NA</u>
Eastbound (Old US Hwy 1)	A / A ¹
Westbound (Old US Hwy 1)	NA
Southbound (Site Drive 2)	C / C ²

1. Level of service for major-street left turning vehicles
2. Level of service for stop controlled minor-street

TIA recommendations:

- The TIA recommends the construction of a full movement stop-controlled southbound approach with a single lane of ingress and a single lane of egress on Old US Hwy 1, approximately 1,050 feet west of the intersection of Old US Hwy 1 and Site Drive 1. Additionally, the TIA recommends construction of a westbound right turn lane with 50 feet of storage and appropriate deceleration length and taper as it's warranted per NCDOT turn lane warrants. Alternatively, the TIA recommends construction of an eastbound left turn lane with 50 feet of storage and appropriate deceleration length and taper. Even though it's not warranted per NCDOT turn lane warrants, it's common safety practice to provide a left turn lane on rural type major thoroughfares with higher speed limits.

Apex staff recommendations:

- Apex staff recommends providing an eastbound left turn lane at Site Drive 2 in lieu of the westbound right turn lane, as recommended in the TIA.
- With the recommended improvements the stop-controlled minor street approach will operate at LOS C during both peak hours. Queues are projected to be minimal.

Table 3: Weekday A.M. / P.M. Signalized Peak Hour Levels of Service Old US 1 and New Hill Olive Chapel Road/New Hill Holleman Road					
	Existing 2022	No Build 2026 w/out Gracewood	Build 2026 w/out Gracewood	No Build 2026 w/ Gracewood	Build 2026 w/ Gracewood
<u>Overall</u>	<u>B / B</u>	<u>C / F</u>	<u>C / E</u>	<u>D / E</u>	<u>D / E</u>
<i>Eastbound (Old US 1)</i>	<i>B / B</i>	<i>C / B</i>	<i>C / C</i>	<i>D / E</i>	<i>E / E</i>
<i>Westbound (Old US 1)</i>	<i>B / B</i>	<i>B / C</i>	<i>B / F</i>	<i>D / D</i>	<i>D / E</i>
<i>Northbound (New Hill Holleman Road)</i>	<i>B / B</i>	<i>C / F</i>	<i>C / F</i>	<i>D / D</i>	<i>D / D</i>
<i>Southbound (New Hill Olive Chapel Road)</i>	<i>B / B</i>	<i>D / E</i>	<i>C / C</i>	<i>D / F</i>	<i>D / F</i>

TIA recommendations:

- The TIA recommends that an eastbound right turn lane with 175 feet of storage and appropriate deceleration length and taper be constructed to mitigate traffic impacts by the development. This recommendation was a result of a TIA Addendum submitted by the Engineer. The Addendum also notes that this length is shorter than the NCDOT recommendation of 225 feet of eastbound right turn storage. Based on Synchro and SimTraffic analysis the 175 feet of storage capacity is projected to adequately meet the right turn queue demand for this movement.
- It should be noted that previously the Gracewood development has also committed to constructing the following improvements at this intersection:
 - Eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.
 - Northbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
 - Southbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
 - Southbound right-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.

Apex staff recommendations:

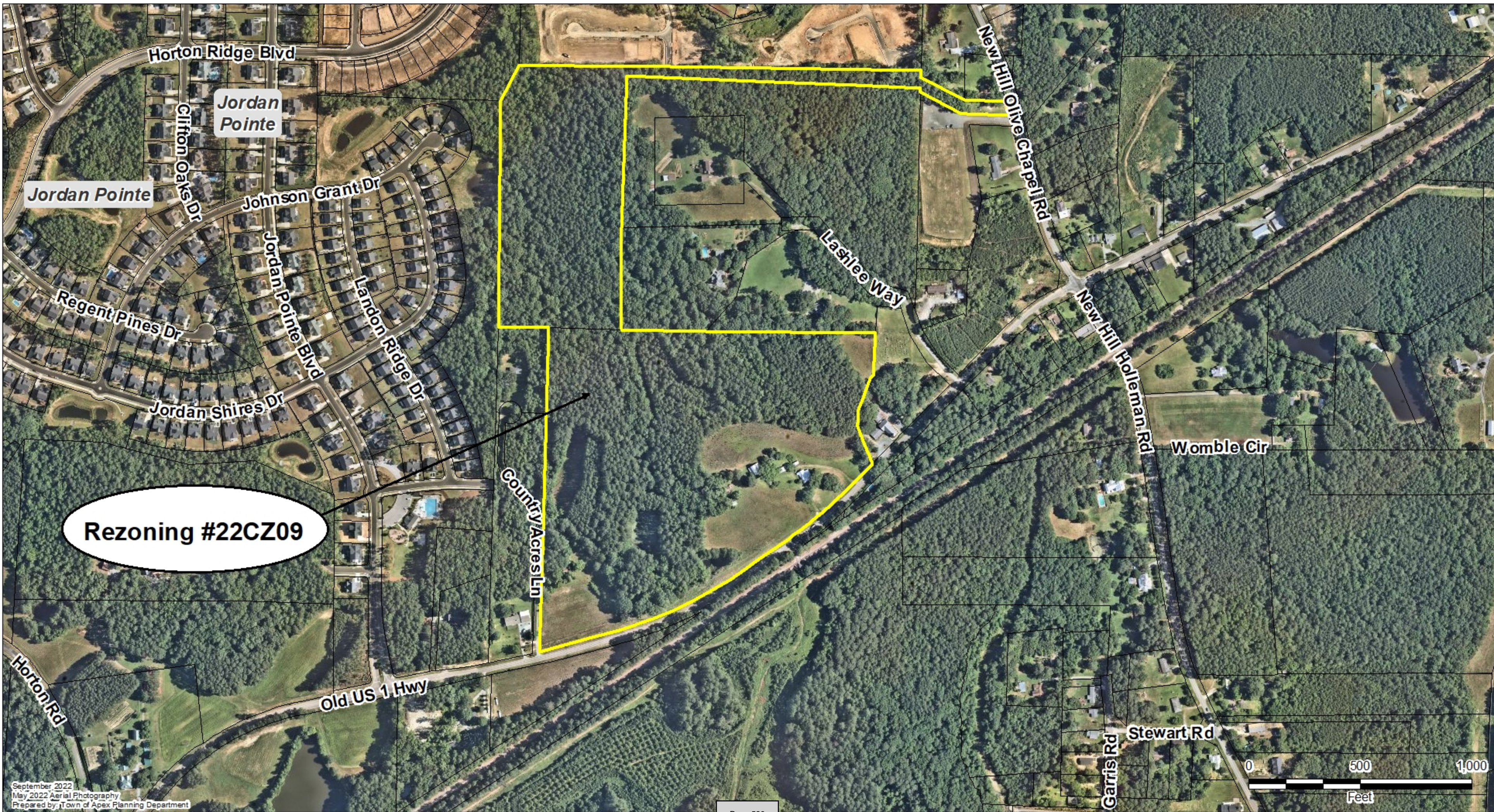
- Apex staff concurs with the recommendation in the TIA. The 175-foot long eastbound right turn storage lane mitigates traffic impacts of the development at this intersection per the UDO. It should be noted that this intersection is still projected to operate with long delays and queues in the PM peak hour in the build condition without the improvements committed by Gracewood. Additional geometric improvements committed by the Gracewood development will further improve traffic operations at this intersection.

Please coordinate with the NCDOT District Engineer's Office concerning recommended improvements. Town staff will be available for meetings with NCDOT staff to discuss improvements on state maintained roadways as needed.

Sincerely,

A handwritten signature in cursive script, appearing to read "Serge Grebenschikov".

Serge Grebenschikov, P.E.
Traffic Engineer
919-372-7448



Rezoning #22CZ09

PLANNED UNIT DEVELOPMENT APPLICATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Application #: 22CZ09 Submittal Date: 5/2/2022
Fee Paid: \$ Check #: _____

PETITION TO AMEND THE OFFICIAL ZONING DISTRICT MAP

Project Name: Utley Farms
Address(es): 3720 Old US 1 Highway (Horton) & 0 New Hill Olive Chapel Rd (Wellons)
PIN(s) 0710-71-4834 & 0710-73-6732

Current Zoning: R-40W & R-80W Proposed Zoning: PUD-CZ Acreage: 56.59
Current 2045 LUM Designation: Low Density Residential and Low Density/Office Employment

Is the proposed rezoning consistent with the 2045 LUM Classification(s)? Yes No

If any portion of the project is shown as mixed use (3 or more stripes on the 2045 Land Use Map) provide the following:

Area classified as mixed use:	Acreage:	<u>N/A</u>
Area proposed as non-residential development:	Acreage:	<u>N/A</u>
Percent of mixed use area proposed as non-residential:	Percent:	<u>N/A</u>

Applicant Information

Name: KB Home, Inc. - Carolinas Division (attn: Thurm Bowen)
Address: 4506 S. Miami Blvd #100
City: Durham State: NC Zip: 27703
Phone: (919) 768-7976 E-mail: rtbowen@kbhome.com

Owner Information

Name: See attached
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ E-mail: _____

Agent Information

Name: Peak Engineering & Design, PLLC (attn: Jeff Roach, P.E.)
Address: 1125 Apex Peakway
City: Apex State: NC Zip: 27502
Phone: (919) 439-0100 E-mail: jroach@peakengineering.com
Other contacts: Jason Barron - Morningstar Law Group (jbarron@morningstarlawgroup.com)

UTLEY FARMS PUD

Property Owner – Exhibit ‘A’

Lot No.	Property Owner	Contact Information	Property Address	PIN	Real Estate ID (REID)	DB/Pg Reference	Acreage (acres)	Current Zoning
1	Horton, Myrtle H.	P.O. Box 312 New Hill, NC 27560-0312	3720 Old US 1 Highway	0710-71-4834	0033299	DB 7883 Pg 737	43.27 (39.84)	R-40W
2	Wellons, Helon Joy Johnson, Ray E.	400 Johnson Farm Road New Hill, NC 27562-8839	0 New Hill Olive Chapel Road	0710-73-6732	0043207	DB 2367 Pg 693	17.96	R-40W R/80W

AREA TOTAL: 61.24 acres
 AREA TOTAL (MINUS R/W): 58.89 acres
 FINAL ZONING AREA: 56.59 acres

Applicant and Owners’ Representative:

Mr. Thurm Bowen & Mr. Roman Acosta
 KB Home, Inc. (Carolinas Division)
 4506 S. Miami Blvd #100
 Durham, NC 27703
 (919) 768-7976 / (919) 768-7972
rtbowen@kbhome.com / racosta@kbhome.com

Civil Engineer and Applicant’s Representative

Mr. Jeff Roach, P.E. - Peak Engineering & Design, PLLC
 1125 Apex Peakway
 Apex, NC 27502
 (919) 439-0100
jroach@peakengineering.com

PLANNED UNIT DEVELOPMENT APPLICATION

Application #: 22C22CZ09 /09

Submittal Date: 5/2/22

PLANNED UNIT DEVELOPMENT DISTRICT STANDARDS:

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town’s adopted land development regulations for routine developments. The PD text and plan should demonstrate how the standards of Sec. 2.3.4.F are met by the proposed rezoning.

LEGISLATIVE CONSIDERATIONS - CONDITIONAL ZONING

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest. Use additional pages as needed.

1) *Consistency with 2045 Land Use Map.* The proposed Conditional Zoning (CZ) District use’s appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.

Answered within the PD Text document.

2) *Compatibility.* The proposed Conditional Zoning (CZ) District use’s appropriateness for its proposed location and compatibility with the character of surrounding land uses.

Answered within the PD Text document.

3) *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use’s compliance with Sec 4.4 *Supplemental Standards*, if applicable.

Answered within the PD Text document.

PETITION PROCESS INFORMATION

4) *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use’s minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

Answered within the PD Text document.

5) *Design minimizes environmental impact.* The proposed Conditional Zoning District use’s minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

Answered within the PD Text document.

6) *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use’s avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

Answered within the PD Text document.

7) *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use’s effect on the health, safety, or welfare of the residents of the Town or its ETJ.

Answered within the PD Text document.

8) *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

Answered within the PD Text document.

9) *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

Answered within the PD Text document.

10) *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

Answered within the PD Text document.

DEVELOPMENT NAME APPROVAL APPLICATION

Application #: 22CZ09 Submittal Date: 5/2/22

Proposed Subdivision/Development Information

Description of location: north side of Old US 1 Highway west of New Hill Baptist Church & Cemetery
Nearest intersecting roads: Old US 1 Highway west of New Hill and west of Lashlee Lane
Wake County PIN(s): 0710-71-4834 (43.28 acres) & 0710-73-6732 (17.96 acres)
Township: Buckhorn Township

Contact Information (as appropriate)

Contact person: Jeff Roach, P.E. (Peak Engineering & Design, PLLC)
Phone number: (919) 439-0100 Fax number: N/A
Address: 1125 Apex Peakway, Apex, NC 27502
E-mail address: jroach@peakengineering.com
Owner: See attached documents
Phone number: _____ Fax number: _____
Address: _____
E-mail address: _____

Proposed Subdivision/Development Name

1st Choice: Utlely Farms
2nd Choice (Optional): _____

Town of Apex Staff Approval:

Town of Apex Planning Department Staff Date

UTLEY FARMS PUD

Property Owner – Exhibit ‘A’

Lot No.	Property Owner	Contact Information	Property Address	PIN	Real Estate ID (REID)	DB/Pg Reference	Acreage (acres)	Current Zoning
1	Horton, Myrtle H.	P.O. Box 312 New Hill, NC 27560-0312	3720 Old US 1 Highway	0710-71-4834	0033299	DB 7883 Pg 737	43.27 (39.84)	R-40W
2	Wellons, Helon Joy Johnson, Ray E.	400 Johnson Farm Road New Hill, NC 27562-8839	0 New Hill Olive Chapel Road	0710-73-6732	0043207	DB 2367 Pg 693	17.96	R-40W R/80W

AREA TOTAL: 61.24 acres
 AREA TOTAL (MINUS R/W): 58.89 acres
 FINAL ZONING AREA: 56.59 acres

Applicant and Owners’ Representative:

Mr. Thurm Bowen & Mr. Roman Acosta
 KB Home, Inc. (Carolinas Division)
 4506 S. Miami Blvd #100
 Durham, NC 27703
 (919) 768-7976 / (919) 768-7972
rtbowen@kbhome.com / racosta@kbhome.com

Civil Engineer and Applicant’s Representative

Mr. Jeff Roach, P.E. - Peak Engineering & Design, PLLC
 1125 Apex Peakway
 Apex, NC 27502
 (919) 439-0100
jroach@peakengineering.com

UTLEY FARMS

PUD ZONING DOCUMENTS

MYRTLE H. HORTON PROPERTY

TOWN OF APEX UTILITIES OFFER AND AGREEMENT

Application #: _____

Submission Date: _____

**Town of Apex
73 Hunter Street
P.O. Box 250 Apex, NC 27502
919-249-3400**

WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

Utlely Farms (Horton and Wellons properties)

(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer & Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

_____, the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.

Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

ACCEPTED:

CUSTOMER: _____

TOWN OF APEX

BY: [Signature] For
Authorized Agent PROPERTY OWNERS

BY: _____
Authorized Agent

DATE: 4/26/2022

DATE: _____

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

Myrtle Holt Horton is the owner* of the property for which the attached application is being submitted:

- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 3720 Old US 1 (04710-71-4834)

The agent for this project is: Peak Engineering & Design, PLLC

I am the owner of the property and will be acting as my own agent

Agent Name: Jeff Roach, P.E.

Address: 1125 Apex Peakway, Apex, NC 27502

Telephone Number: (919) 439-0100

E-Mail Address: jroach@peakengineering.com

Signature(s) of Owner(s)*

Myrtle Holt Horton

Myrtle Holt Horton

Type or print name

4-27-22

Date

Type or print name

Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: _____ Submittal Date: _____

The undersigned, Myrtle Holt Horton (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

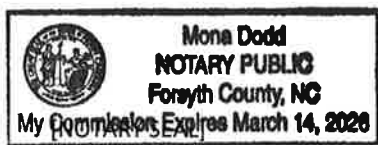
1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at 3720 Old US 1 Highway, New Hill, NC and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated 6/22/2012, and recorded in the Wake County Register of Deeds Office on 6/22/2012, in Book 13-E Page 2029.
4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).
5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on 6/22/2012, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on 6/22/2012, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the 27 day of April, 2022.

x Myrtle Holt Horton (seal)
Myrtle Holt Horton
Type or print name

STATE OF NORTH CAROLINA
COUNTY OF Forsyth

I, the undersigned, a Notary Public in and for the County of Forsyth, hereby certify that Myrtle Holt Horton, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's Myrtle Holt Horton, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.



Mona Dodd
Notary Public
State of North Carolina
My Commission Expires: March 14, 2026

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #:

Submittal Date:

Insert legal description below.

BEING THE OUTER BOUNDARY OF 2 PARCELS; ONE NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON (PIN 0710-73-6732) AND THE OTHER NOW OR FORMERLY OF MYRTLE H. HORTON (PIN 0710-71-4834), EXCLUDING THAT PORTION OF THE MYRTLE H. HORTON PARCEL LYING TO THE SOUTH OF OLD U.S. HIGHWAY 1, LOCATED IN THE TOWN OF NEW HILL, BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 3/4" IRON PIPE FOUND ON THE NORTHEASTERN CORNER OF THE PROPERTY NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON AND THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, SAID IRON BEING THE TRUE POINT OF BEGINNING AND HAVING NORTH CAROLINA STATE PLAIN COORDINATES OF N= 703,604.52' AND E= 2,018,799.66'; THENCE, FROM THE POINT OF BEGINNING AND WITH THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, S14°25'18"E A DISTANCE OF 66.83 FEET TO A 5/8" IRON REBAR FOUND; THENCE, LEAVING SAID RIGHT OF WAY, N88°11'18"W A DISTANCE OF 188.21 FEET TO A 5/8" IRON REBAR FOUND; THENCE N88°11'18"W A DISTANCE OF 25.93 FEET TO A 3/4" IRON PIPE SET; THENCE, N62°24'56"W A DISTANCE OF 207.03 FEET TO A 3/4" IRON PIPE FOUND; THENCE, N87°31'49"W A DISTANCE OF 1,326.61 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S00°29'51"W A DISTANCE OF 657.49 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, S00°28'07"W A DISTANCE OF 459.96 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE, S88°54'39"E A DISTANCE OF 376.22 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE S88°54'39"E A DISTANCE OF 760.21 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°27'54"W A DISTANCE OF 193.23 FEET TO A 2" IRON PIPE FOUND; THENCE S40°29'33"W A DISTANCE OF 39.06 FEET TO A 3/4" IRON PIPE SET; THENCE, S20°02'10"W A DISTANCE OF 148.77 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°26'24"W A DISTANCE OF 74.66 FEET TO A 1" IRON PIPE FOUND; THENCE, S21°56'17"E A DISTANCE OF 90.03 FEET TO A 3/4" IRON PIPE SET; THENCE, S21°56'17"E A DISTANCE OF 82.07 FEET TO A 1/2" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, WITH SAID RIGHT OF WAY, S44°08'00"W A DISTANCE OF 57.11 FEET TO A 3/4" IRON PIPE SET; THENCE S04°26'41"W A DISTANCE OF 47.21 FEET TO A COMPUTED POINT IN THE CENTERLINE OF OLD US HIGHWAY 1; THENCE, WITH SAID CENTERLINE, S44°45'01"W A DISTANCE OF 117.34 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S46°50'07"W A DISTANCE OF 75.89 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S51°00'53"W A DISTANCE OF 86.92 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°38'28"W A DISTANCE OF 187.44 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°43'11"W A DISTANCE OF 166.66 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S55°37'49"W A DISTANCE OF 181.50 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,538.08 FEET AND A CHORD OF 222.64 FEET BEARING S62°15'39"W, A DISTANCE OF 222.83 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,502.64 FEET AND A CHORD OF 205.36 FEET BEARING S70°54'26"W, A DISTANCE OF 205.52 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID RIGHT OF WAY, S74°32'21"W A DISTANCE OF 335.97 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S76°14'37"W A DISTANCE OF 79.04 FEET TO A COMPUTED POINT; THENCE, LEAVING SAID CENTERLINE, N01°40'52"E A DISTANCE OF 31.15 FEET TO A 1" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, LEAVING SAID RIGHT OF WAY, N01°40'52"E A DISTANCE OF 525.44 FEET TO A 1" IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 164.11 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 87.06 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 296.27 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°43'27"E A DISTANCE OF 154.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°45'10"E A DISTANCE OF 230.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N88°57'38"W A DISTANCE OF 226.32 FEET TO A 1.5" CAPPED IRON PIPE FOUND; THENCE, N00°29'37"E A DISTANCE OF 1,013.85 FEET TO A 1" CAPPED IRON PIPE FOUND THENCE, N27°07'07"E A DISTANCE OF 180.77 FEET TO A 3/4" PINCHED IRON PIPE FOUND; THENCE, S89°14'14"E A DISTANCE OF 677.99 FEET TO A 3/4" IRON PIPE SET; THENCE, S89°12'15"E A DISTANCE OF 1,126.48 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S01°21'26"W A DISTANCE OF 33.00 FEET TO A 3/4" BENT IRON PIPE FOUND; THENCE, S62°23'27"E A DISTANCE OF 222.99 FEET TO A 1" BENT IRON PIPE FOUND; THENCE, S89°31'44"E A DISTANCE OF 181.71 FEET TO THE POINT OF BEGINNING. SAID BOUNDARY CONTAINING 2,465,206 SQUARE FEET (56.59 ACRES), MORE OR LESS.

UTLEY FARMS

PUD ZONING DOCUMENTS

HELON JOY WELLONS & RAY E. JOHNSON PROPERTY

TOWN OF APEX UTILITIES OFFER AND AGREEMENT

Application #: _____

Submission Date: _____

**Town of Apex
73 Hunter Street
P.O. Box 250 Apex, NC 27502
919-249-3400**

WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

Utlely Farms (Horton and Wellons properties)

(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer & Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

_____, the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.

Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

ACCEPTED:

CUSTOMER: _____

TOWN OF APEX

BY: [Signature] For
Authorized Agent PROPERTY OWNERS

BY: _____
Authorized Agent

DATE: 4/26/2022

DATE: _____

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

John V. Wellons Jr. is the owner* of the property for which the attached application is being submitted: Helon J. Wellons

- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 0 New Hill Olive Chapel Road (0710-73-6732)

The agent for this project is: Peak Engineering & Design, PLLC

I am the owner of the property and will be acting as my own agent

Agent Name: Jeff Roach, P.E.

Address: 1125 Apex Peakway, Apex, NC 27502

Telephone Number: (919) 439-0100

E-Mail Address: jroach@peakengineering.com

Signature(s) of Owner(s)*

Helon J. Wellons

Helon J. Wellons
Type or print name

4/26/2022
Date

John V. Wellons Jr.

John V. Wellons Jr.
Type or print name

4/26/2022
Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP

Application #: _____

Submittal Date: _____

The undersigned, John V. Wellons Jr (the "Affiant") first being duly sworn, hereby swears or affirms as follows: Helon J. Wellons

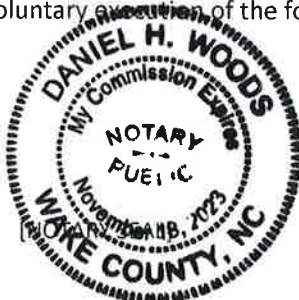
1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at 0 New Hill Olive Chapel Road, New Hill, NC and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated 10/1/2020, and recorded in the Wake County Register of Deeds Office on 10/1/2020, in Book 20-E Page 556.
4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).
5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on 10/1/2020, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on 10/1/2020, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the _____ day of _____, 20_____.

John V. Wellons Jr (seal)
John V. Wellons Jr
Helon J. Wellons Type or print name
Helon J. Wellons

STATE OF NORTH CAROLINA
COUNTY OF WAKE

I, the undersigned, a Notary Public in and for the County of WAKE, hereby certify that JOHN + HELON WELLONS, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's DRIVERS LICENSE, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.



Daniel H. Woods
 Notary Public DANIEL H. WOODS
 State of North Carolina
 My Commission Expires: 11/18/2023

AFFIDAVIT OF OWNERSHIP

Application #: _____ Submittal Date: _____

The undersigned, JANET O JOHNSON
RAY E. JOHNSON (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at 0 New Hill Olive Chapel Road, New Hill, NC and legally described in **Exhibit "A"** attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. If Affiant is the owner of the Property, Affiant acquired ownership by deed, dated 10/1/2020, and recorded in the Wake County Register of Deeds Office on 10/1/2020, in Book 20-E Page 556.
4. If Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).
5. If Affiant is the owner of the Property, from the time Affiant was deeded the Property on 10/1/2020, Affiant has claimed sole ownership of the Property. Affiant or Affiant's predecessors in interest have been in sole and undisturbed possession and use of the property during the period of ownership. Since taking possession of the Property on 10/1/2020, no one has questioned Affiant's ownership or right to possession nor demanded any rents or profits. To Affiant's knowledge, no claim or action has been brought against Affiant (if Affiant is the owner), or against owner(s) (if Affiant is acting as an authorized agent for owner(s)), which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the 26th day of April, 2022.
Ray E Johnson RAY E JOHNSON (seal)
Janet O. Johnson Janet O. Johnson

 Type or print name

STATE OF NORTH CAROLINA
 COUNTY OF WAKE

I, the undersigned, a Notary Public in and for the County of WAKE, hereby certify that RAY & JANET JOHNSON, Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's DRIVERS LICENSE, personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.



Daniel H. Woods
 Notary Public DANIEL H. WOODS
 State of North Carolina
 My Commission Expires: 11/18/2023

AGENT AUTHORIZATION FORM

Application #: _____ Submittal Date: _____

RAY E. JOHNSON JANET O. JOHNSON is the owner* of the property for which the attached application is being submitted:

- Rezoning: For Conditional Zoning and Planned Development rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.
- Site Plan
- Subdivision
- Variance
- Other: _____

The property address is: 0 New Hill Olive Chapel Road (0710-73-6732)

The agent for this project is: Peak Engineering & Design, PLLC

I am the owner of the property and will be acting as my own agent

Agent Name: Jeff Roach, P.E.

Address: 1125 Apex Peakway, Apex, NC 27502

Telephone Number: (919) 439-0100

E-Mail Address: jroach@peakengineering.com

Signature(s) of Owner(s)*

Ray E Johnson

RAY E JOHNSON
Type or print name

4/26/2022
Date

Janet O Johnson

Janet O. Johnson
Type or print name

4/26/2022
Date

Attach additional sheets if there are additional owners.

*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #:

Submittal Date:

Insert legal description below.

BEING THE OUTER BOUNDARY OF 2 PARCELS; ONE NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON (PIN 0710-73-6732) AND THE OTHER NOW OR FORMERLY OF MYRTLE H. HORTON (PIN 0710-71-4834), EXCLUDING THAT PORTION OF THE MYRTLE H. HORTON PARCEL LYING TO THE SOUTH OF OLD U.S. HIGHWAY 1, LOCATED IN THE TOWN OF NEW HILL, BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A 3/4" IRON PIPE FOUND ON THE NORTHEASTERN CORNER OF THE PROPERTY NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON AND THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, SAID IRON BEING THE TRUE POINT OF BEGINNING AND HAVING NORTH CAROLINA STATE PLAIN COORDINATES OF N= 703,604.52' AND E= 2,018,799.66'; THENCE, FROM THE POINT OF BEGINNING AND WITH THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, S14°25'18"E A DISTANCE OF 66.83 FEET TO A 5/8" IRON REBAR FOUND; THENCE, LEAVING SAID RIGHT OF WAY, N88°11'18"W A DISTANCE OF 188.21 FEET TO A 5/8" IRON REBAR FOUND; THENCE N88°11'18"W A DISTANCE OF 25.93 FEET TO A 3/4" IRON PIPE SET; THENCE, N62°24'56"W A DISTANCE OF 207.03 FEET TO A 3/4" IRON PIPE FOUND; THENCE, N87°31'49"W A DISTANCE OF 1,326.61 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S00°29'51"W A DISTANCE OF 657.49 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, S00°28'07"W A DISTANCE OF 459.96 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE, S88°54'39"E A DISTANCE OF 376.22 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE S88°54'39"E A DISTANCE OF 760.21 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°27'54"W A DISTANCE OF 193.23 FEET TO A 2" IRON PIPE FOUND; THENCE S40°29'33"W A DISTANCE OF 39.06 FEET TO A 3/4" IRON PIPE SET; THENCE, S20°02'10"W A DISTANCE OF 148.77 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°26'24"W A DISTANCE OF 74.66 FEET TO A 1" IRON PIPE FOUND; THENCE, S21°56'17"E A DISTANCE OF 90.03 FEET TO A 3/4" IRON PIPE SET; THENCE, S21°56'17"E A DISTANCE OF 82.07 FEET TO A 1/2" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, WITH SAID RIGHT OF WAY, S44°08'00"W A DISTANCE OF 57.11 FEET TO A 3/4" IRON PIPE SET; THENCE S04°26'41"W A DISTANCE OF 47.21 FEET TO A COMPUTED POINT IN THE CENTERLINE OF OLD US HIGHWAY 1; THENCE, WITH SAID CENTERLINE, S44°45'01"W A DISTANCE OF 117.34 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S46°50'07"W A DISTANCE OF 75.89 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S51°00'53"W A DISTANCE OF 86.92 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°38'28"W A DISTANCE OF 187.44 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°43'11"W A DISTANCE OF 166.66 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S55°37'49"W A DISTANCE OF 181.50 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,538.08 FEET AND A CHORD OF 222.64 FEET BEARING S62°15'39"W, A DISTANCE OF 222.83 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,502.64 FEET AND A CHORD OF 205.36 FEET BEARING S70°54'26"W, A DISTANCE OF 205.52 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID RIGHT OF WAY, S74°32'21"W A DISTANCE OF 335.97 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S76°14'37"W A DISTANCE OF 79.04 FEET TO A COMPUTED POINT; THENCE, LEAVING SAID CENTERLINE, N01°40'52"E A DISTANCE OF 31.15 FEET TO A 1" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, LEAVING SAID RIGHT OF WAY, N01°40'52"E A DISTANCE OF 525.44 FEET TO A 1" IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 164.11 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 87.06 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 296.27 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°43'27"E A DISTANCE OF 154.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°45'10"E A DISTANCE OF 230.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N88°57'38"W A DISTANCE OF 226.32 FEET TO A 1.5" CAPPED IRON PIPE FOUND; THENCE, N00°29'37"E A DISTANCE OF 1,013.85 FEET TO A 1" CAPPED IRON PIPE FOUND THENCE, N27°07'07"E A DISTANCE OF 180.77 FEET TO A 3/4" PINCHED IRON PIPE FOUND; THENCE, S89°14'14"E A DISTANCE OF 677.99 FEET TO A 3/4" IRON PIPE SET; THENCE, S89°12'15"E A DISTANCE OF 1,126.48 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S01°21'26"W A DISTANCE OF 33.00 FEET TO A 3/4" BENT IRON PIPE FOUND; THENCE, S62°23'27"E A DISTANCE OF 222.99 FEET TO A 1" BENT IRON PIPE FOUND; THENCE, S89°31'44"E A DISTANCE OF 181.71 FEET TO THE POINT OF BEGINNING. SAID BOUNDARY CONTAINING 2,465,206 SQUARE FEET (56.59 ACRES), MORE OR LESS.

Developer Company Information	
Company Name	KB Home
Company Phone Number	(919) 768-7972
Developer Representative Name	Thurm Bowen
Developer Representative Phone Number	same
Developer Representative Email	rtbowen@kbhome.com

New Residential Subdivision Information	
Date of Application for Subdivision	May 2, 2022
City, Town or Wake County Jurisdiction	Town of Apex
Name of Subdivision	Utley Farms
Address of Subdivision (if unknown enter nearest cross streets)	3720 Old US 1 Highway, New Hill, NC
REID(s)	0033299 & 0080810
PIN(s)	0710-71-4834 & 0710-73-6732

Please complete each section of this form and submit with your application.

Town of Apex staff will enter this information into the online WCPSS form.

Please send any questions about this form to:
studentassignment-gis-group@wcpss.net

Projected Dates Information	
Subdivision Completion Date	August 2026
Subdivision Projected First Occupancy Date	August 2024

Lot by Lot Development Information																	
Unit Type	Total # of Units	Senior Living	Studio	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	Square Foot Range		Price Range		Anticipated Completion Units & Dates					
								Min	Max	Low	High	Year	# Units	Year	# Units	Year	# Units
Single Family	113						113	1445	3174			2024	30	2025	50	2026	33
Townhomes																	
Condos																	
Apartments																	
Other																	

NOTICE OF NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

April 13, 2022

Date

Dear Neighbor:

You are invited to a neighborhood meeting to review and discuss the development proposal at

0 New Hill Olive Chapel Road

0710-73-6732

3720 Old US 1 Highway

0710-71-4834

Address(es)

PIN(s)

in accordance with the Town of Apex Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, please refer to the Project Contact Information page for ways to contact the applicant. Notified neighbors may request that the applicant provide updates and send plans via email or mail. Once an application has been submitted to the Town, it may be tracked using the [Interactive Development Map](#) or the [Apex Development Report](#) located on the Town of Apex website at <http://www.apexnc.org/180/Planning-Community-Development>.

A Neighborhood Meeting is required because this project includes (check all that apply):

Application Type		Approving Authority
<input checked="" type="checkbox"/>	Rezoning (including Planned Unit Development)	Town Council
<input type="checkbox"/>	Major Site Plan	Technical Review Committee (staff)
<input type="checkbox"/>	Special Use Permit	Board of Adjustment (QJPH*)
<input checked="" type="checkbox"/>	Residential Master Subdivision Plan (excludes exempt subdivisions)	Technical Review Committee (staff)

*Quasi-Judicial Public Hearing: The Board of Adjustment cannot discuss the project prior to the public hearing.

The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):

KB Homes is proposing to annex and rezone the Property to facilitate the development of a residential

community consisting of around 110 single family detached homes. Currently, the property is zone R-80W & R40-W in Wake County. KB Homes is proposing to rezone it to PUD-CZ in Apex.

Estimated submittal date: May 3, 2022

MEETING INFORMATION:

Property Owner(s) name(s): Ray Wellons & Mrytle Horton

Applicant(s): KB Homes

Contact information (email/phone): jbarron@morningstarlawgroup.com/919-590-0371

Meeting Address: <https://morningstarlaw.group/04272022mtg>

Date/Time of meeting**: Wednesday, April 27, 2022 starting at 5PM

Welcome: 5:00PM Project Presentation: 5:03PM Question & Answer: 5:10PM

**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning and Community Development Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at <http://www.apexnc.org/180/Planning-Community-Development>.

PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:

Project Name: ~~Belterra~~ Utley Farms Zoning: PUD-CZ
 Location: 0 New Hill Olive Chapel Road & 3720 Old Us 1 Hwy
 Property PIN(s): 0710-71-4834& 0710-73-6732 Acreage/Square Feet: 59.32 acres

Property Owner: Mrytle Horton and Ray Wellons
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Email: _____

Developer: KB Homes
 Address: 4506 S Miami Blvd Ste 100
 City: Durham State: NC Zip: 27703
 Phone: _____ Fax: _____ Email: _____

Engineer: Peak Engineering & Design
 Address: 1125 Apex Peakway
 City: Apex State: NC Zip: 27502
 Phone: 919-439-0100 Fax: _____ Email: jroach@peakengineering.com

Builder (if known): KB Homes
 Address: 4506 S Miami Blvd Ste 100
 City: Durham State: NC Zip: 27502
 Phone: _____ Fax: _____ Email: _____

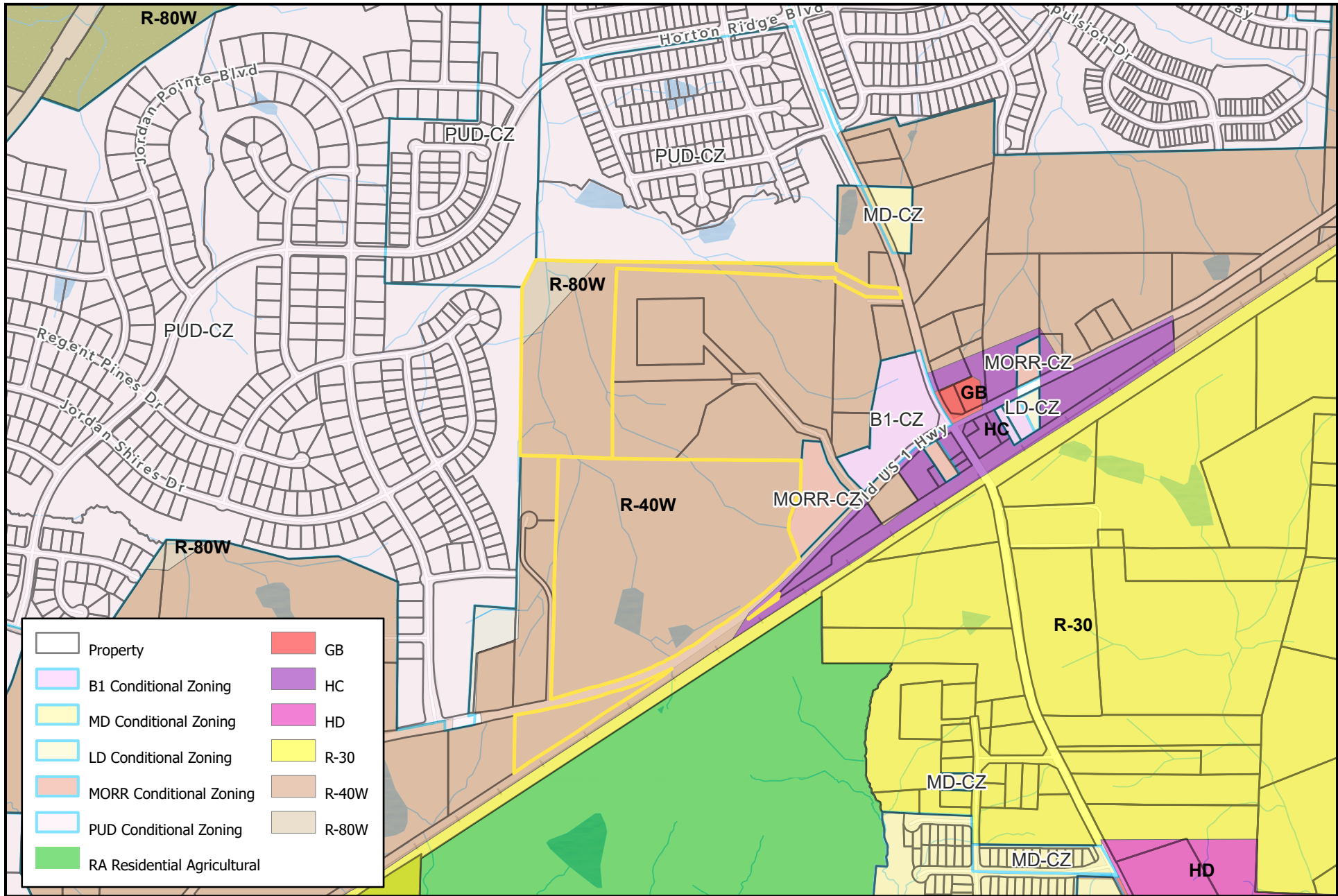
Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

Town of Apex Department Contacts	
Planning and Community Development Department Main Number (Provide development name or location to be routed to correct planner)	(919) 249-3426
Parks, Recreation & Cultural Resources Department Angela Reincke, Parks and Greenways Planner	(919) 249-7468
Public Works - Transportation Russell Dalton, Senior Transportation Engineer	(919) 249-3358
Water Resources Department Jessica Bolin, Environmental Engineering Manager (Stormwater, Sedimentation & Erosion Control)	(919) 249-3537
James Gregg, Utility Engineering Manager (Water & Sewer)	(919) 249-3324
Electric Utilities Division Rodney Smith, Electric Technical Services Manager	(919) 249-3342

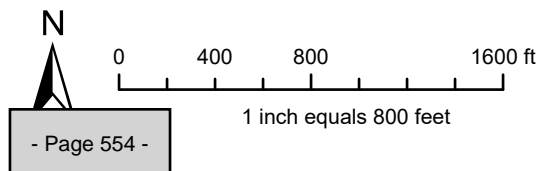
SITE ADDRESS	OWNER	MAILING ADDRESS	
3500 RECLAMATION RD	APEX TOWN OF	PO BOX 250	APEX NC 27502-0250
2625 NEW HILL OLIVE CHAPEL RD	ATKINS, LAURA B	PO BOX 217	NEW HILL NC 27562-0217
3437 JORDAN SHIRES DR	BOISVERT-ROACH, NOELLE ROACH, SHAD	3437 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3429 JORDAN SHIRES DR	BOWERS, SARA BOWERS, MATTHEW	3429 JORDAN SHIRES DR	NEW HILL NC 27562-9310
2704 NEW HILL OLIVE CHAPEL RD	BROADWELL, ANNIE RUTH L	2704 NEW HILL OLIVE CHAPEL RD	NEW HILL NC 27562-9176
2508 LASHLEE WAY	BURROUGHS, RICHARD S TRUSTEE	2508 LASHLEE WAY	NEW HILL NC 27562-9607
3507 JOHNSON GRANT DR	CAPANO, NICHOLAS G JR CAPANO, THERESA F	3507 JOHNSON GRANT DR	NEW HILL NC 27562-9313
3413 JORDAN SHIRES DR	CLARK, MARSLYN KAY CLARK, JEFFERY ALAN	3413 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3409 JORDAN SHIRES DR	COSTAKES, GREGORY EUBANKS, AMBER	3409 JORDAN SHIRES DR	NEW HILL NC 27562-9310
2609 NEW HILL OLIVE CHAPEL RD	CUSUMANO, JOSEPH DAVID CUSUMANO, REAGAN LAYNE	2609 NEW HILL OLIVE CHAPEL RD	NEW HILL NC 27562-9175
2620 NEW HILL OLIVE CHAPEL RD	DHILLON, HARDIP SINGH DHILLON, GURMINDER KAUR	5785 OLD US 1 HWY	NEW HILL NC 27562-8965
3445 JORDAN SHIRES DR	DICUS, DERRIN LEE DICUS, ANDREA KAY	3445 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3401 JORDAN SHIRES DR	EHRHARDT, VINCENT ROBERT SANTAMARIA, AMANDA DELIA	3401 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3912 OLD US 1 HWY	ESKRIDGE, CAMPBELL D JR ESKRIDGE, JO ANN	PO BOX 187	NEW HILL NC 27562-0187
0 OLD US 1 HWY	ESKRIDGE, CAMPBELL D JR ESKRIDGE, JOANN	PO BOX 187	NEW HILL NC 27562-0187
2912 NEW HILL HOLLEMAN RD	GARDNER, THELMA D	2912 NEW HILL HOLLEMAN RD	NEW HILL NC 27562-9242
3405 JORDAN SHIRES DR	HAROLD, ADAM J HAROLD, LAUREN E	3405 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3433 JORDAN SHIRES DR	HENAO, MANUEL IGNACIO MALDONADO, MONICA	3433 JORDAN SHIRES DR	NEW HILL NC 27562-9310
2537 LASHLEE WAY	HEPBURN, DAVID M	1976 OLD BYRE WAY	APEX NC 27502-9113
2600 NEW HILL OLIVE CHAPEL RD	HICKS, MICHAEL N HICKS, ASHLEY FAY	2600 NEW HILL OLIVE CHAPEL RD	NEW HILL NC 27562-9174
2937 LANDON RIDGE DR	HOPFER, PAUL A HOPFER, ELIZABETH N	2937 LANDON RIDGE DR	NEW HILL NC 27562-9305
3720 OLD US 1 HWY	HORTON, MRYTLE H	PO BOX 312	NEW HILL NC 27562-0312
2701 NEW HILL OLIVE CHAPEL RD	HUDSON, CLAUDE LEE JR HUDSON, JUDY A	PO BOX 7	NEW HILL NC 27562-0007
0 JOHNSON GRANT DR	JORDAN POINTE HOMEOWNERS ASSOCIATION INC	PPM	11010 RAVEN RIDGE RD
2713 LADOGA PL	KB HOME RALEIGH-DURHAM INC	4506 S MIAMI BLVD STE 100	DURHAM NC 27703-8001
3425 JORDAN SHIRES DR	LISI, BETHANY A BUIE, RYAN P	3425 JORDAN SHIRES DR	NEW HILL NC 27562-9310
8621 ATHLETE DR	MARTIN, ANDREW T	105 DUNEDIN CT	CARY NC 27511-6405
3500 JOHNSON GRANT DR	MEYERS, BRADLEY C JOHNSTON-MEYERS, ERIN E	3500 JOHNSON GRANT DR	NEW HILL NC 27562-9313
2509 LASHLEE WAY	MILLER, RALPH G JR MILLER, DENISE A	2509 LASHLEE WAY	NEW HILL NC 27562-9608
3421 JORDAN SHIRES DR	NAFKE, ALEXA J	3421 JORDAN SHIRES DR	NEW HILL NC 27562-9310
3701 OLD US 1 HWY	NAGLE, MICHAEL A NAGLE, DORIS J	3701 OLD US 1 HWY # 1	NEW HILL NC 27562-9763
3700 OLD US 1 HWY	NEW HILL BAPTIST CHURCH & CEMETERY TRUSTEES	3700 OLD US 1 HWY	NEW HILL NC 27562-9762

RALEIGH NC 27614-8837

Mailing list provided by the Town
of Apex Addressing and GIS staff.



Parcel and Current Zoning Map



Disclaimer
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are **NOT** surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.

NEIGHBORHOOD MEETING SIGN-IN SHEET

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Meeting Address: See attached information regarding the neighborhood meeting and sign in sheet

Date of meeting: April 27, 2022 Time of meeting: 5:00 - 7:00

Property Owner(s) name(s): See attached documents

Applicant(s): _____

Please print your name below, state your address and/or affiliation with a neighborhood group, and provide your phone number and email address. Providing your name below does not represent support or opposition to the project; it is for documentation purposes only. For virtual meetings, applicants must include all known participants and request the information below.

	NAME/ORGANIZATION	ADDRESS	PHONE #	EMAIL	SEND PLANS & UPDATES
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					

Use additional sheets, if necessary.

UTLEY FARMS – NEIGHBORHOOD MEETING ATTENDEE LIST

Name	email address	Address 1	Address 2
David Hepburn		1976 Old Byre Way	Apex, NC 27502
Neal Zipser		5020 Darcy Woods Ln	Fuquay Varina, NC 27526
Cheryl Zipser		5020 Darcy Woods Ln	Fuquay Varina, NC 27526
Martin Skou		3900 Old US 1 Highway	New Hill, NC 27562
David Horton		1581 Martin Road	Mount Airy, NC 27030
Andrew MacNair			Apex, NC 27539
Daniel Strandh		3501 Johnson Grant Dr	New Hill, NC 27562
Leslie Fetzer		4208 Olive Branch Ln	New Hill, NC 27562
Cate Vetter		3449 Jordan Shires Dr	New Hill, NC 27562
Billy Jones		1024 Bolejack Road	Germanton, NC 27019
Jeff Roach		1125 Apex Peakway	Apex, NC 27502
Jason Barron		421 Fayetteville St Suite 350	Raleigh, NC 27601
Roman Acosta		4506 S. Miami Blvd	Durham, NC 27703
Thurm Bowen		4506 S. Miami Blvd	Durham, NC 27703
Doug Schwartz		4506 S. Miami Boulevard	Durham, NC 27703

SUMMARY OF DISCUSSION FROM THE NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): Horton and Wellons/Johnson

Applicant(s): _____

Contact information (email/phone): Jeff Roach, Peak Engineering & Design & Jason Barron (Morningstar Law)

Meeting Address: VIRTUAL MEETING

Date of meeting: April 27, 2022 Time of meeting: 5:00 - 7:00

Please summarize the questions/comments and your responses from the Neighborhood Meeting or emails/phone calls received in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern #1:

See attached list of comments/questions from the neighborhood meeting

Applicant's Response:

Question/Concern #2:

Applicant's Response:

Question/Concern #3:

Applicant's Response:

Question/Concern #4:

Applicant's Response:

UTLEY FARMS

NEIGHBORHOOD MEETING REPORT

- Q. Looking for the timeline. When will clearing begin? Start of construction?
- A. "Zoning - Takes about 4 to 5.5 months;
 - B. Subdivision Process - Takes about 9 - 12 months;
 - C. Build out - Start about Fall of 2023. About an 11 month development cycle."
- Q. What privacy barriers will be put in place between neighboring land?
- A. Proposing perimeter buffers consistent with the Town's ordinances. 10-ft buffer along along most of the boundary. Along US-1, a 30-ft buffer. 20-ft buffer in some areas.
- Q. Has apex already annexed the property?
- A. No. We will be applying for annexation which should be voted upon at the same time as the rezoning.
- Q. Also it seems this is a done deal if the land has already purchased by a developer. True?
- A. The developer is under contract to purchase the land and has not yet purchased it. The developer would not close on the property if the rezoning is not approved.
- Q. Units would be in the 'yellow' sections, correct?
- A. Yes. Single-family homes are proposed in the areas shaded in yellow.
- Q. Or rather - Not 'below' the red asterisks in the section w/ the 'arm' branch.
- A. There will not be anything developed on the west side of the stream
- Q. Will there be a wood fence with landscaping around the buffer zone?
- A. Our plans do not include a wood fence at this time.
- Q. So historic home would go across US1?
- A. That is what we believe but this has not yet been decided.
- Q. 10 foot buffer on country acres land seems narrow.
- A. This was discussed with the attendees and due to the existing stream buffer and adjacent access easement (Country Acres Lane), the 10' buffer is proposed in this location. We will continue to evaluate buffers throughout the development during zoning and MSP designs.
- Q. This question is probably for Jeff, I'm wondering about the availability of water and sewer access for the future commercial properties to the north/east off Lashlee Way (Hepburn), plus Patel's gas station on the corner of NHOC and Old US1, plus Martin's property behind Miss Annie's property on NHOC Rd.
- A. This project does not contemplate extending sewer towards Patel's gas station. The property in question is not upstream of the Utley Farm project and therefore will not be served through this development.

Q. On the Wellon's property, will all the trees be left in place to the west side of the larger creek? (between the creek and Jordan Pointe)

A. Yes. Anything shown in grey will be left along except where sewer crosses over. Specifically in a location along the western boundary of the Wellons property abutting the Jordan Pointe HOA property.

Q. Our Country Acres road is a legal easement that is to be maintained by our neighbor and us. It appears you have a road joining to our easement. Does that mean that be taken by the City and they would pave and manage the road?

A. No, it does not. We will not be sending traffic towards a privately maintained road. We will be providing street stubs to some adjacent properties to allow for future connectivity. This is one of those street stubs for future connection by others.

Q. Are you aware of the sewer odor from Jordan Pointe. Will this development use this as air relief ?

A. The pump station west of Jordan Point is a public pump station. The sewage from this project should be going north towards Beaver Creek. We are not aware of an odor issue or from where it may be stemming. Contact public works about this.

** Additional information was provided and the Town of Apex Public Works Department contacted concerning the Air Release Value (ARV) on Old US 1 near 3900 Old US 1 property. This has been an ongoing discussion with the property owner and Town of Apex staff.

Q. The easement along country acres lane is our property. Why only 10 feet?

A. The use adjacent to Utley Farms is a roadway access. Any redevelopment of the property would be in keeping with the proposed Utley Farms density/use which would require the 10' buffer. Being adjacent to the street dictates the 10' buffer as a reasonable transition between uses.

Q. If I understand correctly where the existing historic house temporary move was contemplated, across Us 1 that is not part of the current property under contract.

A. The property on the south side of Old US 1 **IS** part of the Horton property. The attendees were shown the Wake County GIS website for the property boundaries.

Q. We have tried.

A. A question concerning the Jordan Pointe pump station odor. Comment addressed above with a conversation with staff after the neighborhood meeting.

Q. If construction vehicles do use our road, who do we contact to prevent that? It can be expensive to maintain if big construction vehicles use it. It can get quite muddy and create ruts, and we would want recourse. We had to chain our driveway to to prevent Jordan Pointe construction folks from driving up and down our driveway, thinking it was an access.

A. This project has direct access and a large amount of frontage on Old US 1. The construction vehicles will not be directed to Country Acres Ln so we do not expect this to be an issue during construction. Signage will be posted on the site to notify contractors of the project access points.

Q. We live on old us 1. There have been several exchanges with govt. folks regarding the smell in JP.

A. (live answered) See above response concerning the Jordan Pointe pump station odor.

Q. 3900 old us 1. Air release is on our property (concerning the pump station ARV)

A. Comment related to the Jordan Pointe pump station ARV.

Q. Is the being recorded? If so will it be made available?

A. Yes.

Q. Just to be clear no land will be moved or trees taken down until fall 2023?

A. yes, it will take that long to go through the design and approval process (estimated approval time)

Q. Is the Wellons section of the neighborhood going to be developed at roughly the same time? It looks like there is no access to the wellons side from the horton side.

A. no, construction will not occur until access can be provided. Access from Horton to Wellons is restricted by buffers and other environmental features.

Q. And we presume all 2 story homes?

A. Yes, with the possibility of a ranch plans.

Q. How frequent will meetings like this be held so neighbors can stay informed?

A. No additional rezoning neighborhood meeting, but we are happy to meet to discuss further if folks desire. The design team and builder is also available to answer questions via email/phone.

Q. So to know when you are close to taking down trees, starting construction, etc. We can learn this by attending public hearings?

A. In addition to those public meetings, there also will be a neighborhood meeting for the subdivision that will occur after the rezoning. The design team also provided a link to the Town's Interactive Development Map and contacts for Jason Barron (Morningstar Law Group) and Jeff Roach (Peak Engineering & Design) to answer additional questions after this meeting.

Q. So roughly 9-12 months before commencement of activities would be the Master Subdivision meeting? And thank you!

A. That is correct.

Q. Do you know if the sewer air relief from new development will also be going to the one on our property? 3900 old us 1 We believe our sewer line with go north of Jordan Pointe. It will follow the same path, but we are not pumping directly to that point. So will get worse with new homes!

A. This was answered above and the Town contacted to determine what is going on. We hope that is not the case and will work with the town to help you get to the root of the issue.

Q. Maybe town of apex could move it to their land? (Jordan Pointe pump station question)

A. We are not sure, but will work with you and the Town to get to the root of the issue

Q. It can be moved but they didn't want to spend the \$\$\$. FYI (Jordan Pointe pump station ARV question)

A. Good to know. Thanks.

Q. Thank you all! Was helpful. very welcome

Q. In Martin's defense, that valve can smell pretty ripe. Anyone that lives along that row of homes on country acres and old US1 may have certain times of day they would not be comfortable sitting in their new backyard. 🤢

A. Understand. We will talk with staff to see what the situation is. Thanks

Q. Is there somewhere we can get a PDF or equivalent of the map you showed? I took a screenshot but the image is scaled down.

A. Yes, we will send a pdf to everyone after the meeting. Please remember that the sketch are preliminary and WILL CHANGE through the Master Subdivision Plan design reviews.

Q. Thanks guys, signing off now. Will follow up with Jeff.

A. Thanks. I will let him know to be on the lookout.

Q. Did you say you'll send out the recording?

A. Yes, we will send out the recording as well as the maps that were shared.

Q. I remember seeing the 2045 map of Apex that showed the entire North-west corner of the Old US 1_New Hill Olive Chapel Road intersection (to include the horton and wellons property) as commercial/business. It sounds like you're anticipating the Lashlee properties to become residential neighborhoods as well at some point. Should be assume any of the north-west corner of that intersection becomes commercial?

A. yes, the Town updated its plans to shift the residential limits to the east. These parcels (north of the Horton property) are now designated low density residential.

Q. Gotcha. Thanks. Gas/grocery/coffee? (corner of Old US 1 and NHOC/NHH Road)

A. Not sure what type, but the land use plan calls for commercial for the parcels in the vicinity of the intersection of NHOC and Old HWY1.

Q. Did you mention anything regarding entrances to the property from Old US 1? Jordan point has a short dedicated turn lane to enter the neighborhood from the westbound direction. Would there be the same type of setup for Wellons property? I would guess in the future the road would need to be widened to handle the traffic increase. Any idea on future outlook in that regard?

A. Widening will occur along the frontage of our site, with two anticipated access points along Old HWY 1. We will know more details on turn lanes into the site when we get into the subdivision stage, as NCDOT will have to approve driveway permits for the property. This is also being reviewed as part of the TIA related to the zoning application but it will take some time to get the final improvements confirmed with Town and NCDOT staff.

AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Jeffrey A. Roach, P.E., do hereby declare as follows:

Print Name

1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 *Neighborhood Meeting*.
2. The meeting invitations were mailed to the Apex Department of Planning and Community Development, all property owners and tenants abutting and within 300 feet of the subject property and any neighborhood association that represents citizens in the notification area via first class mail a minimum of 14 days in advance of the Neighborhood Meeting.
3. The meeting was conducted at a ZOOM meetings (location/address) on April 27, 2022 (date) from 5:00 pm (start time) to 7:00 pm (end time).
4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.
5. I have prepared these materials in good faith and to the best of my ability.

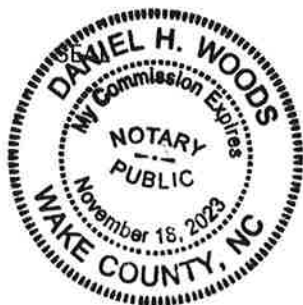
April 28, 2022

Date

By: 

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, DANIEL H. WOODS, a Notary Public for the above State and County, on this the 28 day of APRIL, 2022.





Notary Public

DANIEL H. WOODS

Print Name

My Commission Expires: 11/18/2023

Utley Farms PUD

PD PLAN

APEX, NORTH CAROLINA

Submitted: April 29, 2022

Resubmitted: August 12, 2022

Resubmitted: September 9, 2022

PREPARED BY:



Section 1: Table of Contents – PUD Text

Section 1: Table of Contents

Section 2: Vicinity Map

Section 3: Project Data

Section 4: Purpose Statement

Section 5: Permitted Uses

Section 6: Design Controls

Section 7: Architectural Controls

Section 8: Parking and Loading

Section 9: Signage

Section 10: Natural Resource and Environmental Data

Section 11: Stormwater Management

Section 12: Parks and Recreation

Section 13: Public Facilities

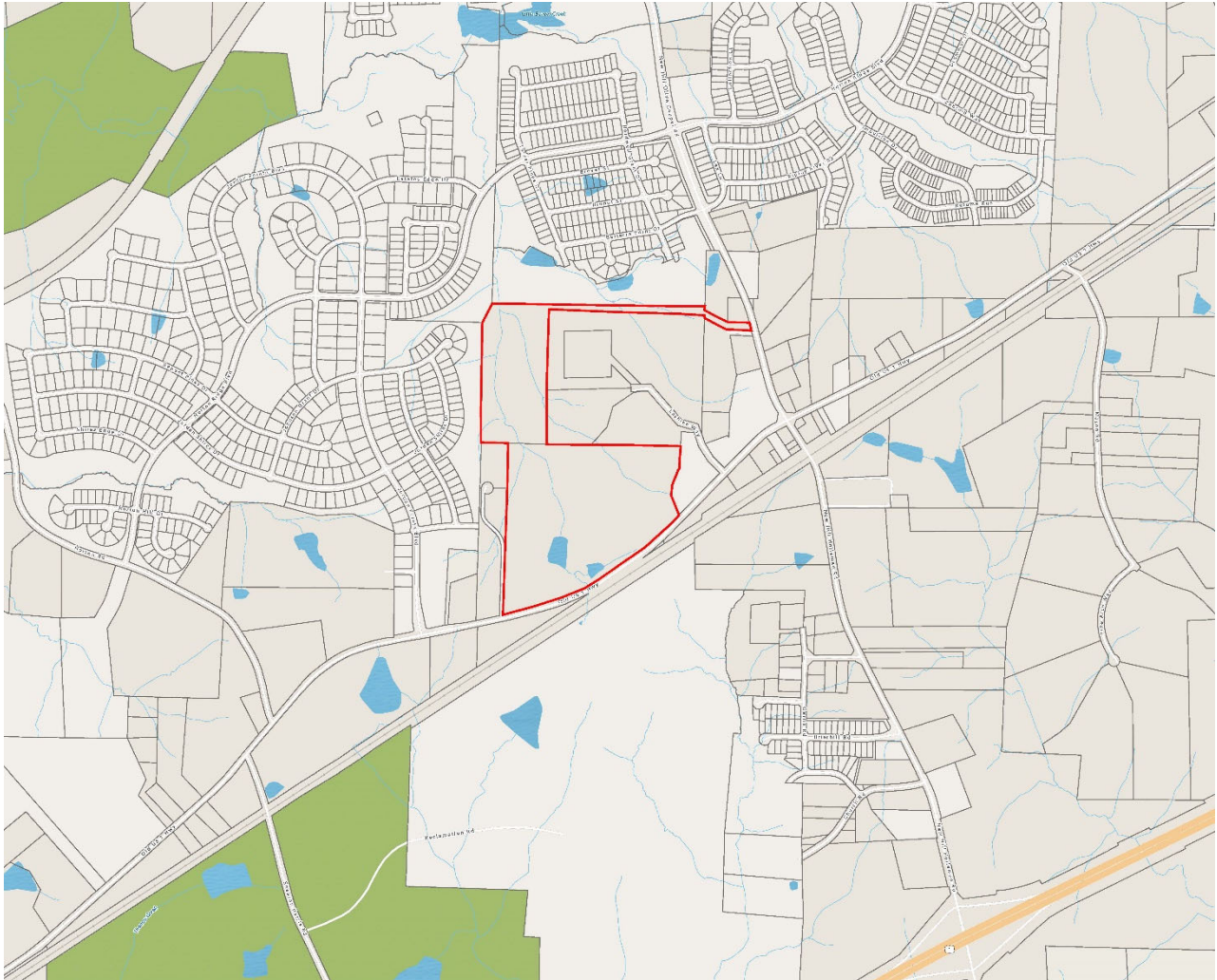
Section 14: Phasing Plan

Section 15: Consistency with 2045 Land Use Plan

Section 16: Compliance with UDO

Section 17: Compliance with Apex Transportation Plan and Bicycle Plan

Section 2: Vicinity Map



The Utley Farms PUD is located in New Hill, Buckhorn Township, and is anticipated to be developed within the Town of Apex corporate limits. The property sits along the north side of Old US 1 Highway, with limited frontage along New Hill Olive Chapel Road. North and west of the site have been developed for single-family homes located within Belterra and Jordan Pointe, respectively. To the west of the site are rural developments on large lots. To the east are parcels planned for office and commercial uses.

Section 3: Project Data

A. Name of Project:

Utley Farms PUD

B. Property Owners:

Myrtle H. Morton

PO Box 312

New Hill, NC 27562-0312

Helon J. Wellons

Raye E. Johnson

400 Johnson Farm Road

New Hill, NC 27562-8839

Prepared By:

Jason Barron and Nil Ghosh

Morningstar Law Group

421 Fayetteville St | Ste 530

Raleigh, NC 27601

C. Current Zoning Designation:

R-40W and R-80W (Wake County)

D. Proposed Zoning Designation:

Planned Unit Development – Conditional Zoning (PUD-CZ)

E. Current 2045 Land Use Map Designation:

Low Density Residential

F. Proposed Use

- Single-family Residential

G. Size of Project

A total of +/-56.59 acres

Section 4: Purpose Statement

The Utlely Farms PUD development will be a single-family detached residential community developed at low density residential along Old US 1 Highway west of its intersection with New Hill Olive Chapel Road. The intent is for the site to develop consistent with the land use intensities contemplated by the recent updates to the Town's 2045 Land Use Designation Map.

This concept is consistent with the Town's stated PUD goals to provide site-specific, high-quality neighborhoods that exhibit natural feature preservation as well as compatibility with, and connectivity to, surrounding land uses. More specifically, this plan will:

- Allow uses that are compatible with Section 4.2.2, *Use Table* of the UDO
- Provide for the preservation of existing environmentally sensitive areas.
- Provide for site specific and appropriate stormwater controls that exceed the requirements of the UDO.
- Provide appropriate buffering and screening from the proposed use to the existing residential areas.
- Offer low density housing in an area that was very recently updated by the Town to include such uses on the 2045 Land Use Designation Map.
- Demonstrate dimensional standards that are consistent with the UDO, and where variations occur, said variations will be included herein and subject to Council approval.
- Provide a high-quality community that is linked by a network of connected streets and pedestrian sidewalks that promotes connectivity, walkability, and healthy lifestyles.
- Exhibit character and quality that is compatible with surrounding communities, which is expected to enhance the value of surrounding land uses.
- Provide open space and walkable trails to promote pedestrian activity, while appropriately buffering adjacent residential areas.
- Preserve the existing historic home on the property along with two existing barns.

All site-specific standards and conditions of this PUD Plan shall be consistent with all Conditional Zoning (CZ) District standards set forth in UDO Section 2.3.3, *Conditional Zoning Districts* and UDO Section 2.3.4.F.1, *Planned Unit Development (PUD-CZ) District*, except as provided for herein. The proposed PUD will provide a development density that is consistent with principles found throughout *Advance Apex 2045*.

Section 5: Permitted Uses

The subject property may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO, except as modified herein. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply. Specifically, the permitted uses include:

- Single-family
- Greenway
- Recreation facility, private
- Accessory apartment
- Park, active
- Park, passive
- Utility, minor

Additionally, the following conditions shall apply:

- A. A maximum of 113 residential units shall be permitted upon the property.
- B. No covenant shall be placed on the property which prohibits accessory apartment as a use.
- C. All residential dwellings and any amenity constructed on the property shall provide solar conduit for the installation of rooftop solar panels.
- D. Stormwater controls for development shall be increased to the 25-year storm as provided for in this PUD.
- E. There shall not be any tree clearing, stormwater control measures (SCM), or other infrastructure in either zone of riparian buffers except for UDO permitted crossings and utilities.
- F. Signage shall be provided by any homeowner's association regarding the need to reduce pet waste and eliminate fertilizer near SCMs. The project shall install at least one (1) sign per SCM about not using fertilizer near an SCM drainage area to reduce pet waste and eliminate fertilizer near SCMs. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to amenity centers, sidewalks, greenways, or side paths.
- G. The project shall provide diverse and abundant pollinator sources and install pollinator-friendly flora within SCM Planting areas.
- H. The project shall include plantings within perimeter buffers and along streetscapes; the selected species shall be native species chosen from the Apex Design & Development Manual or approved by Planning staff.
- I. Deciduous shade trees shall be planted along southern sides of building elevations and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- J. Evergreen trees shall be planted along northern elevations of buildings and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- K. A minimum of three (3) native hardwood tree species shall be planted throughout the development.
- L. The project shall increase biodiversity within the amenity area and recreational areas within the development by selecting and installing tree, shrub, and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall. Subject to

Utley Farms PUD

Condition K above, no single species shall constitute more than 20% of the selected plants for each landscaping type (trees, shrubs and perennials.)

- M. The project shall include landscaping that requires less irrigation and chemical use by planting warm season grasses and drought tolerant species for drought-resistance within perimeter buffers, SCMs, and along streets.
- N. The exterior lighting for all non-residential buildings, parking lots, and amenity areas will consist of entirely of LED fixtures. The project shall install light timers, motion sensors, or other smart lighting technology for all lighting within the parking lots and private amenity areas.
 - a. The project within an amenity area shall use full cutoff LED fixtures that have a maximum color temperature of 3000K for all exterior lighting located within parking lot, private amenity areas, and building mounted fixtures on non-residential buildings.
- O. A minimum of three (3) pet waste stations shall be installed within the development located around the SCMs, play lawns, and gathering areas.
- P. A minimum 4kW solar PV system shall be installed on at least 3 homes within the development. All solar installation required by this condition shall be completed or under construction prior to 90% of the building permits being issued for the development. The lots on which these homes are located shall be identified on Master Subdivision Final Plat, which may be amended from time to time.
- Q. Of the permitted residential single family detached dwellings, at least two (2) restricted median-income affordable housing single family detached ownership units (Affordable Housing Units) shall be constructed on-site and sold at a mutually agreeable maximum affordable housing median-income ownership sales price (includes unit price and lot price) that is calculated based upon the one-hundred percent (100%) of the Raleigh, NC Metropolitan Statistical Area (MSA) Area Median Income (AMI) as most recently published by the U.S. Department of Housing and Urban Development (HUD). The Affordable Housing Units shall be occupied by households earning no more than one-hundred percent (100% - Median-Income) of the Raleigh, NC MSA AMI, adjusted for family size as most recently published by HUD. The two (2) Affordable Housing Unit lots shall be identified on the Master Subdivision Final Plat, which may be amended from time to time. A restrictive covenant (i.e. lot reservation agreement) shall be recorded against the two (2) Affordable Housing Unit lots prior to the issuance of a building permit for such lots and a separate restrictive covenant (i.e. resale deed restriction) with a minimum affordability period of twenty (20) years shall be recorded against each of the Affordable Housing Units at purchase closing to memorialize the affordable housing terms and conditions of the approved zoning condition. Final Affordable Housing Unit floor plan selection which includes the unit size and bedroom size will be at the discretion of the developer.

Section 6: Proposed Design Controls

A. Residential Densities and Design Controls

Maximum Density:	2.0 Units/Acre (includes RCA and rights-of-way)
Maximum Number of Units:	113
Minimum Lot Size:	6,000 SF
Maximum Built-Upon Area:	60%
Minimum Lot Width:	50 feet
Maximum Building Height:	36 feet, no more than 2 stories

Note: Porches, patios, decks and other accessory structures may encroach into building setbacks as allowed by the Town of Apex UDO.

Minimum Building Setbacks:

	Single-family (feet)	Private Recreation Facility
Front	10	10
Front (garage)	20 (from sidewalk or back-of-curb where no sidewalk exists)	N/A
Side	5	10
Side (corner)	10	10
Rear	10	10
Building-to-buffer/RCA	10	10
Parking-to-buffer/RCA	5	5

Utlely Farms PUD

B. Buffers

Perimeter Buffers: as per Sheet C100 of PUD Plan as noted below.

Location	Buffer Provided	UDO Standard	Property Notes
North (Belterra)	10' Type B	10' Type B	
Northern boundary (ex properties)	10' Type B & 20' Type B	20' Type B	Includes Miller, Vitek, & Burroughs property
West (Jordan Pointe & Country Acres Lane)	10' Type B	10' Type B & 20' Type B	Includes Jordan Pointe & Country Acres Lane property
East (ex properties)	10' Type B	20' Type B & 20' Type A	MORR-CZ for the ex Church and Cemetery
Old US 1 Highway	30' Type B	30' Type B	Frontage
New Hill Olive Chapel Road	30' Type B	30' Type B	Frontage

Note: Where perimeter buffers coincide with stream buffers or 100-year floodplain, existing vegetation will be used to meet the buffer width and opacity.

Thoroughfare and Collector Street Buffers

As depicted on the PD Plan, a 30' Type B Buffer shall be established along Old US 1 Highway.

Adjacent property redevelopment buffer:

The buffer can be removed in those locations along the following parcels or portion of parcels if the Wellons property (identified as the "Future Development Area" within the PUD Drawings) is redeveloped in conjunction with the adjacent N/F Andrew Martin (PIN 0710-83-5242), the N/F Ralph Miller property (PIN 0710-83-0487), and/or the N/F Richard Vitek property (PIN 0710-72-4872) as the Wellons property is too narrow to develop independent of such properties.

Section 7: Proposed Architectural Controls

The proposed development offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Master Subdivision submittal.

Except with respect to the existing historic home, the following conditions shall apply:

Single-family Residential:

- A. Vinyl siding is not permitted; however, vinyl windows, decorative elements, and trim are permitted.
- B. Primary building materials shall be brick, stone, and fiber cement siding.
- C. Windows that are not recessed shall be trimmed. Windows shall vary in size and/or type.
- D. At least four of the following decorative features shall be used on each building: decorative shake, board and batten siding, decorative porch rails and posts, shutters, decorative functional foundation and roof vents, recessed windows, decorative windows, decorative brick or stone, decorative gables, decorative cornices, or metal roofing.
- E. A varied color palette shall be utilized throughout the development to include a minimum of three-color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
- F. The rear and side elevations of the units that can be seen from the right-of-way shall have trim around the windows.
- G. Front facing garage doors must have windows, decorative details, or carriage-style adornments.
- H. Entrances for units with front-facing garages shall have a prominent covered porch/stoop area leading to the front door.
- I. Porches constructed with a dwelling unit shall be a minimum of six feet (6') deep.
- J. The front façade of any front-loaded garage shall not protrude farther than one (1) foot forward of (i) the front façade of the dwelling unit, or (ii) the front porch of the dwelling unit, whichever is closer to the right-of-way from which the dwelling unit is addressed.

Section 8: Parking and Loading

Parking for the development shall meet requirements of UDO Section 8.3.

Section 9: Signage

All signage for this PUD shall comply with Apex UDO Section 8.7, *Signs*, of the Town of Apex UDO.

Section 10: Natural Resource and Environmental Data

A. River Basins and Watershed Protection Overlay Districts

The project is located within the Little Beaver Creek Basin and Cape Fear River Basin. The Town's Watershed Protection Overlay District Map shows the site is within the Primary Watershed Protection Overlay District and contains FEMA designated 100-year floodplain.

B. Resource Conservation Areas (RCA) – Required and Provided

This PUD will be subject to, and meet the requirements of, Section 8.1.2 of the UDO, *Resource Conservation Area* and Section 2.3.4, *Planned Development Districts*. Per UDO Section 7.2.5.B.8, if any mass grading is proposed in the single-family sections of the PUD, the following provision will apply to lot coverage area for single-family: An additional five percent (5%) Resource Conservation Area (RCA) shall be set aside. This requirement is added to the standard RCA percentage requirement found in Sec. 8.1.2.C Size of the RCA.

C. Historic structures

The North Carolina State Historic Preservation Office (SHPO) shows the properties within the new Hill Historic District and the existing Utlely-Horton Farm (Nommie Horton Farm – SHPO ID WA1098). In coordination with Capital Area Preservation, the PUD proposes to retain and preserve the historic home (in its current location) and two barns on the property (one relocation and one preservation).

Section 11: Stormwater Management

Development shall meet all stormwater requirements listed in the UDO, including limiting the post-development stormwater flows to not exceed the pre-development rates. In addition, the post-development peak runoff rate shall be limited to the pre-development peak runoff rate for the 2-year, 10-year, and 25-year, 24-hour storm events. The development shall meet all stormwater management requirements for quality and quantity treatment in accordance with Section 6.1.7 of the UDO, such that post development peak runoff shall not exceed pre-development peak runoff rate for the storm events previously noted.

Section 12: Parks and Recreation

Utlely Farms PUD #22CZ09 was reviewed at the August 31, 2022 PRCR Advisory Commission. Following is the recommendation which was provided:

Staff recommends a fee-in-lieu of dedication for 122 single-family detached units. The current 2022 rate of \$3,753.89 per single family detached unit would be deposited with the Town at the time the first final subdivision plat is approved for the units within each phase.

The language has been added to the PUD Drawing documents as well as the PD Text.

Per Article 14 of the UDO, any credit for greenway construction against fees requires the approval of construction plans, contingent upon approval of an engineer’s estimate of probable cost for greenway construction.

Section 13: Public Facilities

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F)(1)(f) and be designed according to sound engineering standards and shall comply with Town of Apex Sewer and Water Master Plan and the Town of Apex Standards and Specifications. Specifically, road and utility infrastructure shall be as follows:

Utley Farms PUD

- **General Roadway Infrastructure**

Developer shall provide minimum frontage widening based on ½ of the ultimate cross section as shown on the adopted Transportation Plan in effect at time of Master Subdivision Plan submittal. The road network will promote connectivity wherever possible to adjacent neighborhoods and undeveloped property. Further, cul-de-sacs will be avoided except where environmental features make through streets unfeasible. Sidewalks will be provided on both sides of streets internal to the site as required by the UDO.

Refer to sheet C100 of the PUD plan for proposed access points, stub street extensions, and planned vehicular connectivity.

- **Potential Access Points:**

Potential Access Points shown on the Conceptual Site Plan / Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections can only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.

- **Transportation Improvements**

All proposed driveway access and improvements on state-maintained roadways are subject to NCDOT review and approval. Roadway improvements are subject to modification and final approval by the Town of Apex and NCDOT as part of the Master Subdivision Plan and Construction Document approval process. A Traffic Impact Analysis (TIA) has been performed as part of this PUD rezoning consistent with the Town's standards for the same. Based upon the TIA and staff review, the following traffic improvements are proposed for this development:

- a. Old US 1 and New Hill Olive Chapel Road/New-Hill Holleman Road.

- Developer shall construct an eastbound right turn lane with 175 feet of storage and appropriate deceleration length and taper. In the event there is insufficient right-of-way for this off-site transportation improvement, Developer shall use commercially reasonable efforts to acquire the right-of-way through good faith negotiations starting with an offer to the third party land owner(s) based upon an appraised value of the right-of-way to be acquired. In the event such negotiations are unsuccessful and the Town of Apex is unable or unwilling to assist Developer in acquiring the requisite right-of-way, Developer shall pay a fee-in-lieu in the amount of the appraised cost of the required right-of-way plus estimated construction cost of the turn lane.

Utley Farms PUD

b. Old US 1 and Site Driveways

The Developer shall construct two access points on Old US 1 consisting of:

- Site Drive 1: A full-movement stop-controlled public street intersection approximately 1,200 feet west of the intersection of New Hill Olive Chapel Road, including an eastbound left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.
- Site Drive 2: A full-movement stop-controlled public street intersection approximately 1,050 feet west of the intersection of Old US 1 and Site Drive 1, including an eastbound left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.

- **Wayfinding Improvements**

Wayfinding measures at the site shall be provided to facilitate the movement of vehicles and pedestrians to and within the development.

- **Water and Sanitary Sewer**

All development within the project shall be served by the Town of Apex water and sanitary sewer facilities. The utility design will be finalized at the time of development plan review and approval upon available facilities adjacent to the site at that time. A conceptual utility plan is included in the PUD plan for reference. All utility infrastructure shall meet current Town Water and Sewer Master Plans.

- **Other Utilities**

Electricity will be provided by Apex Electric. Phone, cable, and gas will be provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Section 14: Phasing Plan

This PUD and all improvements required to support the uses contemplated by the PUD, including without limitation infrastructure and public facilities, may be completed in multiple phases, with construction anticipated to begin in 2023. Project phasing will be planned to ensure the points of access, RCA, stormwater controls and other design standards are met in accordance with the UDO. A final phasing plan will be incorporated within the Master Subdivision Plans (MSP) for review and approval through the Technical Review Committee.

Section 15: Consistency with the 2045 Land Use Map

The proposed land use is consistent with the Town of Apex's 2045 Land Use Map.

Section 16: Compliance with the UDO

The development standards adopted for this PUD are in compliance with those set forth in the current version of the Town's Unified Development Ordinance (UDO). Any deviations from UDO requirements have been specifically defined within this document. No deviations from the UDO are currently anticipated with the project zoning documents.

Section 17: Compliance with Comprehensive Transportation Plan and Bicycle Plan

Development plans submitted pursuant to this rezoning shall comply with the adopted Advance Apex: The 2045 Transportation Plan in effect at the time of the development plan submittal, as provided for in the Unified Development Ordinance. Further, development of the property shall be consistent with the Town's adopted Bicycle and Pedestrian System Plan in effect at the time of the development plan submittal.

<REZONING>

UTLEY FARMS PUD

3720 OLD US 1 HIGHWAY
 NEW HILL, NORTH CAROLINA 27562
 PROJECT NUMBER: 210504
 DATE MAY 2, 2022

RIPARIAN BUFFERS AND WETLANDS:
 RIPARIAN BUFFERS AND WETLANDS LOCATED ON SITE BY
 S&EC TO BE CONFIRMED BY THE US ARMY CORPS OF
 ENGINEERS AND TOWN OF APEX.



OWNER

MYRTLE H. HORTON
 3720 OLD US 1 HIGHWAY
 NEW HILL, NC 27562

HELON J. WELLONS/RAY E. JOHNSON
 0 NEW HILL OLIVE CHAPEL ROAD
 NEW HILL, NC 27562

APPLICANT

KB HOME - RALEIGH
 THURM BOWEN / ROMAN ACOSTA
 4506 S. MIAMI BLVD #100
 DURHAM, NC 27703
 P: (919) 768-7976
 www.KBHome.com

ENGINEER/LAND PLANNER

PEAK ENGINEERING & DESIGN, PLLC
 JEFF ROACH, P.E.
 1125 APEX PEAKWAY
 APEX, NC 27502
 P: (919) 439-0100
 www.PeakEngineering.com

SURVEYOR

BATEMAN CIVIL SURVEY COMPANY
 STEVEN CARSON
 2524 RELIANCE AVENUE
 APX, NC 27502
 P: (919) 577-1080
 www.batemancivilsurvey.com

ENVIRONMENTAL CONSULTANT

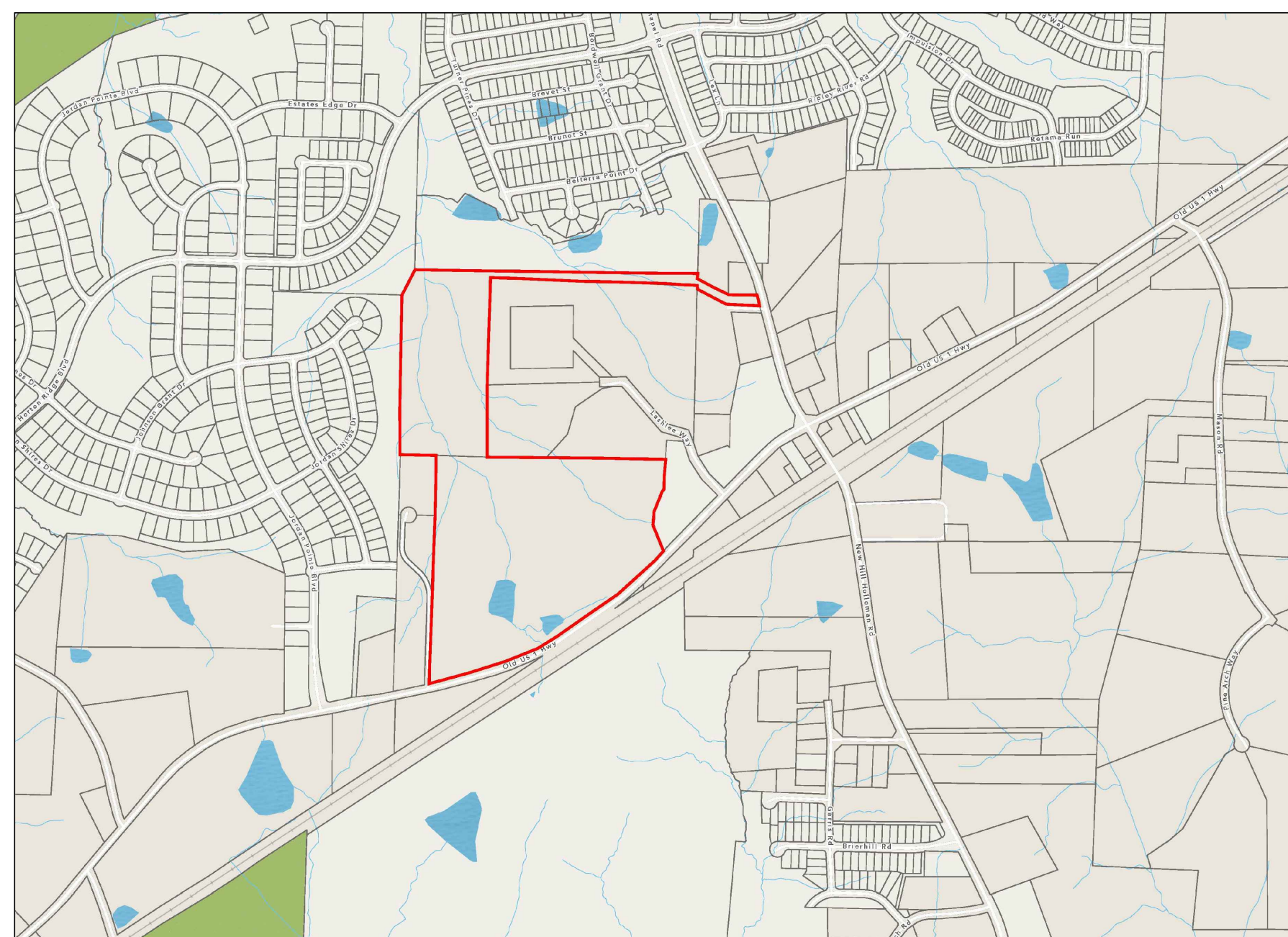
SOIL & ENVIRONMENTAL CONSULTANTS, PA
 STEVEN BALL, RF, PWS
 8412 FALLS OF NEUSE ROAD, SUITE 104
 RALEIGH, NC 27615
 P: (919) 846-5900
 www.SandEC.com

TRAFFIC ENGINEER

RAMEY KEMP & ASSOCIATES, INC.
 RYNAL STEPHENSON, P.E.
 5805 FARINGDON PLACE, SUITE 100
 RALEIGH, NC 27609
 P: (919) 872-5115
 www.RameyKemp.com



PROJECT AERIAL NOT TO SCALE



VICINITY MAP NOT TO SCALE

SITE INFORMATION:

Property Owner	Site Address	PIN	REID	Deeded Acreage	Deed Book/Plat Book
HORTON, MYRTLE H. PO BOX 312 NEW HILL, NC 27562-0312	3720 OLD US 1 HWY	0710-71-4834	0033299 (area included in development)	43.27 acres 39.84 acres	DB 7883 PG 737/DB 686 PG 49 DB 422 PG 84/DB 730 PG 122 DB 7556 PG 521/DB 6711 PG 832
WELLONS, HELON J. JOHNSON, RAY E. 400 JOHNSON FARM ROAD NEW HILL, NC 27562-8839	0 NEW HILL OLIVE CHAPEL RD	0710-73-6732	0080810	17.96 acres	DB 02367 PG 0693

Total Deeded Acreage: 61.24 acres
Total Project Acreage: 56.59 acres
 (area south of Old US 1 Highway centerline is excluded from the N/F Myrtle H. Horton property for this development)

Township: Buckhorn Township

Flood Zone Information: Firm Panel 3720071000K dated February 2, 2007 does not show the presence of flood zones on the properties.

Watershed Information: Primary Watershed Protection Overlay District, Little Beaver Creek Basin, Cape Fear River Basin.

Historical: NC SHPO shows the properties within the New Hill Historic District and the existing Utley-Horton Farm (Nommie Horton Farm) - SHPO ID WA1098

Annexation: annexation required as the property is located OUTSIDE of the Apex ETJ

Existing Zoning: R-40W and R-80W
 Proposed Zoning: PUD - CZ (Planned Unit Development - Conditional Zoning)
 2045 Land Use Map: Low Density Residential

Existing Use: Single Family Residential and vacant
 Proposed Uses: Single-family Park, active
 Greenway Park, passive
 Recreation facility, private Utility, minor
 Accessory apartment

* Homeowners Association covenants shall not restrict the construction of accessory dwelling units

Maximum Number of Lots: 113 dwelling units
 Proposed Project Density: 2.00 dwelling units/acre or less (< 3.0 units/acre for Low Density Residential districts)

Lots:

	Min Lot Size	Min Lot Width	Max Building Height
Single-family detached	6,000 SF	50 feet	36 feet

Building Setbacks (minimum setbacks unless otherwise noted):

	Residential	Private Recreation Facility
Front:	10 feet	10 feet
Front (garage):	20 feet from sidewalk or back-of-curb	N/A
Rear:	10 feet	10 feet
Side:	5 feet	10 feet
Side (Corner Lot):	10 feet	10 feet
From Buffer or RCA	10 feet	10 feet
Parking setback to buffer or RCA	5 feet	5 feet

Parking Requirements:
 Single Family Detached: 2 spaces/dwelling unit required
 Single Family parking provided by driveway and garage (min 2 spaces/lot)

Private Recreation Facility: Parking shall be based upon size and use within the recreation facility

Maximum Built Upon Area: 33.96 acres or 60%

RCA Required: UDO Section 8.1

Grading:
 Site to be "Mass Graded"
 % of lots graded prior to first plat: 50% (limited by Apex UDO to a maximum acreage for mass grading)
 maximum of 20 acres of clearing for single-family detached developments

% of pre-development drainage areas preserved within their natural basins: 90%

PARKS AND RECREATION DATA TABLE:

DATE REVIEWED BY PRCR ADVISORY COMMISSION: **AUGUST 31, 2022**

FEES-IN-LIEU:

SINGLE-FAMILY DETACHED UNITS	\$3,753.89 / DWELLING UNIT x 113 UNITS = \$424,189.57
SINGLE-FAMILY ATTACHED UNITS	\$0.00 / DWELLING UNIT
MULTI-FAMILY UNITS	\$0.00 / DWELLING UNIT

ACRES OF LAND DEDICATION: n/a ACRES
 PUBLIC GREENWAY TRAIL CONSTRUCTION YES NO

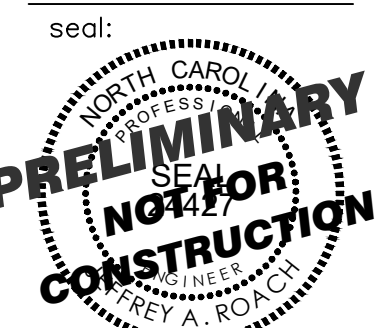
Following is the recommendation from the PRCR Advisory Commission:
 Staff recommends a fee-in-lieu of dedication for 122 single-family detached units. The current 2022 rate of \$3,753.89 per single family detached unit would be consistent with the Town at the time the first final subdivision plat is approved for the units within each

INDEX OF DRAWINGS:

- C000 COVER SHEET
- C002 EXISTING CONDITIONS
- C100 CONCEPTUAL SITE PLAN/UTILITY PLAN
- C120 BUILDING ELEVATIONS

REZONING CASE # 22CZ09
 (SUBMITTED ON MAY 2, 2022)

Project:
UTLEY FARMS PUD
3720 OLD US 1 HIGHWAY
BUCKHORN TOWNSHIP
NEW HILL, NORTH CAROLINA 27562



NO.	DATE	REVISION
1	AUGUST 12, 2022	TOWN OF APEX - 1ST ZONING COMMENTS
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING COMMENTS

title:
PUD COVER SHEET

proj #:
210504

date:
MAY 2, 2022

dwg by: **chkd by:**
FS JR

scale:
As Noted

sheet:
C000
 (PUD PLAN)



RIPARIAN BUFFERS AND WETLANDS:
 RIPARIAN BUFFERS AND WETLANDS LOCATED ON SITE BY S&EC TO BE CONFIRMED BY THE US ARMY CORPS OF ENGINEERS AND TOWN OF APEX.

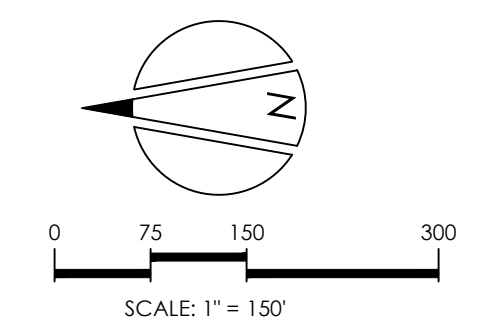
- EXISTING CONDITIONS NOTES:**
- BOUNDARY SURVEY PROVIDED BY BATEMAN CIVIL SURVEY COMPANY).
 - TOPOGRAPHIC INFORMATION FROM WAKE COUNTY GIS AND SURVEYOR DATA.
 - NO SLOPES EQUAL TO OR GREATER THAN 3:1 FOUND ON THE SITE.
 - HISTORIC INVENTORY SITES OR NATURAL INVENTORY AREAS LOCATED ON OR WITHIN 100' OF THIS PROPERTY AS NOTED WITHIN THE SITE DATA TABLE.
 - NO GREENWAY OR TRAILS ARE LOCATED ON THIS SITE. GREENWAY OR TRAILS MAY BE PLANNED FOR THIS SITE AS PER THE GREENWAY MASTER PLAN.
 - TREE SURVEY INFORMATION PROVIDED BY S&EC, INC.
 - 100-YR FLOOD PLAIN IS NOT LOCATED ON OR WITHIN 100' OF THIS PROPERTY.
 - PROPERTIES ARE LOCATED WITHIN THE PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT, LITTLE BEAVER CREEK BASIN, AND THE CAPE FEAR RIVER BASIN.

LEGEND:

- FUTURE DEVELOPMENT
- SINGLE FAMILY - DETACHED
- BUFFERS/RCA
- HISTORIC PRESERVATION AREA
- PROJECT PERIMETER BOUNDARY
- PROPOSED WATER CONNECTIONS
- PROPOSED SEWER CONNECTIONS
- POTENTIAL ACCESS POINTS

PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY

- SITE AND UTILITY NOTES:**
- DEVELOPMENT ACCESS AND STUB STREET LOCATIONS SHALL BE FINALIZED AT MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - FINAL RESOURCE CONSERVATION AREA (RCA), OPEN SPACE, AND PLAY LAWN LOCATIONS SHALL BE COORDINATED WITH STAFF AND BUILDER DURING MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - ALL ZONING PLAN SHEETS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DESIGN COMPONENTS ARE DETERMINED AT MASTER SUBDIVISION PLAN.
 - REFER TO PD TEXT DOCUMENTS FOR A LIST OF ALLOWABLE USES, ZONING CONDITIONS, AND OTHER DESIGN STANDARDS FOR THE DEVELOPMENT.
 - ENVIRONMENTAL FEATURES ARE SUBJECT TO FINAL REVIEW CONCURRENCE WITH VARIOUS REGULATING AGENCIES.
 - PUBLIC PEDESTRIAN AND VEHICULAR ACCESS IS SHOWN FOR CONCEPTUAL PURPOSES AND ARE SUBJECT TO REVISIONS DURING THE MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - ALL SITE ELEMENTS ARE REQUIRED TO MEET OR EXCEED TOWN OF APEX, NCDOT, OR OTHER REVIEW AUTHORITY STANDARD DESIGN SPECIFICATIONS.
 - PROJECT WILL COMPLY WITH ADOPTED TOWN MASTER PLANS INCLUDING TRANSPORTATION, WATER, SEWER, AND GREENWAYS.
 - THE PROJECT IS REQUESTING FULL TOWN SERVICES, INCLUDING BUT NOT LIMITED TO WATER, SEWER AND ELECTRICITY.
 - THE PROJECT WILL NOT UTILIZE PRIVATE SEWAGE DISPOSAL.



1 EXISTING CONDITIONS PLAN
 C001 SCALE: 1"=150'

project:
UTLEY FARMS PUD
3720 OLD US 1 HIGHWAY
BUCKHORN TOWNSHIP
NEW HILL, NORTH CAROLINA 27562



NO.	DATE	REVISION	BY
1	AUGUST 12, 2022	TOWN OF APEX - 1ST ZONING COMMENTS	JR
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING COMMENTS	JR

title:
 EXISTING CONDITIONS PLAN

proj #:
 210504
 date:
 MAY 2, 2022
 dwg by: chkd by:
 FS JR
 scale:
 As Noted
 sheet:
C001
 (PUD PLAN)



SINGLE FAMILY DETACHED
MODEL 1455



SINGLE FAMILY DETACHED
MODEL 1582



SINGLE FAMILY DETACHED
MODEL 2177



SINGLE FAMILY DETACHED
MODEL 2160 & 2338



SINGLE FAMILY DETACHED
MODEL 2539



SINGLE FAMILY DETACHED
MODEL 2723

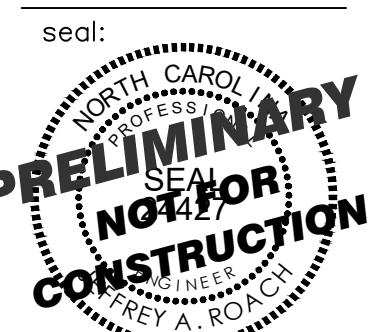


SINGLE FAMILY DETACHED
MODEL 3174

TYPICAL BUILDING ELEVATIONS. WINDOW CONFIGURATIONS, DOOR STYLES, COLORS, AND OTHER ARCHITECTURAL STANDARDS WILL VARY FROM HOME-TO-HOME.

ELEVATIONS ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONDITIONS ARE INCLUDED WITHIN THE ZONING PD TEXT DOCUMENT.

1 CONCEPTUAL BUILDING ELEVATIONS
C120 SCALE: 1"=N/A

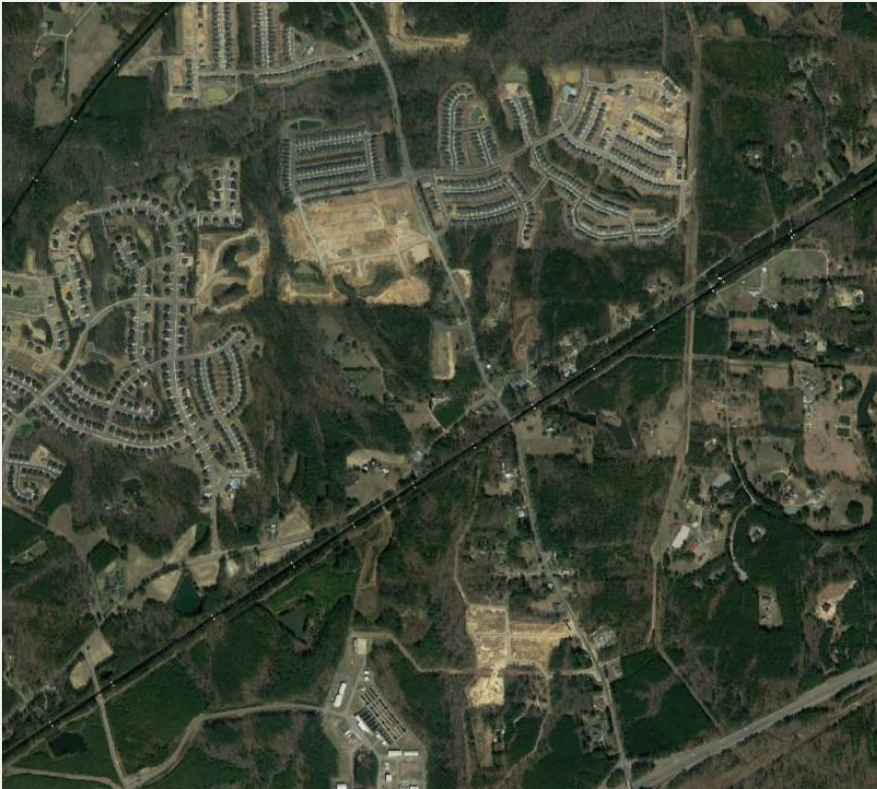


NO.	DATE	REVISION	BY
1	AUGUST 15, 2022	TOWN OF APEX - 1ST ZONING CONFORMANCE	JR
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING CONFORMANCE	JR

title:
CONCEPTUAL
BUILDING
ELEVATIONS

proj #:
210504
date:
MAY 2, 2022
dwg by: chkd by:
FS JR
scale:
As Noted

sheet:
C120
(PUD PLAN)



Utley Farms
Traffic Impact Analysis
Apex, North Carolina



TRAFFIC IMPACT ANALYSIS

FOR

UTLEY FARMS

LOCATED

IN

APEX, NC

Prepared For:
Peak Engineering & Design, PLLC
1125 Apex Peakway
Apex, NC 27502

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

APRIL 2022

RKA Project No. 22093



Prepared By: DT

Reviewed By: NB

TRAFFIC IMPACT ANALYSIS
UTLEY FARMS
APEX, NORTH CAROLINA

EXECUTIVE SUMMARY

1. Development Overview

A Traffic Impact Analysis (TIA) was conducted for the proposed Utley Farms development in accordance with the Apex (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. The proposed development is to be located north of Old US Highway 1, west of New Hill-Olive Chapel Road in Apex, North Carolina. The proposed development is expected to be a maximum of 140 single-family home development and estimated to be built out by 2026. Site access is proposed via two (2) full movement driveways along Old US Highway 1.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions without Gracewood Improvements
- 2026 No-Build Traffic Conditions with Gracewood Improvements
- 2026 Build Traffic Conditions without Gracewood Improvements
- 2026 Build Traffic Conditions with Gracewood Improvements

2. Existing Traffic Conditions

The study area for the TIA was determined through coordination with the Town and NCDOT and consists of the following existing intersection:

- Old US Highway 1 and New Hill - Olive Chapel Road / New Hill - Holleman Road

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersection of Old US Highway 1 and New Hill - Olive Chapel Road / New Hill -

Holleman Road in February of 2022 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods, while schools were in session for in person learning.

3. Site Trip Generation

The proposed development is assumed to consist of a maximum of 140 single-family homes. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE Trip Generation Manual, 10th Edition. Table E-1 provides a summary of the trip generation potential for the site.

Table E-1: Site Trip Generation

LAND USE (ITE Code)	INTENSITY	DAILY TRIPS (VPD)	WEEKDAY AM PEAK HOUR (VPH)		WEEKDAY PM PEAK HOUR (VPH)	
			Enter	Exit	Enter	Exit
Single Family Homes (210)	140 units	1,380	26	75	86	50

4. Future Traffic Conditions

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of 3% would be used to generate 2026 projected weekday AM and PM peak hour traffic volumes. The following adjacent developments were identified to be considered under future conditions:

- Gracewood Residential
- Olive Ridge
- Jordan Manors – 80% built out, 20% included as adjacent development traffic
- Belterra (New Hill Assembly aka Jordan Vistas)

5. Capacity Analysis Summary

The analysis considered weekday AM and PM peak hour traffic for 2022 existing, 2026 no-build, and 2026 build conditions. Refer to Section 7 of the TIA for the capacity analysis summary performed at each study intersection.

6. Recommendations

Based on the findings of this study, specific geometric and traffic control improvements have been identified at study intersections. The improvements are summarized below and are illustrated in Figure E-1.

Background Improvements by Gracewood Residential Development Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

- Construct exclusive eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive northbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound right-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.

Recommended Improvements by Developer

Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

A proportional fee-in-lieu is recommended for these improvements based on an engineering estimate for their construction prior to the 51st unit.

- Construct exclusive eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.

Old US Highway 1 and Site Drive 1

- Construct the southbound approach with one (1) ingress lane and one (1) egress lane.
- Provide an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length.
- Provide stop-control for the southbound approach.

- *Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.*

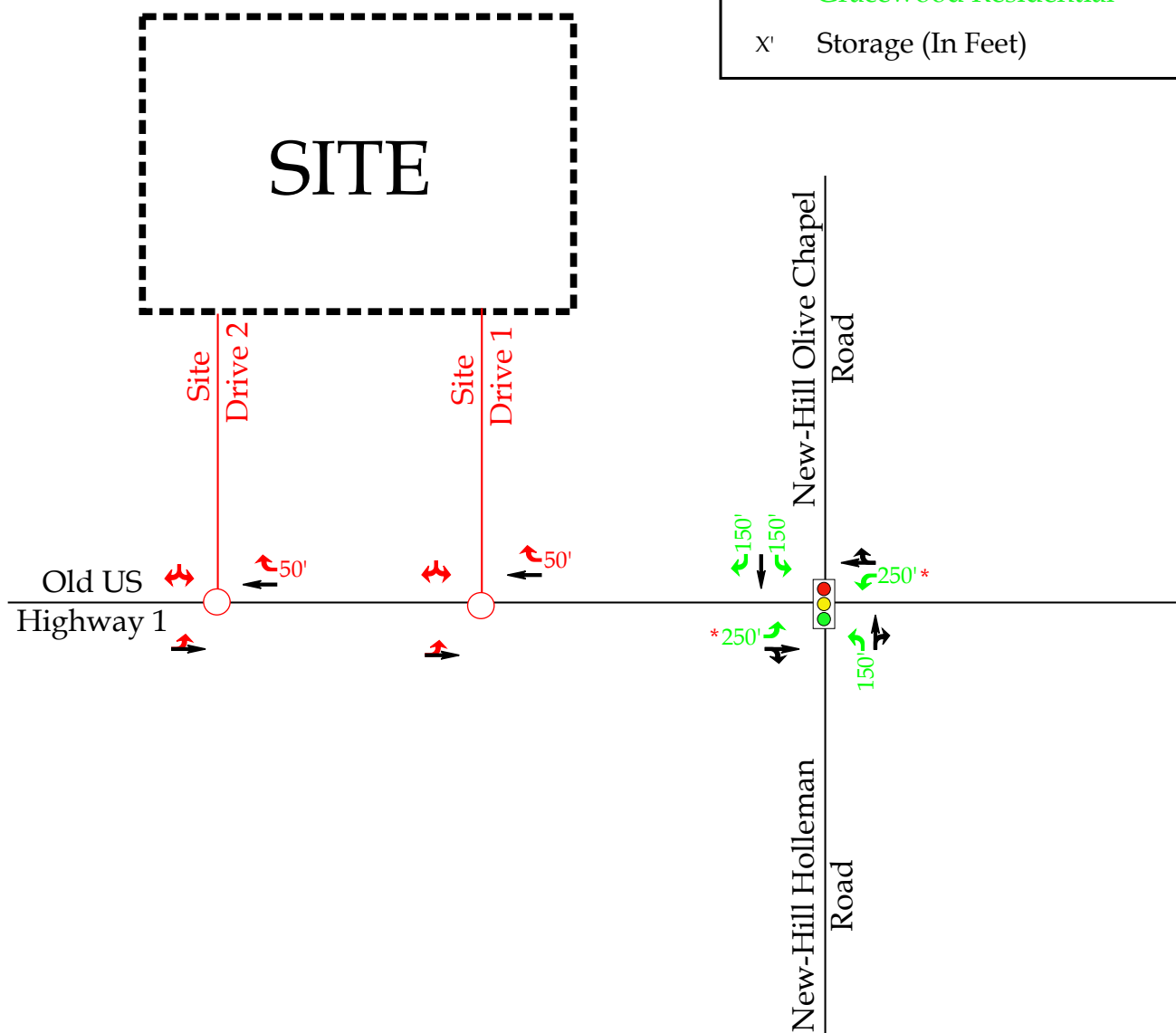
Old US Highway 1 and Site Drive 2

- Construct the southbound approach with one (1) ingress lane and one (1) egress lane.
- Provide an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length.
- Provide stop-control for the southbound approach.
- *Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.*



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ➡ Existing Lane
- ➡ Improvement by Developer
- ➡ Background Improvement by Gracewood Residential
- x' Storage (In Feet)



*Note: Proportional fee-in-lieu by Developer

	<p>Utlely Farms Apex, NC</p>	<p>Recommended Lane Configurations</p>	
			<p>Scale: Not to Scale Figure E-1</p>

TABLE OF CONTENTS

1. INTRODUCTION 1

1.1. Site Location and Study Area 1

1.2. Proposed Land Use and Site Access 2

1.3. Adjacent Land Uses 2

1.4. Existing Roadways 2

2. 2022 EXISTING PEAK HOUR CONDITIONS 6

2.1. 2022 Existing Peak Hour Traffic Volumes 6

2.2. Analysis of 2022 Existing Peak Hour Traffic Conditions 6

3. 2026 NO-BUILD PEAK HOUR CONDITIONS 8

3.1. Ambient Traffic Growth 8

3.2. Adjacent Development Traffic 8

3.3. Future Roadway Improvements 9

3.4. 2026 No-Build Peak Hour Traffic Volumes 10

3.5. Analysis of 2026 No-Build Peak Hour Traffic Conditions 10

4. SITE TRIP GENERATION AND DISTRIBUTION 16

4.1. Trip Generation 16

4.2. Site Trip Distribution and Assignment 16

5. 2026 BUILD TRAFFIC CONDITIONS 19

5.1. 2026 Build Peak Hour Traffic Volumes 19

5.2. Analysis of 2026 Build Peak Hour Traffic Conditions 19

6. TRAFFIC ANALYSIS PROCEDURE 22

6.1. Adjustments to Analysis Guidelines 22

7. CAPACITY ANALYSIS 23

7.1. Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road 23

7.2. Old US Highway 1 and Site Drive 1 27

7.3. Old US Highway 1 and Site Drive 2 28

8. CONCLUSIONS 29

9. RECOMMENDATIONS 33

LIST OF FIGURES

Figure 1 – Site Location Map 3

Figure 2 – Preliminary Site Plan..... 4

Figure 3 – Existing Lane Configurations 5

Figure 4 – 2022 Existing Peak Hour Traffic..... 7

Figure 5 – 2026 Projected Peak Hour Traffic11

Figure 6a – Adjacent Development Trips without Gracewood Improvements
.....12

Figure 6b – Adjacent Development Trips with Gracewood Improvements.13

Figure 7a – 2026 No-Build Peak Hour Traffic without Gracewood
Improvements.....14

Figure 7b – 2026 No-Build Peak Hour Traffic with Gracewood Improvements
.....15

Figure 8 – Site Trip Distribution.....17

Figure 9 – Site Trip Assignment.....18

Figure 10a – 2026 Build Peak Hour Traffic without Gracewood Improvements
.....20

Figure 10b – 2026 Build Peak Hour Traffic with Gracewood Improvements
.....21

Figure 11 – Recommended Lane Configurations35

LIST OF TABLES

Table 1: Existing Roadway Inventory 2

Table 2: Adjacent Development Information..... 9

Table 3: Trip Generation Summary 16

Table 4: Highway Capacity Manual – Levels-of-Service and Delay22

Table 5: Analysis Summary of Old US Highway 1 and New Hill-Olive Chapel Road /
New Hill-Holleman Road23

Table 6: Analysis Summary of Old US Highway 1 and Site Drive 127

Table 7: Analysis Summary of Old US Highway 1 and Site Drive 228

TECHNICAL APPENDIX

- Appendix A: Scoping Documentation
- Appendix B: Traffic Counts
- Appendix C: Adjacent Development Information
- Appendix D: Capacity Calculations – Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road
- Appendix E: Capacity Calculations – Old US Highway 1 and Site Drive 1
- Appendix F: Capacity Calculations – Old US Highway 1 and Site Drive 2
- Appendix G: SimTraffic Queuing Reports
- Appendix H: Turn Lane Warrant Charts

TRAFFIC IMPACT ANALYSIS
UTLEY FARMS
APEX, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Utley Farms development to be located north of Old US Highway 1, west of New Hill-Olive Chapel Road in Apex, North Carolina. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed by 2026, is assumed to consist of a maximum amount of 140 single family homes.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions without Gracewood Improvements
- 2026 No-Build Traffic Conditions with Gracewood Improvements
- 2026 Build Traffic Conditions without Gracewood Improvements
- 2026 Build Traffic Conditions with Gracewood Improvements

1.1. Site Location and Study Area

The development is proposed to be located north of Old US Highway 1, west of New Hill-Olive Chapel Road in Apex, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Apex (Town) and consists of the following existing intersections:

- Old US Highway 1 and New Hill - Olive Chapel Road / New Hill - Holleman Road

Refer to Appendix A for the approved memorandum of understanding (MOU).

1.2. Proposed Land Use and Site Access

The site is expected to be located north of Old US Highway 1, west of New Hill - Olive Chapel Road. The proposed development, anticipated to be completed by 2026, is assumed to consist of a maximum amount of 140 single family homes.

Site access is proposed via two (2) full movement driveways along Old US Highway 1. Refer to Figure 2 for a copy of the preliminary site plan.

1.3. Adjacent Land Uses

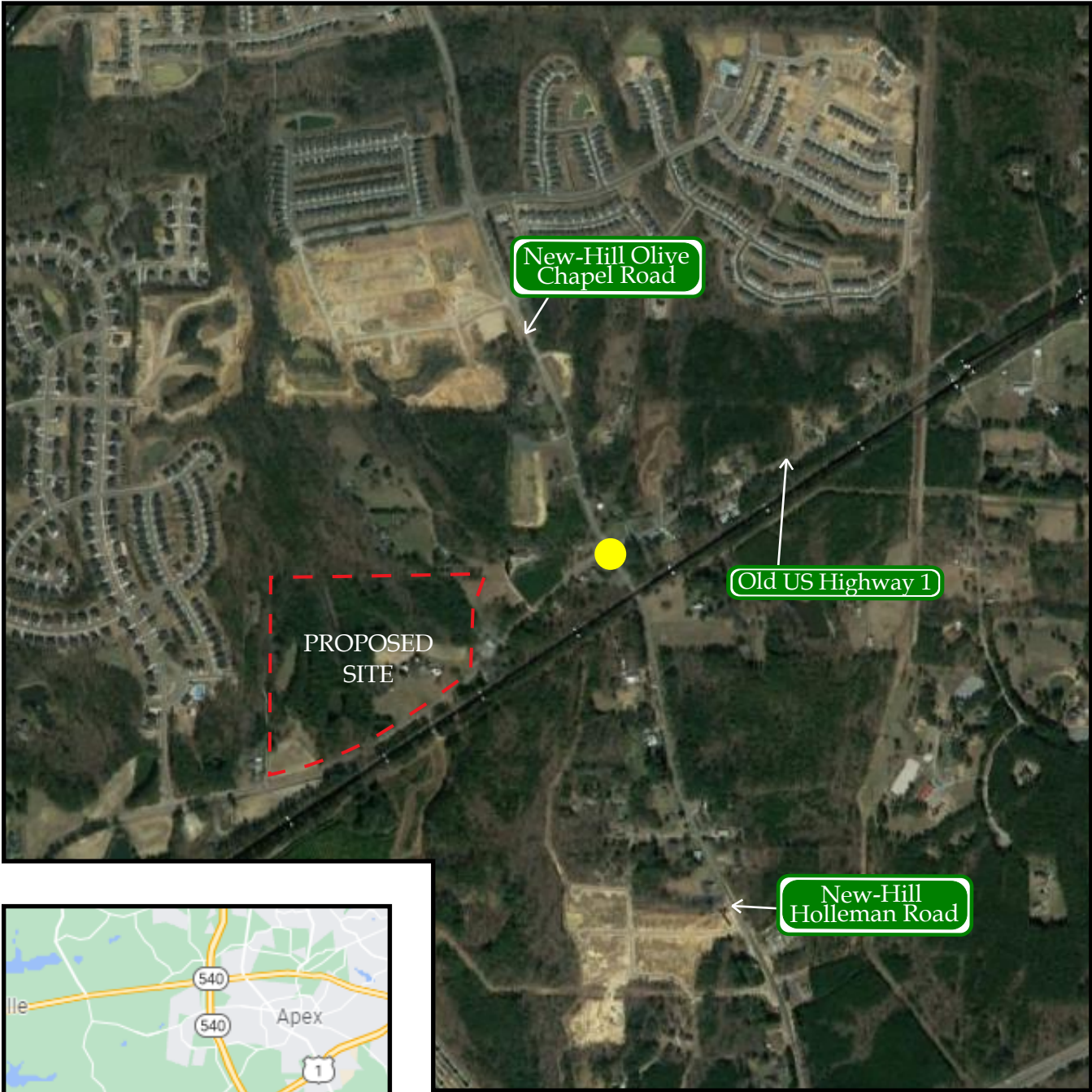
The proposed development is located in an area consisting primarily of undeveloped land and residential development.

1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	Maintained By	2020 AADT (vpd)
Old US Highway 1	SR 1011	2-lane undivided	55 mph	NCDOT	10,500
New Hill-Olive Chapel / New Hill-Holleman	SR 1141	2-lane undivided	45 mph	NCDOT	4,900



LEGEND

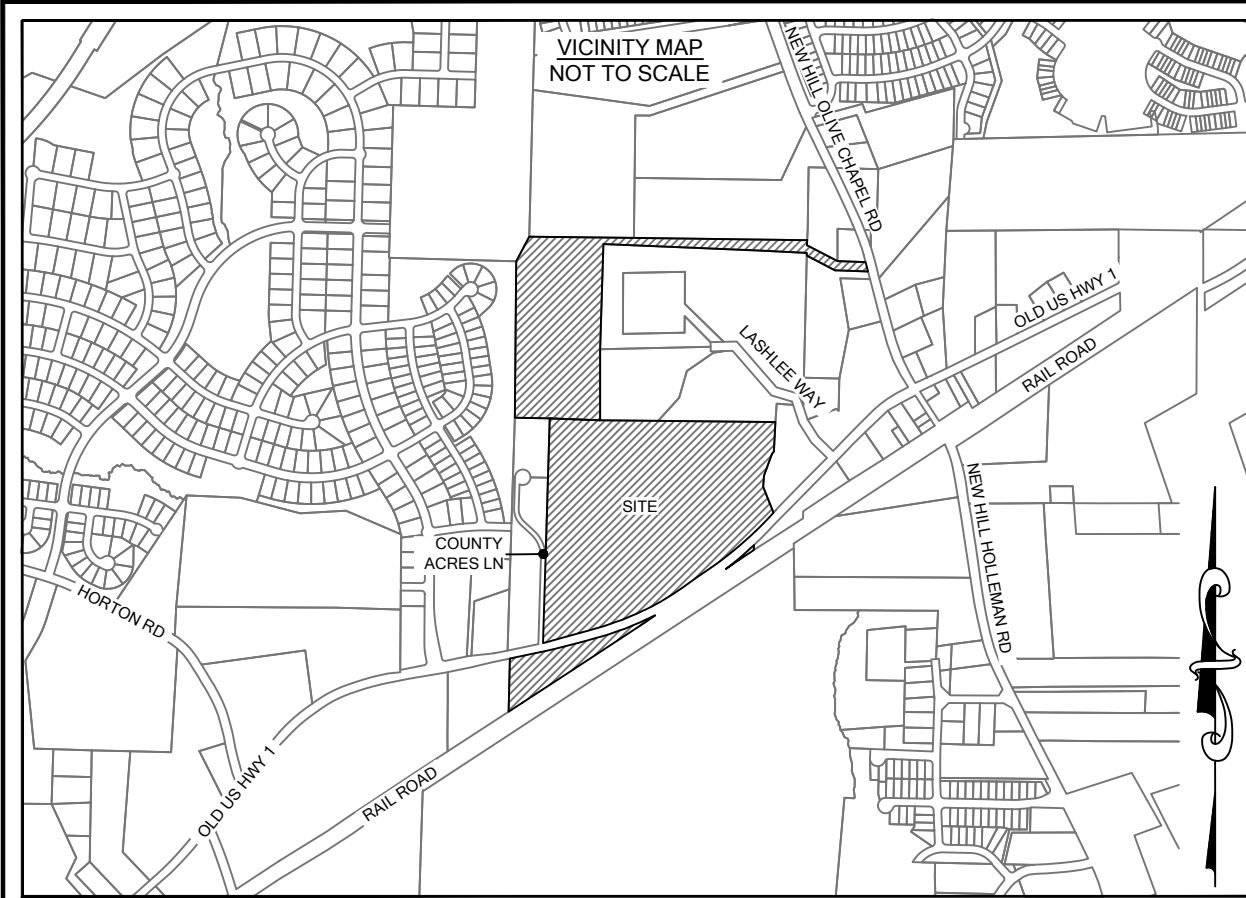
- Proposed Site Location
- Existing Study Intersection
- Study Area



Utlely Farms
Apex, NC

Site Location Map

Scale: Not to Scale Figure 1



LEGEND

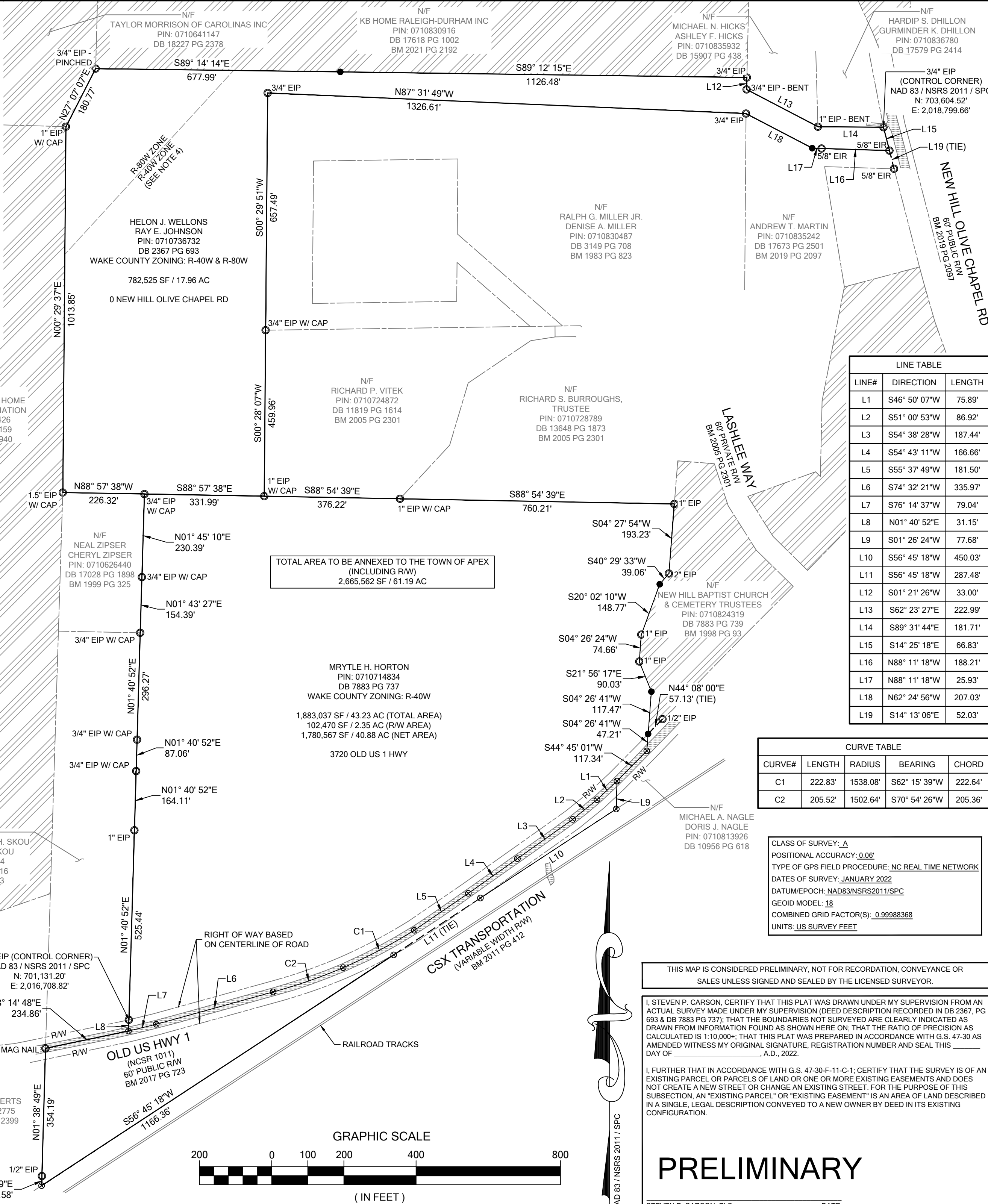
- EXISTING BOUNDARY CORNER FOUND
- ⊙ BOUNDARY CORNER SET COMPUTED POINT
- PROPERTY LINE SURVEYED
- - - PROPERTY LINE NOT SURVEYED
- - - EASEMENTS
- ▨ PAVEMENT
- ▨ TOWN OF APEX CORPORATE LIMITS (PER WAKE COUNTY GIS)
- EIP EXISTING IRON PIPE
- EIR EXISTING IRON REBAR
- BM BOOK OF MAPS
- DB DEED BOOK
- PG PAGE
- R/W RIGHT OF WAY

NOTES

1. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY UNDER THE SUPERVISION OF STEVEN P. CARSON, PLS.
2. ALL DISTANCE ARE HORIZONTAL GROUND DISTANCE AND ALL BEARINGS ARE BASED ON GPS OBSERVATIONS, NAD83 / NSRS 2011 / SPC, UNLESS OTHERWISE SHOWN.
3. PROPERTY LIES IN ZONE "X" PER NATIONAL INSURANCE PROGRAM FLOOD INSURANCE RATE MAP #3720071000K, DATED 02/02/2007.
4. SITE ZONED "R-40W" & "R-80W" FOR WAKE COUNTY PER COUNTY GIS.
5. AREAS COMPUTED BY COORDINATE METHOD.
6. THIS MAP HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.
7. ALL BOUNDARY CORNERS SET ARE 3/4" IRON PIPE SET (3/4" IPS), UNLESS OTHERWISE NOTED.

ANNEXATION #
 I, DONNA B. HOSCH, MMC, NCCMC, TOWN CLERK, APEX, NORTH CAROLINA CERTIFY THIS A TRUE AND EXACT MAP OF ANNEXATION ADOPTED THE DAY OF _____, 20____, BY THE TOWN COUNCIL. I SET MY HAND AND SEAL OF THE TOWN OF APEX, _____ DAY/MONTH/YEAR

DONNA B. HOSCH, MMC, NCCMC, TOWN CLERK



TOTAL AREA TO BE ANNEXED TO THE TOWN OF APEX (INCLUDING R/W)
 2,665,562 SF / 61.19 AC

MRYTLE H. HORTON
 PIN: 0710714834
 DB 7883 PG 737
 WAKE COUNTY ZONING: R-40W
 1,883,037 SF / 43.23 AC (TOTAL AREA)
 102,470 SF / 2.35 AC (R/W AREA)
 1,780,567 SF / 40.88 AC (NET AREA)
 3720 OLD US 1 HWY

LINE TABLE

LINE#	DIRECTION	LENGTH
L1	S46° 50' 07"W	75.89'
L2	S51° 00' 53"W	86.92'
L3	S54° 38' 28"W	187.44'
L4	S54° 43' 11"W	166.66'
L5	S55° 37' 49"W	181.50'
L6	S74° 32' 21"W	335.97'
L7	S76° 14' 37"W	79.04'
L8	N01° 40' 52"E	31.15'
L9	S01° 26' 24"W	77.68'
L10	S56° 45' 18"W	450.03'
L11	S56° 45' 18"W	287.48'
L12	S01° 21' 26"W	33.00'
L13	S62° 23' 27"E	222.99'
L14	S89° 31' 44"E	181.71'
L15	S14° 25' 18"E	66.83'
L16	N88° 11' 18"W	188.21'
L17	N88° 11' 18"W	25.93'
L18	N62° 24' 56"W	207.03'
L19	S14° 13' 06"E	52.03'

CURVE TABLE

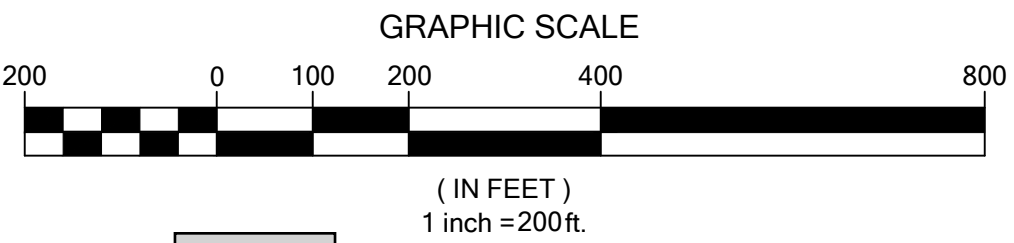
CURVE#	LENGTH	RADIUS	BEARING	CHORD
C1	222.83'	1538.08'	S62° 15' 39"W	222.64'
C2	205.52'	1502.64'	S70° 54' 26"W	205.36'

CLASS OF SURVEY: A
 POSITIONAL ACCURACY: 0.06'
 TYPE OF GPS FIELD PROCEDURE: NC REAL TIME NETWORK
 DATES OF SURVEY: JANUARY 2022
 DATUM/EPOCH: NAD83/NSRS2011/SPC
 GEOID MODEL: 18
 COMBINED GRID FACTOR(S): 0.99988368
 UNITS: US SURVEY FEET

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.

I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN DB 2367, PG 693 & DB 7883 PG 737); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND AS SHOWN HERE ON; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED WITH MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS DAY OF _____, A.D., 2022.

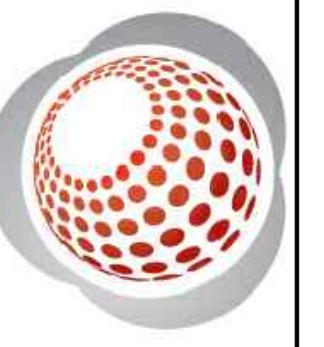
I, FURTHER THAT IN ACCORDANCE WITH G.S. 47-30-F-11-C-1, CERTIFY THAT THE SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET. FOR THE PURPOSE OF THIS SUBSECTION, AN "EXISTING PARCEL" OR "EXISTING EASEMENT" IS AN AREA OF LAND DESCRIBED IN A SINGLE, LEGAL DESCRIPTION CONVEYED TO A NEW OWNER BY DEED IN ITS EXISTING CONFIGURATION.



PRELIMINARY

STEVEN P. CARSON, PLS DATE
 NC LICENSE NO. L-4752

BATEMAN CIVIL SURVEY COMPANY
 ENGINEERS • SURVEYORS • PLANNERS
 2524 RELIANCE AVENUE, APEX, NC 27539
 PHONE: (919) 577-1080 FAX: (919) 577-1081
 INFO@BATEMANCIVILSURVEY.COM
 NCBELS FIRM# C-2378



ANNEXATION MAP FOR THE TOWN OF APEX
 PARCEL ID NUMBER(S): 0710714834 & 0710736732
 AS RECORDED IN DB 7883 PG 737 & DB 2367 PG 693
 BUCKHORN TWP • WAKE COUNTY • NORTH CAROLINA

REVISIONS

- 1.
- 2.
- 3.
- 4.
- 5.

DESIGNED BY: N/A
 DRAWN BY: ELS
 CHECKED BY: SPC
 SCALE: 1" = 200'
 DATE: 03/23/2022
 JOB NUMBER: 210950

SHEET 1 OF 2



LEGEND



Signalized Intersection



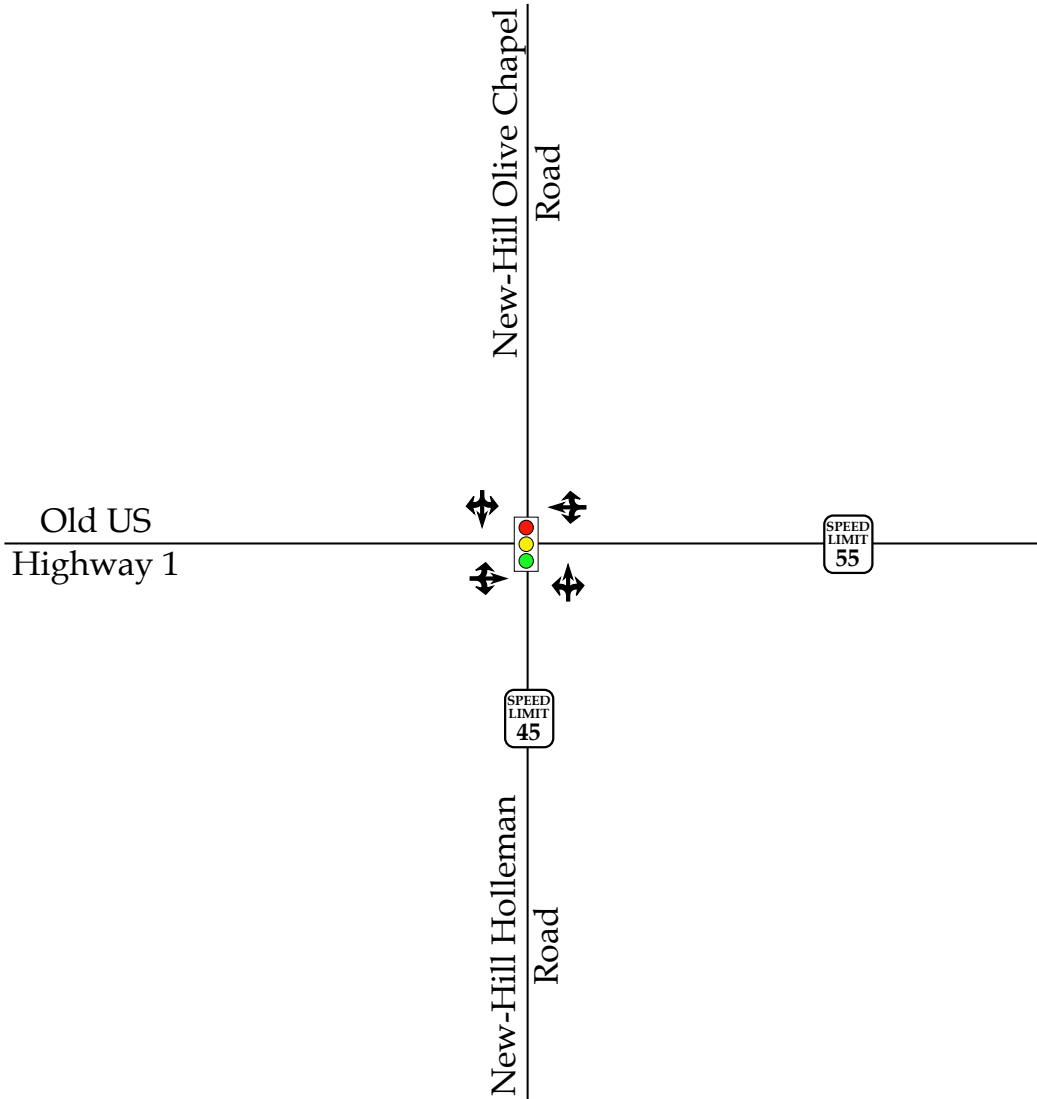
Existing Lane



Storage (In Feet)



Posted Speed Limit



RAMEY KEMP ASSOCIATES

Utley Farms
Apex, NC

2022 Existing
Lane Configurations

Scale: Not to Scale | Figure 3

2. 2022 EXISTING PEAK HOUR CONDITIONS

2.1. 2022 Existing Peak Hour Traffic Volumes

Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersection of Old US Highway 1 and New Hill - Olive Chapel Road / New Hill - Holleman Road in February of 2022 during typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak periods, while schools were in session for in person learning.


Refer to Figure 4 for 2022 existing weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of 2022 Existing Peak Hour Traffic Conditions

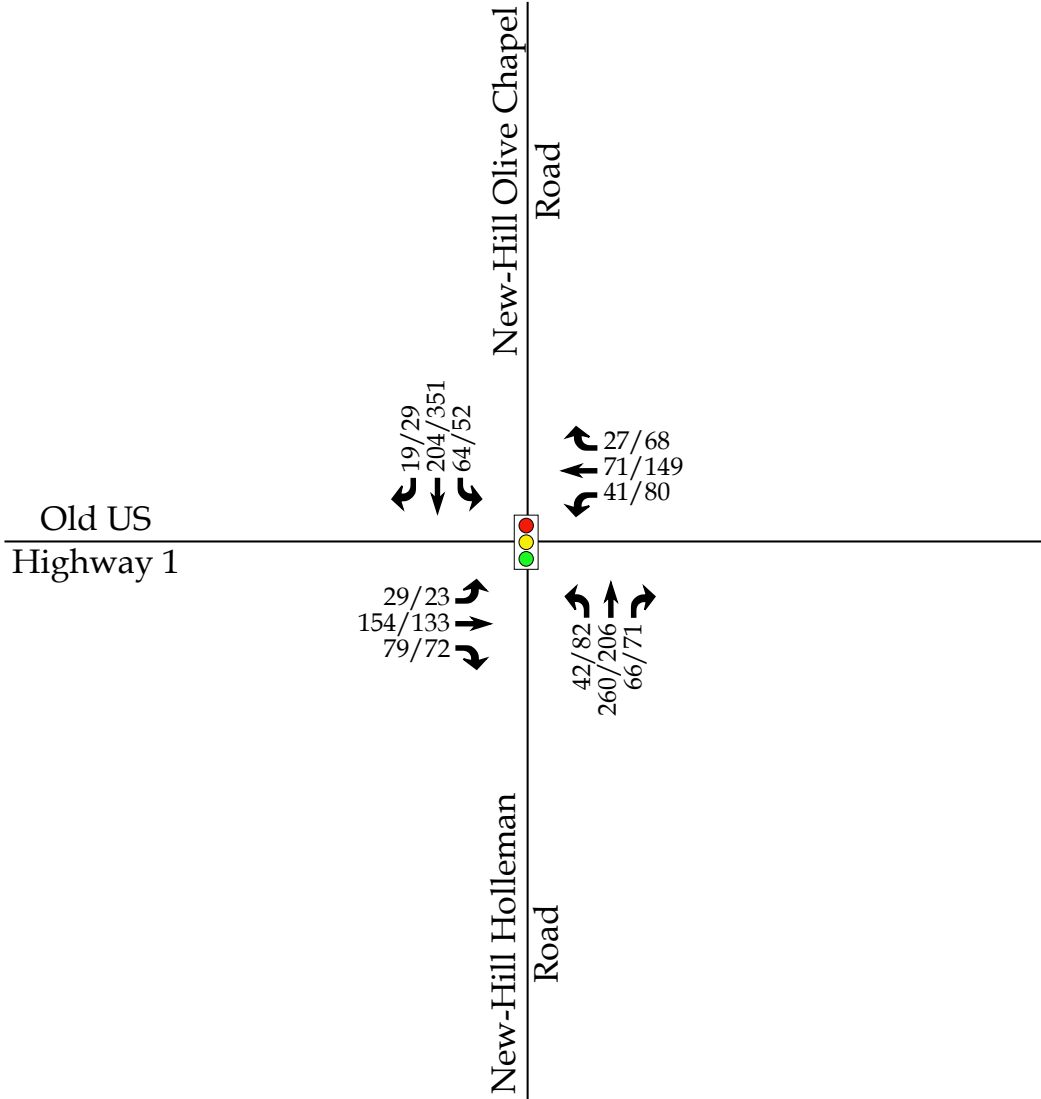
The 2022 existing weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. Signal information was obtained from NCDOT and is included in Appendix C. The results of the analysis are presented in Section 7 of this report.




LEGEND

 Signalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic



	<p>Utlely Farms Apex, NC</p>	<p>2022 Existing Peak Hour Traffic</p>	
		<p>Scale: Not to Scale</p>	<p>Figure 4</p>

3. 2026 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, no-build traffic projections are needed. No-build traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. No-build traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of 3% would be used to generate 2026 projected weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for 2026 projected peak hour traffic.

3.2. Adjacent Development Traffic

Through coordination with the Town and NCDOT, the following adjacent developments were identified to be included as an approved adjacent development in this study:

- Gracewood Residential
- Olive Ridge
- Jordan Manors – 80% built out, 20% included as adjacent development traffic
- Belterra (New Hill Assembly aka Jordan Vistas)

Table 2, on the following page, provides a summary of the adjacent developments.

Table 2: Adjacent Development Information

Development Name	Location	Build-Out Year	Land Use / Intensity	TIA Performed
Gracewood Residential	Northwest of the intersection of Old US 1 at Horton Road	2024	448 single family homes	April 2021 by KHA
Olive Ridge	East of New Hill Olive Chapel Road, across from Jordan Manors Drive	2022	169 single family homes	December 2018 by RKA
Jordan Manors	West side of New Hill Olive Chapel Road	2018	240 single family homes	May 2015 by KHA
Belterra (New Hill Assembly aka Jordan Vistas)	West of New Hill Olive Chapel Road, north of Old US 1	2022	152 single family homes	April 2018 by RKA

For the purposes of this study, future conditions were analyzed with and without future roadway improvements associated with the Gracewood Residential development. Under future conditions without Gracewood Improvements, the Gracewood Residential development is expected to consist of 270 single family homes. Analysis of future conditions with Gracewood Improvements includes 85% of the development’s density at full build out as adjacent development trips as this study assumes 85% of the Gracewood Residential development is to be constructed prior to the build out of the proposed development. It should be noted that the adjacent developments were approved, during scoping, by the Town and NCDOT. Adjacent development trips are shown in Figure 6. Adjacent development information can be found in Appendix D.

3.3. Future Roadway Improvements

Based on coordination with the NCDOT and the Town, it was determined that the roadway improvements associated with the Gracewood Residential development would be analyzed under future conditions with Gracewood Improvements.

The following improvements are committed by the Gracewood Residential development:

Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

- Construct exclusive eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive northbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound right-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Install a traffic signal when warranted.


3.4. 2026 No-Build Peak Hour Traffic Volumes

The 2026 no-build traffic volumes were determined by projecting the 2022 existing peak hour traffic to the year 2022, and adding the adjacent development trips. Refer to Figure 7a for an illustration of the 2026 no-build peak hour traffic volumes without Gracewood Improvements and Figure 7b for the 2026 no-build peak hour traffic with Gracewood Improvements at the study intersections.

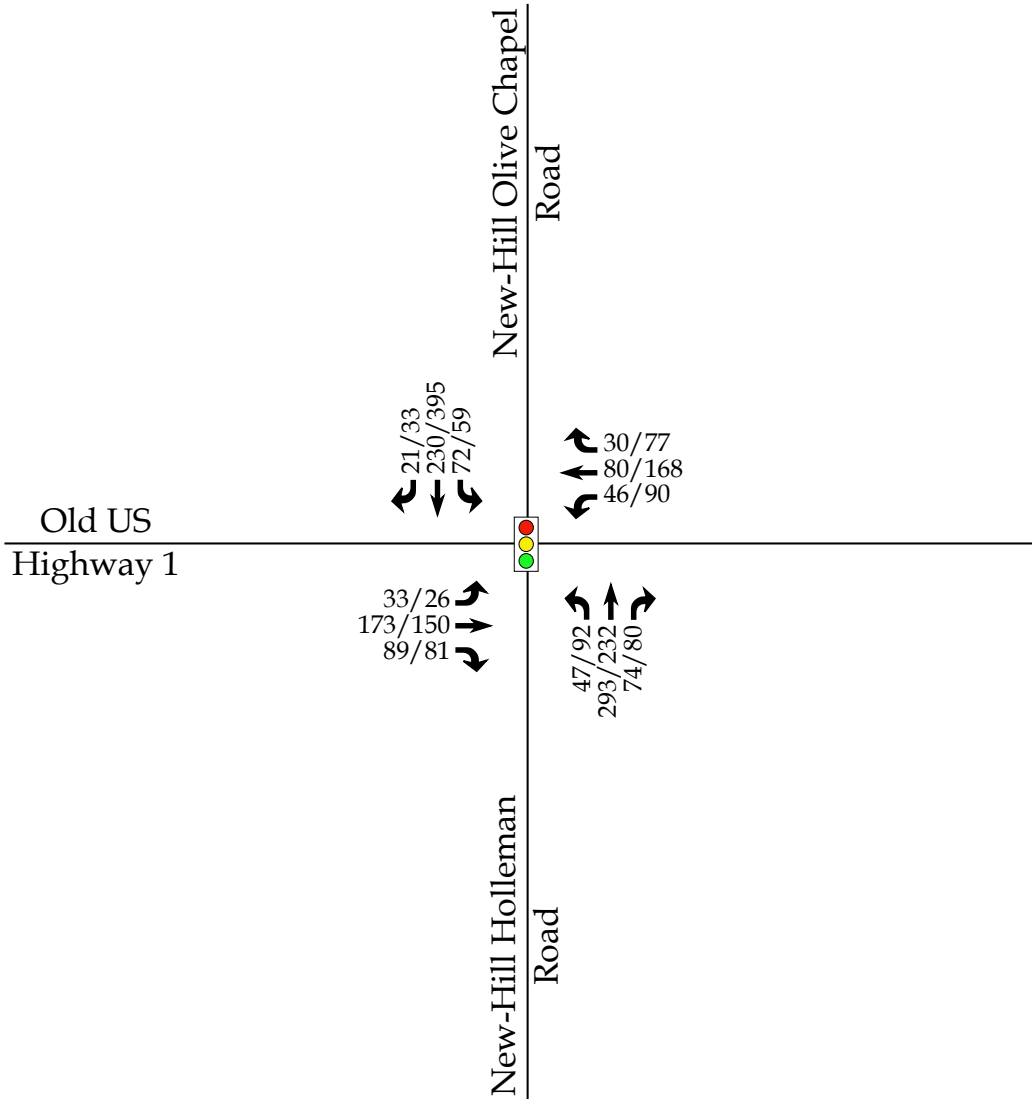
3.5. Analysis of 2026 No-Build Peak Hour Traffic Conditions

The 2026 no-build AM and PM peak hour traffic volumes at the study intersections were analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.

LEGEND

 Signalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic



Utlely Farms
Apex, NC

2026 Projected
Peak Hour Traffic

Scale: Not to Scale | Figure 5



LEGEND

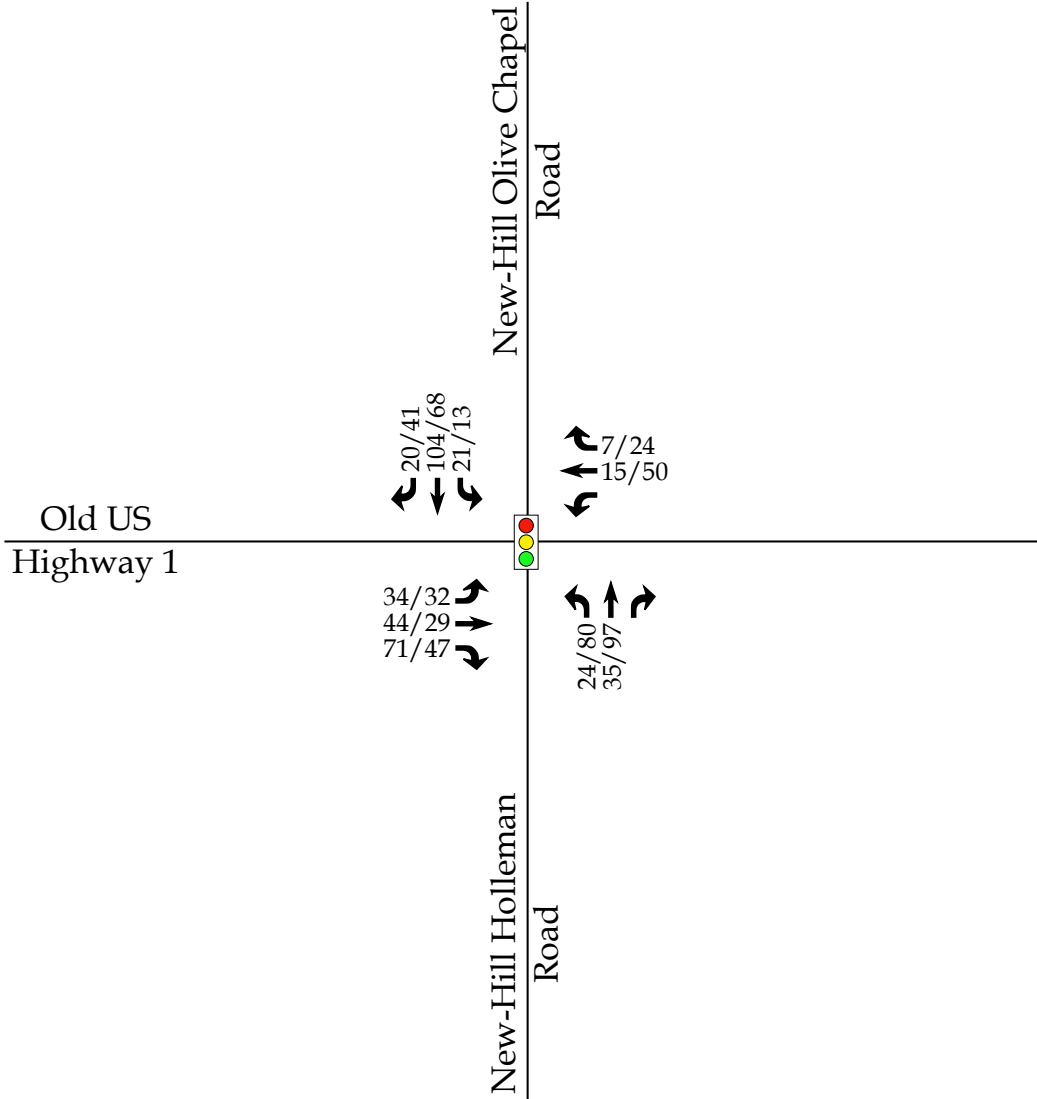


Signalized Intersection

X / Y →

Weekday AM / PM Peak Hour

Adjacent Development Trips



RAMEY KEMP ASSOCIATES


Utlely Farms
Apex, NC

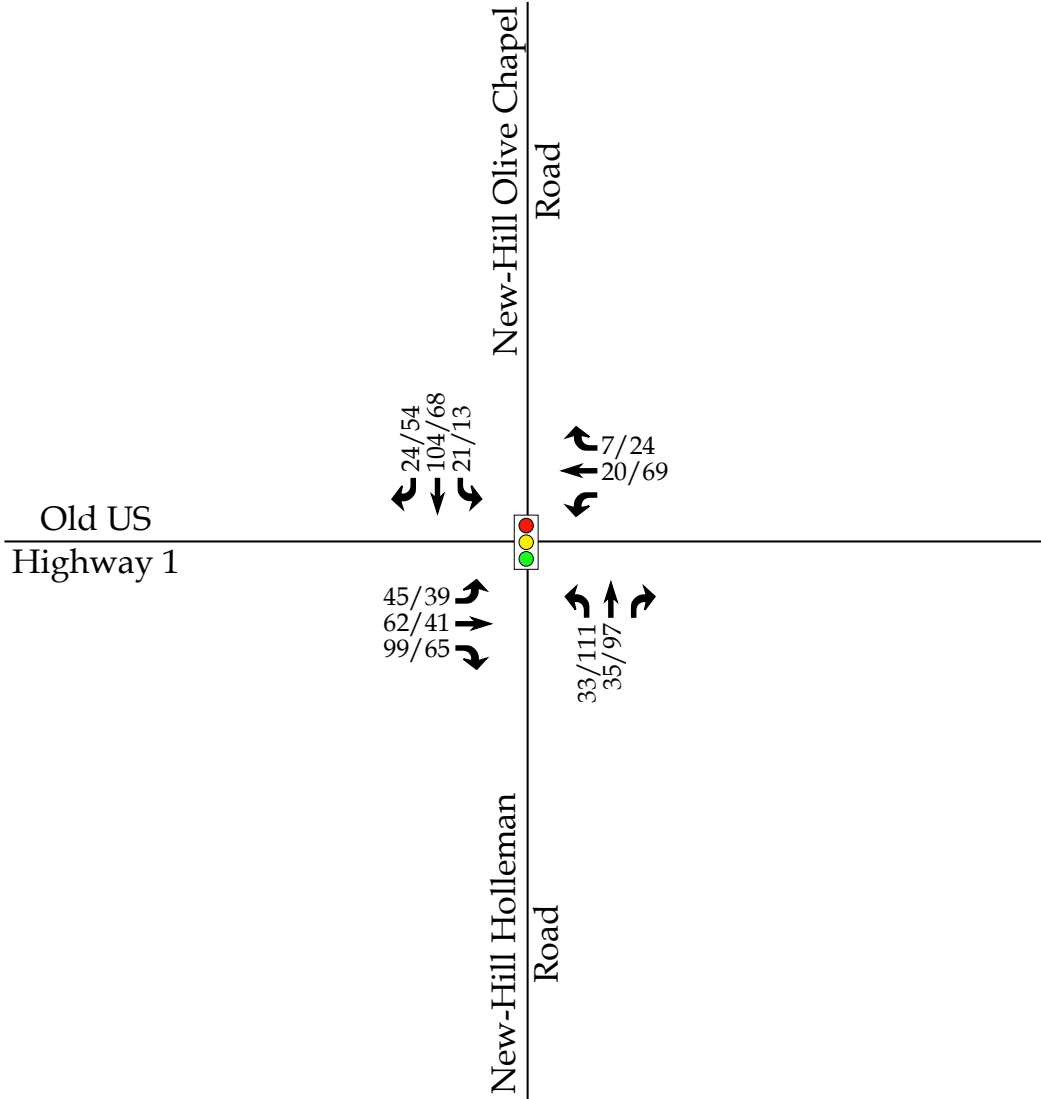
Adjacent Development
Trips - without
Gracewood Improvements


Scale: Not to Scale | Figure 6a




LEGEND

 Signalized Intersection
 X / Y → Weekday AM / PM Peak Hour
 Adjacent Development Trips

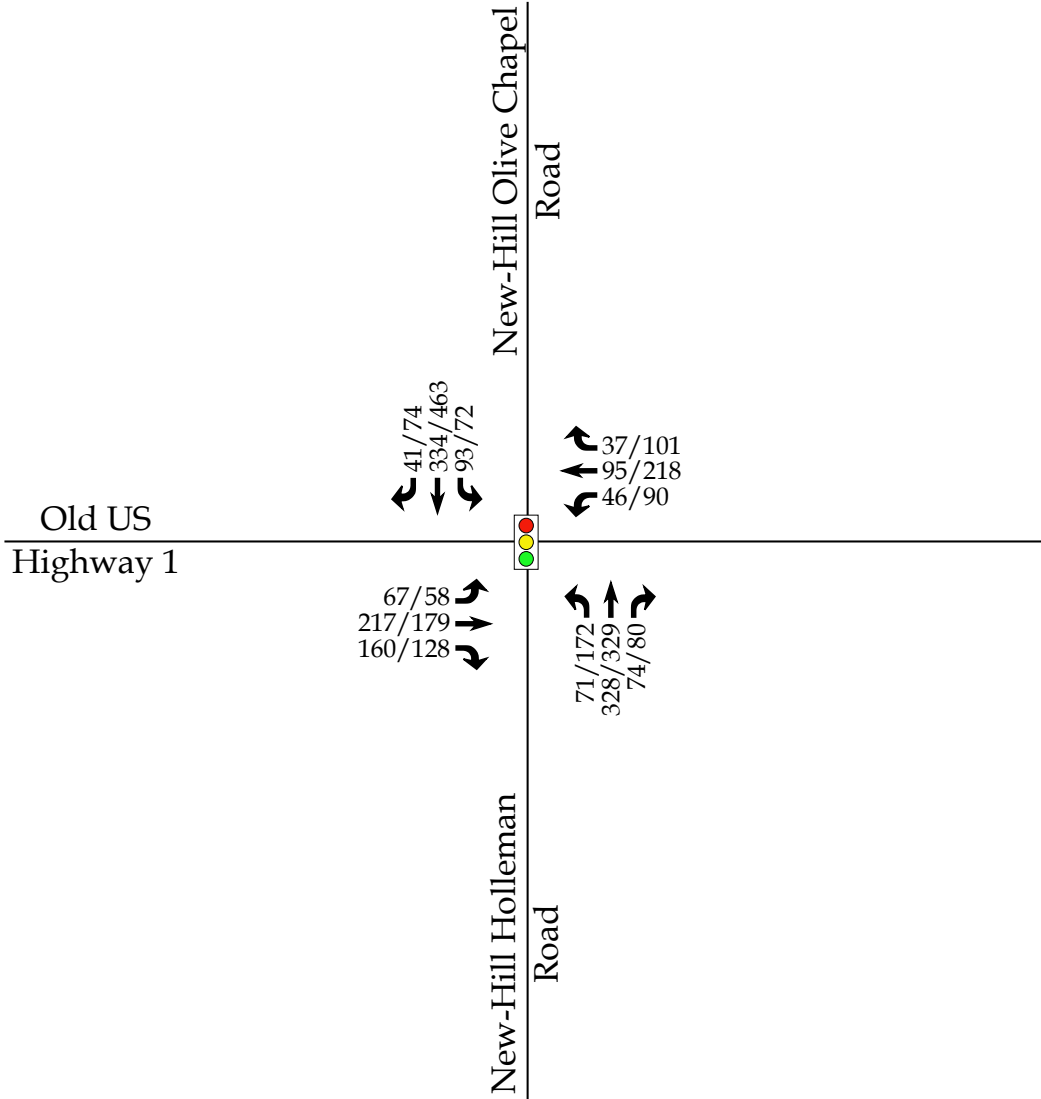



	<p>Utlely Farms Apex, NC</p>	<p>Adjacent Development Trips - with Gracewood Improvements</p>	
			<p>Scale: Not to Scale Figure 6b</p>

LEGEND

 Signalized Intersection


X / Y → Weekday AM / PM Peak Hour Traffic



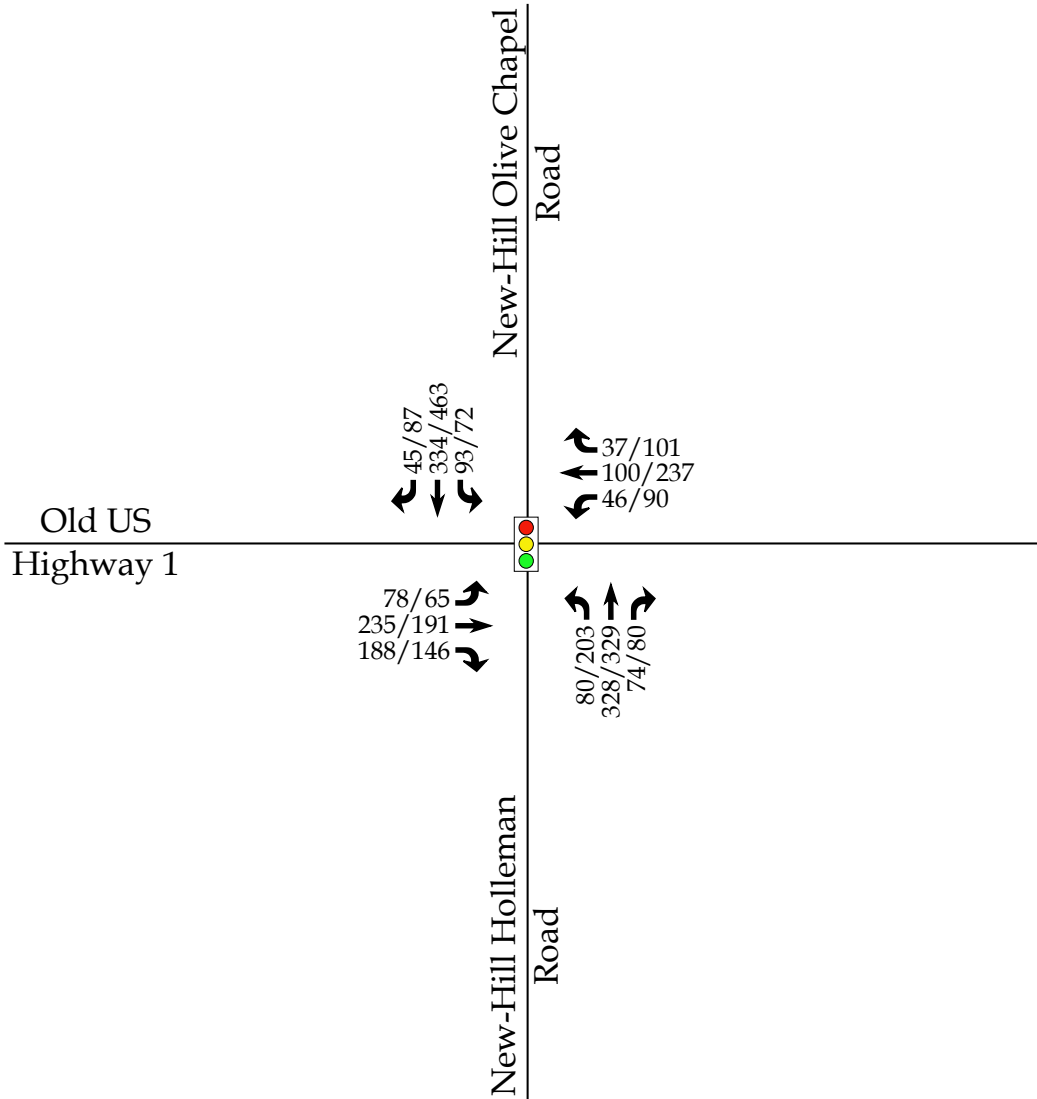
	<p>Utlely Farms Apex, NC</p>	<p>2026 No-Build Peak Hour Traffic - without Gracewood Improvements</p>	
		<p>Scale: Not to Scale</p>	<p>Figure 7a</p>



LEGEND

 Signalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic



Utlely Farms
Apex, NC

2026 No-Build
Peak Hour Traffic - with
Gracewood Improvements

Scale: Not to Scale | Figure 7b

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of a maximum amount of 140 single family homes. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 11th Edition. Table 3 provides a summary of the trip generation potential for the site.

Table 3: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single Family Homes	140 units	1,380	26	75	86	50

It is estimated that the proposed development will generate approximately 1,380 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 101 trips (26 entering and 75 exiting) will occur during the weekday AM peak hour and 136 trips (86 entering and 50 exiting) will occur during the weekday PM peak hour.

4.2. Site Trip Distribution and Assignment

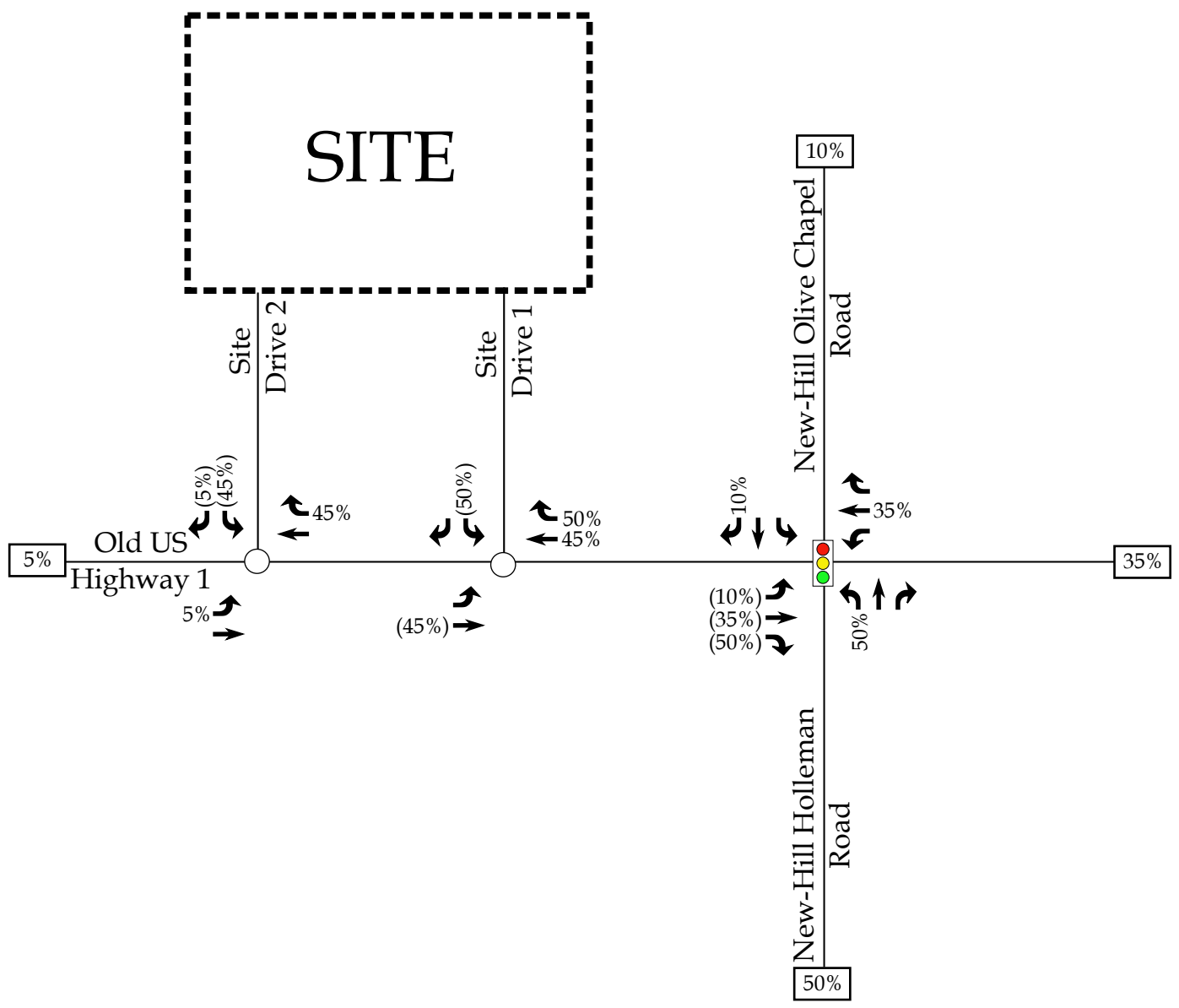
Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. It is estimated that the site trips will be regionally distributed as follows:


- 10% to/from the north via New-Hill Olive Chapel Road
- 50% to/from the south via New-Hill Holleman Road
- 35% to/from the east via Old US Highway 1
- 5% to/from the west via Old US Highway 1

Refer to Figure 8 for the site trip distribution and Figure 9 for the site trip assignment.

LEGEND

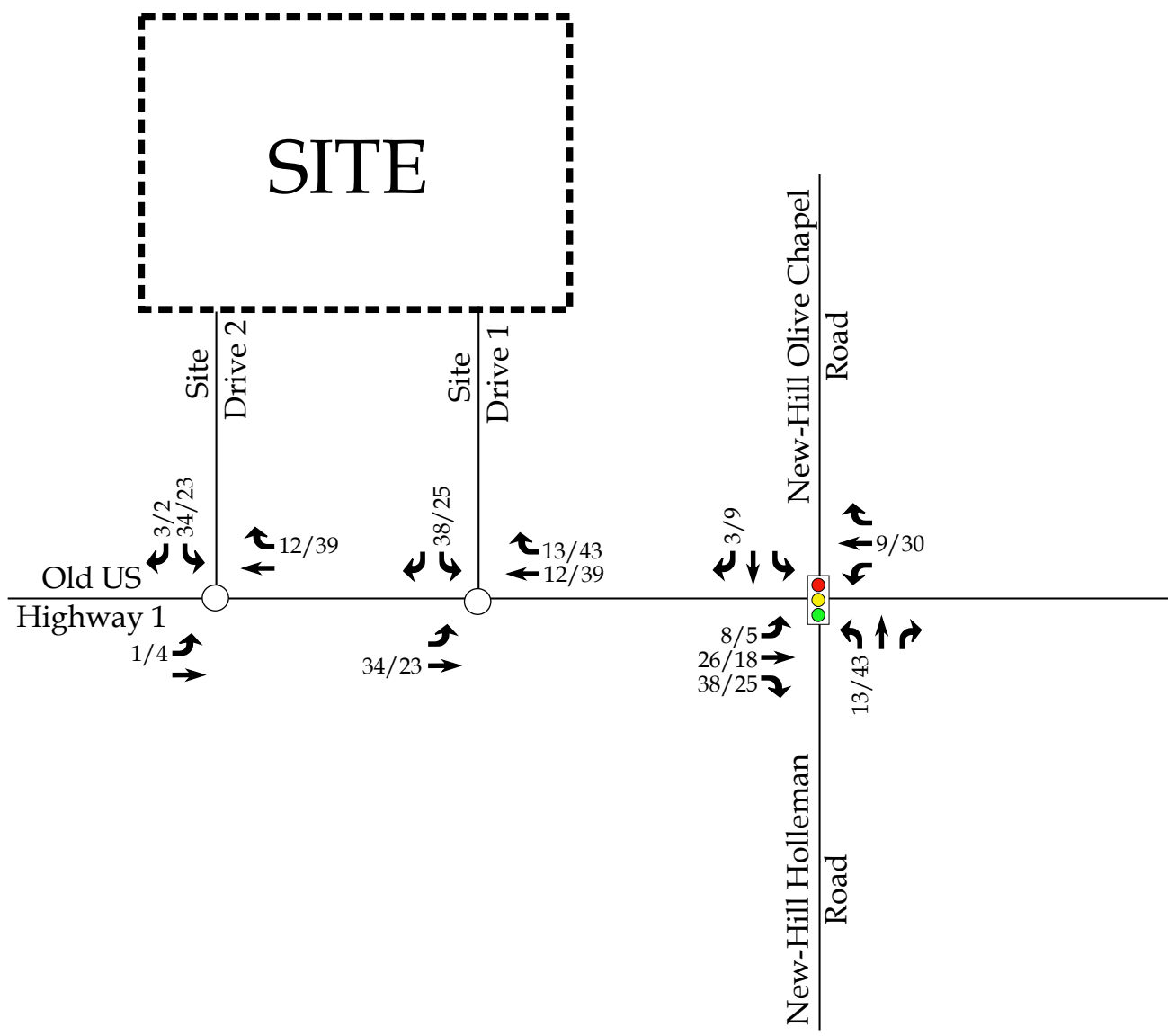
- Unsignalized Intersection
- 🚦 Signalized Intersection
- X% → Entering Trip Distribution
- (Y%) → Exiting Trip Distribution
- XX% Regional Trip Distribution



	Utley Farms Apex, NC	Site Trip Distribution
	Scale: Not to Scale Figure 8	

LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Site Trips



	<p>Utlely Farms Apex, NC</p>	<p>Site Trip Assignment</p>	
		<p>Scale: Not to Scale</p>	<p>Figure 9</p>

5. 2026 BUILD TRAFFIC CONDITIONS

5.1. 2026 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2026 no-build traffic volumes to determine the 2026 build traffic volumes. Refer to Figure 10a and Figure 10b for an illustration of the 2026 build peak hour traffic volumes without and with the Gracewood Improvements, respectively, both with the proposed site fully developed.

5.2. Analysis of 2026 Build Peak Hour Traffic Conditions

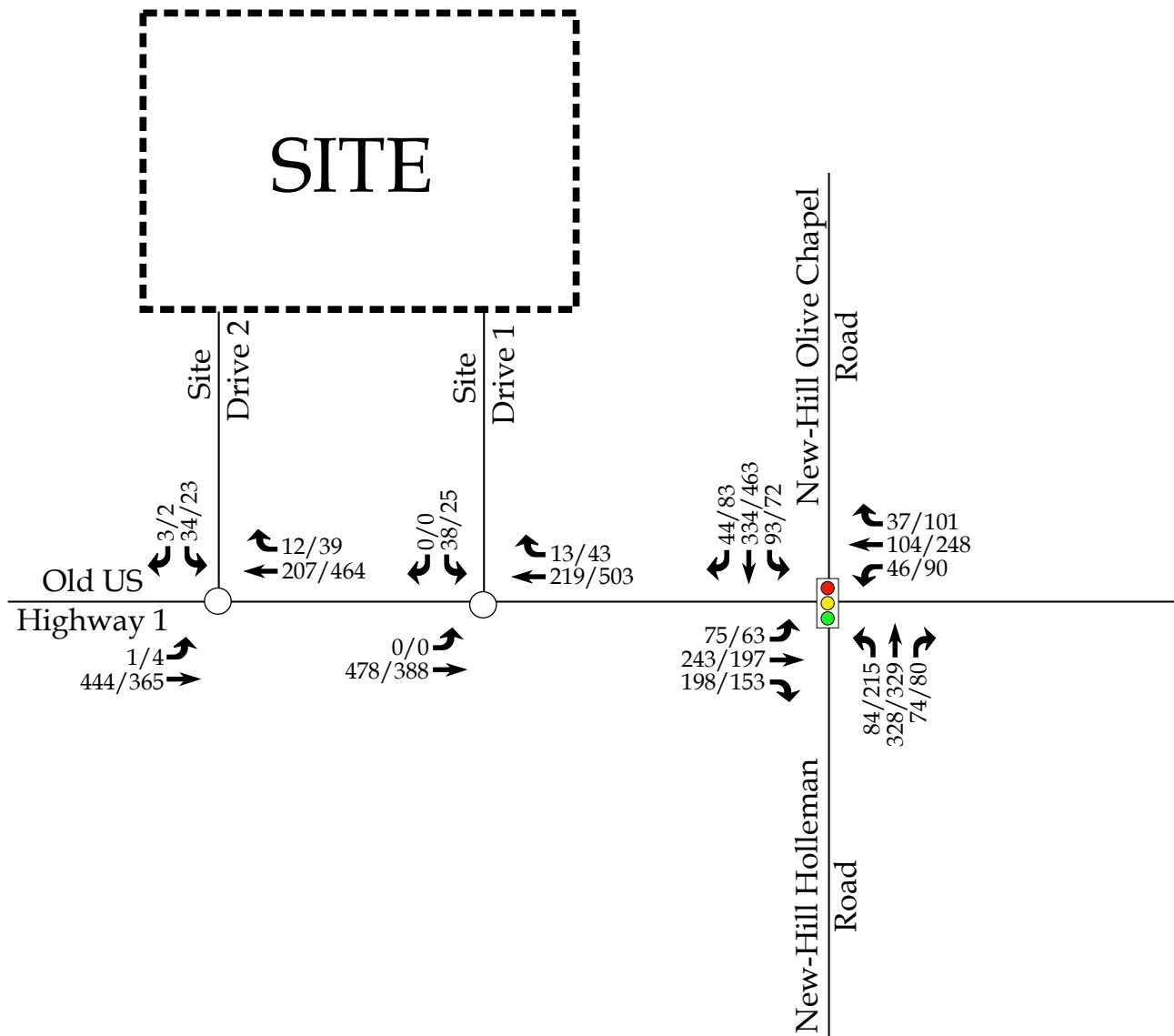
Study intersections were analyzed with the 2026 build traffic volumes using the same methodology previously discussed for existing and no-build traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.

LEGEND

○ Unsignalized Intersection

◫ Signalized Intersection

X / Y → Weekday AM / PM Peak Hour Traffic



RAMEY KEMP ASSOCIATES

Utlely Farms
Apex, NC

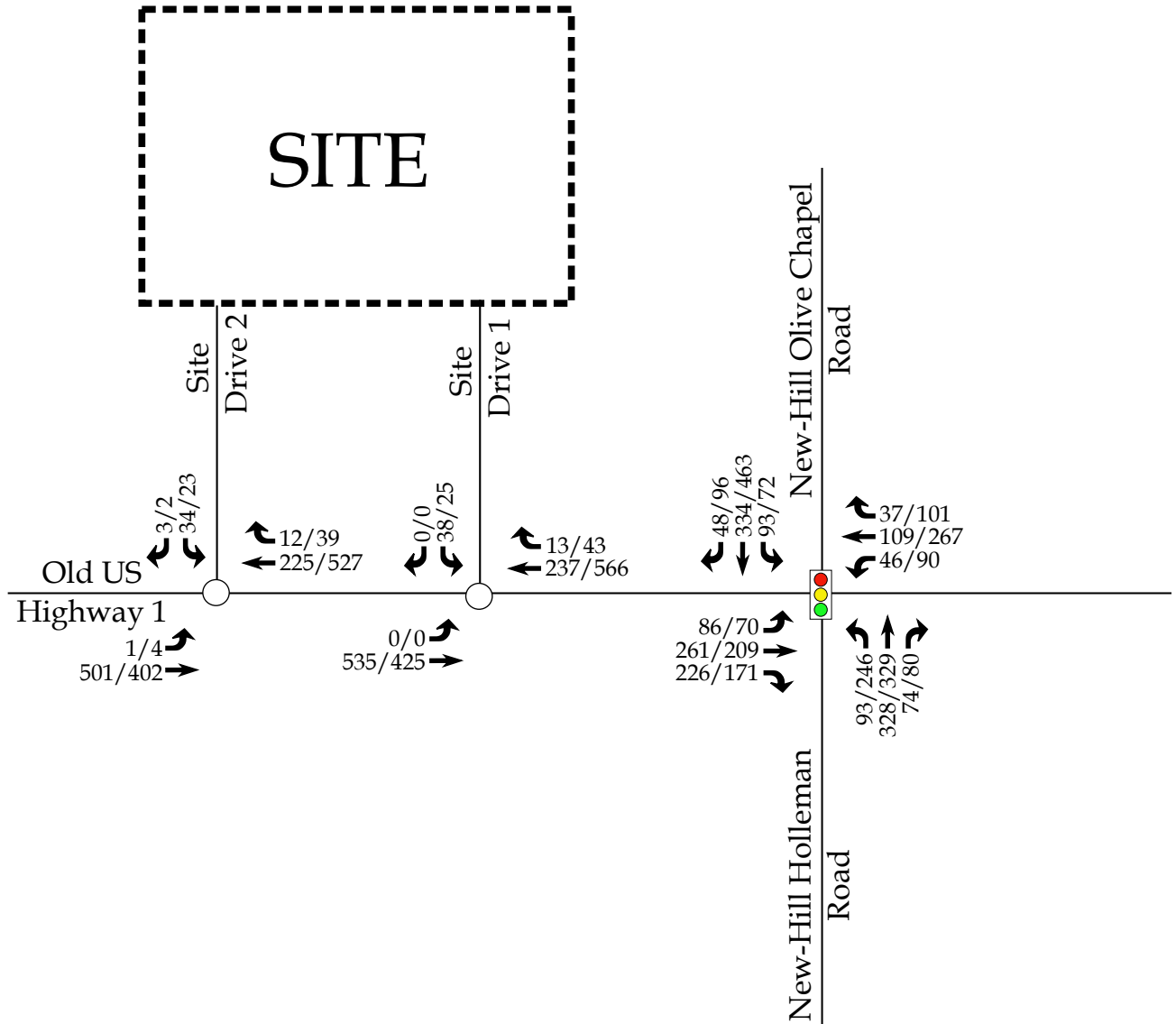
2026 Build
Peak Hour Traffic - without
Gracewood Improvements


Scale: Not to Scale | Figure 10a



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic



	<p>Utlely Farms Apex, NC</p>	<p>2026 Build Peak Hour Traffic - with Gracewood Improvements</p>
	<p>Scale: Not to Scale Figure 10b</p>	

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual* (HCM), 6th Edition published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 10.3), was used to complete the analyses for the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as “the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions.” Level of service (LOS) is a term used to represent different driving conditions, and is defined as a “qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers.” Level of service varies from Level “A” representing free flow, to Level “F” where breakdown conditions are evident. Refer to Table 4 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes “initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay”. An average control delay of 50 seconds at a signalized intersection results in LOS “D” operation at the intersection.

Table 4: Highway Capacity Manual – Levels-of-Service and Delay

UNSIGNALIZED INTERSECTION		SIGNALIZED INTERSECTION	
LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

6.1. Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the NCDOT Congestions Management Guidelines.

7. CAPACITY ANALYSIS

7.1. Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

The existing unsignalized intersection of Old US Highway 1 and New Hill-Olive Chapel Road was analyzed under 2022 existing, 2026 no-build without Gracewood Improvements, 2026 no-build with Gracewood Improvements, 2026 build without Gracewood Improvements and 2026 build with Gracewood Improvements traffic conditions with lane configurations and traffic control shown in Table 5. Refer to Table 5 for a summary of the analysis results. The with Gracewood Improvement scenarios under 2026 no-build and 2026 build conditions analyzed the intersection with exclusive turn lanes on all approaches to be constructed by the Gracewood Residential development at its build out. Refer to Appendix E for the Synchro capacity analysis reports. SimTraffic queuing reports can be found in Appendix H.

Table 5: Analysis Summary of Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2022 Existing	EB	1 LT-TH-RT	B	B (14)	B	B (16)
	WB	1 LT-TH-RT	B			
	NB	1 LT-TH-RT	B			
	SB	1 LT-TH-RT	B			
2026 No-Build without Gracewood Improvements	EB	1 LT-TH-RT	C	C (29)	B	F (108)
	WB	1 LT-TH-RT	B			
	NB	1 LT-TH-RT	C			
	SB	1 LT-TH-RT	D			
2026 No-Build with Gracewood Improvements	EB	<u>1 LT</u> , 1 TH-RT	D	D (45)	E	E (60)
	WB	<u>1 LT</u> , 1 TH-RT	D			
	NB	<u>1 LT</u> , 1 TH-RT	D			
	SB	<u>1 LT</u> , 1 TH, <u>1 RT</u>	D			
2026 Build without Gracewood Improvements	EB	1 LT-TH-RT	C	D (44)	B	F (160)
	WB	1 LT-TH-RT	B			
	NB	1 LT-TH-RT	E			
	SB	1 LT-TH-RT	E			

Background improvements by the Gracewood Residential development shown underlined.

Table 5: Analysis Summary of Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road (continued)

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2026 Build with Gracewood Improvements	EB	<u>1 LT</u> , 1 TH-RT	E	D (53)	E	E (67)
	WB	<u>1 LT</u> , 1 TH-RT	D		E	
	NB	<u>1 LT</u> , 1 TH-RT	D		D	
	SB	<u>1 LT</u> , 1 TH, <u>1 RT</u>	D		F	
2026 Build without Gracewood Improvements - 50 Lots	EB	1 LT-TH-RT	C	C (29)	D	E (64)
	WB	1 LT-TH-RT	B		F	
	NB	1 LT-TH-RT	C		F	
	SB	1 LT-TH-RT	C		C	
2026 Build without Gracewood Improvements - with FIL Improvements	EB	1 LT , 1 TH-RT	D	D (43)	F	E (79)
	WB	1 LT , 1 TH-RT	C		F	
	NB	1 LT-TH-RT	D		F	
	SB	1 LT-TH-RT	D		C	
2026 Build with Gracewood Improvements - Signal Timing Modifications	EB	<u>1 LT</u> , 1 TH-RT	E	D (47)	E	E (58)
	WB	<u>1 LT</u> , 1 TH-RT	D		E	
	NB	<u>1 LT</u> , 1 TH-RT	D		D	
	SB	<u>1 LT</u> , 1 TH, <u>1 RT</u>	D		E	

Background improvements by the Gracewood Residential development shown underlined. Improvements to be paid via fee-in-lieu by the Developer shown in **bold**.

Capacity analysis of 2022 existing conditions indicates that the intersection of Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road is expected to operate at an overall LOS B during the weekday AM peak hour and PM peak hours. Under 2026 no-build and 2026 build conditions without Gracewood Improvements the intersection is expected to operate at an overall LOS D or better during the weekday AM peak hour and an overall LOS F during the weekday PM peak hour. For the purposes of this study, future conditions were also analyzed with improvements committed to by the Gracewood Residential development. These improvements include providing exclusive turn lanes on all approaches. Capacity analysis of 2026 no-build and 2026 build conditions with the

Gracewood Improvements indicates that the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour.

Signal timing modifications were considered at this intersection under 2026 build conditions with the Gracewood Improvements to mitigate an overall poor level of service experienced during the weekday PM peak hour. With this improvement, the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour with delays better than 2026 no-build conditions during the weekday PM peak hour. The signal timing modifications are expected to improve delay to the better than 2026 no-build conditions during the weekday PM peak hour. While this study analyzes the signal with optimization, NCDOT periodically undertakes this at all signals to account for changes in traffic patterns.

2026 build conditions without Gracewood Improvements was analyzed with 50 single family homes built out to determine the impacts on the surrounding roadway network. With 50 single family homes, the intersection is expected to operate at an overall LOS C during the weekday AM peak hour and LOS E during the weekday PM peak hour with delays equal to or better than 2026 no-build conditions without Gracewood Improvements.

Under 2026 build – without Gracewood Improvements conditions, the intersection was analyzed with exclusive eastbound and westbound left-turn lanes along the major-street (Old US Highway 1) in order to mitigate poor levels-of-service experienced during the weekday PM peak hour. With these improvements, the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour under 2026 build conditions with delays better than 2026 no-build conditions during the weekday PM peak hour.

These improvements are not recommended to be constructed by the proposed development as they are already committed to by the Gracewood Residential development to be built out once completed. The Gracewood development has additional improvements at the subject intersection that will be constructed at time of their improvements. In order to not have

continuous intersection improvements being undertaken at the subject intersection, it is recommended that these turn lanes be constructed once triggered by the Gracewood Residential development. The costs of these improvements are significant and beyond the impacts caused solely by the proposed development; therefore, a proportional fee in lieu is recommended for the Utley Farms development. An additional phased analysis scenario was provided to demonstrate the operations at the intersection with buildout of 50 units. Acceptable levels of service are expected under this scenario; therefore, it is recommended that the proportional fee in lieu for these improvements be assessed prior to the 51st single family home.

Per Section 13.19.2 of the Town's Unified Development Ordinance (UDO), improvements to minimize delay are to be required for intersections operating at poor levels of service under future conditions when the traffic generated by the proposed development is at least 10% of the projected total weekday AM or PM peak hour traffic at the intersection. The proposed development is expected to only account for approximately 6% of the overall traffic at the intersection during the weekday AM and PM peak hours with the Gracewood Improvements. Without the Gracewood Improvements, the proposed development is expected to only account for approximately 6% of the overall traffic during the weekday AM peak hour and approximately 7% of overall traffic during the weekday PM peak hour. Additionally, the proposed development is only expected to add approximately eight seconds to the overall delay during the weekday AM peak hour and approximately seven seconds to the overall delay during the weekday PM peak hour under 2026 build conditions with Gracewood Improvements.

7.2. Old US Highway 1 and Site Drive 1

The proposed unsignalized intersection of Old US Highway 1 and Site Drive 1 was analyzed under 2026 build without Gracewood Improvements and 2026 build with Gracewood Improvements traffic conditions with lane configurations and traffic control shown in Table 6. Refer to Table 6 for a summary of the analysis results. Refer to Appendix F for the Synchro capacity analysis reports. SimTraffic queuing reports can be found in Appendix H.

Table 6: Analysis Summary of Old US Highway 1 and Site Drive 1

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2026 Build without Gracewood Improvements	EB WB SB	1 LT-TH 1 TH, 1 RT 1 LT-RT	A ¹ -- C ²	N/A	A ¹ -- C ²	N/A
2026 Build with Gracewood Improvements	EB WB SB	1 LT-TH 1 TH, 1 RT 1 LT-RT	A ¹ -- C ²	N/A	A ¹ -- C ²	N/A

1. Level of service for major-street left-turn movement.

2. Level of service for minor-street approach.

Improvements by Developer shown in bold.

Capacity analysis of 2026 build with Gracewood Improvements and 2026 build without Gracewood Improvements indicates that the major-street left-turn movement and the minor-street approach at the intersection of Old US Highway 1 and Site Drive 1 are expected to operate at LOS C or better during the weekday AM and PM peak hours.

Turn lanes were considered at this intersection according to the NCDOT *Policy on Street and Driveway Access to NC Highways* (Driveway Manual). Based on the Driveway Manual, an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length is warranted and recommended by the proposed development. Turn lane warrant charts can be found in Appendix H. Due to a low volume of left-turning movements into the proposed development, an exclusive eastbound left-turn lane is not

warranted based on the criteria within the Driveway Manual. Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.

7.3. Old US Highway 1 and Site Drive 2

The proposed unsignalized intersection of Old US Highway 1 and Site Drive 2 was analyzed under 2026 build without Gracewood Improvements and 2026 build with Gracewood Improvements traffic conditions with lane configurations and traffic control shown in Table 7. Refer to Table 7 for a summary of the analysis results. Refer to Appendix G for the Synchro capacity analysis reports. SimTraffic queuing reports can be found in Appendix H.

Table 7: Analysis Summary of Old US Highway 1 and Site Drive 2

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2026 Build without Gracewood Improvements	EB WB SB	1 LT-TH 1 TH, 1 RT 1 LT-RT	A ¹ -- B ²	N/A	A ¹ -- C ²	N/A
2026 Build with Gracewood Improvements	EB WB SB	1 LT-TH 1 TH, 1 RT 1 LT-RT	A ¹ -- C ²	N/A	A ¹ -- C ²	N/A

3. Level of service for major-street left-turn movement.

4. Level of service for minor-street approach.

Improvements by Developer shown in bold.

Capacity analysis of 2026 build with Gracewood Improvements and 2026 build without Gracewood Improvements indicates that the major-street left-turn movement and the minor-street approach at the intersection of Old US Highway 1 and Site Drive 1 are expected to operate at LOS C or better during the weekday AM and PM peak hours.

Turn lanes were considered at this intersection according to the NCDOT *Policy on Street and Driveway Access to NC Highways* (Driveway Manual). Based on the Driveway Manual, an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length is warranted and recommended by the proposed development. Turn lane warrant charts can be found in Appendix H. Due to a low volume of left-turning movements into the proposed development, an exclusive eastbound left-turn lane is not

warranted based on the criteria within the Driveway Manual. Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.

8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed development, located north of Old Highway US 1, west of New Hill-Olive Chapel Road in Apex, North Carolina. The proposed development is expected to be a residential development and be built out by 2026. Site access is proposed via two (2) full movement driveways along Old US Highway 1.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions without Gracewood Improvements
- 2026 No-Build Traffic Conditions with Gracewood Improvements
- 2026 Build Traffic Conditions without Gracewood Improvements
- 2026 Build Traffic Conditions with Gracewood Improvements

Trip Generation

It is estimated that the proposed development will generate approximately 1,380 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 101 trips (26 entering and 75 exiting) will occur during the weekday AM peak hour and 136 trips (86 entering and 50 exiting) will occur during the weekday PM peak hour.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the

exception of the intersections listed below. A summary of the study area intersections that are expected to need improvements are as follows:

Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

Under 2026 no-build and 2026 build conditions without Gracewood Improvements the intersection is expected to operate at an overall LOS D or better during the weekday AM peak hour and an overall LOS F during the weekday PM peak hour. For the purposes of this study, future conditions were also analyzed with improvements committed to by the Gracewood Residential development. These improvements include installing a signal at the intersection and providing exclusive turn lanes on all approaches. Capacity analysis of 2026 no-build and 2026 build conditions with the Gracewood Improvements indicates that the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour.

Signal timing modifications were considered at this intersection under 2026 build conditions with the Gracewood Improvements to mitigate an overall poor level of service experienced during the weekday PM peak hour. With this improvement, the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour with delays better than 2026 no-build conditions during the weekday PM peak hour. The signal timing modifications are expected to improve delay to the better than 2026 no-build conditions during the weekday PM peak hour. While this study analyzes the signal with optimization, NCDOT periodically undertakes this at all signals to account for changes in traffic patterns.

2026 build conditions without Gracewood Improvements was analyzed with 50 single family homes built out to determine the impacts on the surrounding roadway network. With 50 single family homes, the intersection is expected to operate at an overall LOS C during the weekday AM peak hour and LOS E during the weekday PM peak hour with delays equal to or better than 2026 no-build conditions without Gracewood Improvements.

Under 2026 build – without Gracewood Improvements conditions, the intersection was analyzed with exclusive eastbound and westbound left-turn lanes along the major-street (Old US Highway 1) in order to mitigate poor levels-of-service experienced during the weekday PM peak hour. With these improvements, the intersection is expected to operate at an overall LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour under 2026 build conditions with delays better than 2026 no-build conditions during the weekday PM peak hour.

These improvements are not recommended to be constructed by the proposed development as they are already committed to by the Gracewood Residential development to be built out once completed. The Gracewood development has additional improvements at the subject intersection that will be constructed at time of their improvements. In order to not have continuous intersection improvements being undertaken at the subject intersection, it is recommended that these turn lanes be constructed once triggered by the Gracewood Residential development. The costs of these improvements are significant and beyond the impacts caused solely by the proposed development; therefore, a proportional fee in lieu is recommended for the Utley Farms development. An additional phased analysis scenario was provided to demonstrate the operations at the intersection with buildout of 50 units. Acceptable levels of service are expected under this scenario; therefore, it is recommended that the proportional fee in lieu for these improvements be assessed prior to the 51st single family home.

Per Section 13.19.2 of the Town's Unified Development Ordinance (UDO), improvements to minimize delay are to be required for intersections operating at poor levels of service under future conditions when the traffic generated by the proposed development is at least 10% of the projected total weekday AM or PM peak hour traffic at the intersection. The proposed development is expected to only account for approximately 6% of the overall traffic at the intersection during the weekday AM and PM peak hours with the Gracewood Improvements. Without the Gracewood Improvements, the proposed development is expected to only account for approximately 6% of the overall traffic during the weekday AM peak hour and approximately 7% of overall traffic during the weekday PM peak hour. Additionally, the

proposed development is only expected to add approximately eight seconds to the overall delay during the weekday AM peak hour and approximately seven seconds to the overall delay during the weekday PM peak hour under 2026 build conditions with Gracewood Improvements.

9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Background Improvements by Gracewood Residential Development

Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

- Construct exclusive eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive northbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound left-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.
- Construct an exclusive southbound right-turn lane with a minimum of 150 feet of storage and appropriate deceleration and taper length.

Recommended Improvements by Developer

Old US Highway 1 and New Hill-Olive Chapel Road / New Hill-Holleman Road

A proportional fee-in-lieu is recommended for these improvements based on an engineering estimate for their construction prior to the 51st unit.

- Construct exclusive eastbound and westbound left-turn lanes along Old US Highway 1 with a minimum of 250 feet of storage and appropriate deceleration and taper length.

Old US Highway 1 and Site Drive 1

- Construct the southbound approach with one (1) ingress lane and one (1) egress lane.
- Provide an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length.
- Provide stop-control for the southbound approach.

- *Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.*

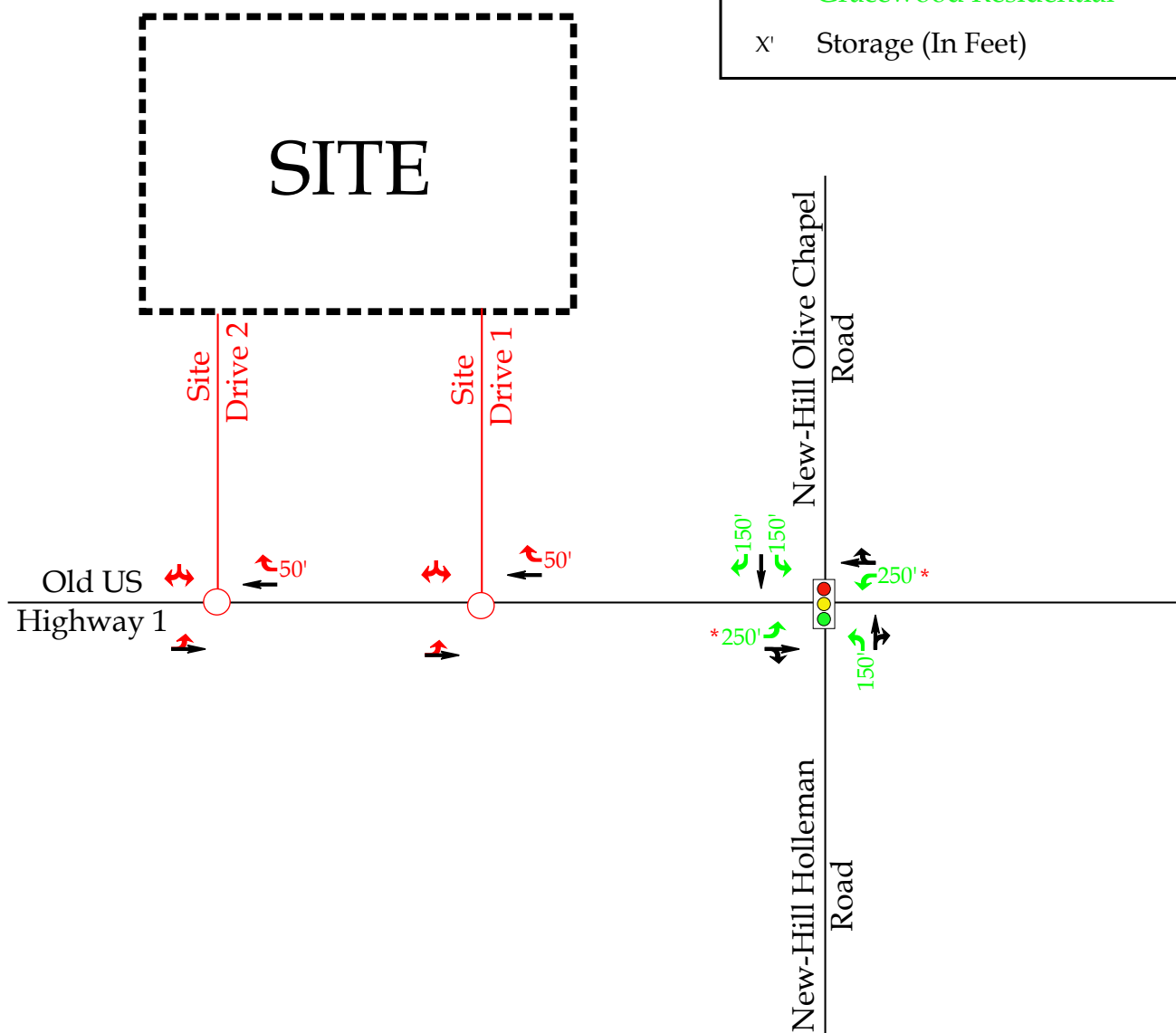
Old US Highway 1 and Site Drive 2

- Construct the southbound approach with one (1) ingress lane and one (1) egress lane.
- Provide an exclusive westbound right-turn lane with a minimum of 50 feet of storage and appropriate deceleration and taper length.
- Provide stop-control for the southbound approach.
- *Although an exclusive eastbound left-turn lane is not warranted, this improvement would not be uncommon along the major thoroughfare (Old US Highway 1) due to the high posted speed limit (55 mph) and the traffic growth expected in the future. At this site driveway, the proposed development could construct an exclusive eastbound left-turn lane in place of the recommended exclusive westbound right-turn lane.*



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- ➡ Existing Lane
- ➡ Improvement by Developer
- ➡ Background Improvement by Gracewood Residential
- x' Storage (In Feet)



*Note: Proportional fee-in-lieu by Developer

	Utley Farms Apex, NC	Recommended Lane Configurations	
		Scale: Not to Scale	Figure 11

TECHNICAL APPENDIX

APPENDIX A

SCOPING DOCUMENTATION



February 23, 2022

Russell Dalton, PE
Town of Apex
73 Hunter Street
Apex, NC 27502
P: 919-429-3358
E: russell.dalton@apexnc.org

Subject: **Memorandum of Understanding** – Belterra Section II
Apex, North Carolina

Dear Mr. Dalton:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions related to the Traffic Impact Analysis (TIA) for the proposed Belterra Section II development, to be located north of Old US Highway 1 and west of New Hill - Olive Chapel Road in Apex, North Carolina.

It is our understanding that the proposed development is expected be fully built out by 2026 and consist of a maximum amount of 140 single family homes. Access to the development is proposed via two (2) full movement driveways along Old US Highway 1. An internal connection to the existing phase 1 of the Belterra development, north of the site, is expected to provide site access to the proposed development. For the purposes of this study, this access will not be analyzed under future conditions as the traffic that is is expected to utilize this connection is negligible. This MOU contains information based on a scoping call with the Town of Apex (Town) on December 29, 2021 and with the North Carolina Department of Transportation (NCDOT) on December 28, 2021. A site location map and preliminary site plan has been attached for your reference.

Study Area

Based on coordination with the Town and NCDOT, the study area is proposed to consist of the following existing intersection:

- Old US Highway 1 and New Hill - Olive Chapel Road / New Hill – Holleman Road

Analysis Scenarios

All capacity analyses will be performed utilizing Synchro (Version 10.3). All study intersections will be analyzed during typical weekday AM and PM peak hours under the following proposed traffic scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions with Gracewood Improvements
- 2026 No-Build Traffic Conditions without Gracewood Improvements
- 2026 Build Traffic Conditions with Gracewood Improvements



- 2026 Build Traffic Conditions without Gracewood Improvements

Existing Traffic Volumes

Peak hour turning movement counts were collected at the study intersection in February 2022 during weekday AM (7:00 – 9:00 AM) and PM (4:00 – 6:00 PM) peak periods, while schools are in session, to determine 2022 existing peak hour traffic volumes.

No-Build Traffic Volumes

Per coordination with Town and NCDOT Staff, no-build traffic volumes will be determined by projecting 2022 existing traffic volumes to the build-out year using a proposed 3% annual growth rate.

Adjacent Developments

Based on coordination with the Town, the following adjacent developments are to be included in this study:

- Gracewood Residential – April 2021 by KHA
 - Without Gracewood Improvements – this study will assume Gracewood consist of 270 single family homes.
 - With Gracewood Improvements – this study will consider 85% of the Gracewood development as adjacent development traffic as 15% of the development is currently built-out.
- Olive Ridge – December 2018 by RKA
- Jordan Manors – May 2015 by KHA
 - 20% of the Jordan Manors development will be considered as adjacent development traffic as 80% of the development is currently built out.
- Belterra (New Hill Assembly aka Jordan Vistas) – April 2018 by RKA

All other future developments will be accounted for with the proposed 3% growth rate.

Future Roadway Improvements

Through coordination with NCDOT and the Town, future roadway improvements associated with the Gracewood Residential development are to be included in this study under future conditions. For the purposes of this study, under future conditions without Gracewood Improvements, the Gracewood adjacent development is expected to consist of 270 single family homes. Analysis of future conditions with Gracewood Improvements will include 85% of the development’s density as adjacent development traffic as 15% of the development is currently built-out.

Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 11th Edition. Refer to Table 1, on the following page, for a detailed breakdown of the buildout site trip generation.

Table 1: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	AM Peak Hour Trips (vph)		PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single-Family Homes (210)	140 units	1,380	26	75	86	50

It is estimated that the proposed site will generate approximately 1,380 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 101 trips (26 entering and 75 exiting) would occur during the weekday AM peak hour and 136 trips (86 entering and 50 exiting) would occur during the weekday PM peak hour.

Trip Distribution

The primary site trips are distributed based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. A summary of the proposed regional trip distributions is as follows:

- 10% to/from the north via New-Hill Olive Chapel Road
- 50% to/from the south via New-Hill Holleman Road
- 35% to/from the east via Old US Highway 1
- 5% to/from the west via Old US Highway 1

Refer to the attachments for a figure showing the anticipated site trip distributions for the site.

Report

The Traffic Impact Analysis report will be prepared based on the Town and NCDOT guidelines. If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report. If you have any questions or concerns, please do not hesitate to contact me.

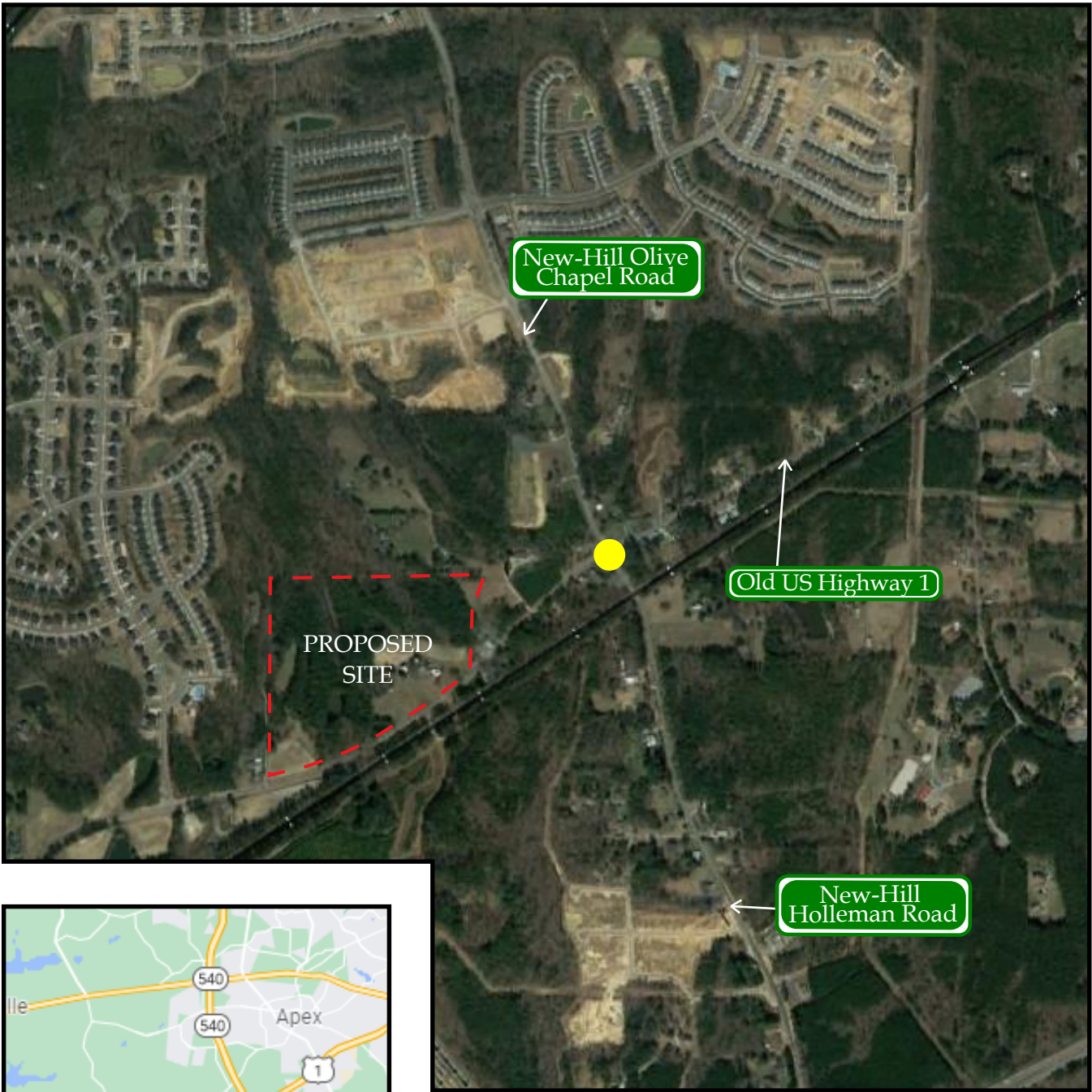
Sincerely,
Ramey Kemp & Associates, Inc.



Nate Bouquin, PE, PTOE
Traffic Engineering Project Manager

- Attachments: Site Location Map
Preliminary Site Plan
2022 Existing Peak Hour Traffic
Proposed Site Trip Distribution Figure





LEGEND

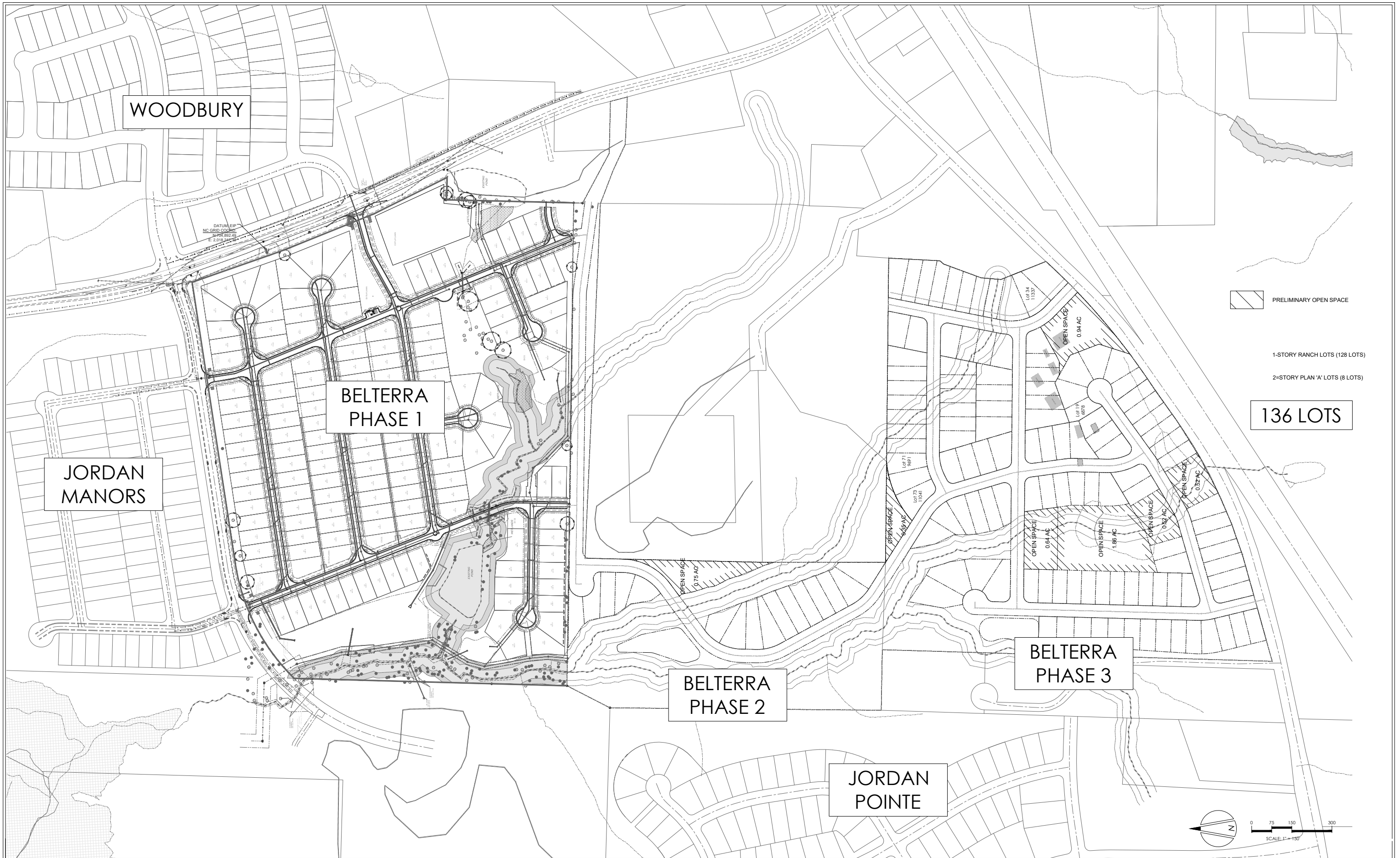
- Proposed Site Location
- Existing Study Intersection
- Study Area



Belterra Section II
Apex, NC

Site Location Map

Scale: Not to Scale



WOODBURY


BELTERRA
PHASE 1

JORDAN
MANORS

BELTERRA
PHASE 2

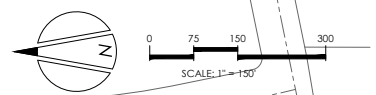
BELTERRA
PHASE 3

JORDAN
POINTE

 PRELIMINARY OPEN SPACE

 1-STORY RANCH LOTS (128 LOTS)
 2-STORY PLAN 'A' LOTS (8 LOTS)

136 LOTS



NO.	DATE	REVISION	BY

Designer: FS Scale: 1" = 150'
 Drawn By: FS Date: 06/30/2021
 Checked By: JR Job No.: 210504

BELTERRA PHASE 2
 NEW HILL, NORTH CAROLINA

- Page 635 -

SKETCH PLAN 1


 1125 Apex Parkway | Apex, NC 27502
 ph: 919.439.0100
 www.PeakEngineering.com

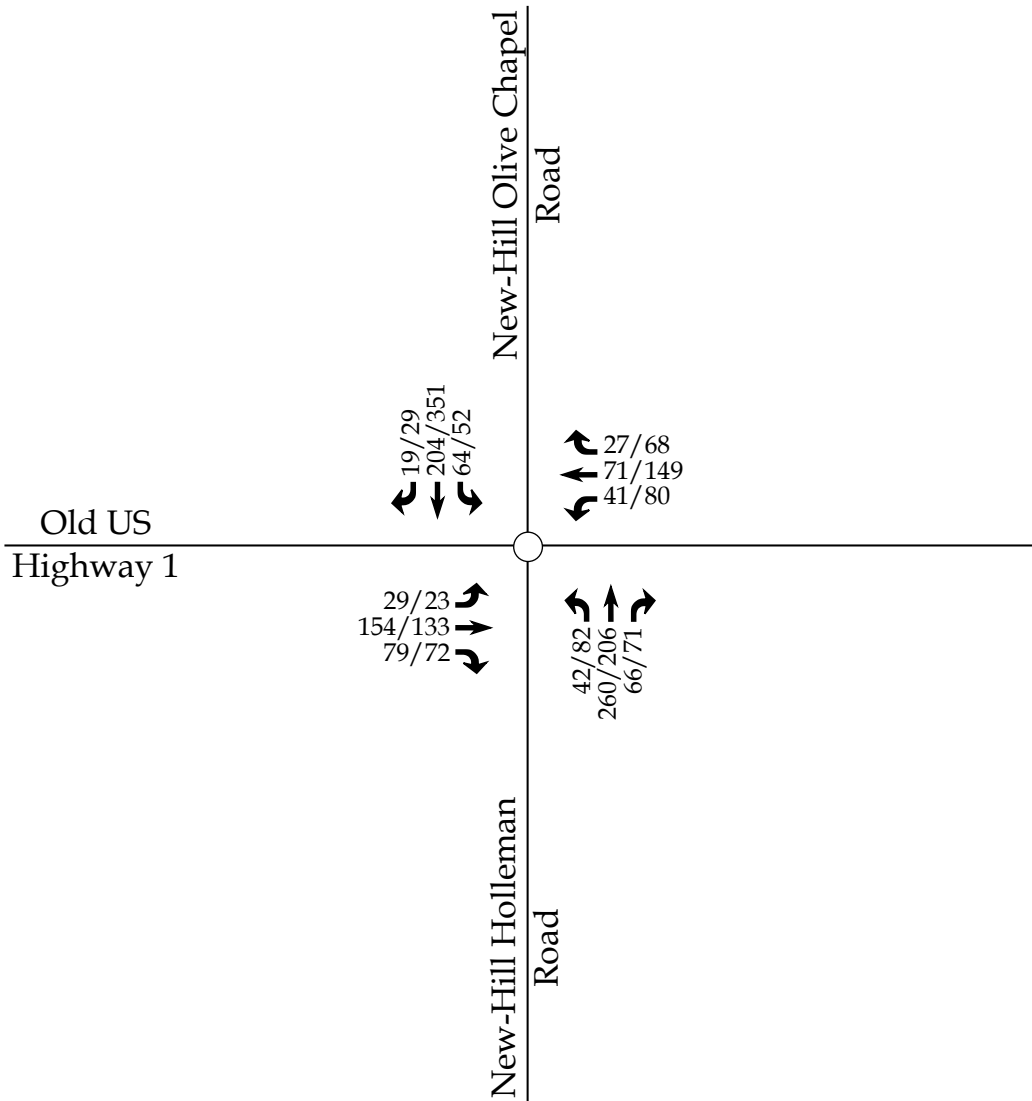
Sheet No.
SP-1

© 2020 Peak Engineering & Design. All Rights Reserved



LEGEND

- Unsignalized Intersection
- X / Y → Weekday AM / PM Peak Hour Traffic



Belterra Section II
Apex, NC

2022 Existing
Peak Hour Traffic

Scale: Not to Scale

LEGEND

○ Unsignalized Intersection

🚦 Signalized Intersection

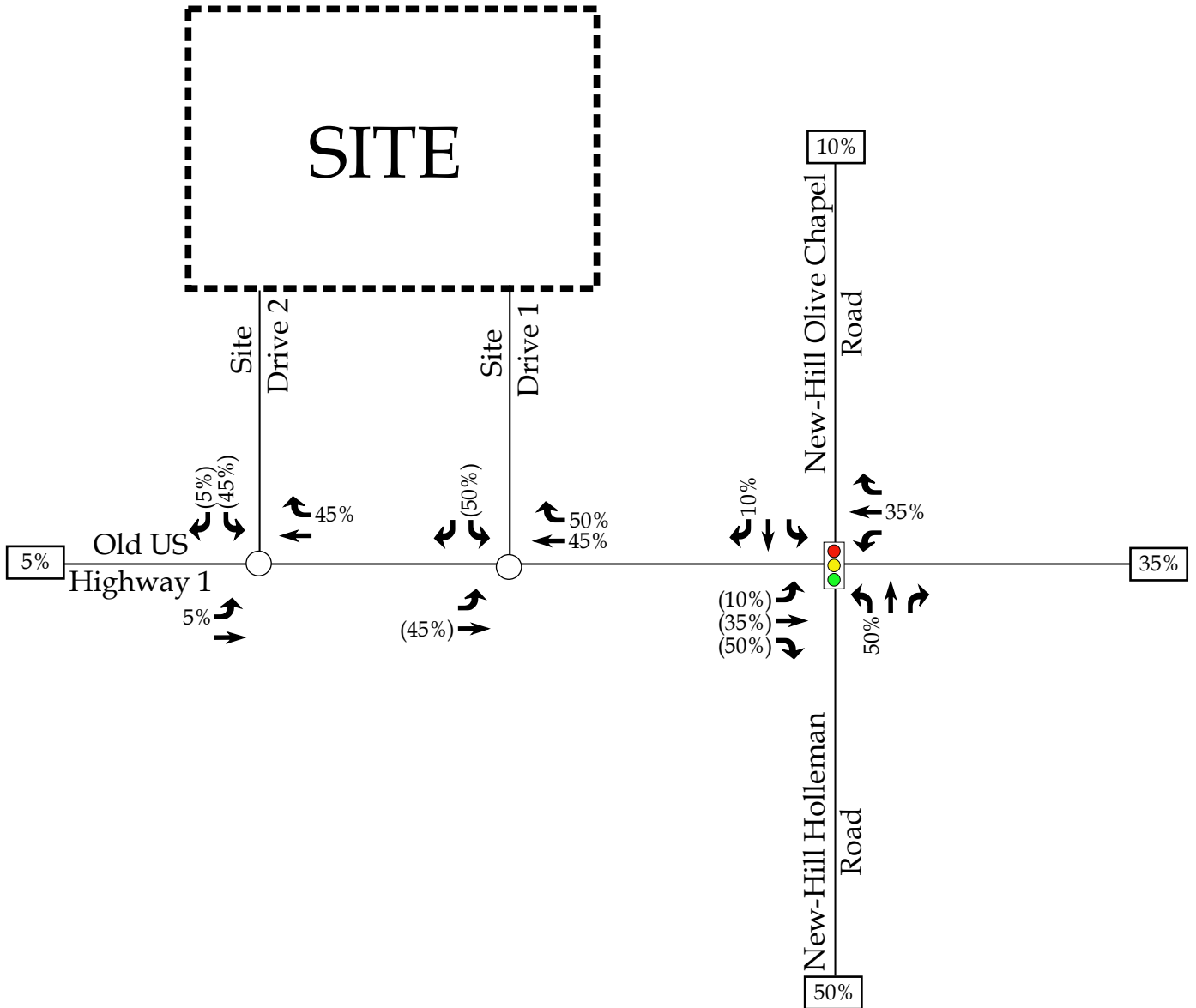
X% → Entering Trip Distribution

(Y%) → Exiting Trip Distribution

XX% Regional Trip Distribution



SITE



Belterra Section II
Apex, NC

Proposed
Site Trip Distribution

Scale: Not to Scale

APPENDIX B

TRAFFIC COUNTS



TRAFFIC DATA COLLECTION

File Name : Apex(Old US Hwy 1 and New Hill)
 Site Code :
 Start Date : 2/16/2022
 Page No : 1

Groups Printed- Cars + - Trucks

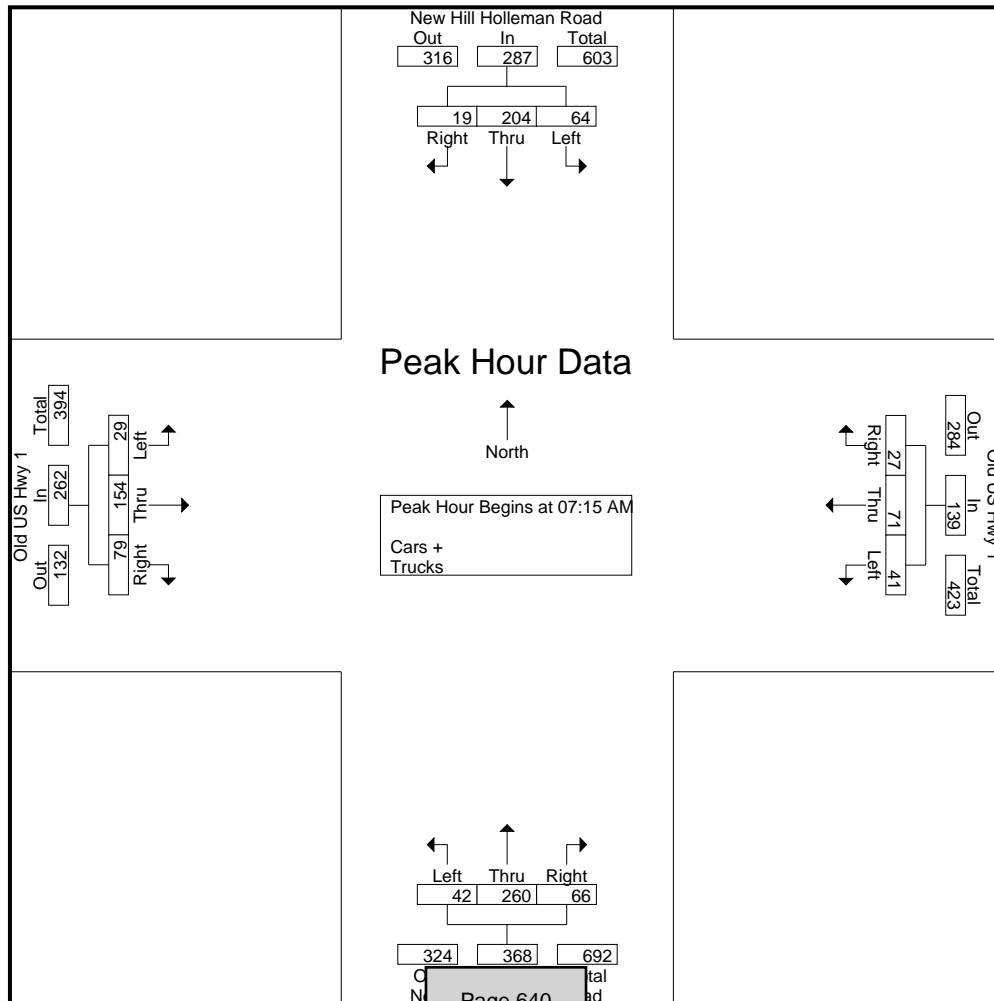
Start Time	New Hill Holleman Road Southbound				Old US Hwy 1 Westbound				New Hill Holleman Road Northbound				Old US Hwy 1 Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	5	48	13	66	3	7	11	21	17	59	7	83	8	34	16	58	228
07:15 AM	2	76	24	102	7	10	8	25	15	54	9	78	29	35	6	70	275
07:30 AM	7	53	15	75	3	13	6	22	13	83	6	102	21	47	6	74	273
07:45 AM	6	39	7	52	6	23	17	46	19	63	14	96	14	45	8	67	261
Total	20	216	59	295	19	53	42	114	64	259	36	359	72	161	36	269	1037
08:00 AM	4	36	18	58	11	25	10	46	19	60	13	92	15	27	9	51	247
08:15 AM	11	42	18	71	7	24	10	41	14	83	5	102	14	31	10	55	269
08:30 AM	7	42	25	74	4	30	8	42	14	60	15	89	11	53	10	74	279
Grand Total	42	336	120	498	41	132	70	243	111	462	69	642	112	272	65	449	1832
Apprch %	8.4	67.5	24.1		16.9	54.3	28.8		17.3	72	10.7		24.9	60.6	14.5		
Total %	2.3	18.3	6.6	27.2	2.2	7.2	3.8	13.3	6.1	25.2	3.8	35	6.1	14.8	3.5	24.5	
Cars +	34	300	114	448	37	119	65	221	108	417	61	586	105	262	63	430	1685
% Cars +	81	89.3	95	90	90.2	90.2	92.9	90.9	97.3	90.3	88.4	91.3	93.8	96.3	96.9	95.8	92
Trucks	8	36	6	50	4	13	5	22	3	45	8	56	7	10	2	19	147
% Trucks	19	10.7	5	10	9.8	9.8	7.1	9.1	2.7	9.7	11.6	8.7	6.2	3.7	3.1	4.2	8



TRAFFIC DATA COLLECTION

File Name : Apex(Old US Hwy 1 and New Hill)
 Site Code :
 Start Date : 2/16/2022
 Page No : 2

	New Hill Holleman Road Southbound				Old US Hwy 1 Westbound				New Hill Holleman Road Northbound				Old US Hwy 1 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	76	24	102	7	10	8	25	15	54	9	78	29	35	6	70	275
07:30 AM	7	53	15	75	3	13	6	22	13	83	6	102	21	47	6	74	273
07:45 AM	6	39	7	52	6	23	17	46	19	63	14	96	14	45	8	67	261
08:00 AM	4	36	18	58	11	25	10	46	19	60	13	92	15	27	9	51	247
Total Volume	19	204	64	287	27	71	41	139	66	260	42	368	79	154	29	262	1056
% App. Total	6.6	71.1	22.3		19.4	51.1	29.5		17.9	70.7	11.4		30.2	58.8	11.1		
PHF	.679	.671	.667	.703	.614	.710	.603	.755	.868	.783	.750	.902	.681	.819	.806	.885	.960





TRAFFIC DATA COLLECTION

File Name : Apex(Old US Hwy 1 and New Hill)
 Site Code :
 Start Date : 2/16/2022
 Page No : 1

Groups Printed- Cars + - Trucks

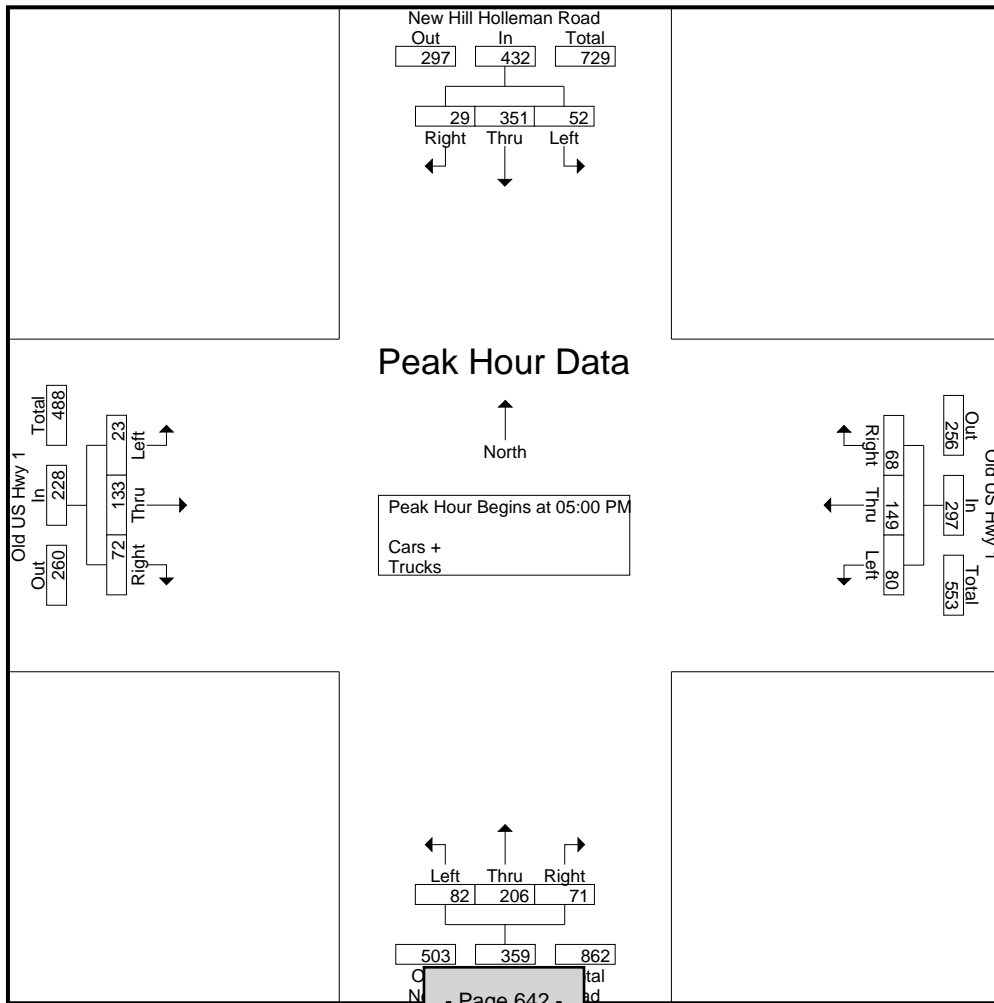
Start Time	New Hill Holleman Road Southbound				Old US Hwy 1 Westbound				New Hill Holleman Road Northbound				Old US Hwy 1 Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	5	67	10	82	21	46	23	90	14	43	11	68	21	21	6	48	288
04:15 PM	13	73	5	91	17	33	25	75	16	56	10	82	16	18	8	42	290
04:30 PM	9	60	6	75	13	43	26	82	9	52	29	90	15	28	8	51	298
04:45 PM	7	68	8	83	15	39	27	81	18	45	17	80	20	18	7	45	289
Total	34	268	29	331	66	161	101	328	57	196	67	320	72	85	29	186	1165
05:00 PM	6	55	14	75	17	36	18	71	14	39	16	69	15	26	2	43	258
05:15 PM	6	135	15	156	18	31	26	75	25	59	24	108	24	38	11	73	412
05:30 PM	9	91	11	111	22	51	20	93	22	47	18	87	16	30	3	49	340
05:45 PM	8	70	12	90	11	31	16	58	10	61	24	95	17	39	7	63	306
Total	29	351	52	432	68	149	80	297	71	206	82	359	72	133	23	228	1316
Grand Total	63	619	81	763	134	310	181	625	128	402	149	679	144	218	52	414	2481
Apprch %	8.3	81.1	10.6		21.4	49.6	29		18.9	59.2	21.9		34.8	52.7	12.6		
Total %	2.5	24.9	3.3	30.8	5.4	12.5	7.3	25.2	5.2	16.2	6	27.4	5.8	8.8	2.1	16.7	
Cars +	56	587	78	721	133	305	175	613	124	384	147	655	137	211	51	399	2388
% Cars +	88.9	94.8	96.3	94.5	99.3	98.4	96.7	98.1	96.9	95.5	98.7	96.5	95.1	96.8	98.1	96.4	96.3
Trucks	7	32	3	42	1	5	6	12	4	18	2	24	7	7	1	15	93
% Trucks	11.1	5.2	3.7	5.5	0.7	1.6	3.3	1.9	3.1	4.5	1.3	3.5	4.9	3.2	1.9	3.6	3.7



TRAFFIC DATA COLLECTION

File Name : Apex(Old US Hwy 1 and New Hill)
 Site Code :
 Start Date : 2/16/2022
 Page No : 2

	New Hill Holleman Road Southbound				Old US Hwy 1 Westbound				New Hill Holleman Road Northbound				Old US Hwy 1 Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	6	55	14	75	17	36	18	71	14	39	16	69	15	26	2	43	258
05:15 PM	6	135	15	156	18	31	26	75	25	59	24	108	24	38	11	73	412
05:30 PM	9	91	11	111	22	51	20	93	22	47	18	87	16	30	3	49	340
05:45 PM	8	70	12	90	11	31	16	58	10	61	24	95	17	39	7	63	306
Total Volume	29	351	52	432	68	149	80	297	71	206	82	359	72	133	23	228	1316
% App. Total	6.7	81.2	12		22.9	50.2	26.9		19.8	57.4	22.8		31.6	58.3	10.1		
PHF	.806	.650	.867	.692	.773	.730	.769	.798	.710	.844	.854	.831	.750	.853	.523	.781	.799



APPENDIX C

ADJACENT DEVELOPMENT INFORMATION

Traffic Impact Analysis New Hill Assembly Apex, NC



RAMEY KEMP
- - - - -
ASSOCIATES
TRANSPORTATION ENGINEERS

TRAFFIC IMPACT ANALYSIS

FOR

NEW HILL ASSEMBLY

LOCATED

IN

APEX, NORTH CAROLINA

Prepared For:
Forsyth Investments Company, LLC
414 Forsyth Street
Raleigh, NC 27609

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910



April 2018

RKA Project No. 18120

Prepared By: NB

Reviewed By: JM



0 50 100 200
SCALE 1" = 100'

1 SKETCH PLAN 1
SCALE 1" = 100'



PROJECT # 1709001
DATE MARCH 5, 2018
DRAWN BY JJE
CHECKED BY JN
SCALE 1" = 100'

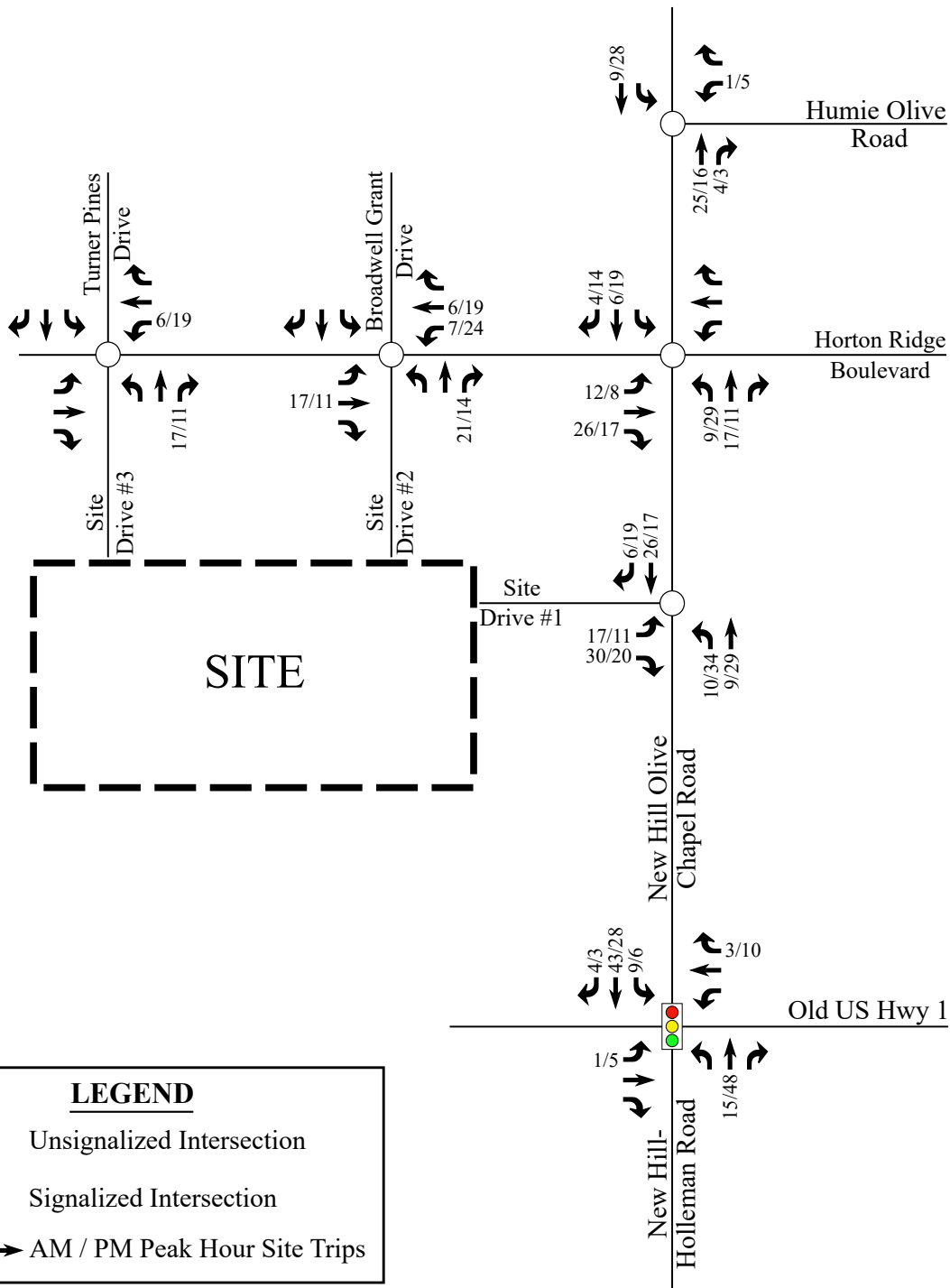
NO.	DATE	REVISION BY

PROJECT: NEW HILL ASSEMBLY
HILL OLIVE CHAPEL ROAD @
TON RIDGE ROAD
CROOKHORN TOWNSHIP
APEX, NORTH CAROLINA

- Page 646 -

PEAK
Engineering & Design
5448 Apex Parkway #308 | Apex, NC 27502
PH: 919.439.0100 | FAX: 919.439.4411
www.PeakEngineeringDesign.com

© 2017 Peak Engineering & Design, All Rights Reserved.



LEGEND

- Unsignalized Intersection
- 🚦 Signalized Intersection
- X/Y → AM / PM Peak Hour Site Trips

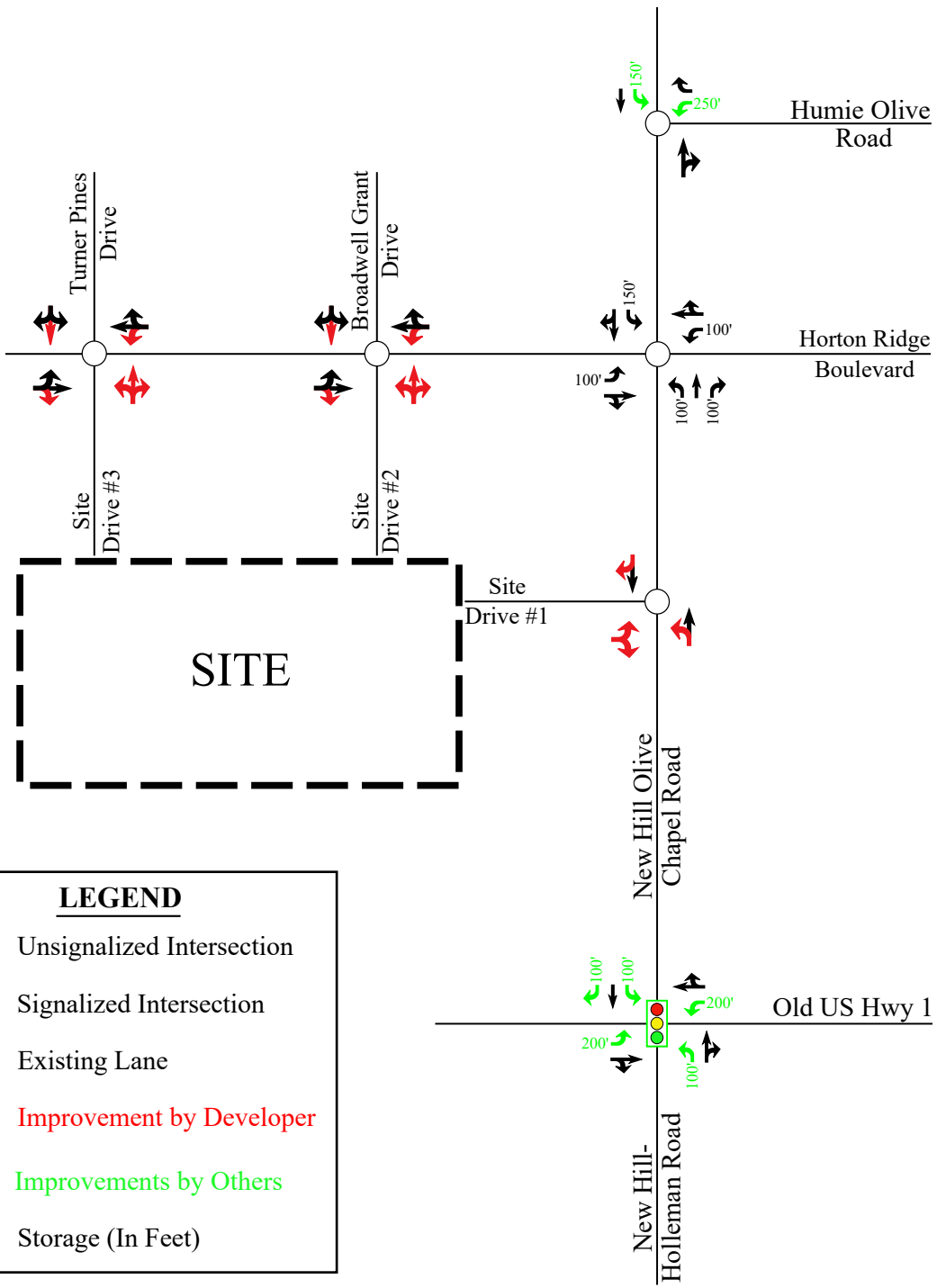


New Hill Assembly
Apex, NC

Site
Trip Assignment

Scale: Not to Scale

Figure 9



LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- Existing Lane
- Improvement by Developer
- Improvements by Others
- X' Storage (In Feet)



New Hill Assembly
Apex, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure 11



Traffic Impact Analysis

Gracewood Residential Apex, NC

Prepared for:
Community Properties, Inc.

Kimley»Horn

© Kimley-Horn and Associates, Inc. 2021

Updated Traffic Impact Analysis for
Gracewood Residential
Apex, North Carolina

Prepared for:
Community Properties, Inc.
Raleigh, NC

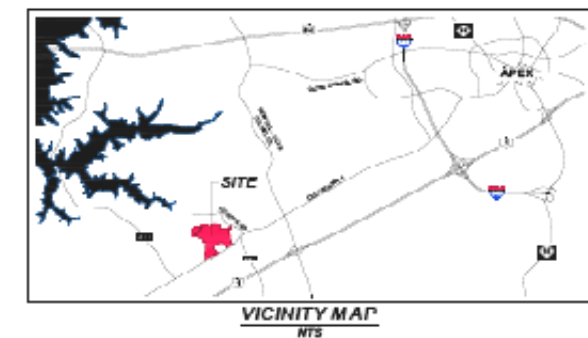
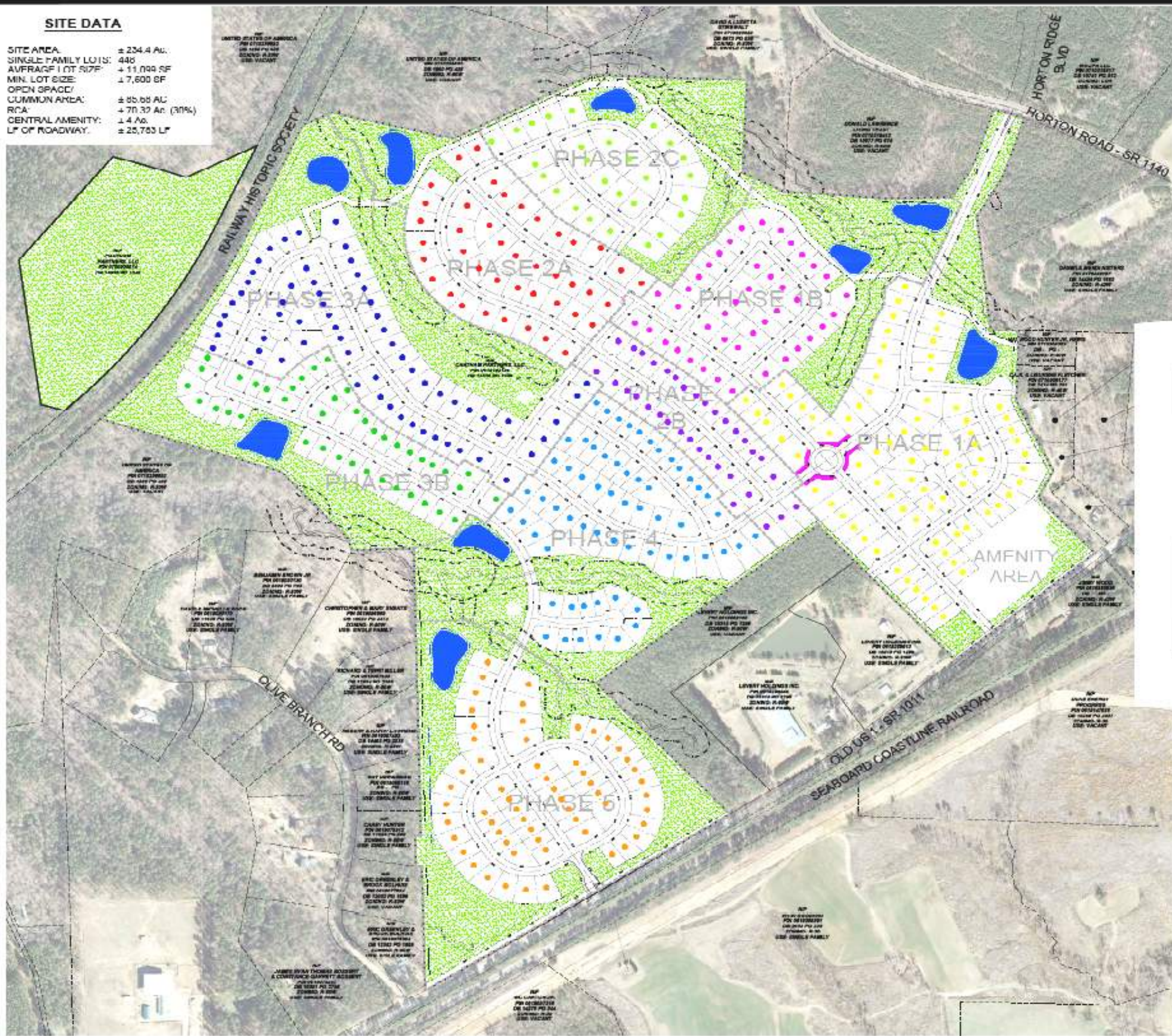
Prepared by:
Kimley-Horn and Associates, Inc.
NC License #F-0102
300 Morris Street, Suite 200
Durham, NC 27701
(919) 682-3583

April 2021
018723000



SITE DATA

SITE AREA: ± 234.4 AC.
 SINGLE FAMILY LOTS: 448
 AVFRA/F LOT SIZE: ± 11,099 SF
 MIN. LOT SIZE: ± 7,600 SF
 OPEN SPACE/
 COMMON AREA: ± 85.88 AC
 RCA: ± 70.37 AC (30%)
 CENTRAL AMENITY: ± 4 AC.
 LF OF ROADWAY: ± 25,783 LF



PHASE 1 (120 LOTS)	
PHASE 1A	78 LOTS
PHASE 1B	42 LOTS
PHASE 2 (103 LOTS)	
PHASE 2A	42 LOTS
PHASE 2B	34 LOTS
PHASE 2C	27 LOTS
PHASE 3 (105 LOTS)	
PHASE 3A	64 LOTS
PHASE 3B	41 LOTS
PHASE 4	61 LOTS
PHASE 5	59 LOTS
TOTAL LOTS IN SUBDIVISION	448 LOTS

GRACEWOOD
 RESIDENTIAL COMMUNITY
CONCEPTUAL PHASING PLAN
 APEX, NORTH CAROLINA
 MARCH 10, 2021



FIGURE 2.2

PROPOSED SITE PLAN

GRACEWOOD RESIDENTIAL APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

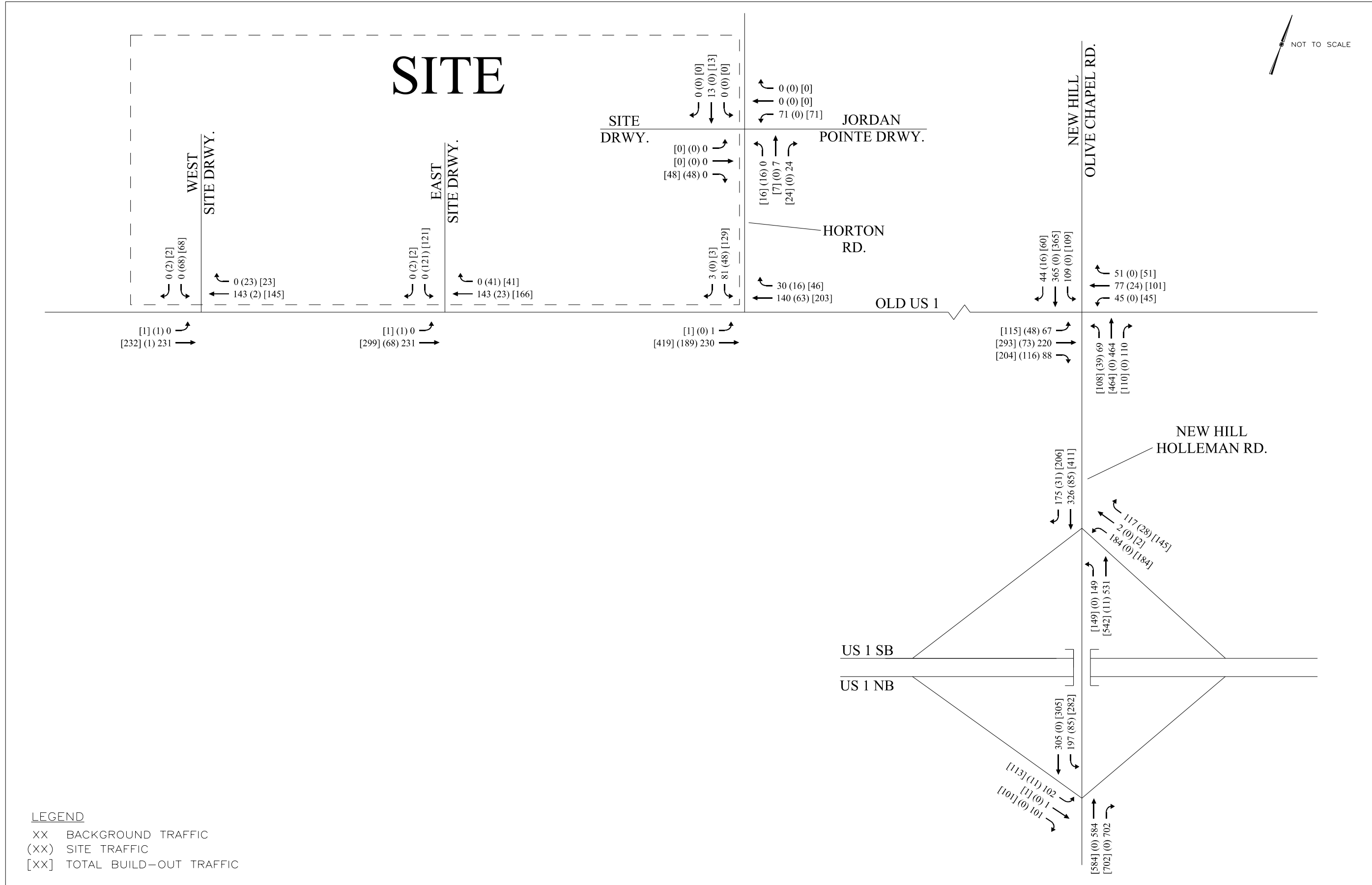


FIGURE 5.3

PROJECTED (2027) BUILD-OUT AM PEAK HOUR TRAFFIC VOLUMES

GRACEWOOD RESIDENTIAL APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

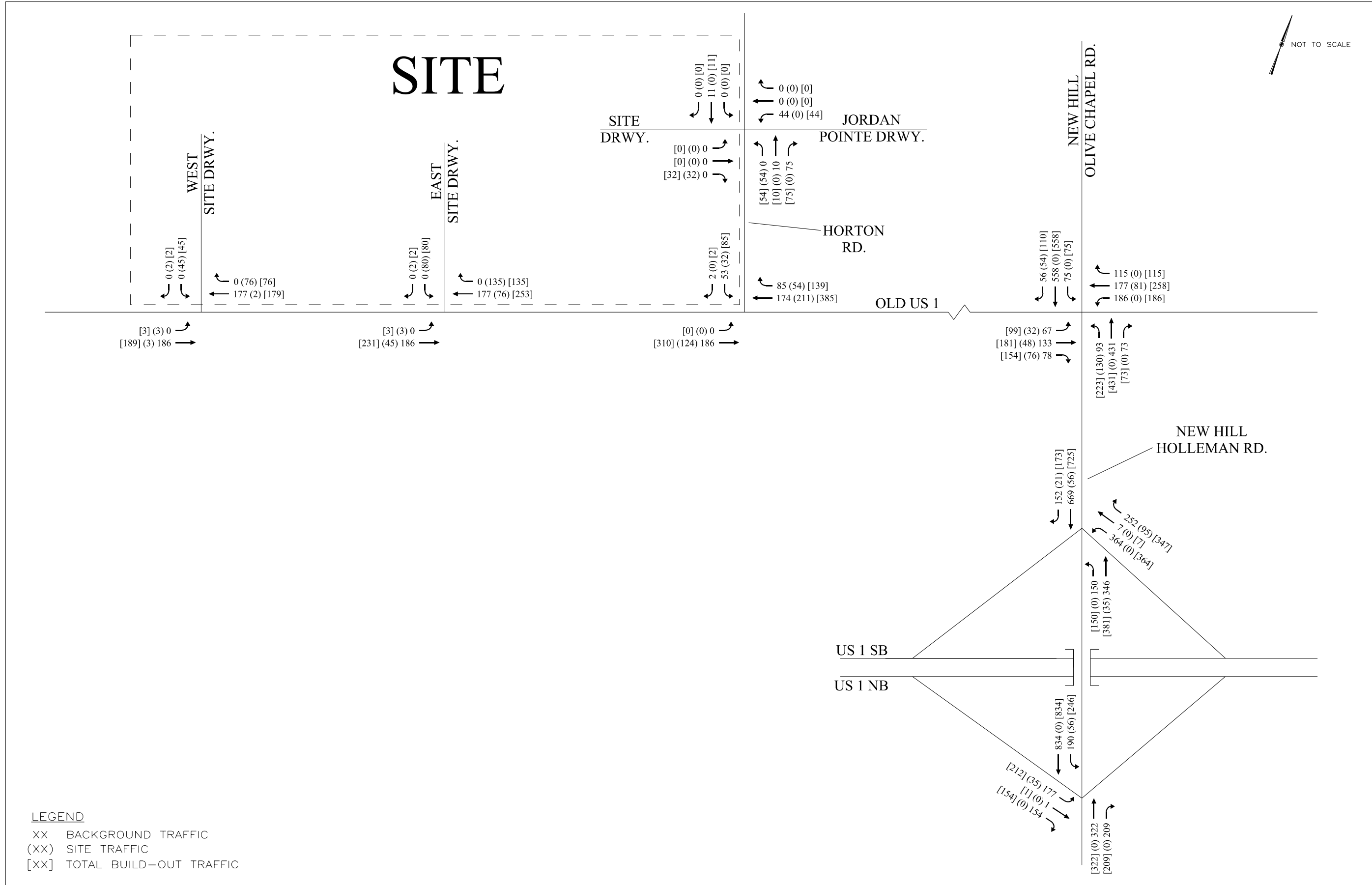


FIGURE 5.4

PROJECTED (2027) BUILD-OUT PM PEAK HOUR TRAFFIC VOLUMES

GRACEWOOD RESIDENTIAL APEX, NC TRAFFIC IMPACT ANALYSIS



THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

May 29, 2015

Mr. Colen Davidson
Milestone Developments, LLC.
140 Towerview Ct.
Cary, NC 27513



RE: *Finkle and Haus Assemblage – Traffic Impact Analysis*

5/29/2015

Dear Mr. Davidson:

Kimley-Horn and Associates, Inc. has revised the Traffic Impact Analysis (originally dated February 27, 2015) for the proposed residential development located on the west side of New Hill Olive Chapel Road in Apex, NC. The proposed development will consist of approximately 240 single-family homes split between 2 parcels (approximately 160 units in the northern parcel and 80 units in the southern parcel) and is expected to be completed (built-out) by the year 2018. The northern parcel is proposed to be accessed by two full-movement driveways on New Hill Olive Chapel Road, and the southern parcel is proposed to be access by two full-movement driveways on the Proposed Collector Road that will tie to New Hill Olive Chapel Road along the south end of the site. Figure 1 shows the site location, and Figure 2 shows the proposed site plan.

This report presents trip generation, distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with the development. The three traffic conditions studied include the existing (2015) traffic condition, the projected (2018) background traffic condition, and the projected (2018) build-out traffic condition. Analyses were performed for the weekday AM and PM peak hours. The study area consists of the following intersections:

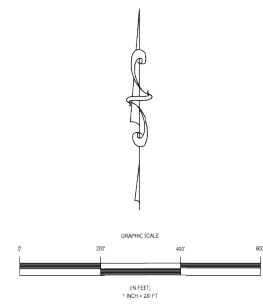
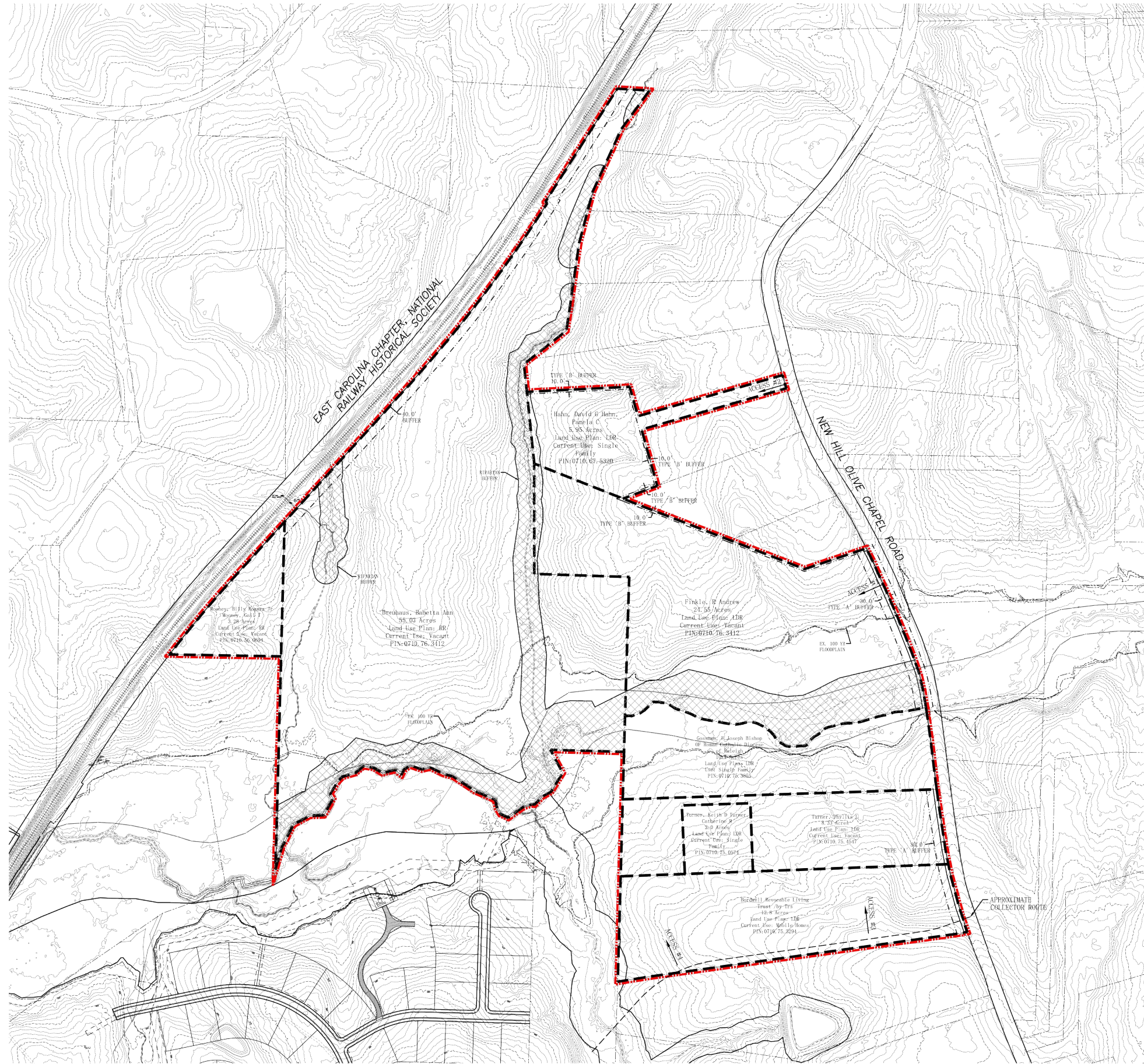
- New Hill Olive Chapel Road & Old US Hwy 1
- New Hill Olive Chapel Road & Humie Olive Road
- New Hill Olive Chapel Road & Proposed Site Access 1
- New Hill Olive Chapel Road & Proposed Site Access 2
- New Hill Olive Chapel Road & Proposed Collector Road (to connect with Site Access 3, 4)

Background Traffic

AM and PM peak hour traffic counts were performed at the following intersections on January 22, 2015:

- New Hill Olive Chapel Road & Old US Hwy 1
- New Hill Olive Chapel Road & Humie Olive Road

The existing AM and PM peak hour turning movement volumes are shown on Figures 3 and 4, respectively. A 3% annual growth factor was applied to the existing volumes to account for ambient



240 UNITS

Wm. G. Daniel & Assoc.
 Engineering Planning
 Site Design
 1150 SE MAYNARD ROAD
 SUITE 260
 CARY, NC 27511
 (919) 467-9708
 C-0329

Revisions
 05/13/15 Added parcels
 and increased unit count to 240

DEVELOPER:
 Milestone Developments, LLC
 142 Towerview Court
 Cary, NC 27513
 (919) 417-4429

Project
 Finkle and Haus
 New Hill Olive Chapel Road

Basemap

Date
 February 20, 2015

Scale
 1" = 200'

Sheet

CS-0

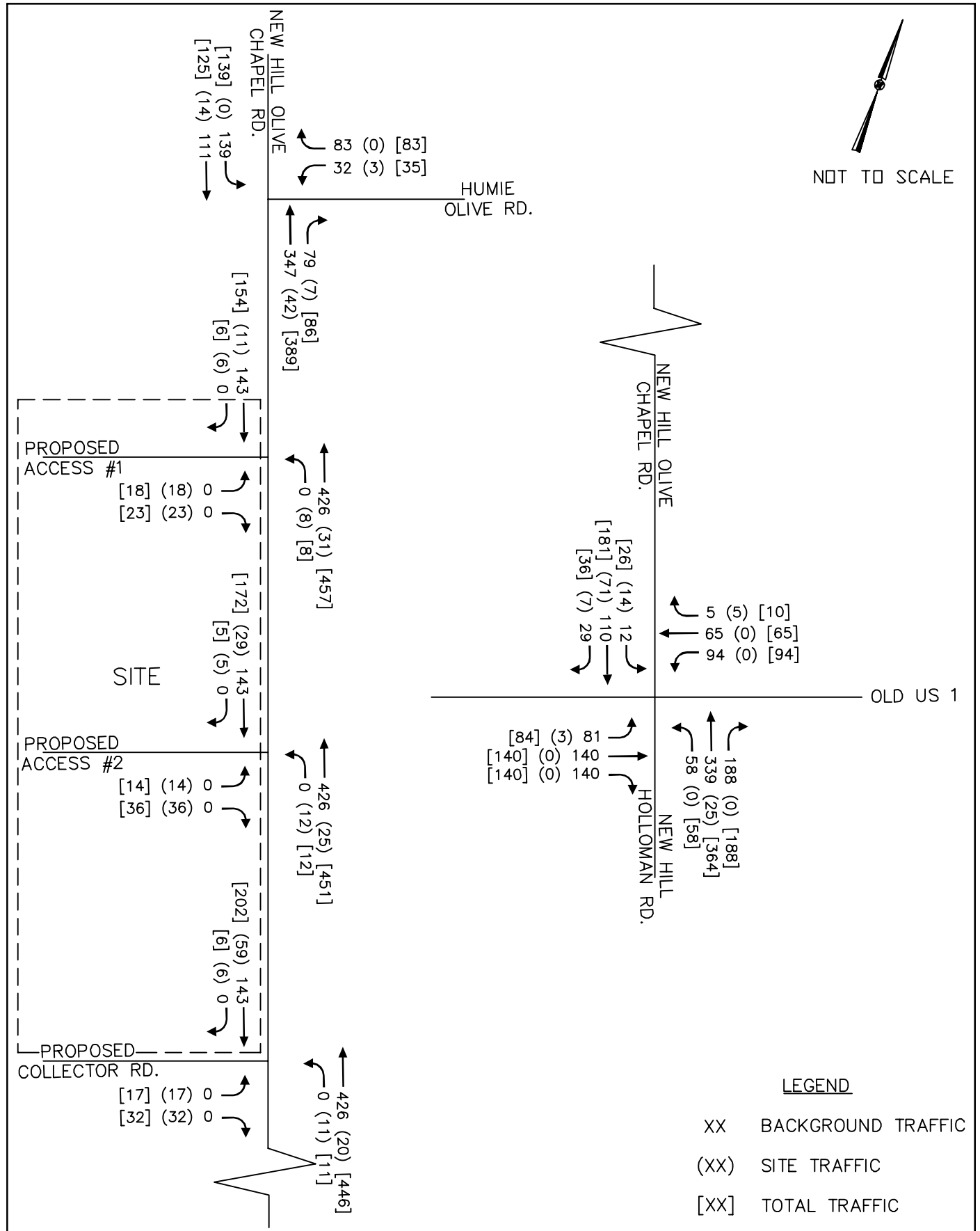
FIGURE 2

SITE PLAN

FINKLE & HAUS ASSEMBLAGE
 APEX, NC
 TRAFFIC IMPACT ANALYSIS

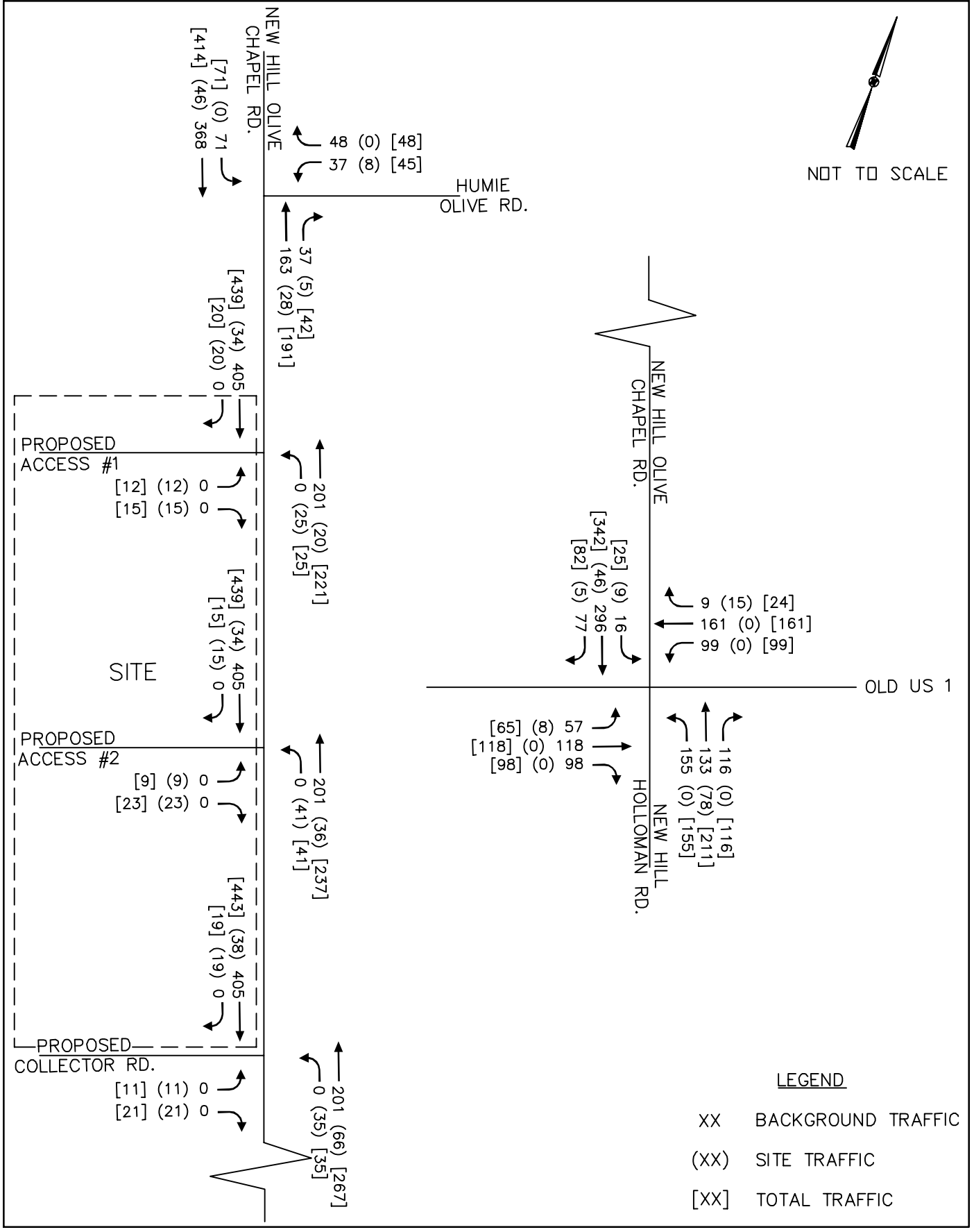
Kimley»Horn

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.





NOT TO SCALE



LEGEND

- XX BACKGROUND TRAFFIC
- (XX) SITE TRAFFIC
- [XX] TOTAL TRAFFIC

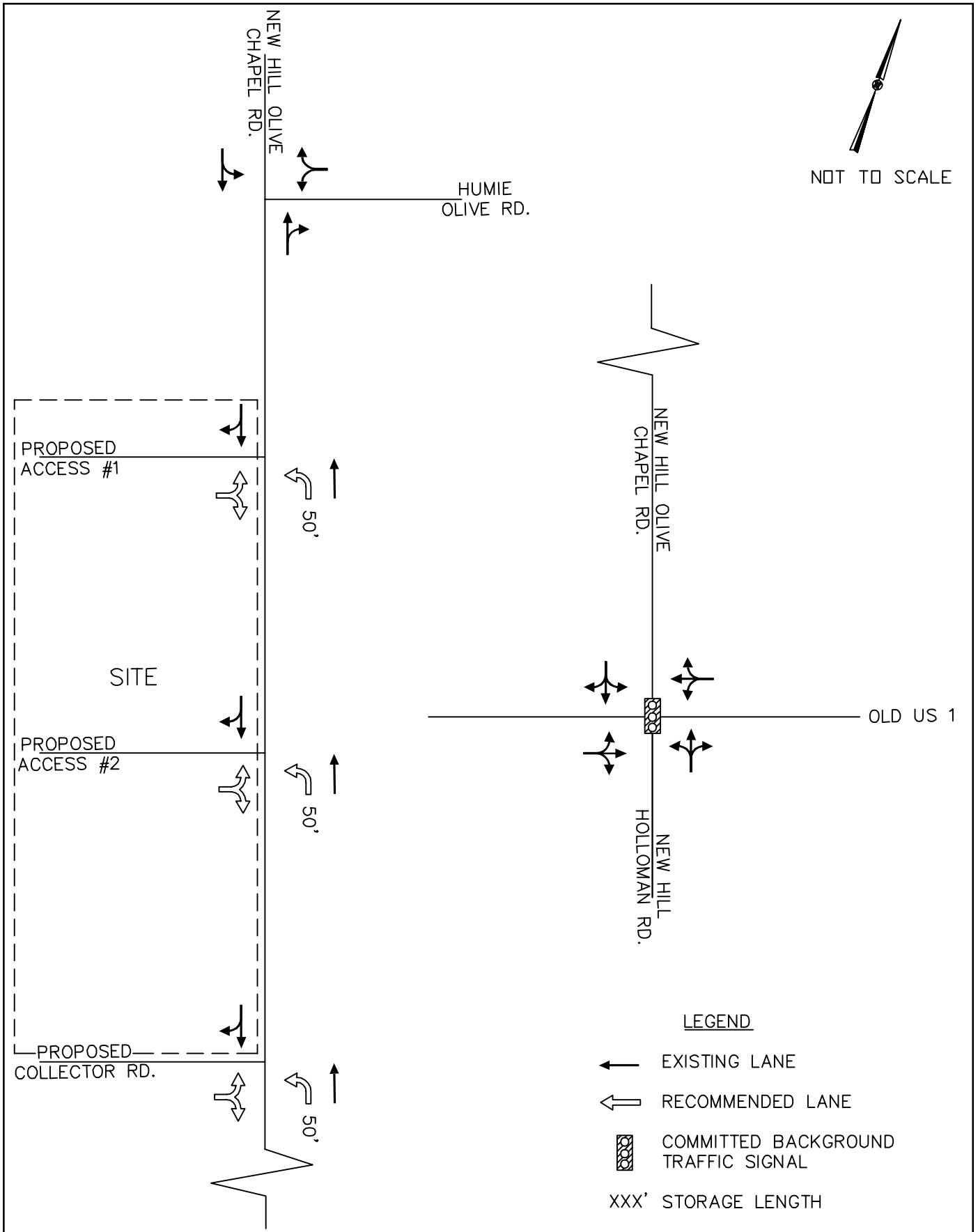


FINKLE & HAUS ASSEMBLAGE
 APEX, NC
 TRAFFIC IMPACT ANALYSIS

PROJECTED (2018)
 BUILD-OUT PM PEAK HOUR
 TRAFFIC VOLUMES

FIGURE
 7

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS THE PROPERTY OF KIMLEY-HORN AND ASSOCIATES, INC. IT IS TO BE USED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER ADAPTATION OF THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.



FINKLE & HAUS ASSEMBLAGE
APEX, NC
TRAFFIC IMPACT ANALYSIS

RECOMMENDED ROADWAY
LANEAGE

FIGURE
8

Traffic Impact Analysis Olive Ridge Apex, North Carolina



TRAFFIC IMPACT ANALYSIS

FOR

OLIVE RIDGE

LOCATED

IN

APEX, NORTH CAROLINA

Prepared For:
Rob Tessar
Weekley Homes, LLC
1901 N. Harrison Avenue, Suite 200
Cary, NC 27513

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

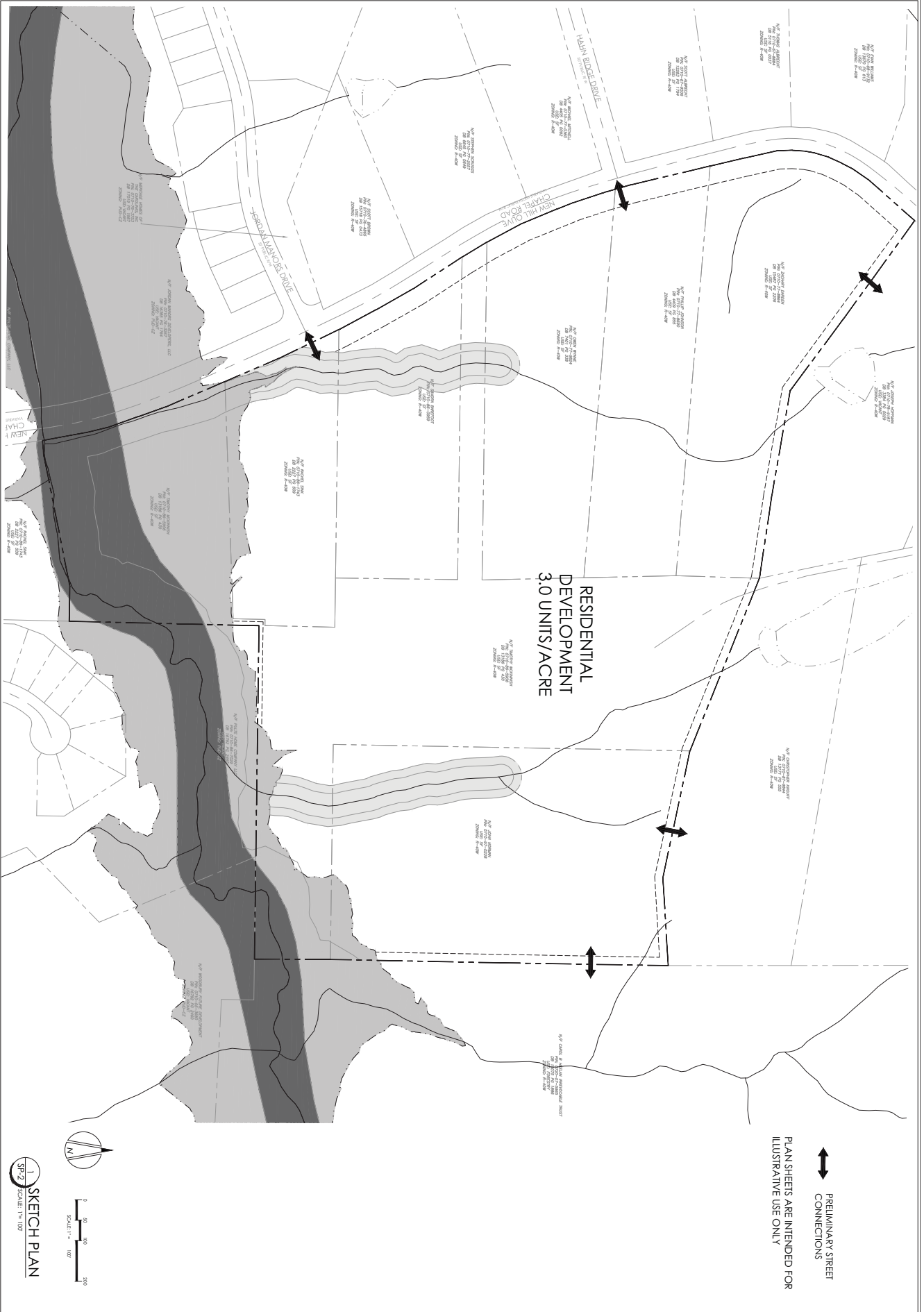
December 2018

RKA Project No. 18357



Prepared By: NB

Reviewed By: RS



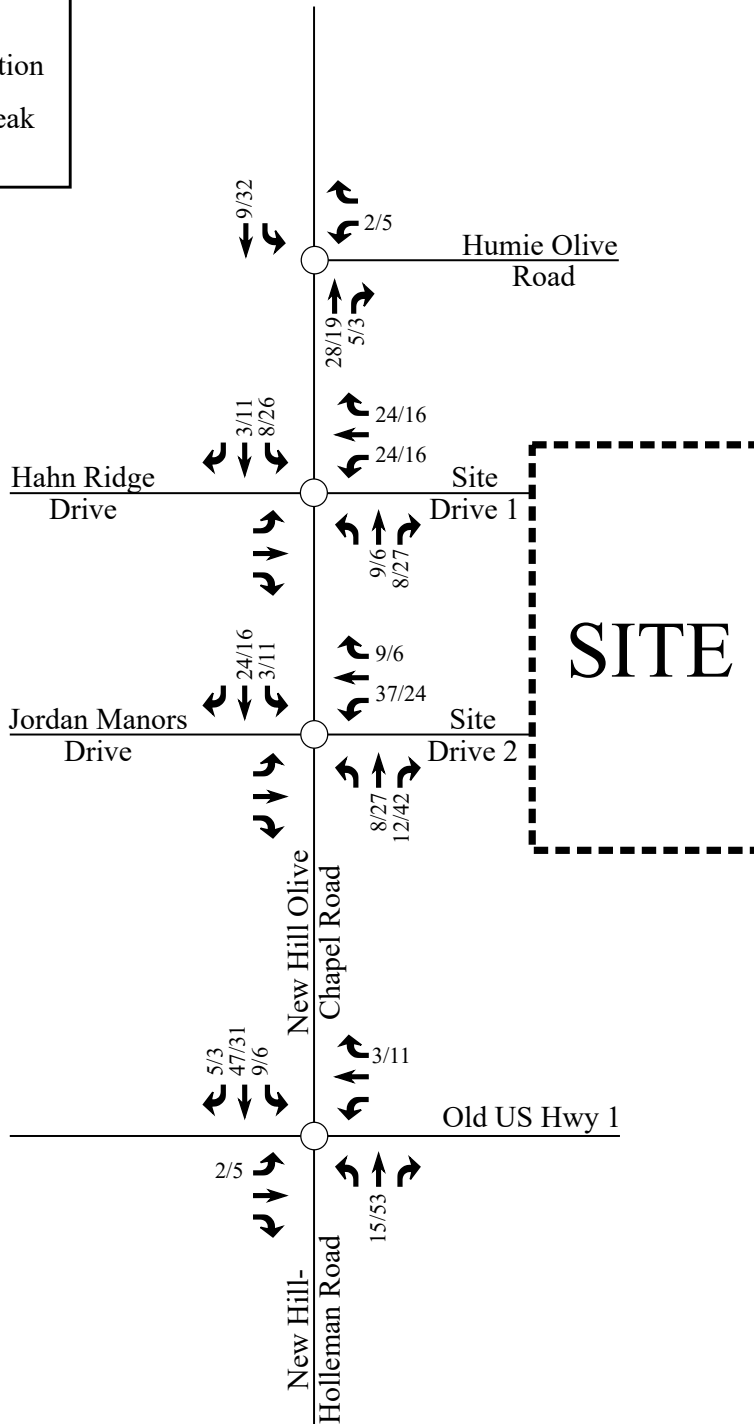
1 SKETCH PLAN
SP-2 SCALE: 1" = 100'



SP-2 SKETCH PLAN	sheet: 1 of 100	scale: 1" = 100'	dsg by: chkd by: JH	date: AUGUST 31, 2018	prof #: 180701
	title: SKETCH PLAN	project: OLIVE RIDGE SUBDIVISION HILL OLIVE CHAPEL ROAD KHORN TOWNSHIP YORK, NORTH CAROLINA	- Page 662 -	5448 Ikea Parkway #318 Apex, NC 27502 ph: 919.439.0100 fax: 919.439.6411 www.PeakEngineeringDesign.com	NC License #1042878

LEGEND

- Unsignalized Intersection
- X/Y → Weekday AM / PM Peak Hour Site Trips



Olive Ridge Residential
Apex, NC

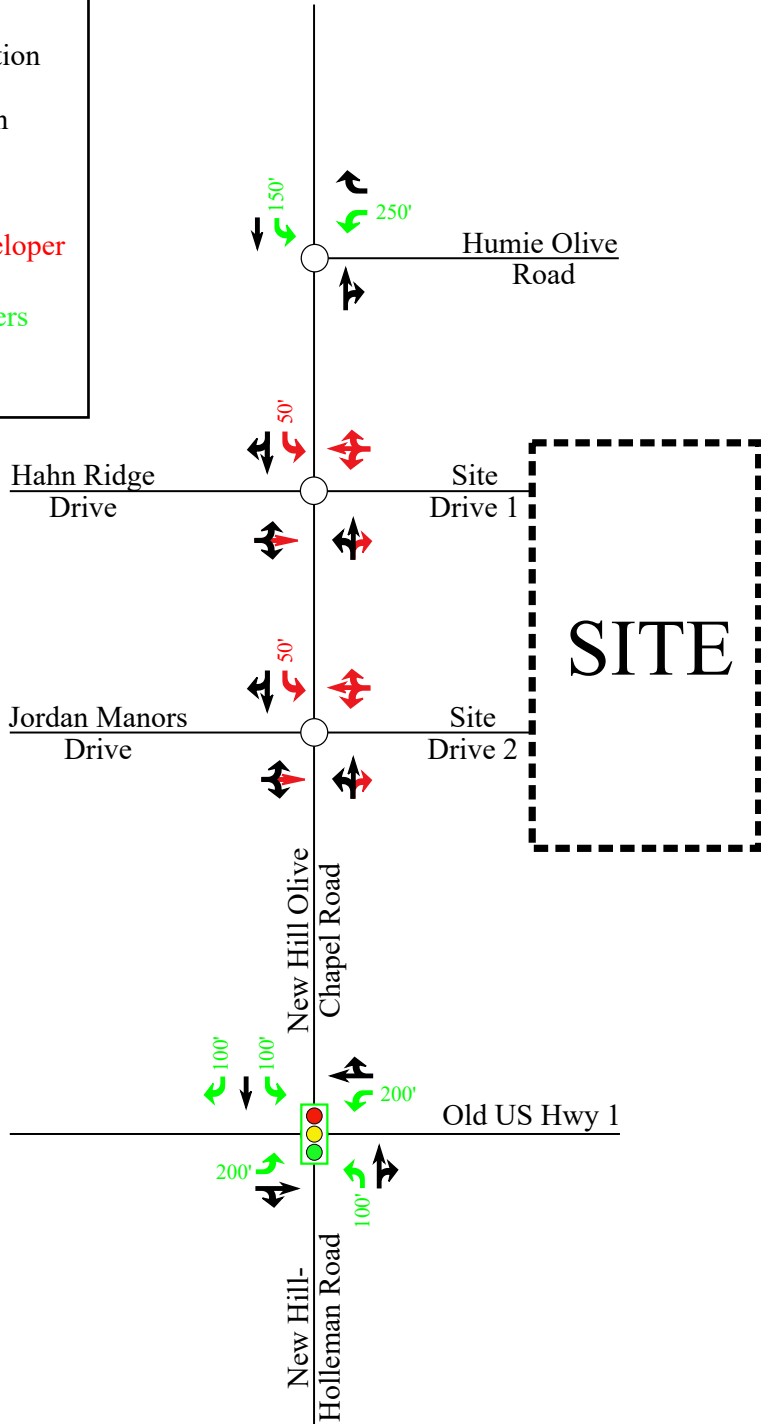
Site
Trip Assignment

Scale: Not to Scale

Figure 9

LEGEND

- Unsignalized Intersection
- ◫ Signalized Intersection
- ➡ Existing Lane
- ➡ Improvement by Developer
- ➡ Improvements by Others
- X' Storage (In Feet)



Olive Ridge Residential
Apex, NC

Recommended
Lane Configurations

Scale: Not to Scale

Figure 11

APPENDIX D

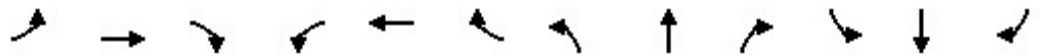
CAPACITY ANALYSIS CALCULATIONS

OLD US HIGHWAY 1

&

NEW HILL-OLIVE CHAPEL ROAD / NEW

HILL-HOLLEMAN ROAD



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	29	154	79	41	71	27	42	260	66	64	204	19
Future Volume (vph)	29	154	79	41	71	27	42	260	66	64	204	19
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
Fr _t		0.959			0.974			0.976			0.991	
Fl _t Protected		0.995			0.985			0.994			0.989	
Satd. Flow (prot)	0	1777	0	0	1787	0	0	1807	0	0	1826	0
Fl _t Permitted		0.954			0.842			0.931			0.853	
Satd. Flow (perm)	0	1704	0	0	1528	0	0	1693	0	0	1575	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	32	171	88	46	79	30	47	289	73	71	227	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	291	0	0	155	0	0	409	0	0	319	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		16.2			16.2			20.1			20.1	
Actuated g/C Ratio		0.35			0.35			0.43			0.43	
v/c Ratio		0.49			0.29			0.56			0.47	
Control Delay		14.8			12.3			14.2			12.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.8			12.3			14.2			12.9	
LOS		B			B			B			B	
Approach Delay		14.8			12.3			14.2			12.9	
Approach LOS		B			B			B			B	

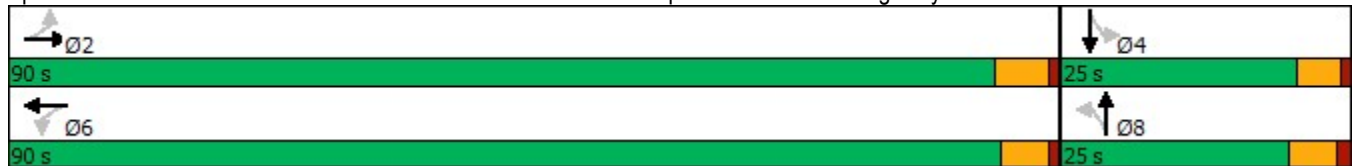


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		59			29			75			55	
Queue Length 95th (ft)		109			61			168			129	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1704			1528			734			682	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.17			0.10			0.56			0.47	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	46.3
Natural Cycle:	40
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.56
Intersection Signal Delay:	13.8
Intersection LOS:	B
Intersection Capacity Utilization	50.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2022 Existing

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	23	133	72	80	149	68	82	206	71	52	351	29
Future Volume (vph)	23	133	72	80	149	68	82	206	71	52	351	29
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
Fr _t		0.957			0.969			0.973			0.991	
Fl _t Protected		0.995			0.987			0.989			0.994	
Satd. Flow (prot)	0	1774	0	0	1782	0	0	1793	0	0	1835	0
Fl _t Permitted		0.939			0.859			0.829			0.914	
Satd. Flow (perm)	0	1674	0	0	1550	0	0	1503	0	0	1687	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	26	148	80	89	166	76	91	229	79	58	390	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	254	0	0	331	0	0	399	0	0	480	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		15.1			15.1			20.1			20.1	
Actuated g/C Ratio		0.33			0.33			0.44			0.44	
v/c Ratio		0.46			0.64			0.60			0.64	
Control Delay		14.6			19.1			15.1			15.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.6			19.1			15.1			15.9	
LOS		B			B			B			B	
Approach Delay		14.6			19.1			15.1			15.9	
Approach LOS		B			B			B			B	

Lanes, Volumes, Timings

2022 Existing

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

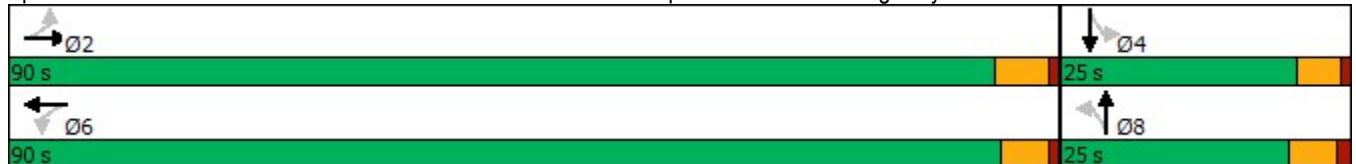


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		50			70			70			86	
Queue Length 95th (ft)		96			133			#170			#213	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1674			1550			667			749	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.15			0.21			0.60			0.64	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	45.2
Natural Cycle:	50
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	16.2
Intersection LOS:	B
Intersection Capacity Utilization	75.4%
ICU Level of Service	D
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 No Build

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	67	217	160	46	95	37	71	328	74	93	334	41
Future Volume (vph)	67	217	160	46	95	37	71	328	74	93	334	41
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
Fr _t		0.951			0.972			0.979			0.988	
Fl _t Protected		0.993			0.987			0.993			0.990	
Satd. Flow (prot)	0	1759	0	0	1787	0	0	1811	0	0	1822	0
Fl _t Permitted		0.920			0.838			0.859			0.795	
Satd. Flow (perm)	0	1630	0	0	1517	0	0	1566	0	0	1463	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	74	241	178	51	106	41	79	364	82	103	371	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	493	0	0	198	0	0	525	0	0	520	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		20.6			20.6			20.2			20.2	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
v/c Ratio		0.75			0.32			0.85			0.90	
Control Delay		20.6			11.5			32.5			39.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.6			11.5			32.5			39.5	
LOS		C			B			C			D	
Approach Delay		20.6			11.5			32.5			39.5	
Approach LOS		C			B			C			D	

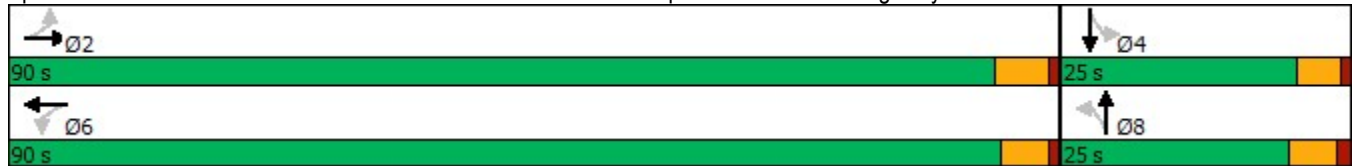


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		118			38			136			139	
Queue Length 95th (ft)		207			74			#349			#357	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1630			1517			620			579	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.13			0.85			0.90	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	50.9
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.90
Intersection Signal Delay:	28.8
Intersection LOS:	C
Intersection Capacity Utilization	74.5%
ICU Level of Service	D
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

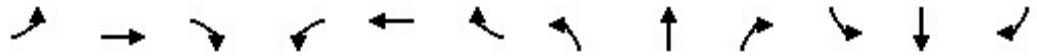
Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



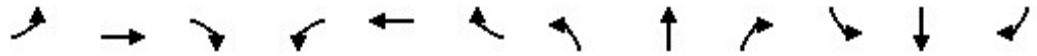
Lanes, Volumes, Timings

2026 No Build

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	58	179	128	90	218	101	172	329	80	72	463	74
Future Volume (vph)	58	179	128	90	218	101	172	329	80	72	463	74
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
Fr _t		0.953			0.967			0.981			0.984	
Fl _t Protected		0.992			0.989			0.985			0.994	
Satd. Flow (prot)	0	1761	0	0	1781	0	0	1800	0	0	1822	0
Fl _t Permitted		0.884			0.833			0.584			0.869	
Satd. Flow (perm)	0	1569	0	0	1500	0	0	1067	0	0	1593	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	64	199	142	100	242	112	191	366	89	80	514	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	405	0	0	454	0	0	646	0	0	676	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		19.9			19.9			20.2			20.2	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
v/c Ratio		0.65			0.76			1.51			1.06	
Control Delay		17.5			22.2			261.0			73.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.5			22.2			261.0			73.0	
LOS		B			C			F			E	
Approach Delay		17.5			22.2			261.0			73.0	
Approach LOS		B			C			F			E	

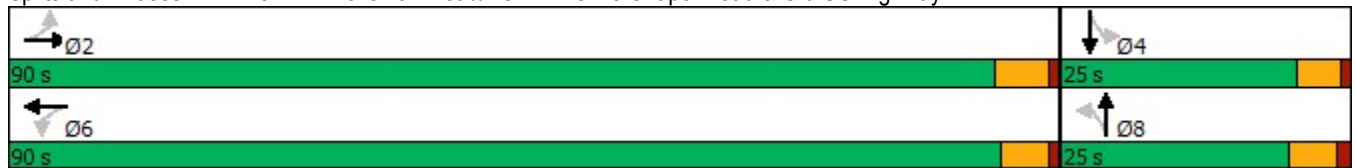


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		91			109			~274			~226	
Queue Length 95th (ft)		162			195			#520			#477	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1569			1500			429			640	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.26			0.30			1.51			1.06	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	50.2
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.51
Intersection Signal Delay:	107.8
Intersection LOS:	F
Intersection Capacity Utilization	106.1%
ICU Level of Service	G
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 No-Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	235	188	46	100	37	80	328	74	93	334	45
Future Volume (vph)	78	235	188	46	100	37	80	328	74	93	334	45
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.933			0.960			0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1738	0	1770	1788	0	1770	1811	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1738	0	1770	1788	0	1770	1811	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	87	261	209	51	111	41	89	364	82	103	371	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	470	0	51	152	0	89	446	0	103	371	50
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	27.0	33.0		27.0	33.0		27.0	33.0		27.0	33.0	27.0
Total Split (%)	22.5%	27.5%		22.5%	27.5%		22.5%	27.5%		22.5%	27.5%	22.5%
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	26.0		20.0	26.0	20.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	12.4	28.9		10.7	27.2		12.5	28.9		13.1	29.5	47.1
Actuated g/C Ratio	0.13	0.31		0.11	0.29		0.13	0.31		0.14	0.31	0.50
v/c Ratio	0.37	0.88		0.25	0.29		0.38	0.81		0.42	0.64	0.06
Control Delay	45.6	54.7		45.3	32.7		45.6	46.4		45.4	37.0	15.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	45.6	54.7		45.3	32.7		45.6	46.4		45.4	37.0	15.5
LOS	D	D		D	C		D	D		D	D	B
Approach Delay		53.2			35.9			46.3			36.6	
Approach LOS		D			D			D			D	

Lanes, Volumes, Timings

2026 No-Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

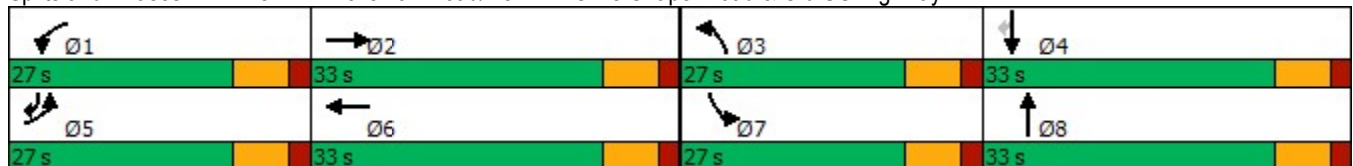
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	52	292		30	78		53	268		61	208	17
Queue Length 95th (ft)	102	#547		69	149		104	#495		116	342	40
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	426	532		426	547		426	554		426	583	963
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.20	0.88		0.12	0.28		0.21	0.81		0.24	0.64	0.05

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 94.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 44.5
 Intersection Capacity Utilization 73.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 No-Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	191	146	90	237	101	203	329	80	72	463	87
Future Volume (vph)	65	191	146	90	237	101	203	329	80	72	463	87
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.935			0.955			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1742	0	1770	1779	0	1770	1809	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1742	0	1770	1779	0	1770	1809	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	72	212	162	100	263	112	226	366	89	80	514	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	72	374	0	100	375	0	226	455	0	80	514	97
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	27.0	33.0		27.0	33.0		27.0	33.0		27.0	33.0	27.0
Total Split (%)	22.5%	27.5%		22.5%	27.5%		22.5%	27.5%		22.5%	27.5%	22.5%
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	26.0		20.0	26.0	20.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	12.0	27.1		13.5	28.5		19.4	38.3		12.4	28.1	45.2
Actuated g/C Ratio	0.11	0.25		0.12	0.26		0.18	0.35		0.11	0.26	0.42
v/c Ratio	0.37	0.86		0.45	0.80		0.71	0.71		0.39	1.06	0.15
Control Delay	51.4	59.7		51.7	52.0		55.8	40.5		51.5	98.4	21.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	51.4	59.7		51.7	52.0		55.8	40.5		51.5	98.4	21.4
LOS	D	E		D	D		E	D		D	F	C
Approach Delay		58.4			51.9			45.6			82.1	
Approach LOS		E			D			D			F	

Lanes, Volumes, Timings

2026 No-Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	49	255		67	249		150	287		54	~415	43
Queue Length 95th (ft)	96	#447		123	#413		247	#508		104	#663	80
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	361	453		361	486		361	640		361	484	808
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.20	0.83		0.28	0.77		0.63	0.71		0.22	1.06	0.12

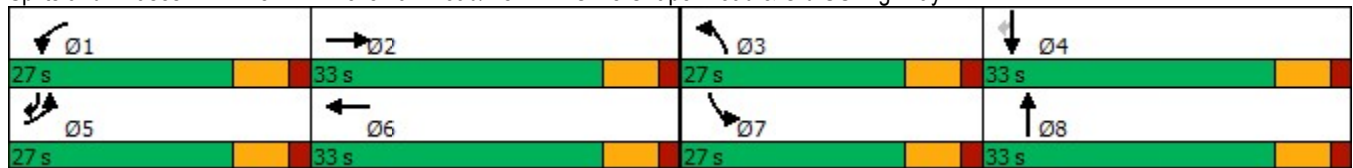
Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 108.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 60.4
 Intersection Capacity Utilization 77.1%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service D

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

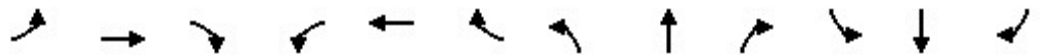
Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	75	243	198	46	104	37	84	328	74	93	334	44
Future Volume (vph)	75	243	198	46	104	37	84	328	74	93	334	44
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
Fr _t		0.948			0.973			0.979			0.987	
Fl _t Protected		0.993			0.988			0.991			0.990	
Satd. Flow (prot)	0	1754	0	0	1791	0	0	1807	0	0	1820	0
Fl _t Permitted		0.921			0.829			0.805			0.766	
Satd. Flow (perm)	0	1626	0	0	1503	0	0	1468	0	0	1408	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	83	270	220	51	116	41	93	364	82	103	371	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	573	0	0	208	0	0	539	0	0	523	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		24.2			24.2			20.2			20.2	
Actuated g/C Ratio		0.44			0.44			0.37			0.37	
v/c Ratio		0.79			0.31			0.99			1.00	
Control Delay		21.9			10.7			60.3			64.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.9			10.7			60.3			64.3	
LOS		C			B			E			E	
Approach Delay		21.9			10.7			60.3			64.3	
Approach LOS		C			B			E			E	

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

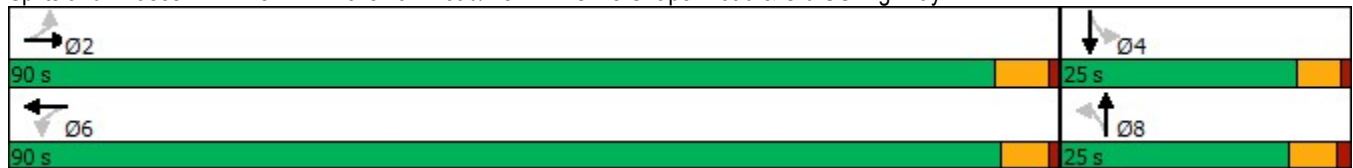


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		148			40			~169			~168	
Queue Length 95th (ft)		251			75			#424			#417	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1626			1503			544			521	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.14			0.99			1.00	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	54.6
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	43.9
Intersection LOS:	D
Intersection Capacity Utilization	77.8%
ICU Level of Service	D
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

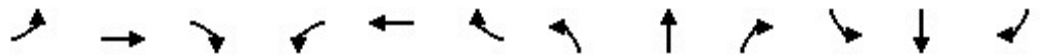
Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

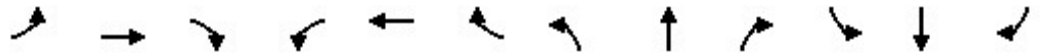
2026 Build

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	63	197	153	90	248	101	215	329	80	72	463	83
Future Volume (vph)	63	197	153	90	248	101	215	329	80	72	463	83
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
Fr _t		0.950			0.969			0.983			0.982	
Fl _t Protected		0.992			0.990			0.983			0.994	
Satd. Flow (prot)	0	1755	0	0	1787	0	0	1800	0	0	1818	0
Fl _t Permitted		0.879			0.828			0.526			0.865	
Satd. Flow (perm)	0	1555	0	0	1495	0	0	963	0	0	1582	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	70	219	170	100	276	112	239	366	89	80	514	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	459	0	0	488	0	0	694	0	0	686	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		21.7			21.7			20.2			20.2	
Actuated g/C Ratio		0.42			0.42			0.39			0.39	
v/c Ratio		0.71			0.78			1.86			1.12	
Control Delay		19.0			22.8			415.2			94.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.0			22.8			415.2			94.8	
LOS		B			C			F			F	
Approach Delay		19.0			22.8			415.2			94.8	
Approach LOS		B			C			F			F	

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

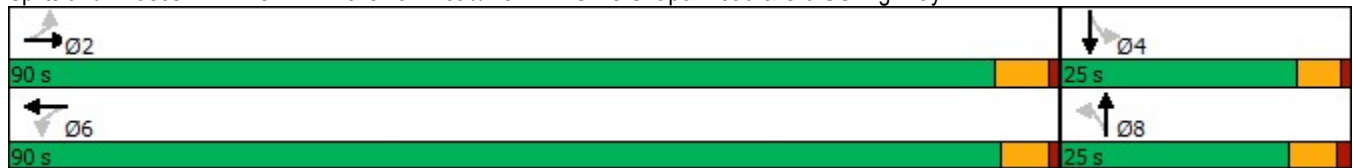


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		109			121			~334			~249	
Queue Length 95th (ft)		190			214			#601			#514	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1555			1495			374			615	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.33			1.86			1.12	

Intersection Summary

Area Type:	Other
Cycle Length:	115
Actuated Cycle Length:	52
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.86
Intersection Signal Delay:	160.3
Intersection LOS:	F
Intersection Capacity Utilization	115.9%
ICU Level of Service	H
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	261	226	46	109	37	93	328	74	93	334	48
Future Volume (vph)	86	261	226	46	109	37	93	328	74	93	334	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.930			0.962			0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1732	0	1770	1792	0	1770	1811	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1732	0	1770	1792	0	1770	1811	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	96	290	251	51	121	41	103	364	82	103	371	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	541	0	51	162	0	103	446	0	103	371	53
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	27.0	33.0		27.0	33.0		27.0	33.0		27.0	33.0	27.0
Total Split (%)	22.5%	27.5%		22.5%	27.5%		22.5%	27.5%		22.5%	27.5%	22.5%
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	26.0		20.0	26.0	20.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	12.8	28.9		10.7	26.8		13.1	28.9		13.1	28.9	46.8
Actuated g/C Ratio	0.14	0.31		0.11	0.28		0.14	0.31		0.14	0.31	0.50
v/c Ratio	0.40	1.02		0.25	0.32		0.42	0.81		0.42	0.65	0.07
Control Delay	45.5	81.3		45.3	33.5		45.4	46.4		45.4	38.3	15.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	45.5	81.3		45.3	33.5		45.4	46.4		45.4	38.3	15.7
LOS	D	F		D	C		D	D		D	D	B
Approach Delay		75.9			36.3			46.2			37.4	
Approach LOS		E			D			D			D	

Lanes, Volumes, Timings

2026 Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	57	~393		30	84		61	268		61	210	18
Queue Length 95th (ft)	110	#660		69	159		116	#495		116	#367	42
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	426	530		426	549		426	554		426	570	952
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.23	1.02		0.12	0.30		0.24	0.81		0.24	0.65	0.06

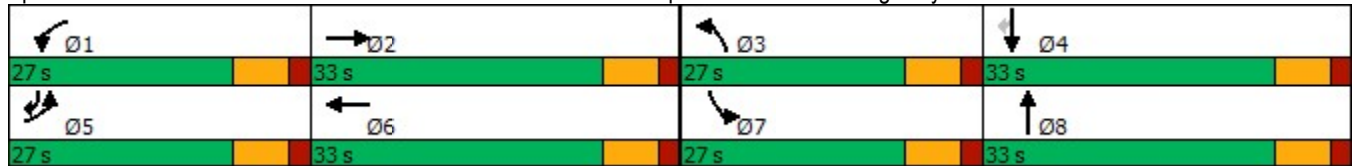
Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 94.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 52.5
 Intersection Capacity Utilization 77.6%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service D

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	209	171	90	267	101	246	329	80	72	463	96
Future Volume (vph)	70	209	171	90	267	101	246	329	80	72	463	96
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.932			0.959			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1736	0	1770	1786	0	1770	1809	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1736	0	1770	1786	0	1770	1809	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	78	232	190	100	297	112	273	366	89	80	514	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	422	0	100	409	0	273	455	0	80	514	107
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	27.0	33.0		27.0	33.0		27.0	33.0		27.0	33.0	27.0
Total Split (%)	22.5%	27.5%		22.5%	27.5%		22.5%	27.5%		22.5%	27.5%	22.5%
Maximum Green (s)	20.0	26.0		20.0	26.0		20.0	26.0		20.0	26.0	20.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	12.3	28.0		13.6	29.3		21.1	39.7		12.5	28.0	45.4
Actuated g/C Ratio	0.11	0.25		0.12	0.26		0.19	0.36		0.11	0.25	0.41
v/c Ratio	0.40	0.96		0.46	0.87		0.81	0.70		0.40	1.09	0.17
Control Delay	52.2	76.6		52.5	59.4		62.9	40.2		52.2	108.6	21.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	52.2	76.6		52.5	59.4		62.9	40.2		52.2	108.6	21.8
LOS	D	E		D	E		E	D		D	F	C
Approach Delay		72.8			58.0			48.7			88.9	
Approach LOS		E			E			D			F	

Lanes, Volumes, Timings

2026 Build with Gracewood Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	53	301		68	281		187	287		54	~419	48
Queue Length 95th (ft)	101	#531		123	#477		#335	#508		104	#663	87
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	351	439		351	471		351	648		351	471	787
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.22	0.96		0.28	0.87		0.78	0.70		0.23	1.09	0.14

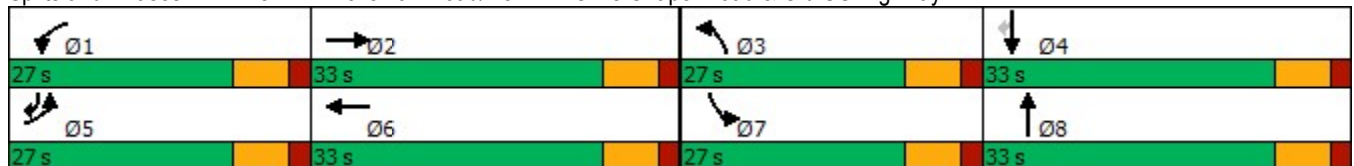
Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 110.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 67.2
 Intersection Capacity Utilization 81.9%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service D

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build - 50 lots

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	226	173	46	98	37	76	328	74	93	334	42
Future Volume (vph)	70	226	173	46	98	37	76	328	74	93	334	42
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
Frt		0.950			0.972			0.979			0.988	
Flt Protected		0.993			0.987			0.992			0.990	
Satd. Flow (prot)	0	1757	0	0	1787	0	0	1809	0	0	1822	0
Flt Permitted		0.920			0.835			0.842			0.786	
Satd. Flow (perm)	0	1628	0	0	1512	0	0	1535	0	0	1447	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	78	251	192	51	109	41	84	364	82	103	371	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	0	201	0	0	530	0	0	521	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	90.0	90.0		90.0	90.0		25.0	25.0		25.0	25.0	
Total Split (%)	78.3%	78.3%		78.3%	78.3%		21.7%	21.7%		21.7%	21.7%	
Maximum Green (s)	84.3	84.3		84.9	84.9		19.6	19.6		20.2	20.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		21.7			21.7			20.2			20.2	
Actuated g/C Ratio		0.42			0.42			0.39			0.39	
v/c Ratio		0.77			0.32			0.89			0.93	
Control Delay		21.1			11.2			38.6			45.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		21.1			11.2			38.6			45.4	
LOS		C			B			D			D	
Approach Delay		21.1			11.2			38.6			45.4	
Approach LOS		C			B			D			D	

Lanes, Volumes, Timings

2026 Build - 50 lots

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

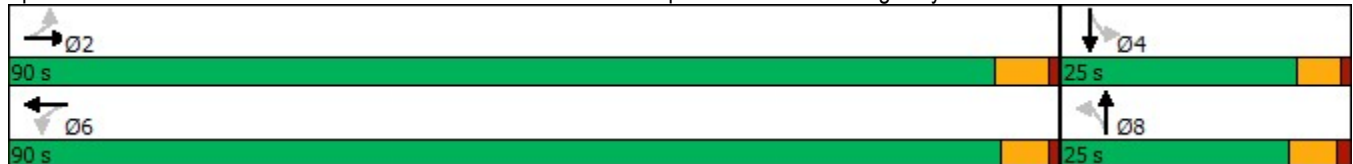
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		128			39			147			148	
Queue Length 95th (ft)		222			74			#374			#378	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		1628			1512			595			561	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.32			0.13			0.89			0.93	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 52
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 32.4
 Intersection Capacity Utilization 75.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build - 50 lots

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	185	137	90	229	101	187	329	80	72	463	77
Future Volume (vph)	60	185	137	90	229	101	187	329	80	72	463	77
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
Frt		0.952			0.968			0.982			0.983	
Flt Protected		0.992			0.989			0.985			0.994	
Satd. Flow (prot)	0	1759	0	0	1783	0	0	1802	0	0	1820	0
Flt Permitted		0.802			0.711			0.589			0.859	
Satd. Flow (perm)	0	1422	0	0	1282	0	0	1077	0	0	1573	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	67	206	152	100	254	112	208	366	89	80	514	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	425	0	0	466	0	0	663	0	0	680	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	17.7	17.7		17.1	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	45.0	45.0		45.0	45.0		70.0	70.0		70.0	70.0	
Total Split (%)	39.1%	39.1%		39.1%	39.1%		60.9%	60.9%		60.9%	60.9%	
Maximum Green (s)	39.3	39.3		39.9	39.9		64.6	64.6		65.2	65.2	
Yellow Time (s)	4.7	4.7		4.1	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)		-0.7			-0.1			-0.4			0.2	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	6.0	6.0		6.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	15.0	15.0		15.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	30.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Act Effct Green (s)		40.0			40.0			65.0			65.0	
Actuated g/C Ratio		0.35			0.35			0.57			0.57	
v/c Ratio		0.86			1.05			1.09			0.76	
Control Delay		53.5			92.9			89.7			26.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		53.5			92.9			89.7			26.3	
LOS		D			F			F			C	
Approach Delay		53.5			92.9			89.7			26.3	
Approach LOS		D			F			F			C	

Lanes, Volumes, Timings

2026 Build - 50 lots

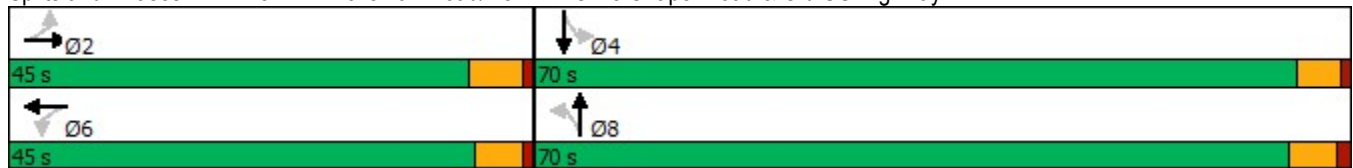
1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)		291			~375			~553			366	
Queue Length 95th (ft)		#473			#580			#780			534	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)												
Base Capacity (vph)		494			445			608			889	
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		0.86			1.05			1.09			0.76	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 64.2
 Intersection Capacity Utilization 111.0%
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build - with FIL Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	243	198	46	104	37	84	328	74	93	334	44
Future Volume (vph)	75	243	198	46	104	37	84	328	74	93	334	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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
Frt		0.933			0.961			0.979			0.987	
Flt Protected	0.950			0.950				0.991			0.990	
Satd. Flow (prot)	1770	1738	0	1770	1790	0	0	1807	0	0	1820	0
Flt Permitted	0.950			0.950				0.796			0.754	
Satd. Flow (perm)	1770	1738	0	1770	1790	0	0	1452	0	0	1386	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	83	270	220	51	116	41	93	364	82	103	371	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	83	490	0	51	157	0	0	539	0	0	523	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	17.7		14.0	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	15.0	43.0		15.0	43.0		57.0	57.0		57.0	57.0	
Total Split (%)	13.0%	37.4%		13.0%	37.4%		49.6%	49.6%		49.6%	49.6%	
Maximum Green (s)	8.0	37.3		8.0	37.9		51.6	51.6		52.2	52.2	
Yellow Time (s)	5.0	4.7		5.0	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	2.0	1.0		2.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)	-2.0	-0.7		-2.0	-0.1			-0.4			0.2	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	10.8	31.9		10.6	31.7			40.8			40.8	
Actuated g/C Ratio	0.11	0.34		0.11	0.34			0.43			0.43	
v/c Ratio	0.41	0.84		0.26	0.26			0.86			0.87	
Control Delay	54.6	46.2		51.1	28.2			41.3			43.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	54.6	46.2		51.1	28.2			41.3			43.5	

Lanes, Volumes, Timings

2026 Build - with FIL Improvements

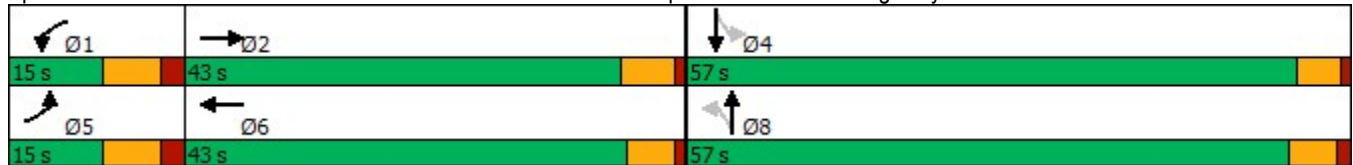
1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	D	D		D	C			D			D	
Approach Delay		47.4			33.8			41.3			43.5	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	56	310		33	78			330			323	
Queue Length 95th (ft)	113	#521		77	140			#539			#535	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250								
Base Capacity (vph)	210	785		210	808			864			825	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.40	0.62		0.24	0.19			0.62			0.63	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 94.5
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 43.0
 Intersection Capacity Utilization 78.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings

2026 Build - with FIL Improvements

1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	197	153	90	248	101	215	329	80	72	463	83
Future Volume (vph)	63	197	153	90	248	101	215	329	80	72	463	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	100			100			100			100		
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
Frt		0.934			0.957			0.983			0.982	
Flt Protected	0.950			0.950				0.983			0.994	
Satd. Flow (prot)	1770	1740	0	1770	1783	0	0	1800	0	0	1818	0
Flt Permitted	0.950			0.950				0.569			0.856	
Satd. Flow (perm)	1770	1740	0	1770	1783	0	0	1042	0	0	1566	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	70	219	170	100	276	112	239	366	89	80	514	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	389	0	100	388	0	0	694	0	0	686	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	12.0		7.0	12.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	14.0	17.7		14.0	17.1		12.4	12.4		11.8	11.8	
Total Split (s)	15.0	28.0		15.0	28.0		72.0	72.0		72.0	72.0	
Total Split (%)	13.0%	24.3%		13.0%	24.3%		62.6%	62.6%		62.6%	62.6%	
Maximum Green (s)	8.0	22.3		8.0	22.9		66.6	66.6		67.2	67.2	
Yellow Time (s)	5.0	4.7		5.0	4.1		4.1	4.1		3.8	3.8	
All-Red Time (s)	2.0	1.0		2.0	1.0		1.3	1.3		1.0	1.0	
Lost Time Adjust (s)	-2.0	-0.7		-2.0	-0.1			-0.4			0.2	
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	6.0		3.0	6.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		2.0	2.0		2.0	2.0	
Time Before Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	30.0		0.0	0.0		30.0	30.0		0.0	0.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	9.8	23.0		9.9	25.9			67.0			67.0	
Actuated g/C Ratio	0.09	0.20		0.09	0.23			0.58			0.58	
v/c Ratio	0.47	1.12		0.66	0.97			1.14			0.75	
Control Delay	60.7	126.5		72.0	83.2			107.8			24.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	60.7	126.5		72.0	83.2			107.8			24.4	

Lanes, Volumes, Timings

2026 Build - with FIL Improvements

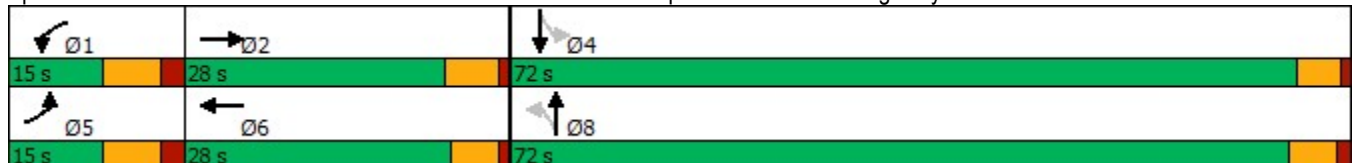
1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	F		E	F			F			C	
Approach Delay		116.5			80.9			107.8			24.4	
Approach LOS		F			F			F			C	
Queue Length 50th (ft)	50	~332		73	~323			~602			357	
Queue Length 95th (ft)	98	#524		#148	#515			#831			520	
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250								
Base Capacity (vph)	153	348		153	401			607			913	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.46	1.12		0.65	0.97			1.14			0.75	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 114.9
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 79.3
 Intersection Capacity Utilization 109.7%
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings 2026 Build with Gracewood Improvements - Signal Timing Mods
 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	261	226	46	109	37	93	328	74	93	334	48
Future Volume (vph)	86	261	226	46	109	37	93	328	74	93	334	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.930			0.962			0.972				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1732	0	1770	1792	0	1770	1811	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1732	0	1770	1792	0	1770	1811	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	96	290	251	51	121	41	103	364	82	103	371	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	541	0	51	162	0	103	446	0	103	371	53
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	15.0	38.0		15.0	38.0		26.0	50.0		17.0	41.0	15.0
Total Split (%)	12.5%	31.7%		12.5%	31.7%		21.7%	41.7%		14.2%	34.2%	12.5%
Maximum Green (s)	8.0	31.0		8.0	31.0		19.0	43.0		10.0	34.0	8.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	10.2	34.9		10.1	30.1		13.8	32.8		11.6	30.6	46.2
Actuated g/C Ratio	0.10	0.34		0.10	0.30		0.14	0.32		0.11	0.30	0.46
v/c Ratio	0.54	0.91		0.29	0.30		0.43	0.76		0.51	0.66	0.07
Control Delay	61.7	58.0		53.7	32.6		50.6	41.5		57.6	39.3	19.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	61.7	58.0		53.7	32.6		50.6	41.5		57.6	39.3	19.1
LOS	E	E		D	C		D	D		E	D	B
Approach Delay		58.5			37.6			43.2			40.9	
Approach LOS		E			D			D			D	

Lanes, Volumes, Timings 2026 Build with Gracewood Improvements - Signal Timing Mods
 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	65	~402		34	86		67	284		69	227	21
Queue Length 95th (ft)	#149	#706		80	163		128	401		138	352	49
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	184	595		184	615		386	848		221	704	725
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.52	0.91		0.28	0.26		0.27	0.53		0.47	0.53	0.07

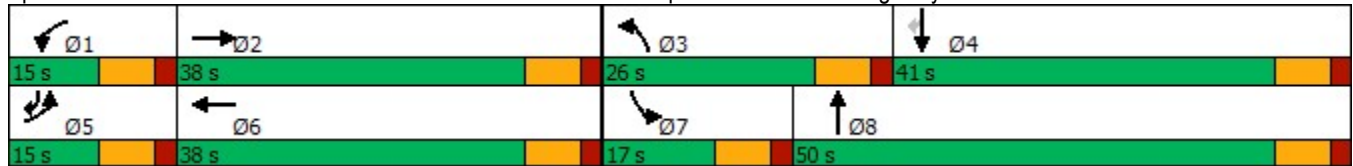
Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 101.4
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 47.0
 Intersection Capacity Utilization 77.6%
 Analysis Period (min) 15

Intersection LOS: D
 ICU Level of Service D

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



Lanes, Volumes, Timings 2026 Build with Gracewood Improvements - Signal Timing Mods
 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	209	171	90	267	101	246	329	80	72	463	96
Future Volume (vph)	70	209	171	90	267	101	246	329	80	72	463	96
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	250		0	100		0	150		150
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	100			100			100			100		
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
Frt		0.932			0.959			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1736	0	1770	1786	0	1770	1809	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1736	0	1770	1786	0	1770	1809	0	1770	1863	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		55			55			45			45	
Link Distance (ft)		1174			1039			1284			1091	
Travel Time (s)		14.6			12.9			19.5			16.5	
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
Adj. Flow (vph)	78	232	190	100	297	112	273	366	89	80	514	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	422	0	100	409	0	273	455	0	80	514	107
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases												4
Detector Phase	5	2		1	6		3	8		7	4	5
Switch Phase												
Minimum Initial (s)	7.0	14.0		7.0	14.0		7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	14.0	21.0		14.0	21.0		14.0	14.0		14.0	14.0	14.0
Total Split (s)	15.0	38.0		15.0	38.0		26.0	50.0		17.0	41.0	15.0
Total Split (%)	12.5%	31.7%		12.5%	31.7%		21.7%	41.7%		14.2%	34.2%	12.5%
Maximum Green (s)	8.0	31.0		8.0	31.0		19.0	43.0		10.0	34.0	8.0
Yellow Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0		-2.0	-2.0		-2.0	-2.0		-2.0	-2.0	-2.0
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Min		None	Min		None	None		None	None	None
Act Effct Green (s)	9.8	31.6		9.9	31.8		20.6	47.3		11.2	34.8	49.6
Actuated g/C Ratio	0.08	0.27		0.08	0.27		0.18	0.40		0.10	0.30	0.42
v/c Ratio	0.53	0.90		0.67	0.85		0.88	0.62		0.47	0.93	0.16
Control Delay	66.1	65.0		74.9	57.7		76.2	34.1		60.8	64.9	22.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	66.1	65.0		74.9	57.7		76.2	34.1		60.8	64.9	22.0
LOS	E	E		E	E		E	C		E	E	C
Approach Delay		65.2			61.1			49.9			57.9	
Approach LOS		E			E			D			E	

Lanes, Volumes, Timings 2026 Build with Gracewood Improvements - Signal Timing Mods
 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway Timing Plan: PM Peak Hour

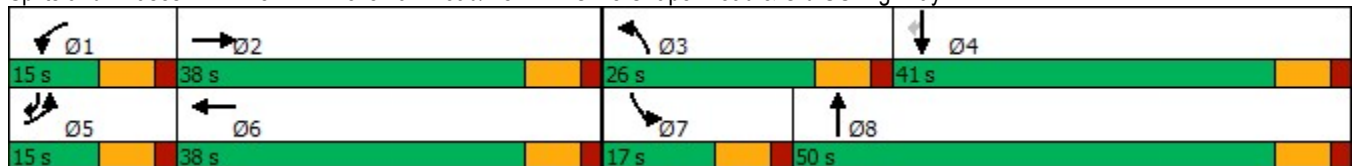
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 50th (ft)	59	314		77	298		208	292		59	385	50
Queue Length 95th (ft)	112	#495		#157	#462		#363	411		112	#591	89
Internal Link Dist (ft)		1094			959			1204			1011	
Turn Bay Length (ft)	250			250			100			150		150
Base Capacity (vph)	151	491		151	505		318	732		182	574	674
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.52	0.86		0.66	0.81		0.86	0.62		0.44	0.90	0.16

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 117
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 57.7
 Intersection Capacity Utilization 81.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: E
 ICU Level of Service D

Splits and Phases: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1



APPENDIX E

CAPACITY ANALYSIS CALCULATIONS

OLD US HIGHWAY 1

&

SITE DRIVE 1

HCM 6th TWSC
2: Old US Highway 1 & Site Drive 1

2026 Build
Timing Plan: AM Peak Hour

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	↑
Traffic Vol, veh/h	4	478	219	13	38	4
Future Vol, veh/h	4	478	219	13	38	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	-	-	-	50	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	4	531	243	14	42	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	257	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1308	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1308	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1308	-	-	-	382
HCM Lane V/C Ratio	0.003	-	-	-	0.122
HCM Control Delay (s)	7.8	0	-	-	15.7
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	4	388	503	43	25	4
Future Vol, veh/h	4	388	503	43	25	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	-	-	-	50	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	4	431	559	48	28	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	607	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	971	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	971	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	971	-	-	-	289
HCM Lane V/C Ratio	0.005	-	-	-	0.111
HCM Control Delay (s)	8.7	0	-	-	19
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection

Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↑	↗	↘	
Traffic Vol, veh/h	4	535	237	13	38	4
Future Vol, veh/h	4	535	237	13	38	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	-	-	-	50	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	4	594	263	14	42	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	277	0	0	865	263
Stage 1	-	-	-	263	-
Stage 2	-	-	-	602	-
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	1286	-	-	324	776
Stage 1	-	-	-	781	-
Stage 2	-	-	-	547	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1286	-	-	322	776
Mov Cap-2 Maneuver	-	-	-	322	-
Stage 1	-	-	-	777	-
Stage 2	-	-	-	547	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1286	-	-	-	341
HCM Lane V/C Ratio	0.003	-	-	-	0.137
HCM Control Delay (s)	7.8	0	-	-	17.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection

Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↑	↑	↔	↔
Traffic Vol, veh/h	4	425	566	43	25	4
Future Vol, veh/h	4	425	566	43	25	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	-	-	-	50	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	4	472	629	48	28	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	677	0	-	0	1109 629
Stage 1	-	-	-	-	629 -
Stage 2	-	-	-	-	480 -
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	915	-	-	-	232 482
Stage 1	-	-	-	-	531 -
Stage 2	-	-	-	-	622 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	915	-	-	-	231 482
Mov Cap-2 Maneuver	-	-	-	-	231 -
Stage 1	-	-	-	-	528 -
Stage 2	-	-	-	-	622 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	21.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	915	-	-	-	249
HCM Lane V/C Ratio	0.005	-	-	-	0.129
HCM Control Delay (s)	9	0	-	-	21.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

APPENDIX F

CAPACITY ANALYSIS CALCULATIONS

OLD US HIGHWAY 1

&

SITE DRIVE 2

HCM 6th TWSC
3: Old US Highway 1 & Site Drive 2

2026 Build
Timing Plan: AM Peak Hour

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	4	444	207	12	34	4
Future Vol, veh/h	4	444	207	12	34	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	-	-	-	50	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	4	493	230	13	38	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	243	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1323	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1323	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1323	-	-	-	409
HCM Lane V/C Ratio	0.003	-	-	-	0.103
HCM Control Delay (s)	7.7	0	-	-	14.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

HCM 6th TWSC
 3: Old US Highway 1 & Site Drive 2

2026 Build
 Timing Plan: PM Peak Hour

Intersection

Int Delay, s/veh 0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	4	365	464	39	23	4
Future Vol, veh/h	4	365	464	39	23	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	-	-	-	50	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	4	406	516	43	26	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	559	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1012	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1012	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1012	-	-	-	318
HCM Lane V/C Ratio	0.004	-	-	-	0.094
HCM Control Delay (s)	8.6	0	-	-	17.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	↑
Traffic Vol, veh/h	4	501	225	12	34	4
Future Vol, veh/h	4	501	225	12	34	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	-	-	-	50	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	4	557	250	13	38	4

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	263	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1301	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1301	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1301	-	-	-	368
HCM Lane V/C Ratio	0.003	-	-	-	0.115
HCM Control Delay (s)	7.8	0	-	-	16
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↑	↗	↘	
Traffic Vol, veh/h	4	402	527	39	23	4
Future Vol, veh/h	4	402	527	39	23	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	-	-	-	50	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	4	447	586	43	26	4

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	629	0	0	1041	586
Stage 1	-	-	-	586	-
Stage 2	-	-	-	455	-
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	953	-	-	255	510
Stage 1	-	-	-	556	-
Stage 2	-	-	-	639	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	953	-	-	253	510
Mov Cap-2 Maneuver	-	-	-	253	-
Stage 1	-	-	-	553	-
Stage 2	-	-	-	639	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	953	-	-	-	273
HCM Lane V/C Ratio	0.005	-	-	-	0.11
HCM Control Delay (s)	8.8	0	-	-	19.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

APPENDIX G

SIMTRAFFIC QUEUING REPORTS

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	111	110	332	233
Average Queue (ft)	50	47	126	84
95th Queue (ft)	97	88	255	146
Link Distance (ft)	1134	1004	1249	1051
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	132	149	614	377
Average Queue (ft)	54	81	193	154
95th Queue (ft)	96	127	432	295
Link Distance (ft)	1134	1004	1249	1051
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	306	221	1224	767
Average Queue (ft)	135	75	505	406
95th Queue (ft)	229	165	1130	797
Link Distance (ft)	1134	1004	1249	1051
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	399	381	1312	1103
Average Queue (ft)	127	185	1266	633
95th Queue (ft)	247	330	1282	1301
Link Distance (ft)	1134	1004	1249	1051
Upstream Blk Time (%)			100	39
Queuing Penalty (veh)			0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	1129	113	190	200	482	250	283	65
Average Queue (ft)	172	518	35	72	92	226	58	156	19
95th Queue (ft)	427	1013	83	144	185	410	130	261	53
Link Distance (ft)		1114		997		1242		1040	
Upstream Blk Time (%)		0							
Queuing Penalty (veh)		0							
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		47			4	37	0	11	
Queuing Penalty (veh)		37			17	30	0	15	

Network Summary

Network wide Queuing Penalty: 100

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	834	350	428	200	433	250	1074	250
Average Queue (ft)	110	295	84	244	144	253	141	611	101
95th Queue (ft)	319	619	181	373	233	411	311	1246	271
Link Distance (ft)		1114		997		1242		1040	
Upstream Blk Time (%)								33	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		25		12	21	40		55	0
Queuing Penalty (veh)		17		11	89	81		89	0

Network Summary

Network wide Queuing Penalty: 286

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	408	91	1301	928
Average Queue (ft)	164	52	894	401
95th Queue (ft)	302	91	1545	737
Link Distance (ft)	1106	1004	1249	1051
Upstream Blk Time (%)			43	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	23	41
Average Queue (ft)	1	15
95th Queue (ft)	8	32
Link Distance (ft)	935	953
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	22
Average Queue (ft)	15
95th Queue (ft)	31
Link Distance (ft)	1153
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	349	517	1283	1103
Average Queue (ft)	156	207	1263	673
95th Queue (ft)	279	361	1273	1207
Link Distance (ft)	1106	1004	1249	1051
Upstream Blk Time (%)			100	23
Queuing Penalty (veh)			0	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	17
Average Queue (ft)	7
95th Queue (ft)	21
Link Distance (ft)	953
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	24	22
Average Queue (ft)	2	15
95th Queue (ft)	12	32
Link Distance (ft)	1076	1153
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	853	114	191	200	393	249	517	51
Average Queue (ft)	192	481	33	71	88	238	68	187	19
95th Queue (ft)	435	761	80	133	197	370	148	373	49
Link Distance (ft)		1086		997		1242		1040	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		60			0	41	1	15	
Queuing Penalty (veh)		52			0	39	5	22	

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	53
Average Queue (ft)	17
95th Queue (ft)	37
Link Distance (ft)	972
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	50
Average Queue (ft)	24
95th Queue (ft)	46
Link Distance (ft)	1068
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 118

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	487	349	442	200	637	250	1103	250
Average Queue (ft)	79	237	61	212	167	275	112	791	145
95th Queue (ft)	213	418	168	355	232	471	273	1348	331
Link Distance (ft)		1086		997		1242		1040	
Upstream Blk Time (%)								36	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		14		7	35	41		64	
Queuing Penalty (veh)		10		6	146	101		108	

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	26	36
Average Queue (ft)	2	10
95th Queue (ft)	12	27
Link Distance (ft)	996	972
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	73	50
Average Queue (ft)	9	17
95th Queue (ft)	41	41
Link Distance (ft)	1064	1068
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 371

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	510	334	476	530
Average Queue (ft)	302	152	186	228
95th Queue (ft)	450	289	324	456
Link Distance (ft)	1106	1004	1249	1051
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	22	17
Average Queue (ft)	1	8
95th Queue (ft)	8	21
Link Distance (ft)	935	953
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	51	47
Average Queue (ft)	2	14
95th Queue (ft)	17	37
Link Distance (ft)	1076	1153
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	823	1038	1301	713
Average Queue (ft)	440	975	1265	356
95th Queue (ft)	735	1169	1279	602
Link Distance (ft)	1106	1004	1249	1051
Upstream Blk Time (%)		77	97	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	42
Average Queue (ft)	9
95th Queue (ft)	26
Link Distance (ft)	953
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	42
Average Queue (ft)	2	8
95th Queue (ft)	18	28
Link Distance (ft)	1076	1153
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	SB
Directions Served	L	TR	L	TR	LTR	LTR
Maximum Queue (ft)	350	619	73	148	1004	1108
Average Queue (ft)	101	329	29	61	319	514
95th Queue (ft)	295	554	64	122	706	1083
Link Distance (ft)		1105		1003	1242	1045
Upstream Blk Time (%)						17
Queuing Penalty (veh)						0
Storage Bay Dist (ft)	250		250			
Storage Blk Time (%)		33				
Queuing Penalty (veh)		25				

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	51	40
Average Queue (ft)	2	15
95th Queue (ft)	17	34
Link Distance (ft)	935	952
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	SB
Directions Served	LR
Maximum Queue (ft)	22
Average Queue (ft)	15
95th Queue (ft)	31
Link Distance (ft)	1153
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 25

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	B4	WB	WB	NB	SB
Directions Served	L	TR	T	L	TR	LTR	LTR
Maximum Queue (ft)	350	1213	458	350	937	1294	834
Average Queue (ft)	162	689	29	210	516	1261	283
95th Queue (ft)	410	1379	147	435	867	1279	533
Link Distance (ft)		1105	436		1003	1242	1045
Upstream Blk Time (%)		20	0			96	
Queuing Penalty (veh)		80	1			0	
Storage Bay Dist (ft)	250			250			
Storage Blk Time (%)		59		2	62		
Queuing Penalty (veh)		38		7	56		

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	17
Average Queue (ft)	2	7
95th Queue (ft)	18	20
Link Distance (ft)	935	952
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	24	22
Average Queue (ft)	1	15
95th Queue (ft)	8	32
Link Distance (ft)	1076	1153
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 182

Queuing and Blocking Report 2026 Build with Gracewood Improvements - Signal Timing Mods

AM Peak Hour

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	963	113	130	200	356	250	437	250
Average Queue (ft)	223	563	38	57	73	212	83	224	26
95th Queue (ft)	464	849	87	108	157	328	174	384	104
Link Distance (ft)		1086		997		1242		1040	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		68			1	36	3	21	
Queuing Penalty (veh)		59			4	34	11	30	

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	SB
Directions Served	LR
Maximum Queue (ft)	39
Average Queue (ft)	17
95th Queue (ft)	34
Link Distance (ft)	972
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	70	49
Average Queue (ft)	4	24
95th Queue (ft)	31	48
Link Distance (ft)	1064	1068
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 139

Intersection: 1: New-Hill Holleman Road/New-Hill Olive Chapel Road & Old US Highway 1

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	T	R
Maximum Queue (ft)	350	472	349	456	200	444	250	948	250
Average Queue (ft)	84	228	75	228	175	269	88	486	131
95th Queue (ft)	217	376	212	368	228	383	232	844	302
Link Distance (ft)		1086		997		1242		1040	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250		250		100		150		150
Storage Blk Time (%)		9		10	46	31		55	
Queuing Penalty (veh)		6		10	191	76		92	

Intersection: 2: Old US Highway 1 & Site Drive 1

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	26	36
Average Queue (ft)	2	9
95th Queue (ft)	13	24
Link Distance (ft)	996	972
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Old US Highway 1 & Site Drive 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	47
Average Queue (ft)	4	17
95th Queue (ft)	23	41
Link Distance (ft)	1064	1068
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 374

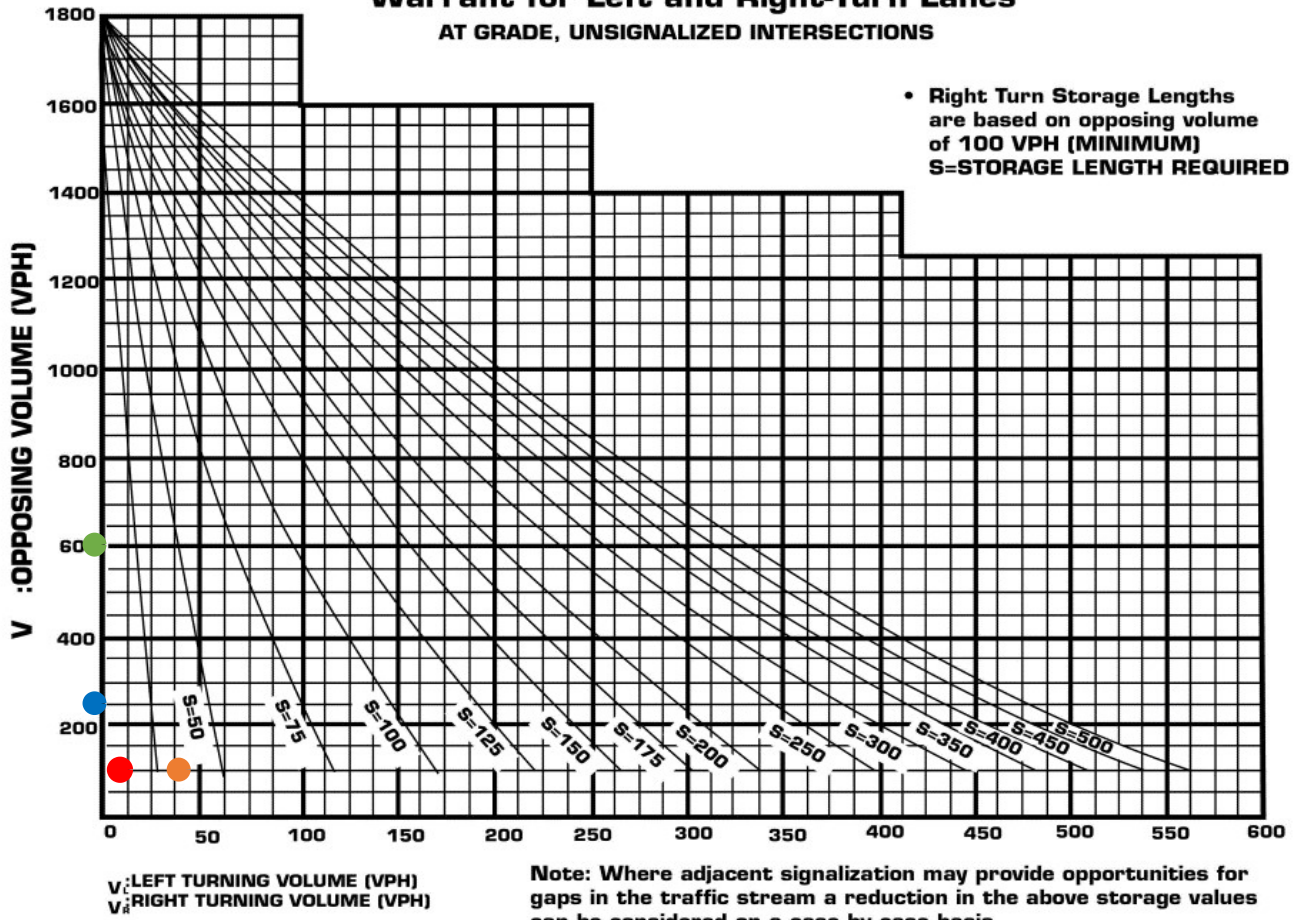
APPENDIX H

TURN LANE WARRANT CHARTS

UTLEY FARMS

TURN LANE STORAGE WARRANTS

**Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS**



Policy On Street And Driveway Access to North Carolina Highways

INTERSECTION: OLD US HIGHWAY 1 & SITE DRIVE 1

SCENARIO	Movement	Turn Lane	Turning Volume (V_R/V_L)	Approach / Opposing Volume (V_A/V_O)	Symbol
AM Build	WBR	Right	13	100	●
AM Build	EBL	Left	0	250	●
PM Build	WBR	Right	43	100	●
PM Build	EBL	Left	0	609	●

Moving forward.

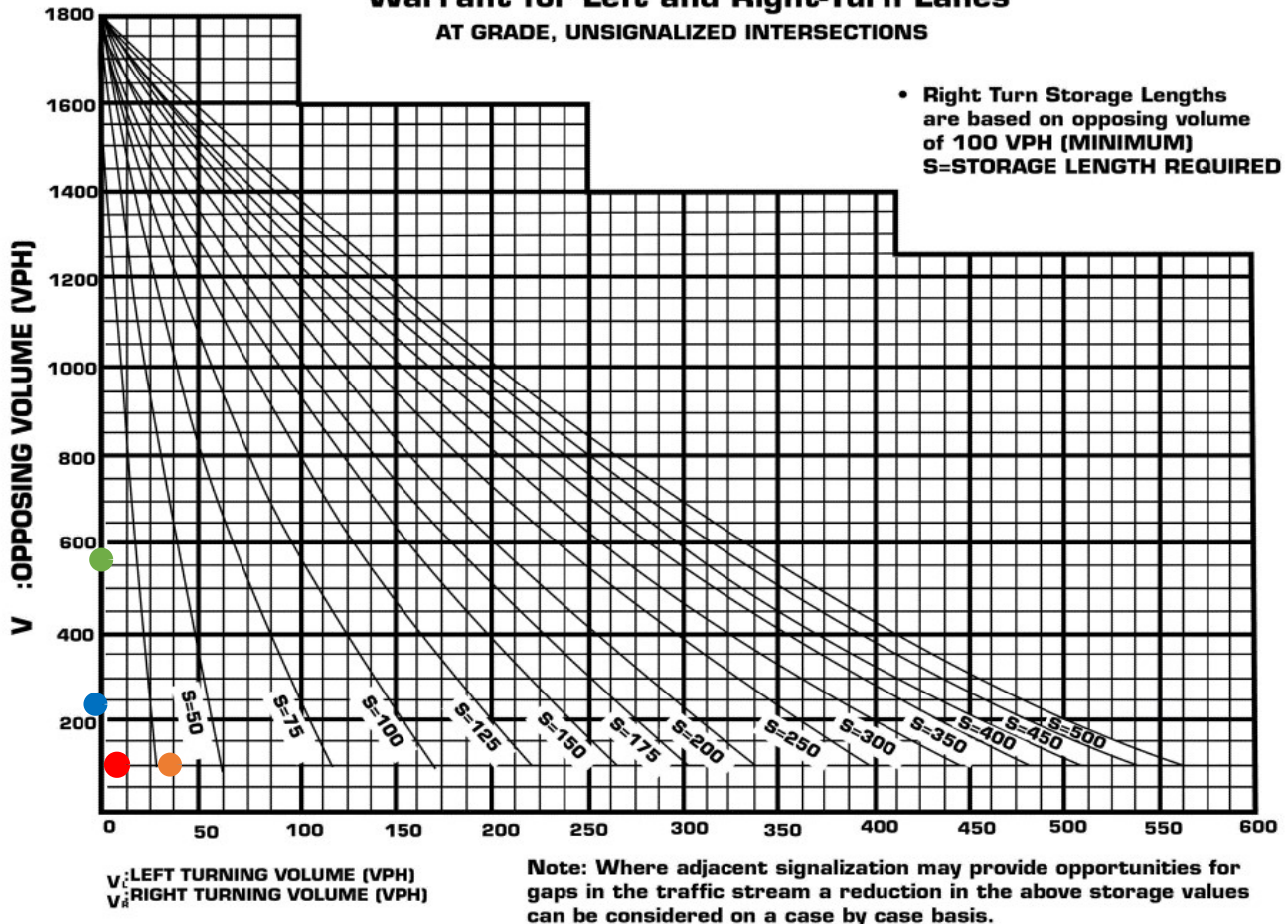


RAMEY KEMP ASSOCIATES

UTLEY FARMS

TURN LANE STORAGE WARRANTS

**Warrant for Left and Right-Turn Lanes
AT GRADE, UNSIGNALIZED INTERSECTIONS**



Policy On Street And Driveway Access to North Carolina Highways

INTERSECTION: OLD US HIGHWAY 1 & SITE DRIVE 2

SCENARIO	Movement	Turn Lane	Turning Volume (V_R/V_L)	Approach / Opposing Volume (V_A/V_O)	Symbol
AM Build	WBR	Right	12	100	●
AM Build	EBL	Left	1	237	●
PM Build	WBR	Right	39	100	●
PM Build	EBL	Left	4	566	●

Moving forward.



RAMEY KEMP ASSOCIATES

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ09 Utley Farms PUD

Planning Board Meeting Date: October 10, 2022



Report Requirements:

Per NCGS §160D-604(b), all proposed amendments to the zoning ordinance or zoning map shall be submitted to the Planning Board for review and comment. If no written report is received from the Planning Board within 30 days of referral of the amendment to the Planning Board, the Town Council may act on the amendment without the Planning Board report. The Town Council is not bound by the recommendations, if any, of the Planning Board.

Per NCGS §160D-604(d), the Planning Board shall advise and comment on whether the proposed action is consistent with all applicable officially adopted plans, and provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Town Council.

PROJECT DESCRIPTION:

Acreage: ±56.59 acres

PIN(s): 0710714843 & 0710736732

Current Zoning: Wake County Residential-40W (R-40W) & Wake County Residential-80W (R-80W)

Proposed Zoning: Planned Unit Development-Conditional Zoning (PUD-CZ)

2045 Land Use Map: Low Density Residential & Low Density Residential/Office Employment

Town Limits: Currently in Wake County jurisdiction; to be annexed with rezoning

Applicable Officially Adopted Plans:

The Board must state whether the project is consistent or inconsistent with the following officially adopted plans, if applicable. Applicable plans have a check mark next to them.

2045 Land Use Map
 Consistent Inconsistent Reason: _____

Apex Transportation Plan
 Consistent Inconsistent Reason: _____

Parks, Recreation, Open Space, and Greenways Plan
 Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ09 Utley Farms PUD

Planning Board Meeting Date: October 10, 2022



Legislative Considerations:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1. *Consistency with 2045 Land Use Plan.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Plan.

Consistent Inconsistent Reason: _____

2. *Compatibility.* The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

Consistent Inconsistent Reason: _____

3. *Zoning district supplemental standards.* The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 *Supplemental Standards*, if applicable.

Consistent Inconsistent Reason: _____

4. *Design minimizes adverse impact.* The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

Consistent Inconsistent Reason: _____

5. *Design minimizes environmental impact.* The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ09 Utley Farms PUD

Planning Board Meeting Date: October 10, 2022



6. *Impact on public facilities.* The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

Consistent Inconsistent Reason: _____

7. *Health, safety, and welfare.* The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

Consistent Inconsistent Reason: _____

8. *Detrimental to adjacent properties.* Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

Consistent Inconsistent Reason: _____

9. *Not constitute nuisance or hazard.* Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.

Consistent Inconsistent Reason: _____

10. *Other relevant standards of this Ordinance.* Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

Consistent Inconsistent Reason: _____

PLANNING BOARD REPORT TO TOWN COUNCIL

Rezoning Case: 22CZ09 Utley Farms PUD

Planning Board Meeting Date: October 10, 2022



Planning Board Recommendation:

Motion: To recommend approval as presented.

Introduced by Planning Board member: Ryan Akers

Seconded by Planning Board member: Tina Sherman

- Approval:* the project is consistent with all applicable officially adopted plans and the applicable legislative considerations listed above.
- Approval with conditions:* the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above, so the following conditions are recommended to be included in the project in order to make it fully consistent:

As presented.

- Denial:* the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above.

With 7 Planning Board Member(s) voting "aye"

With 0 Planning Board Member(s) voting "no"

Reasons for dissenting votes:

This report reflects the recommendation of the Planning Board, this the 10th day of October 2022.

Attest:



 Reginald Skinner, Planning Board Chair

Dianne Khin

Digitally signed by Dianne Khin
Date: 2022.10.10 17:52:11
-04'00'

Dianne Khin, Director of Planning and
Community Development



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS CONDITIONAL ZONING #22CZ09 Utlely Farms PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board of the Town of Apex. The purpose of these hearings is to consider the following:

- Applicant:** Thurm Bowen, KB Homes, Inc. Carolinas Division
- Authorized Agents:** Jeff Roach, Peak Engineering & Design
- Property Addresses:** 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
- Acreage:** ±56.59 acres
- Property Identification Numbers (PINs):** 0710714834 and 0710736732
- Current 2045 Land Use Map Designation:** Low Density Residential and Low Density/Office Employment
- Existing Zoning of Properties:** Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)
- Proposed Zoning of Properties:** Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Planning Board Public Hearing Date and Time: October 10, 2022 4:30 PM

You may attend the meeting in person or view the meeting through the Town’s YouTube livestream at: <https://www.youtube.com/c/townofapexgov>.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the clerk of the Planning Board, Jeri Pederson (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Planning Board vote. You must provide your name and address for the record. The written statements will be delivered to the Planning Board prior to their vote. Please include the Public Hearing name in the subject line.

A separate notice of the Town Council public hearing on this project will be mailed and posted in order to comply with State public notice requirements.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighnc.gov/imaps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**PUBLIC NOTIFICATION
OF PUBLIC HEARINGS
CONDITIONAL ZONING #22CZ09
Utley Farms PUD**

Pursuant to the provisions of North Carolina General Statutes §1600-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: Thurm Bowen, KB Homes, Inc. Carolinas Division
Authorized Agents: Jeff Roach, Peak Engineering & Design
Property Addresses: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Acreage: ±56.59 acres
Property Identification Numbers (PINs): 0710714834 and 0710736732
Current 2045 Land Use Map Designation: Low Density Residential and Low Density/Office Employment
Existing Zoning of Properties: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Planning Board Public Hearing Date and Time: October 10, 2022 4:30 PM
You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: <https://www.youtube.com/c/townofapexgov>

If you are unable to attend, you may provide a written statement by email to public-hearing@apexnc.org, or submit it to the clerk of the Planning Board, Jeri Pederson (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Planning Board vote. You must provide your name and address for the record. The written statements will be delivered to the Planning Board prior to their vote. Please include the Public Hearing name in the subject line.

A separate notice of the Town Council public hearing on this project will be mailed and posted in order to comply with State public notice requirements.



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.ralighnc.gov/maps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/4376. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/40148>

Dianne F. Khin, ACP
Director of Planning and Community Development

Published Dates: September 26-October 10, 2022



TOWN OF APEX
PO BOX 250
APEX, NORTH CAROLINA 27502
TELEFONO 919-249-3426

**NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ09
Utley Farms PUD (Desarrollo de Unidad Planificada)**

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §1600-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante la Junta de Planificación de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Thurm Bowen, KB Homes, Inc. Carolinas Division
Agente autorizado: Jeff Roach, Peak Engineering & Design
Dirección de las propiedades: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Superficie: ±56.59 acres
Números de identificación de las propiedades: 0710714834 and 0710736732



TOWN OF APEX
PO BOX 250
APEX, NORTH CAROLINA 27502
TELÉFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ09

Utlely Farms PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante la Junta de Planificación de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Thurm Bowen, KB Homes, Inc. Carolinas Division

Agente autorizado: Jeff Roach, Peak Engineering & Design

Dirección de las propiedades: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road

Superficie: ±56.59 acres

Números de identificación de las propiedades: 0710714834 and 0710736732

Designación actual en el Mapa de Uso Territorial para 2045: Low Density Residential and Low Density/Office Employment

Ordenamiento territorial existente de las propiedades: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)

Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública de la Junta de Planificación: 10 de octubre de 2022 4:30 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la secretaria de la Junta de Planificación, Jeri Pederson (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación de la Junta de Planificación. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán a la Junta de Planificación antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

De conformidad con los requisitos estatales de notificaciones públicas, se enviará por correo y se publicará por separado una notificación de la audiencia pública del Consejo Municipal sobre este proyecto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.raleighnc.gov/imaps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP
Directora de Planificación y Desarrollo Comunitario

Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.apexnc.gov/maps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/39388>

Dianne F. Khin, AICP
Director of Planning and Community Development

Published Dates: September 26-October 10, 2022

TOWN OF APEX
PO BOX 250
APEX, NORTH CAROLINA 27502
TELEFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ09
Utley Farms PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §1600-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante la Junta de Planificación de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Thurm Bowen, KB Homes, Inc. Carolinas Division
Agente autorizado: Jeff Roach, Peak Engineering & Design
Dirección de las propiedades: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Superficie: 256.59 acres
Números de identificación de las propiedades: 0710714834 and 0710736732
Designación actual en el Mapa de Uso Territorial para 2045: Low Density Residential and Low Density/Office Employment
Ordenamiento territorial existente de las propiedades: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)
Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2º piso
73 Hunter Street, Apex, Carolina del Norte

Fecha y hora de la audiencia pública de la Junta de Planificación: 10 de octubre de 2022 4:30 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/watch?v=Hwvncfapexgaw>

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org o presentarla a la secretaria de la Junta de Planificación, Jeri Pederson (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación de la Junta de Planificación. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán a la Junta de Planificación antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

De conformidad con los requisitos estatales de notificaciones públicas, se enviará por correo y se publicará por separado una notificación de la audiencia pública del Consejo Municipal sobre este proyecto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.apexnc.gov/maps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/39388>

Dianne F. Khin, AICP
Directora de Planificación y Desarrollo Comunitario

Fechas de publicación: 26 de septiembre – 10 de octubre



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice**

Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name: Conditional Zoning #22CZ09
Utley Farms PUD
Project Location: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Applicant or Authorized Agent: Thurm Bowen, KB Homes, Inc. Carolinas Division

This is to certify that I, as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on September 26, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300' of the land subject to notification. I further certify that I relied on information from the Wake County Tax Assessor and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.

9/26/2022
Date

Maive F. Khin
Director of Planning and Community Development

STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Joshua Killian, a Notary Public for the above
State and County, this the 27 day of September, 202 2.



Joshua Killian
Notary Public

My Commission Expires: 6/27/2027



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

PUBLIC NOTIFICATION OF PUBLIC HEARINGS CONDITIONAL ZONING #22CZ09 Utlely Farms PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: Thurm Bowen, KB Homes, Inc. Carolinas Division

Authorized Agents: Jeff Roach, Peak Engineering & Design

Property Addresses: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road

Acreage: ±56.59 acres

Property Identification Numbers (PINs): 0710714834 and 0710736732

Current 2045 Land Use Map Designation: Low Density Residential and Low Density/Office Employment

Existing Zoning of Properties: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)

Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Comments received prior to the Planning Board public hearing will not be provided to the Town Council. Separate comments for the Town Council public hearing must be provided by the deadline specified below.

Town Council Public Hearing Date and Time: October 25, 2022 6:00 PM

You may attend the meeting in person or view the meeting through the Town’s YouTube livestream at: <https://www.youtube.com/c/townofapexgov>.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighnc.gov/imaps>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**PUBLIC NOTIFICATION
OF PUBLIC HEARINGS**
CONDITIONAL ZONING #22CZ09
Utley Farms PUD

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: Thurm Bowen, KB Homes, Inc. Carolinas Division
Authorized Agents: Jeff Roach, Peak Engineering & Design
Property Addresses: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Acreage: ±56.59 acres
Property Identification Numbers (PINs): 0710714834 and 0710736732
Current 2045 Land Use Map Designation: Low Density Residential and Low Density/Office Employment
Existing Zoning of Properties: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)

Public Hearing Location: Apex Town Hall
Council Chamber, 2nd Floor
73 Hunter Street, Apex, North Carolina

Comments received prior to the Planning Board public hearing will not be provided to the Town Council. Separate comments for the Town Council public hearing must be provided by the deadline specified below.

Town Council Public Hearing Date and Time: October 25, 2022 6:00 PM
You may attend the meeting in person or view the meeting through the Town's YouTube livestream at:
<https://www.youtube.com/c/townofapexgov>.

If you are unable to attend, you may provide a written statement by email to public_hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.

Vicinity Map:



Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at <https://maps.raleighbc.gov/imap>. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/4372. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents online: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP
Director of Planning and Community Development



TOWN OF APEX

PO BOX 250
APEX, NORTH CAROLINA 27502
TELÉFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS

ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ09
Utley Farms PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Thurm Bowen, KB Homes, Inc. Carolinas Division

Agente autorizado: Jeff Roach, Peak Engineering & Design

Dirección de las propiedades: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road

Superficie: ±56.59 acres

Números de identificación de las propiedades: 0710714834 and 0710736732

Designación actual en el Mapa de Uso Territorial para 2045: Low Density Residential and Low Density/Office Employment

Ordenamiento territorial existente de las propiedades: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)

Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex

Cámara del Consejo, 2º piso

73 Hunter Street, Apex, Carolina del Norte

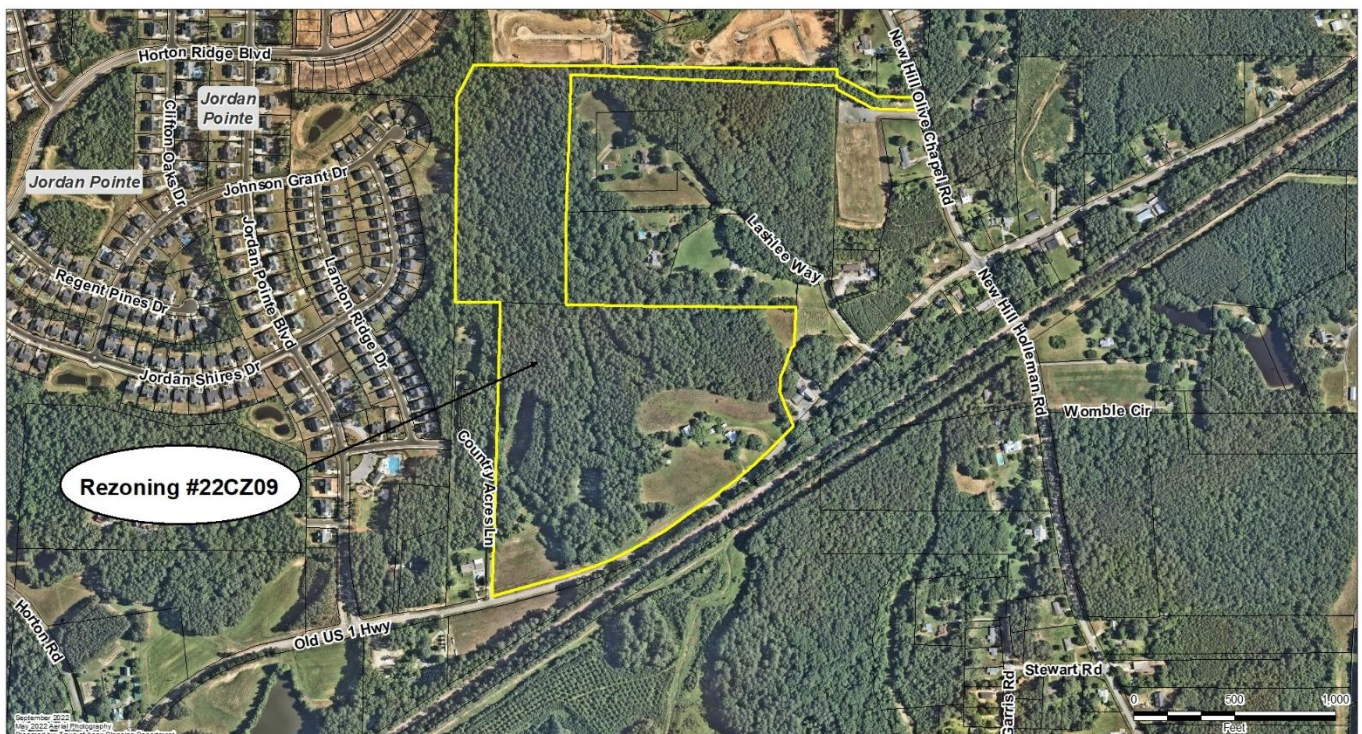
Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

Fecha y hora de la audiencia pública del Consejo Municipal: 25 de octubre de 2022 6:00 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.raleighnc.gov/imaps>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP

Directora de Planificación y Desarrollo Comunitario



TOWN OF APEX
 PO BOX 250
 APEX, NORTH CAROLINA 27502
 TELEFONO 919-249-3426

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL #22CZ09
 Utley Farms PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Thurm Bowen, KB Homes, Inc. Carolinas Division
Agente autorizado: Jeff Roach, Peak Engineering & Design
Dirección de las propiedades: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Superficie: ±56.59 acres
Números de identificación de las propiedades: 0710714834 and 0710736732
Designación actual en el Mapa de Uso Territorial para 2045: Low Density Residential and Low Density/Office Employment
Ordenamiento territorial existente de las propiedades: Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W)
Ordenamiento territorial propuesto para las propiedades: Planned Unit Development-Conditional Zoning (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
 Cámara del Consejo, 2º piso
 73 Hunter Street, Apex, Carolina del Norte

Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

Fecha y hora de la audiencia pública del Consejo Municipal: 25 de octubre de 2022 6:00 P.M.
 Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: <https://www.youtube.com/c/townofapexgov>.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public_hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal (73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

Mapa de las inmediaciones:



Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: <https://maps.apexnc.gov/imagery>. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/4278. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: <https://www.apexnc.org/DocumentCenter/View/39388>.

Dianne F. Khin, AICP
 Directora de Planificación y Desarrollo Comunitario

Fechas de publicación: 3 octubre- 25 de octubre de 2022



TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

**AFFIDAVIT CERTIFYING
Public Notification – Written (Mailed) Notice**
Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name: Conditional Zoning #22CZ09
Utley Farms PUD
Project Location: 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road
Applicant or Authorized Agent: Thurm Bowen, KB Homes, Inc. Carolinas Division

This is to certify that I, as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on October 3, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300' of the land subject to notification. I further certify that I relied on information from the Wake County Tax Assessor and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.

10/3/2022
Date

Stanae F. Khun
Director of Planning and Community Development

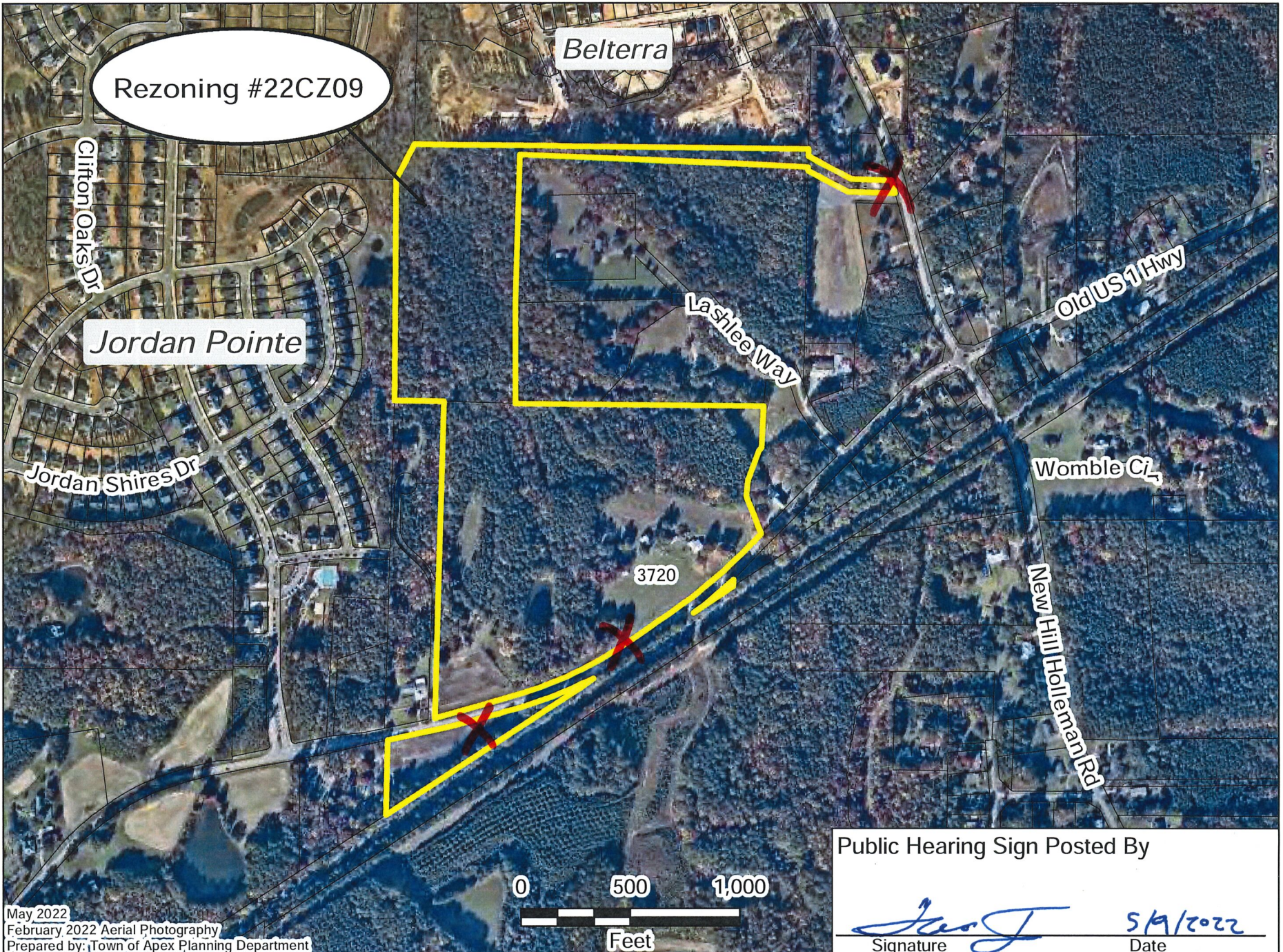
STATE OF NORTH CAROLINA
COUNTY OF WAKE

Sworn and subscribed before me, Joshua Killian, a Notary Public for the above
State and County, this the 3 day of October, 202 2.



Joshua Killian
Notary Public

My Commission Expires: 6 / 17 / 2027



Rezoning #22CZ09

Belterra

Jordan Pointe

Clifton Oaks Dr

Jordan Shires Dr

Lashlee Way

Old US 1 Hwy

Womble Ct

3720

New Hill Holleman Rd



Public Hearing Sign Posted By

Justin J
Signature

5/19/2022
Date

May 2022
February 2022 Aerial Photography
Prepared by: Town of Apex Planning Department



Student Assignment
5625 Dillard Drive
Cary, NC, 27518
Email: studentassignment@wcpss.net

tel: (919) 431-7333
fax: (919) 694-7753

June 24, 2022

Dianne Khin, AICP
Director, Department of Planning and Community Development
Town of Apex
Dianne.Khin@apexnc.org

Dear Dianne,

The Wake County Public School System (WCPSS) Office of School Assignment received information about a proposed rezoning/development within the Town of Apex planning area. We are providing this letter to share information about WCPSS's capacity related to the proposal. The following information about the proposed rezoning/development was provided through the Wake County Residential Development Notification database:

- Date of application: May 1, 2022
Name of development: 22CZ09 Utley Farms PUD
Address of rezoning: 3720 Old US 1 Hwy & o New Hill Olive Chapel Rd (PINs 0710704834 & 0710736732
Total number of proposed residential units: 122
Type(s) of residential units proposed: Single-family detached

Based on the information received at the time of application, the Office of School Assignment is providing the following assessment of possible impacts to the Wake County Public School System:

- Schools at all grade levels within the current assignment area for the proposed rezoning/development are anticipated to have sufficient capacity for future students.
[X] Schools at the following grade levels within the current assignment area for the proposed rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated:
[X] Elementary [X] Middle [X] High

The following mitigation of capacity concerns due to school construction or expansion is anticipated:

- Not applicable - existing school capacity is anticipated to be sufficient.
School expansion or construction within the next five years is not anticipated to address concerns.
[X] School expansion or construction within the next five years may address concerns at these grade levels:
[X] Elementary [X] Middle [X] High

Thank you for sharing this information with the Town of Apex Planning Board and Town Council as they consider the proposed rezoning/development.

Sincerely,

Susan W. Pullium



PROTECT • PROMOTE • EDUCATE

P.O. Box 28072
Raleigh, NC 27611

Phone: 919.833.6404 Fax: 919.834.7314
www.cappresinc.org

October 7, 2022

Lauren Staudenmaier
Planner II, Town of Apex
PO Box 250
Apex, NC 27502

Lauren,

CAP has been working with the developer (KB Homes) and their team for most of 2022 developing a plan to save the Utley-Horton Farmhouse and two contributing outbuildings. A large lot for the house and two outbuildings has been designated for preservation purposes. I have attached the most recent sketch plan that was presented to CAP that satisfies the preservation goals of the property. The developer's intention is to donate the property to CAP, where it will be rehabilitated and protected with a rehabilitation agreement and preservation easement to protect the property in perpetuity.

Sincerely,

A handwritten signature in black ink that reads "Gary Roth". The signature is written in a cursive, flowing style.

Gary G. Roth
President/CEO

STATEMENT OF TOWN COUNCIL AND ORDINANCE AMENDING THE OFFICIAL ZONING DISTRICT MAP OF THE TOWN OF APEX TO CHANGE THE ZONING OF APPROXIMATELY 56.59 ACRES LOCATED AT 3720 OLD US 1 HIGHWAY AND 0 NEW HILL OLIVE CHAPEL ROAD FROM WAKE COUNTY RESIDENTIAL-40W (R-40W) AND WAKE COUNTY RESIDENTIAL-80W (R-80W) TO PLANNED UNIT DEVELOPMENT-CONDITIONAL ZONING (PUD-CZ)

#22CZ09

WHEREAS, Thurm Bowen, KB Home, Inc. Carolinas Division, owner/applicant (the "Applicant"), submitted a completed application for a conditional zoning on the 2nd day of May 2022 (the "Application"). The proposed conditional zoning is designated #22CZ09;

WHEREAS, the Director of Planning and Community Development for the Town of Apex, Dianne Khin, caused proper notice to be given (by publication and posting) of a public hearing on #22CZ09 before the Planning Board on the 10th day of October 2022;

WHEREAS, the Apex Planning Board held a public hearing on the 10th day of October 2022, gathered facts, received public comments and formulated a recommendation regarding the application for conditional zoning #22CZ09. A motion was made by the Apex Planning Board to recommend approval; the motion passed unanimously for the application for #22CZ09;

WHEREAS, pursuant to N.C.G.S. §160D-601 and Sec. 2.2.11.E of the Unified Development Ordinance, the Director of Planning and Community Development caused proper notice to be given (by publication and posting), of a public hearing on #22CZ09 before the Apex Town Council on the 25th day of October 2022;

WHEREAS, the Apex Town Council held a public hearing on the 25th day of October 2022; Lauren Staudenmaier, Planner II, presented the Planning Board's recommendation at the public hearing;

WHEREAS, all persons who desired to present information relevant to the application for #22CZ09 and who were residents of Apex or its extraterritorial jurisdiction, or who owned property adjoining the property for which the conditional zoning is sought, were allowed to present evidence at the public hearing before the Apex Town Council. No one who wanted to speak was turned away;

WHEREAS, the Apex Town Council finds that the approval of the rezoning is consistent with the 2045 Land Use Plan and other adopted plans in that: The 2045 Land Use Map designates this area as Low Density Residential and Low Density Residential/Office Employment. This designation on the 2045 Land Use Map includes the zoning district Planned Unit Development-Conditional Zoning (PUD-CZ) and the Apex Town Council has further considered that the proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) will maintain the character and appearance of the area and provide the flexibility to accommodate the growth in population, economy, and infrastructure consistent with that contemplated by the 2045 Land Use Map;

WHEREAS, the Apex Town Council finds that the approval of the rezoning is reasonable and in the public interest in that: The rezoning will allow development for single-family residential uses in a manner to be generally consistent with the surrounding properties. The proposed rezoning also provides additional environmental conditions and a minimum of two affordable housing units; and

WHEREAS, the Apex Town Council by a vote of ___ to ___ approved Application #22CZ09 rezoning the subject tract located at 3720 Old US 1 Highway and 0 New Hill Olive Chapel Road from Wake County Residential-40 W (R-40W) and Wake County Residential-80W (R-80W) to Planned Unit Development-Conditional Zoning (PUD-CZ).

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF APEX

Section 1: The lands that are the subject of the Ordinance are those certain lands described in Attachment "A" – Legal Description which is incorporated herein by reference, and said lands are hereafter referred to as the "Rezoned Lands."

Ordinance Amending the Official Zoning District Map #22CZ09

Section 2: The Town of Apex Unified Development Ordinance, including the Town of Apex North Carolina Official Zoning District Map which is a part of said Ordinance, is hereby amended by changing the zoning classification of the "Rezoned Lands" from Wake County Residential-40W (R-40W) and Wake County Residential-80W (R-80W) to Planned Unit Development-Conditional Zoning (PUD-CZ) District, subject to the conditions stated herein.

Section 3: The Director of Planning and Community Development is hereby authorized and directed to cause the said Official Zoning District Map for the Town of Apex, North Carolina, to be physically revised and amended to reflect the zoning changes ordained by this Ordinance.

Section 4: The "Rezoned Lands" are subject to the conditions in Attachment "B" Utlely Farms PUD which are imposed as part of this rezoning.

Section 5: The "Rezoned Lands" shall be perpetually bound to the conditions imposed including the uses authorized, unless subsequently changed or amended as provided for in the Unified Development Ordinance. Site plans for any development to be made pursuant to this amendment to the Official Zoning District Map shall be submitted for site plan approval as provided for in the Unified Development Ordinance.

Section 6: This Ordinance shall be in full force and effect from and after its adoption.

Motion by Council Member _____

Seconded by Council Member _____

With ____ Council Member(s) voting "aye."

With ____ Council Member(s) voting "no."

This the ____ day of _____ 2022.

TOWN OF APEX

Mayor

ATTEST:

Allen Coleman, CMC, NCCCC
Town Clerk

APPROVED AS TO FORM:

Town Attorney

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: 22CZ09

Submission Date:

Insert legal description below.

BEING THE OUTER BOUNDARY OF 2 PARCELS; ONE NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON (PIN 0710-73-6732) AND THE OTHER NOW OR FORMERLY OF MYRTLE H. HORTON (PIN 0710-71-4834), EXCLUDING THAT PORTION OF THE MYRTLE H. HORTON PARCEL LYING TO THE SOUTH OF OLD U.S. HIGHWAY 1, LOCATED IN THE TOWN OF NEW HILL, BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 3/4" IRON PIPE FOUND ON THE NORTHEASTERN CORNER OF THE PROPERTY NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON AND THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, SAID IRON BEING THE TRUE POINT OF BEGINNING AND HAVING NORTH CAROLINA STATE PLAIN COORDINATES OF N= 703,604.52' AND E= 2,018,799.66'; THENCE, FROM THE POINT OF BEGINNING AND WITH THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, S14°25'18"E A DISTANCE OF 66.83 FEET TO A 5/8" IRON REBAR FOUND; THENCE, LEAVING SAID RIGHT OF WAY, N88°11'18"W A DISTANCE OF 188.21 FEET TO A 5/8" IRON REBAR FOUND; THENCE N88°11'18"W A DISTANCE OF 25.93 FEET TO A 3/4" IRON PIPE SET; THENCE, N62°24'56"W A DISTANCE OF 207.03 FEET TO A 3/4" IRON PIPE FOUND; THENCE, N87°31'49"W A DISTANCE OF 1,326.61 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S00°29'51"W A DISTANCE OF 657.49 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, S00°28'07"W A DISTANCE OF 459.96 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE, S88°54'39"E A DISTANCE OF 376.22 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE S88°54'39"E A DISTANCE OF 760.21 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°27'54"W A DISTANCE OF 193.23 FEET TO A 2" IRON PIPE FOUND; THENCE S40°29'33"W A DISTANCE OF 39.06 FEET TO A 3/4" IRON PIPE SET; THENCE, S20°02'10"W A DISTANCE OF 148.77 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°26'24"W A DISTANCE OF 74.66 FEET TO A 1" IRON PIPE FOUND; THENCE, S21°56'17"E A DISTANCE OF 90.03 FEET TO A 3/4" IRON PIPE SET; THENCE, S21°56'17"E A DISTANCE OF 82.07 FEET TO A 1/2" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, WITH SAID RIGHT OF WAY, S44°08'00"W A DISTANCE OF 57.11 FEET TO A 3/4" IRON PIPE SET; THENCE S04°26'41"W A DISTANCE OF 47.21 FEET TO A COMPUTED POINT IN THE CENTERLINE OF OLD US HIGHWAY 1; THENCE, WITH SAID CENTERLINE, S44°45'01"W A DISTANCE OF 117.34 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S46°50'07"W A DISTANCE OF 75.89 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S51°00'53"W A DISTANCE OF 86.92 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°38'28"W A DISTANCE OF 187.44 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°43'11"W A DISTANCE OF 166.66 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S55°37'49"W A DISTANCE OF 181.50 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,538.08 FEET AND A CHORD OF 222.64 FEET BEARING S62°15'39"W, A DISTANCE OF 222.83 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,502.64 FEET AND A CHORD OF 205.36 FEET BEARING S70°54'26"W, A DISTANCE OF 205.52 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID RIGHT OF WAY, S74°32'21"W A DISTANCE OF 335.97 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S76°14'37"W A DISTANCE OF 79.04 FEET TO A COMPUTED POINT; THENCE, LEAVING SAID CENTERLINE, N01°40'52"E A DISTANCE OF 31.15 FEET TO A 1" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, LEAVING SAID RIGHT OF WAY, N01°40'52"E A DISTANCE OF 525.44 FEET TO A 1" IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 164.11 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 87.06 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 296.27 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°43'27"E A DISTANCE OF 154.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°45'10"E A DISTANCE OF 230.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N88°57'38"W A DISTANCE OF 226.32 FEET TO A 1.5" CAPPED IRON PIPE FOUND; THENCE, N00°29'37"E A DISTANCE OF 1,013.85 FEET TO A 1" CAPPED IRON PIPE FOUND THENCE, N27°07'07"E A DISTANCE OF 180.77 FEET TO A 3/4" PINCHED IRON PIPE FOUND; THENCE, S89°14'14"E A DISTANCE OF 677.99 FEET TO A 3/4" IRON PIPE SET; THENCE, S89°12'15"E A DISTANCE OF 1,126.48 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S01°21'26"W A DISTANCE OF 33.00 FEET TO A 3/4" BENT IRON PIPE FOUND; THENCE, S62°23'27"E A DISTANCE OF 222.99 FEET TO A 1" BENT IRON PIPE FOUND; THENCE, S89°31'44"E A DISTANCE OF 181.71 FEET TO THE POINT OF BEGINNING. SAID BOUNDARY CONTAINING 2,465,206 SQUARE FEET (56.59 ACRES), MORE OR LESS.

AFFIDAVIT OF OWNERSHIP: EXHIBIT A – LEGAL DESCRIPTION

Application #: 22CZ09

Submission Date:

Insert legal description below.

BEING THE OUTER BOUNDARY OF 2 PARCELS; ONE NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON (PIN 0710-73-6732) AND THE OTHER NOW OR FORMERLY OF MYRTLE H. HORTON (PIN 0710-71-4834), EXCLUDING THAT PORTION OF THE MYRTLE H. HORTON PARCEL LYING TO THE SOUTH OF OLD U.S. HIGHWAY 1, LOCATED IN THE TOWN OF NEW HILL, BUCKHORN TOWNSHIP, WAKE COUNTY, NORTH CAROLINA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A 3/4" IRON PIPE FOUND ON THE NORTHEASTERN CORNER OF THE PROPERTY NOW OR FORMERLY OF HELON J. WELLONS AND RAY E. JOHNSON AND THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, SAID IRON BEING THE TRUE POINT OF BEGINNING AND HAVING NORTH CAROLINA STATE PLAIN COORDINATES OF N= 703,604.52' AND E= 2,018,799.66'; THENCE, FROM THE POINT OF BEGINNING AND WITH THE WESTERN RIGHT OF WAY OF NEW HILL OLIVE CHAPEL ROAD, S14°25'18"E A DISTANCE OF 66.83 FEET TO A 5/8" IRON REBAR FOUND; THENCE, LEAVING SAID RIGHT OF WAY, N88°11'18"W A DISTANCE OF 188.21 FEET TO A 5/8" IRON REBAR FOUND; THENCE N88°11'18"W A DISTANCE OF 25.93 FEET TO A 3/4" IRON PIPE SET; THENCE, N62°24'56"W A DISTANCE OF 207.03 FEET TO A 3/4" IRON PIPE FOUND; THENCE, N87°31'49"W A DISTANCE OF 1,326.61 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S00°29'51"W A DISTANCE OF 657.49 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, S00°28'07"W A DISTANCE OF 459.96 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE, S88°54'39"E A DISTANCE OF 376.22 FEET TO A 1" CAPPED IRON PIPE FOUND; THENCE S88°54'39"E A DISTANCE OF 760.21 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°27'54"W A DISTANCE OF 193.23 FEET TO A 2" IRON PIPE FOUND; THENCE S40°29'33"W A DISTANCE OF 39.06 FEET TO A 3/4" IRON PIPE SET; THENCE, S20°02'10"W A DISTANCE OF 148.77 FEET TO A 1" IRON PIPE FOUND; THENCE, S04°26'24"W A DISTANCE OF 74.66 FEET TO A 1" IRON PIPE FOUND; THENCE, S21°56'17"E A DISTANCE OF 90.03 FEET TO A 3/4" IRON PIPE SET; THENCE, S21°56'17"E A DISTANCE OF 82.07 FEET TO A 1/2" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, WITH SAID RIGHT OF WAY, S44°08'00"W A DISTANCE OF 57.11 FEET TO A 3/4" IRON PIPE SET; THENCE S04°26'41"W A DISTANCE OF 47.21 FEET TO A COMPUTED POINT IN THE CENTERLINE OF OLD US HIGHWAY 1; THENCE, WITH SAID CENTERLINE, S44°45'01"W A DISTANCE OF 117.34 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S46°50'07"W A DISTANCE OF 75.89 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S51°00'53"W A DISTANCE OF 86.92 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°38'28"W A DISTANCE OF 187.44 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S54°43'11"W A DISTANCE OF 166.66 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S55°37'49"W A DISTANCE OF 181.50 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,538.08 FEET AND A CHORD OF 222.64 FEET BEARING S62°15'39"W, A DISTANCE OF 222.83 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 1,502.64 FEET AND A CHORD OF 205.36 FEET BEARING S70°54'26"W, A DISTANCE OF 205.52 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID RIGHT OF WAY, S74°32'21"W A DISTANCE OF 335.97 FEET TO A COMPUTED POINT; THENCE, CONTINUING WITH SAID CENTERLINE, S76°14'37"W A DISTANCE OF 79.04 FEET TO A COMPUTED POINT; THENCE, LEAVING SAID CENTERLINE, N01°40'52"E A DISTANCE OF 31.15 FEET TO A 1" IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY OF OLD US HIGHWAY 1; THENCE, LEAVING SAID RIGHT OF WAY, N01°40'52"E A DISTANCE OF 525.44 FEET TO A 1" IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 164.11 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 87.06 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°40'52"E A DISTANCE OF 296.27 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°43'27"E A DISTANCE OF 154.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N01°45'10"E A DISTANCE OF 230.39 FEET TO A 3/4" CAPPED IRON PIPE FOUND; THENCE, N88°57'38"W A DISTANCE OF 226.32 FEET TO A 1.5" CAPPED IRON PIPE FOUND; THENCE, N00°29'37"E A DISTANCE OF 1,013.85 FEET TO A 1" CAPPED IRON PIPE FOUND THENCE, N27°07'07"E A DISTANCE OF 180.77 FEET TO A 3/4" PINCHED IRON PIPE FOUND; THENCE, S89°14'14"E A DISTANCE OF 677.99 FEET TO A 3/4" IRON PIPE SET; THENCE, S89°12'15"E A DISTANCE OF 1,126.48 FEET TO A 3/4" IRON PIPE FOUND; THENCE, S01°21'26"W A DISTANCE OF 33.00 FEET TO A 3/4" BENT IRON PIPE FOUND; THENCE, S62°23'27"E A DISTANCE OF 222.99 FEET TO A 1" BENT IRON PIPE FOUND; THENCE, S89°31'44"E A DISTANCE OF 181.71 FEET TO THE POINT OF BEGINNING. SAID BOUNDARY CONTAINING 2,465,206 SQUARE FEET (56.59 ACRES), MORE OR LESS.

Attachment "B"

Utley Farms PUD

PD PLAN

APEX, NORTH CAROLINA

Submitted: April 29, 2022

Resubmitted: August 12, 2022

Resubmitted: September 9, 2022

PREPARED BY:



Section 1: Table of Contents – PUD Text

Section 1: Table of Contents

Section 2: Vicinity Map

Section 3: Project Data

Section 4: Purpose Statement

Section 5: Permitted Uses

Section 6: Design Controls

Section 7: Architectural Controls

Section 8: Parking and Loading

Section 9: Signage

Section 10: Natural Resource and Environmental Data

Section 11: Stormwater Management

Section 12: Parks and Recreation

Section 13: Public Facilities

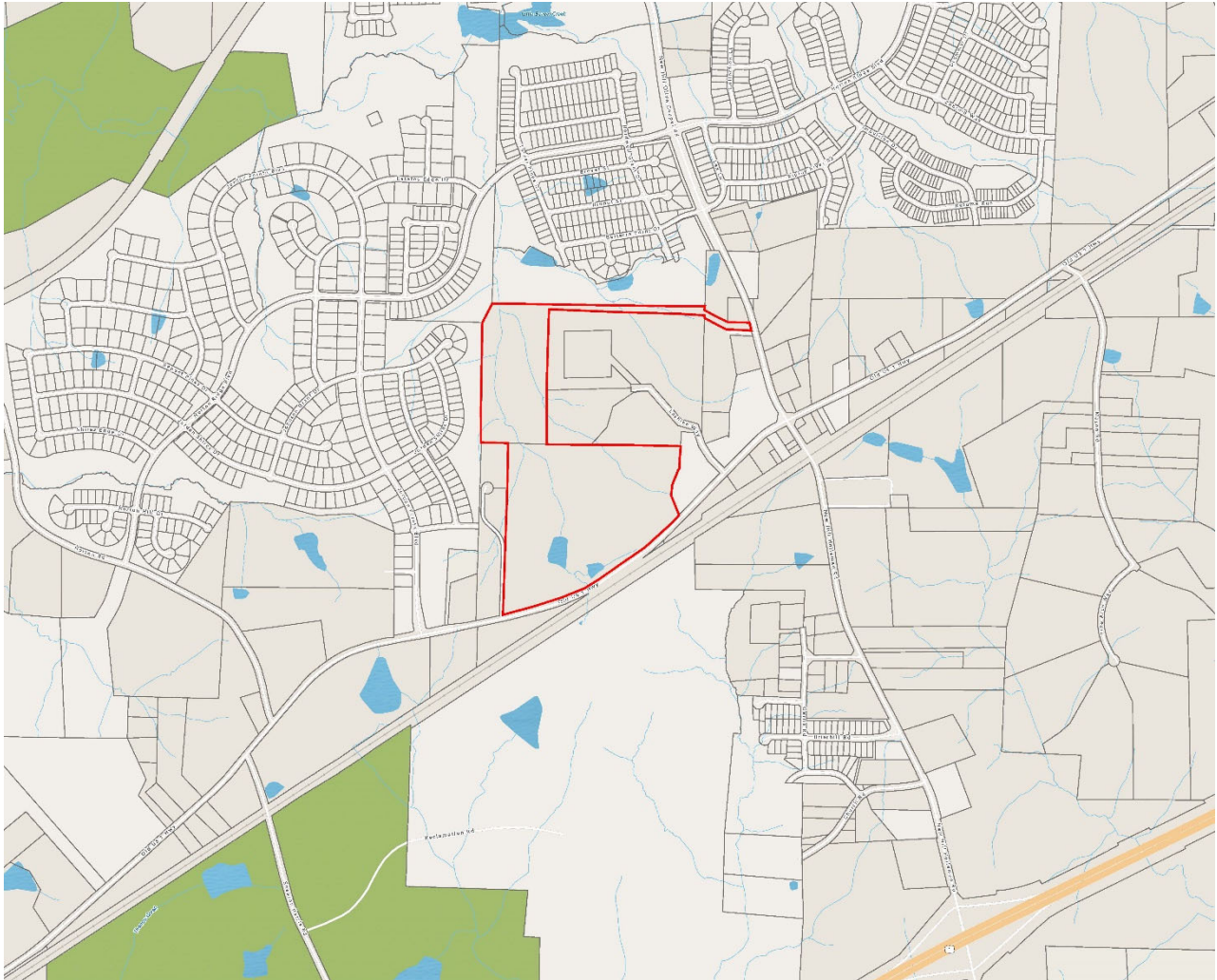
Section 14: Phasing Plan

Section 15: Consistency with 2045 Land Use Plan

Section 16: Compliance with UDO

Section 17: Compliance with Apex Transportation Plan and Bicycle Plan

Section 2: Vicinity Map



The Utley Farms PUD is located in New Hill, Buckhorn Township, and is anticipated to be developed within the Town of Apex corporate limits. The property sits along the north side of Old US 1 Highway, with limited frontage along New Hill Olive Chapel Road. North and west of the site have been developed for single-family homes located within Belterra and Jordan Pointe, respectively. To the west of the site are rural developments on large lots. To the east are parcels planned for office and commercial uses.

Section 3: Project Data

A. Name of Project:

Utley Farms PUD

B. Property Owners:

Myrtle H. Morton

PO Box 312

New Hill, NC 27562-0312

Helon J. Wellons

Raye E. Johnson

400 Johnson Farm Road

New Hill, NC 27562-8839

Prepared By:

Jason Barron and Nil Ghosh

Morningstar Law Group

421 Fayetteville St | Ste 530

Raleigh, NC 27601

C. Current Zoning Designation:

R-40W and R-80W (Wake County)

D. Proposed Zoning Designation:

Planned Unit Development – Conditional Zoning (PUD-CZ)

E. Current 2045 Land Use Map Designation:

Low Density Residential

F. Proposed Use

- Single-family Residential

G. Size of Project

A total of +/-56.59 acres

Section 4: Purpose Statement

The Utlely Farms PUD development will be a single-family detached residential community developed at low density residential along Old US 1 Highway west of its intersection with New Hill Olive Chapel Road. The intent is for the site to develop consistent with the land use intensities contemplated by the recent updates to the Town's 2045 Land Use Designation Map.

This concept is consistent with the Town's stated PUD goals to provide site-specific, high-quality neighborhoods that exhibit natural feature preservation as well as compatibility with, and connectivity to, surrounding land uses. More specifically, this plan will:

- Allow uses that are compatible with Section 4.2.2, *Use Table* of the UDO
- Provide for the preservation of existing environmentally sensitive areas.
- Provide for site specific and appropriate stormwater controls that exceed the requirements of the UDO.
- Provide appropriate buffering and screening from the proposed use to the existing residential areas.
- Offer low density housing in an area that was very recently updated by the Town to include such uses on the 2045 Land Use Designation Map.
- Demonstrate dimensional standards that are consistent with the UDO, and where variations occur, said variations will be included herein and subject to Council approval.
- Provide a high-quality community that is linked by a network of connected streets and pedestrian sidewalks that promotes connectivity, walkability, and healthy lifestyles.
- Exhibit character and quality that is compatible with surrounding communities, which is expected to enhance the value of surrounding land uses.
- Provide open space and walkable trails to promote pedestrian activity, while appropriately buffering adjacent residential areas.
- Preserve the existing historic home on the property along with two existing barns.

All site-specific standards and conditions of this PUD Plan shall be consistent with all Conditional Zoning (CZ) District standards set forth in UDO Section 2.3.3, *Conditional Zoning Districts* and UDO Section 2.3.4.F.1, *Planned Unit Development (PUD-CZ) District*, except as provided for herein. The proposed PUD will provide a development density that is consistent with principles found throughout *Advance Apex 2045*.

Section 5: Permitted Uses

The subject property may be used for, and only for, the uses listed immediately below. The permitted uses are subject to the limitations and regulations stated in the UDO, except as modified herein. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply. Specifically, the permitted uses include:

- Single-family
- Greenway
- Recreation facility, private
- Accessory apartment
- Park, active
- Park, passive
- Utility, minor

Additionally, the following conditions shall apply:

- A. A maximum of 113 residential units shall be permitted upon the property.
- B. No covenant shall be placed on the property which prohibits accessory apartment as a use.
- C. All residential dwellings and any amenity constructed on the property shall provide solar conduit for the installation of rooftop solar panels.
- D. Stormwater controls for development shall be increased to the 25-year storm as provided for in this PUD.
- E. There shall not be any tree clearing, stormwater control measures (SCM), or other infrastructure in either zone of riparian buffers except for UDO permitted crossings and utilities.
- F. Signage shall be provided by any homeowner's association regarding the need to reduce pet waste and eliminate fertilizer near SCMs. The project shall install at least one (1) sign per SCM about not using fertilizer near an SCM drainage area to reduce pet waste and eliminate fertilizer near SCMs. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to amenity centers, sidewalks, greenways, or side paths.
- G. The project shall provide diverse and abundant pollinator sources and install pollinator-friendly flora within SCM Planting areas.
- H. The project shall include plantings within perimeter buffers and along streetscapes; the selected species shall be native species chosen from the Apex Design & Development Manual or approved by Planning staff.
- I. Deciduous shade trees shall be planted along southern sides of building elevations and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- J. Evergreen trees shall be planted along northern elevations of buildings and the selected species shall be taken from the Apex Design & Development Manual or approved by Planning staff.
- K. A minimum of three (3) native hardwood tree species shall be planted throughout the development.
- L. The project shall increase biodiversity within the amenity area and recreational areas within the development by selecting and installing tree, shrub, and perennial species with special attention to providing diverse and abundant pollinator and bird food sources, including plants that bloom in succession from spring to fall. Subject to

Utley Farms PUD

- Condition K above, no single species shall constitute more than 20% of the selected plants for each landscaping type (trees, shrubs and perennials.)
- M. The project shall include landscaping that requires less irrigation and chemical use by planting warm season grasses and drought tolerant species for drought-resistance within perimeter buffers, SCMs, and along streets.
 - N. The exterior lighting for all non-residential buildings, parking lots, and amenity areas will consist of entirely of LED fixtures. The project shall install light timers, motion sensors, or other smart lighting technology for all lighting within the parking lots and private amenity areas.
 - a. The project within an amenity area shall use full cutoff LED fixtures that have a maximum color temperature of 3000K for all exterior lighting located within parking lot, private amenity areas, and building mounted fixtures on non-residential buildings.
 - O. A minimum of three (3) pet waste stations shall be installed within the development located around the SCMs, play lawns, and gathering areas.
 - P. A minimum 4kW solar PV system shall be installed on at least 3 homes within the development. All solar installation required by this condition shall be completed or under construction prior to 90% of the building permits being issued for the development. The lots on which these homes are located shall be identified on Master Subdivision Final Plat, which may be amended from time to time.
 - Q. Of the permitted residential single family detached dwellings, at least two (2) restricted median-income affordable housing single family detached ownership units (Affordable Housing Units) shall be constructed on-site and sold at a mutually agreeable maximum affordable housing median-income ownership sales price (includes unit price and lot price) that is calculated based upon the one-hundred percent (100%) of the Raleigh, NC Metropolitan Statistical Area (MSA) Area Median Income (AMI) as most recently published by the U.S. Department of Housing and Urban Development (HUD). The Affordable Housing Units shall be occupied by households earning no more than one-hundred percent (100% - Median-Income) of the Raleigh, NC MSA AMI, adjusted for family size as most recently published by HUD. The two (2) Affordable Housing Unit lots shall be identified on the Master Subdivision Final Plat, which may be amended from time to time. A restrictive covenant (i.e. lot reservation agreement) shall be recorded against the two (2) Affordable Housing Unit lots prior to the issuance of a building permit for such lots and a separate restrictive covenant (i.e. resale deed restriction) with a minimum affordability period of twenty (20) years shall be recorded against each of the Affordable Housing Units at purchase closing to memorialize the affordable housing terms and conditions of the approved zoning condition. Final Affordable Housing Unit floor plan selection which includes the unit size and bedroom size will be at the discretion of the developer.

Section 6: Proposed Design Controls

A. Residential Densities and Design Controls

Maximum Density:	2.0 Units/Acre (includes RCA and rights-of-way)
Maximum Number of Units:	113
Minimum Lot Size:	6,000 SF
Maximum Built-Upon Area:	60%
Minimum Lot Width:	50 feet
Maximum Building Height:	36 feet, no more than 2 stories

Note: Porches, patios, decks and other accessory structures may encroach into building setbacks as allowed by the Town of Apex UDO.

Minimum Building Setbacks:

	Single-family (feet)	Private Recreation Facility
Front	10	10
Front (garage)	20 (from sidewalk or back-of-curb where no sidewalk exists)	N/A
Side	5	10
Side (corner)	10	10
Rear	10	10
Building-to-buffer/RCA	10	10
Parking-to-buffer/RCA	5	5

Utlely Farms PUD

B. Buffers

Perimeter Buffers: as per Sheet C100 of PUD Plan as noted below.

Location	Buffer Provided	UDO Standard	Property Notes
North (Belterra)	10' Type B	10' Type B	
Northern boundary (ex properties)	10' Type B & 20' Type B	20' Type B	Includes Miller, Vitek, & Burroughs property
West (Jordan Pointe & Country Acres Lane)	10' Type B	10' Type B & 20' Type B	Includes Jordan Pointe & Country Acres Lane property
East (ex properties)	10' Type B	20' Type B & 20' Type A	MORR-CZ for the ex Church and Cemetery
Old US 1 Highway	30' Type B	30' Type B	Frontage
New Hill Olive Chapel Road	30' Type B	30' Type B	Frontage

Note: Where perimeter buffers coincide with stream buffers or 100-year floodplain, existing vegetation will be used to meet the buffer width and opacity.

Thoroughfare and Collector Street Buffers

As depicted on the PD Plan, a 30' Type B Buffer shall be established along Old US 1 Highway.

Adjacent property redevelopment buffer:

The buffer can be removed in those locations along the following parcels or portion of parcels if the Wellons property (identified as the "Future Development Area" within the PUD Drawings) is redeveloped in conjunction with the adjacent N/F Andrew Martin (PIN 0710-83-5242), the N/F Ralph Miller property (PIN 0710-83-0487), and/or the N/F Richard Vitek property (PIN 0710-72-4872) as the Wellons property is too narrow to develop independent of such properties.

Section 7: Proposed Architectural Controls

The proposed development offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of Master Subdivision submittal.

Except with respect to the existing historic home, the following conditions shall apply:

Single-family Residential:

- A. Vinyl siding is not permitted; however, vinyl windows, decorative elements, and trim are permitted.
- B. Primary building materials shall be brick, stone, and fiber cement siding.
- C. Windows that are not recessed shall be trimmed. Windows shall vary in size and/or type.
- D. At least four of the following decorative features shall be used on each building: decorative shake, board and batten siding, decorative porch rails and posts, shutters, decorative functional foundation and roof vents, recessed windows, decorative windows, decorative brick or stone, decorative gables, decorative cornices, or metal roofing.
- E. A varied color palette shall be utilized throughout the development to include a minimum of three-color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
- F. The rear and side elevations of the units that can be seen from the right-of-way shall have trim around the windows.
- G. Front facing garage doors must have windows, decorative details, or carriage-style adornments.
- H. Entrances for units with front-facing garages shall have a prominent covered porch/stoop area leading to the front door.
- I. Porches constructed with a dwelling unit shall be a minimum of six feet (6') deep.
- J. The front façade of any front-loaded garage shall not protrude farther than one (1) foot forward of (i) the front façade of the dwelling unit, or (ii) the front porch of the dwelling unit, whichever is closer to the right-of-way from which the dwelling unit is addressed.

Section 8: Parking and Loading

Parking for the development shall meet requirements of UDO Section 8.3.

Section 9: Signage

All signage for this PUD shall comply with Apex UDO Section 8.7, *Signs*, of the Town of Apex UDO.

Section 10: Natural Resource and Environmental Data

A. River Basins and Watershed Protection Overlay Districts

The project is located within the Little Beaver Creek Basin and Cape Fear River Basin. The Town's Watershed Protection Overlay District Map shows the site is within the Primary Watershed Protection Overlay District and contains FEMA designated 100-year floodplain.

B. Resource Conservation Areas (RCA) – Required and Provided

This PUD will be subject to, and meet the requirements of, Section 8.1.2 of the UDO, *Resource Conservation Area* and Section 2.3.4, *Planned Development Districts*. Per UDO Section 7.2.5.B.8, if any mass grading is proposed in the single-family sections of the PUD, the following provision will apply to lot coverage area for single-family: An additional five percent (5%) Resource Conservation Area (RCA) shall be set aside. This requirement is added to the standard RCA percentage requirement found in Sec. 8.1.2.C Size of the RCA.

C. Historic structures

The North Carolina State Historic Preservation Office (SHPO) shows the properties within the new Hill Historic District and the existing Utlely-Horton Farm (Nommie Horton Farm – SHPO ID WA1098). In coordination with Capital Area Preservation, the PUD proposes to retain and preserve the historic home (in its current location) and two barns on the property (one relocation and one preservation).

Section 11: Stormwater Management

Development shall meet all stormwater requirements listed in the UDO, including limiting the post-development stormwater flows to not exceed the pre-development rates. In addition, the post-development peak runoff rate shall be limited to the pre-development peak runoff rate for the 2-year, 10-year, and 25-year, 24-hour storm events. The development shall meet all stormwater management requirements for quality and quantity treatment in accordance with Section 6.1.7 of the UDO, such that post development peak runoff shall not exceed pre-development peak runoff rate for the storm events previously noted.

Section 12: Parks and Recreation

Utlely Farms PUD #22CZ09 was reviewed at the August 31, 2022 PRCR Advisory Commission. Following is the recommendation which was provided:

Staff recommends a fee-in-lieu of dedication for 122 single-family detached units. The current 2022 rate of \$3,753.89 per single family detached unit would be deposited with the Town at the time the first final subdivision plat is approved for the units within each phase.

The language has been added to the PUD Drawing documents as well as the PD Text.

Per Article 14 of the UDO, any credit for greenway construction against fees requires the approval of construction plans, contingent upon approval of an engineer’s estimate of probable cost for greenway construction.

Section 13: Public Facilities

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F)(1)(f) and be designed according to sound engineering standards and shall comply with Town of Apex Sewer and Water Master Plan and the Town of Apex Standards and Specifications. Specifically, road and utility infrastructure shall be as follows:

Utley Farms PUD

- **General Roadway Infrastructure**

Developer shall provide minimum frontage widening based on ½ of the ultimate cross section as shown on the adopted Transportation Plan in effect at time of Master Subdivision Plan submittal. The road network will promote connectivity wherever possible to adjacent neighborhoods and undeveloped property. Further, cul-de-sacs will be avoided except where environmental features make through streets unfeasible. Sidewalks will be provided on both sides of streets internal to the site as required by the UDO.

Refer to sheet C100 of the PUD plan for proposed access points, stub street extensions, and planned vehicular connectivity.

- **Potential Access Points:**

Potential Access Points shown on the Conceptual Site Plan / Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections can only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.

- **Transportation Improvements**

All proposed driveway access and improvements on state-maintained roadways are subject to NCDOT review and approval. Roadway improvements are subject to modification and final approval by the Town of Apex and NCDOT as part of the Master Subdivision Plan and Construction Document approval process. A Traffic Impact Analysis (TIA) has been performed as part of this PUD rezoning consistent with the Town's standards for the same. Based upon the TIA and staff review, the following traffic improvements are proposed for this development:

- a. Old US 1 and New Hill Olive Chapel Road/New-Hill Holleman Road.

- Developer shall construct an eastbound right turn lane with 175 feet of storage and appropriate deceleration length and taper. In the event there is insufficient right-of-way for this off-site transportation improvement, Developer shall use commercially reasonable efforts to acquire the right-of-way through good faith negotiations starting with an offer to the third party land owner(s) based upon an appraised value of the right-of-way to be acquired. In the event such negotiations are unsuccessful and the Town of Apex is unable or unwilling to assist Developer in acquiring the requisite right-of-way, Developer shall pay a fee-in-lieu in the amount of the appraised cost of the required right-of-way plus estimated construction cost of the turn lane.

Utley Farms PUD

b. Old US 1 and Site Driveways

The Developer shall construct two access points on Old US 1 consisting of:

- Site Drive 1: A full-movement stop-controlled public street intersection approximately 1,200 feet west of the intersection of New Hill Olive Chapel Road, including an eastbound left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.
- Site Drive 2: A full-movement stop-controlled public street intersection approximately 1,050 feet west of the intersection of Old US 1 and Site Drive 1, including an eastbound left turn lane on Old US 1 with 50 feet of storage and appropriate deceleration length and taper.

- **Wayfinding Improvements**

Wayfinding measures at the site shall be provided to facilitate the movement of vehicles and pedestrians to and within the development.

- **Water and Sanitary Sewer**

All development within the project shall be served by the Town of Apex water and sanitary sewer facilities. The utility design will be finalized at the time of development plan review and approval upon available facilities adjacent to the site at that time. A conceptual utility plan is included in the PUD plan for reference. All utility infrastructure shall meet current Town Water and Sewer Master Plans.

- **Other Utilities**

Electricity will be provided by Apex Electric. Phone, cable, and gas will be provided by the developer and shall meet the Town of Apex standards as outlined in the UDO.

Section 14: Phasing Plan

This PUD and all improvements required to support the uses contemplated by the PUD, including without limitation infrastructure and public facilities, may be completed in multiple phases, with construction anticipated to begin in 2023. Project phasing will be planned to ensure the points of access, RCA, stormwater controls and other design standards are met in accordance with the UDO. A final phasing plan will be incorporated within the Master Subdivision Plans (MSP) for review and approval through the Technical Review Committee.

Section 15: Consistency with the 2045 Land Use Map

The proposed land use is consistent with the Town of Apex's 2045 Land Use Map.

Section 16: Compliance with the UDO

The development standards adopted for this PUD are in compliance with those set forth in the current version of the Town's Unified Development Ordinance (UDO). Any deviations from UDO requirements have been specifically defined within this document. No deviations from the UDO are currently anticipated with the project zoning documents.

Section 17: Compliance with Comprehensive Transportation Plan and Bicycle Plan

Development plans submitted pursuant to this rezoning shall comply with the adopted Advance Apex: The 2045 Transportation Plan in effect at the time of the development plan submittal, as provided for in the Unified Development Ordinance. Further, development of the property shall be consistent with the Town's adopted Bicycle and Pedestrian System Plan in effect at the time of the development plan submittal.

<REZONING>

UTLEY FARMS PUD

3720 OLD US 1 HIGHWAY
 NEW HILL, NORTH CAROLINA 27562
 PROJECT NUMBER: 210504
 DATE MAY 2, 2022

RIPARIAN BUFFERS AND WETLANDS:
 RIPARIAN BUFFERS AND WETLANDS LOCATED ON SITE BY
 S&EC TO BE CONFIRMED BY THE US ARMY CORPS OF
 ENGINEERS AND TOWN OF APEX.



NC License #P-0673

OWNER

MYRTLE H. HORTON
 3720 OLD US 1 HIGHWAY
 NEW HILL, NC 27562

HELON J. WELLONS/RAY E. JOHNSON
 0 NEW HILL OLIVE CHAPEL ROAD
 NEW HILL, NC 27562

APPLICANT

KB HOME - RALEIGH
 THURM BOWEN / ROMAN ACOSTA
 4506 S. MIAMI BLVD #100
 DURHAM, NC 27703
 P: (919) 768-7976
 www.KBHome.com

ENGINEER/LAND PLANNER

PEAK ENGINEERING & DESIGN, PLLC
 JEFF ROACH, P.E.
 1125 APEX PEAKWAY
 APEX, NC 27502
 P: (919) 439-0100
 www.PeakEngineering.com

SURVEYOR

BATEMAN CIVIL SURVEY COMPANY
 STEVEN CARSON
 2524 RELIANCE AVENUE
 APX, NC 27502
 P: (919) 577-1080
 www.batemancivilsurvey.com

ENVIRONMENTAL CONSULTANT

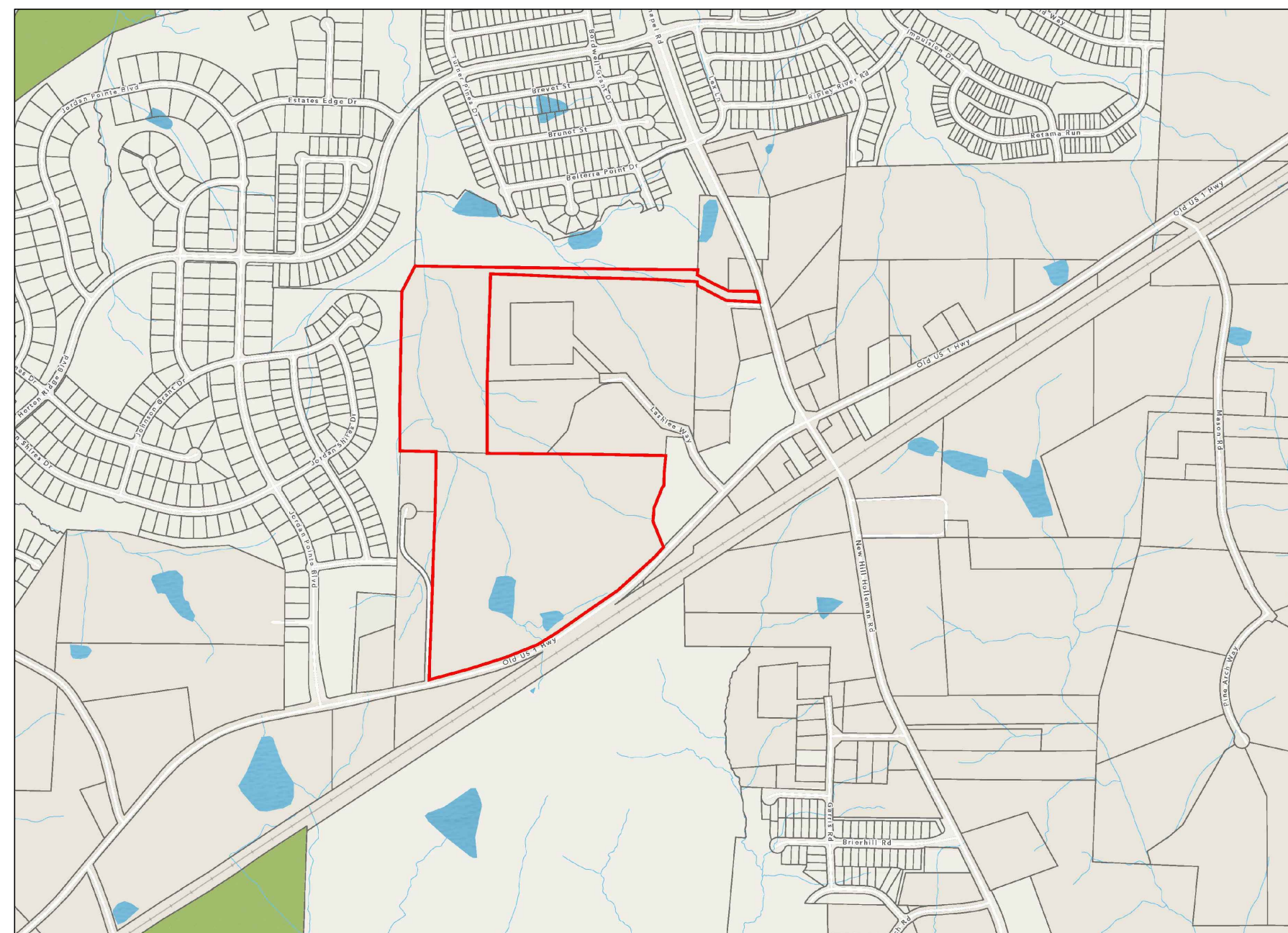
SOIL & ENVIRONMENTAL CONSULTANTS, PA
 STEVEN BALL, RF, PWS
 8412 FALLS OF NEUSE ROAD, SUITE 104
 RALEIGH, NC 27615
 P: (919) 846-5900
 www.SandEC.com

TRAFFIC ENGINEER

RAMEY KEMP & ASSOCIATES, INC.
 RYNAL STEPHENSON, P.E.
 5805 FARINGDON PLACE, SUITE 100
 RALEIGH, NC 27609
 P: (919) 872-5115
 www.RameyKemp.com



PROJECT AERIAL NOT TO SCALE



VICINITY MAP NOT TO SCALE

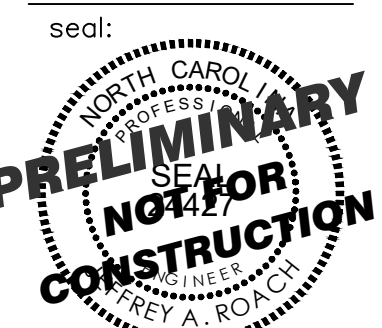
SITE INFORMATION:					
Property Owner	Site Address	PIN	REID	Deeded Acreage	Deed Book/Plat Book
HORTON, MYRTLE H. PO BOX 312 NEW HILL, NC 27562-0312	3720 OLD US 1 HWY	0710-71-4834	0033299 (area included in development)	43.27 acres	DB 7883 PG 737/DB 686 PG 49 DB 422 PG 84/DB 730 PG 122 DB 7556 PG 521/DB 6711 PG 832
WELLONS, HELON J. JOHNSON, RAY E. 400 JOHNSON FARM ROAD NEW HILL, NC 27562-8839	0 NEW HILL OLIVE CHAPEL RD	0710-73-6732	0080810	17.96 acres	DB 02367 PG 0693
Total Deeded Acreage:		61.24 acres			
Total Project Acreage:		56.59 acres			
(area south of Old US 1 Highway centerline is excluded from the N/F Myrtle H. Horton property for this development)					
Township:	Buckhorn Township				
Flood Zone Information:	Firm Panel 3720071000K dated February 2, 2007 does not show the presence of flood zones on the properties.				
Watershed Information:	Primary Watershed Protection Overlay District, Little Beaver Creek Basin, Cape Fear River Basin.				
Historical:	NC SHPO shows the properties within the New Hill Historic District and the existing Utley-Horton Farm (Nommie Horton Farm) - SHPO ID WA1098				
Annexation:	annexation required as the property is located OUTSIDE of the Apex ETJ				
Existing Zoning:	R-40W and R-80W				
Proposed Zoning:	PUD - CZ (Planned Unit Development - Conditional Zoning)				
2045 Land Use Map:	Low Density Residential				
Existing Use:	Single Family Residential and vacant				
Proposed Uses:	Single-family	Park, active			
	Greenway	Park, passive			
	Recreation facility, private	Utility, minor			
	Accessory apartment				
* Homeowners Association covenants shall not restrict the construction of accessory dwelling units					
Maximum Number of Lots:	113 dwelling units				
Proposed Project Density:	2.00 dwelling units/acre or less (< 3.0 units/acre for Low Density Residential districts)				
Lots:	Min Lot Size	Min Lot Width	Max Building Height		
Single-family detached	6,000 SF	50 feet	36 feet		
Building Setbacks (minimum setbacks unless otherwise noted):					
Front:	Residential	Private Recreation Facility			
Front (garage):	10 feet	10 feet			
Rear:	20 feet from sidewalk or back-of-curb	N/A			
Side:	10 feet	10 feet			
Side (Corner Lot):	5 feet	10 feet			
From Buffer or RCA	10 feet	10 feet			
Parking setback to buffer or RCA	10 feet	10 feet			
	5 feet	5 feet			
Parking Requirements:	2 spaces/dwelling unit required				
Single Family Detached:	Single Family parking provided by driveway and garage (min 2 spaces/lot)				
Private Recreation Facility:	Parking shall be based upon size and use within the recreation facility				
Maximum Built Upon Area:	33.96 acres or 60%				
RCA Required:	UDO Section 8.1				
Grading:	Site to be "Mass Graded"				
% of lots graded prior to first plat:	50% (limited by Apex UDO to a maximum acreage for mass grading)				
% of pre-development drainage areas preserved within their natural basins:	maximum of 20 acres of clearing for single-family detached developments				
	90%				

INDEX OF DRAWINGS:

- C000 COVER SHEET
- C002 EXISTING CONDITIONS
- C100 CONCEPTUAL SITE PLAN/UTILITY PLAN
- C120 BUILDING ELEVATIONS

REZONING CASE # 22CZ09
 (SUBMITTED ON MAY 2, 2022)

Project:
UTLEY FARMS PUD
 3720 OLD US 1 HIGHWAY
 BUCKHORN TOWNSHIP
 NEW HILL, NORTH CAROLINA 27562



NO.	DATE	REVISION
1	AUGUST 12, 2022	TOWN OF APEX - 1ST ZONING COMMENTS
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING COMMENTS

title:
PUD COVER SHEET

proj #:
 210504
 date:
 MAY 2, 2022
 dwg by: chkd by:
 FS JR
 scale:
 As Noted
 sheet:
C000
 (PUD PLAN)

PARKS AND RECREATION DATA TABLE:

DATE REVIEWED BY PRCR ADVISORY COMMISSION: **AUGUST 31, 2022**

DATE REVIEWED BY PRCR ADVISORY COMMISSION:	AUGUST 31, 2022
FEES-IN-LIEU:	
SINGLE-FAMILY DETACHED UNITS	\$3,753.89 / DWELLING UNIT x 113 UNITS = \$424,189.57
SINGLE-FAMILY ATTACHED UNITS	\$0.00 / DWELLING UNIT
MULTI-FAMILY UNITS	\$0.00 / DWELLING UNIT

ACRES OF LAND DEDICATION: n/a ACRES
PUBLIC GREENWAY TRAIL CONSTRUCTION: YES NO X
 Following is the recommendation from the PRCR Advisory Commission:
 Staff recommends a fee-in-lieu of dedication for 122 single-family detached units. The current 2022 rate of \$3,753.89 per single family detached unit would be consistent with the Town at the time the first final subdivision plat is approved for the units within each



RIPARIAN BUFFERS AND WETLANDS:
 RIPARIAN BUFFERS AND WETLANDS LOCATED ON SITE BY S&EC TO BE CONFIRMED BY THE US ARMY CORPS OF ENGINEERS AND TOWN OF APEX.

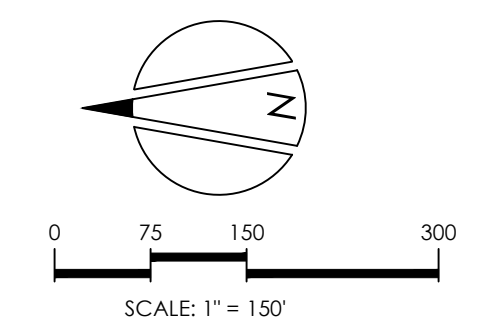
- EXISTING CONDITIONS NOTES:**
- BOUNDARY SURVEY PROVIDED BY BATEMAN CIVIL SURVEY COMPANY).
 - TOPOGRAPHIC INFORMATION FROM WAKE COUNTY GIS AND SURVEYOR DATA.
 - NO SLOPES EQUAL TO OR GREATER THAN 3:1 FOUND ON THE SITE.
 - HISTORIC INVENTORY SITES OR NATURAL INVENTORY AREAS LOCATED ON OR WITHIN 100' OF THIS PROPERTY AS NOTED WITHIN THE SITE DATA TABLE.
 - NO GREENWAY OR TRAILS ARE LOCATED ON THIS SITE. GREENWAY OR TRAILS MAY BE PLANNED FOR THIS SITE AS PER THE GREENWAY MASTER PLAN.
 - TREE SURVEY INFORMATION PROVIDED BY S&EC, INC.
 - 100-YR FLOOD PLAIN IS NOT LOCATED ON OR WITHIN 100' OF THIS PROPERTY.
 - PROPERTIES ARE LOCATED WITHIN THE PRIMARY WATERSHED PROTECTION OVERLAY DISTRICT, LITTLE BEAVER CREEK BASIN, AND THE CAPE FEAR RIVER BASIN.

LEGEND:

- FUTURE DEVELOPMENT
- SINGLE FAMILY - DETACHED
- BUFFERS/RCA
- HISTORIC PRESERVATION AREA
- PROJECT PERIMETER BOUNDARY
- PROPOSED WATER CONNECTIONS
- PROPOSED SEWER CONNECTIONS
- POTENTIAL ACCESS POINTS

PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY

- SITE AND UTILITY NOTES:**
- DEVELOPMENT ACCESS AND STUB STREET LOCATIONS SHALL BE FINALIZED AT MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - FINAL RESOURCE CONSERVATION AREA (RCA), OPEN SPACE, AND PLAY LAWN LOCATIONS SHALL BE COORDINATED WITH STAFF AND BUILDER DURING MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - ALL ZONING PLAN SHEETS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DESIGN COMPONENTS ARE DETERMINED AT MASTER SUBDIVISION PLAN.
 - REFER TO PD TEXT DOCUMENTS FOR A LIST OF ALLOWABLE USES, ZONING CONDITIONS, AND OTHER DESIGN STANDARDS FOR THE DEVELOPMENT.
 - ENVIRONMENTAL FEATURES ARE SUBJECT TO FINAL REVIEW CONCURRENCE WITH VARIOUS REGULATING AGENCIES.
 - PUBLIC PEDESTRIAN AND VEHICULAR ACCESS IS SHOWN FOR CONCEPTUAL PURPOSES AND ARE SUBJECT TO REVISIONS DURING THE MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
 - ALL SITE ELEMENTS ARE REQUIRED TO MEET OR EXCEED TOWN OF APEX, NCDOT, OR OTHER REVIEW AUTHORITY STANDARD DESIGN SPECIFICATIONS.
 - PROJECT WILL COMPLY WITH ADOPTED TOWN MASTER PLANS INCLUDING TRANSPORTATION, WATER, SEWER, AND GREENWAYS.
 - THE PROJECT IS REQUESTING FULL TOWN SERVICES, INCLUDING BUT NOT LIMITED TO WATER, SEWER AND ELECTRICITY.
 - THE PROJECT WILL NOT UTILIZE PRIVATE SEWAGE DISPOSAL.



1 EXISTING CONDITIONS PLAN
 C001 SCALE: 1"=150'

NC License #P-0673

project:
UTLEY FARMS PUD
3720 OLD US 1 HIGHWAY
BUCKHORN TOWNSHIP
NEW HILL, NORTH CAROLINA 27562

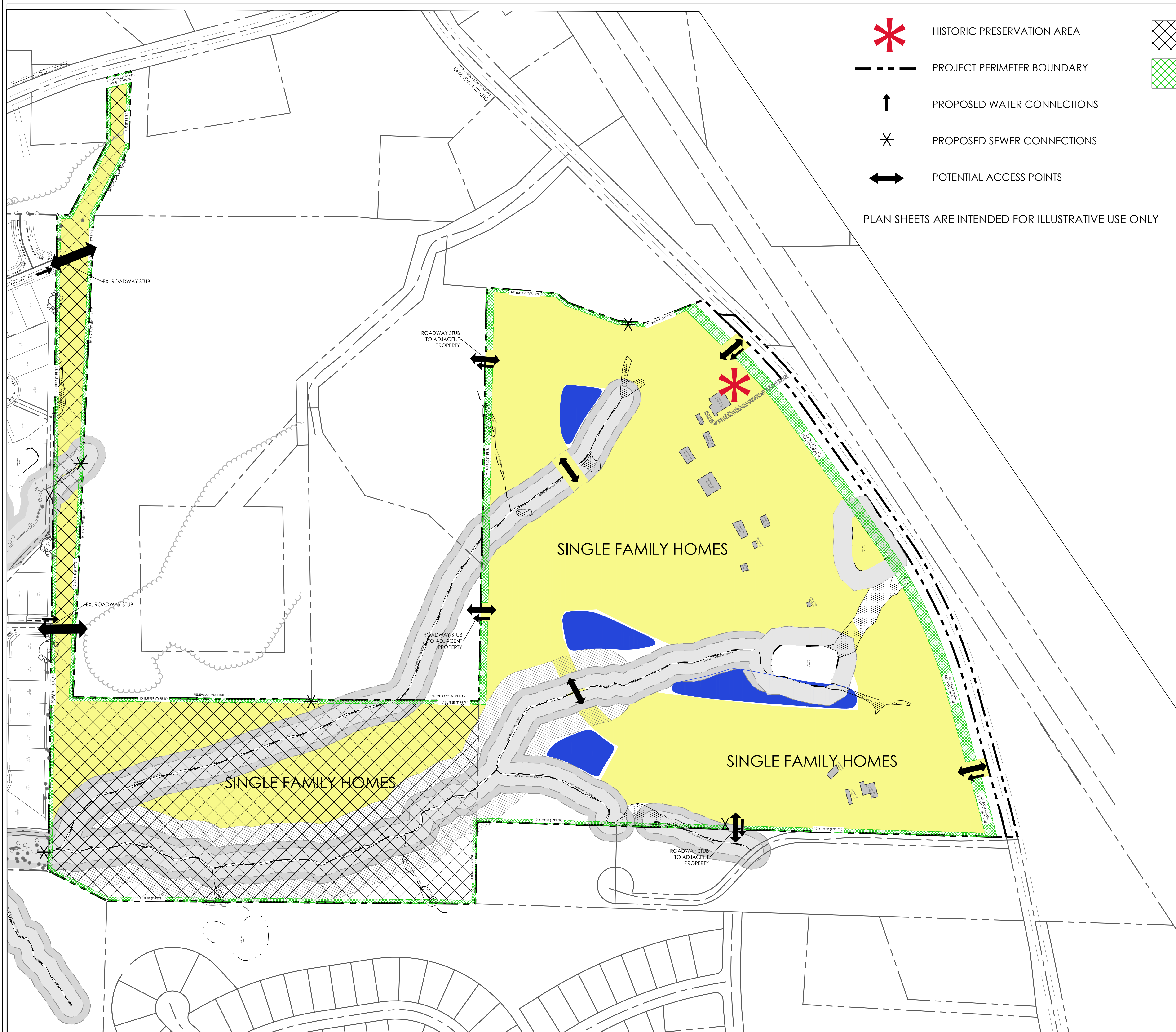







NO.	DATE	REVISION	BY
1	AUGUST 12, 2022	TOWN OF APEX - 1ST ZONING COMMENTS	JR
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING COMMENTS	JR

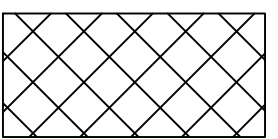

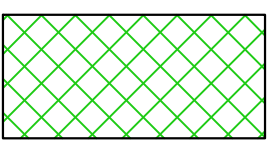
title:
 EXISTING CONDITIONS PLAN

proj #:
 210504
 date:
 MAY 2, 2022
 dwg by: chkd by:
 FS JR
 scale:
 As Noted

sheet:
C001
 (PUD PLAN)



-  HISTORIC PRESERVATION AREA
-  PROJECT PERIMETER BOUNDARY
-  PROPOSED WATER CONNECTIONS
-  PROPOSED SEWER CONNECTIONS
-  POTENTIAL ACCESS POINTS

-  FUTURE DEVELOPMENT
-  SINGLE FAMILY - DETACHED
-  BUFFERS/RCA

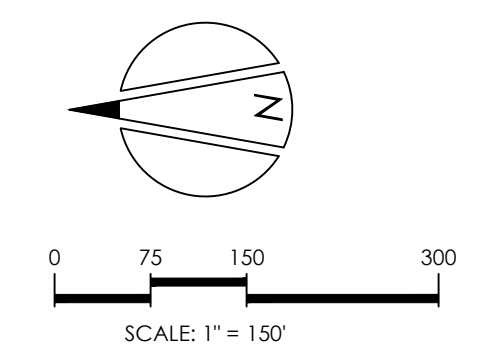
PLAN SHEETS ARE INTENDED FOR ILLUSTRATIVE USE ONLY

SITE AND UTILITY NOTES:

1. DEVELOPMENT ACCESS AND STUB STREET LOCATIONS SHALL BE FINALIZED AT MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
2. FINAL RESOURCE CONSERVATION AREA (RCA), OPEN SPACE, AND PLAY LAWN LOCATIONS SHALL BE COORDINATED WITH STAFF AND BUILDER DURING MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
3. ALL ZONING PLAN SHEETS ARE PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DESIGN COMPONENTS ARE DETERMINED AT MASTER SUBDIVISION PLAN.
4. REFER TO PD TEXT DOCUMENTS FOR A LIST OF ALLOWABLE USES, ZONING CONDITIONS, AND OTHER DESIGN STANDARDS FOR THE DEVELOPMENT.
5. ENVIRONMENTAL FEATURES ARE SUBJECT TO FINAL REVIEW CONCURRENCE WITH VARIOUS REGULATING AGENCIES.
6. PUBLIC PEDESTRIAN AND VEHICULAR ACCESS IS SHOWN FOR CONCEPTUAL PURPOSES AND ARE SUBJECT TO REVISIONS DURING THE MASTER SUBDIVISION PLAN DESIGN AND APPROVAL.
7. ALL SITE ELEMENTS ARE REQUIRED TO MEET OR EXCEED TOWN OF APEX, NCDOT, OR OTHER REVIEW AUTHORITY STANDARD DESIGN SPECIFICATIONS.
8. PROJECT WILL COMPLY WITH ADOPTED TOWN MASTER PLANS INCLUDING TRANSPORTATION, WATER, SEWER, AND GREENWAYS.
9. THE PROJECT IS REQUESTING FULL TOWN SERVICES, INCLUDING BUT NOT LIMITED TO WATER, SEWER AND ELECTRICITY.
10. THE PROJECT WILL NOT UTILIZE PRIVATE SEWAGE DISPOSAL.
11. NO SITE DEVELOPMENT ACTIVITY INCLUDING, BUT NOT LIMITED TO, TESTING, CLEARING, INSTALLATION OF S&E MEASURES, OR GRADING SHALL OCCUR UNTIL REQUIRED TREE PROTECTION FENCING HAS BEEN INSTALLED AND INSPECTED. A TREE PROTECTION FENCING INSTALLATION PERMIT MAY BE OBTAINED AT THE PLANNING DEPARTMENT OR ONLINE AT [HTTP://WWW.APEXNC.ORG/215/APPLICATIONS-SCHEDULES](http://www.apexnc.org/215/APPLICATIONS-SCHEDULES).
12. TREE PROTECTION FENCING MUST BE PLACED:
 - a. ONE FOOT AWAY FROM ANY SAVED TREE FOR EACH INCH OF DIAMETER AT BREAST HEIGHT;
 - b. ALONG THE OUTSIDE LINE OF THE 100-YEAR FLOODPLAIN AND THE OUTSIDE EDGE OF ANY RIPARIAN BUFFER; AND
 - c. AT LEAST 10 FEET AWAY FROM ANY OTHER DESIGNATED RCA SUCH AS, BUT NOT LIMITED TO, HISTORIC BUILDINGS AND STRUCTURES, WETLANDS, AND PONDS.
13. ADDITIONAL TREE PROTECTION FENCING MAY BE REQUIRED IN OTHER LOCATIONS CLOSE TO CONSTRUCTION ACTIVITY WHERE IT IS DEEMED NECESSARY BY THE ZONING ENFORCEMENT OFFICER. SUCH AREAS MAY INCLUDE, BUT ARE NOT LIMITED TO, COMMON PROPERTY LINES OR NEAR PUBLIC AREAS (SIDEWALKS, ETC.).

POTENTIAL ACCESS POINTS:

Potential Access Points shown on the Conceptual Site Plan / Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections can only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.



**CONCEPTUAL SITE PLAN/
CONCEPTUAL UTILITY PLAN**
SCALE: 1"=150'



NC License #P-0673

Project:
UTLEY FARMS PUD
3720 OLD US 1 HIGHWAY
BUCKHORN TOWNSHIP
NEW HILL, NORTH CAROLINA 27562



NO.	DATE	REVISION	BY
1	AUGUST 12, 2022	TOWN OF APEX - 1ST ZONING COMMENTS	JR
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING COMMENTS	JR

title:
**CONCEPTUAL SITE PLAN/
UTILITY PLAN**

proj #:
210504
date:
MAY 2, 2022
dwg by: **chkd by: JR**
scale:
As Noted

sheet:
C100
(PUD PLAN)



SINGLE FAMILY DETACHED
MODEL 1455



SINGLE FAMILY DETACHED
MODEL 1582



SINGLE FAMILY DETACHED
MODEL 2177



SINGLE FAMILY DETACHED
MODEL 2160 & 2338



SINGLE FAMILY DETACHED
MODEL 2539



SINGLE FAMILY DETACHED
MODEL 2723



SINGLE FAMILY DETACHED
MODEL 3174

TYPICAL BUILDING ELEVATIONS. WINDOW CONFIGURATIONS, DOOR STYLES, COLORS, AND OTHER ARCHITECTURAL STANDARDS WILL VARY FROM HOME-TO-HOME.

ELEVATIONS ARE FOR ILLUSTRATIVE PURPOSES ONLY. CONDITIONS ARE INCLUDED WITHIN THE ZONING PD TEXT DOCUMENT.

1 CONCEPTUAL BUILDING ELEVATIONS
SCALE: 1"=N/A



NO.	DATE	REVISION	BY
1	AUGUST 15, 2022	TOWN OF APEX - 1ST ZONING CONCEPTS	JR
2	SEPTEMBER 9, 2022	TOWN OF APEX - 2ND ZONING CONCEPTS	JR

title:
CONCEPTUAL BUILDING ELEVATIONS

proj #:
210504
date:
MAY 2, 2022
dwg by: chkd by:
FS JR
scale:
As Noted

sheet:
C120
(PUD PLAN)