

December 11, 2017

Mr. Ben Hitchings
Director of Planning and Development Services
Town of Chapel Hill
405 Martin Luther King Junior Boulevard
Chapel Hill, North Carolina 27514

Re: Park Apartments
Road Design Modifications
WDF-17000

Mr. Hitchings:

The design modifications described below for the Elliot Road Extension through the Park Apartments property, as well as the roadway sections for the section for Ephesus Church Road west of the proposed roundabout, have been reviewed and the traffic study revised by the Town's Roads Team. This letter and exhibit are provided to formally submit the modification requests for approval by the necessary Town boards and finally by the Town Council.

Elliot Road Extension

Elliot Road divides the current Park Apartment development into two pieces. The 25% plans prepared by Kimley-Horn & Associates for the Town include a continuous center median from Fordham Boulevard to Ephesus Church Road. Access to the remaining parcels on either side is provided by single right-in / right-out accesses. This design creates illogical access routes and does not provide acceptable access for the proposed high density residential development on this project.

The attached exhibit shows a comparison of the approved 25% plan and the proposed revision to allow full access to the property on both sides of Elliot Road Extension. The revised design was studied by Craig Scheffler, P.E., PTOE with HNTB North Carolina, P.C., the Town's traffic consultant. Mr. Scheffler's report states that they found that "...the four intersections in the vicinity of the Park at Chapel Hill Redevelopment are expected to operate acceptably in the 2030 Build and 2030 Build+Mitigation Scenarios."

We request that the change of the access to the sites to a full access intersection be approved by Town Council and that Kimley-Horn, the Town's design consultant be released to progress there design from 25% to 70% and incorporate this revision in their 70% drawings.

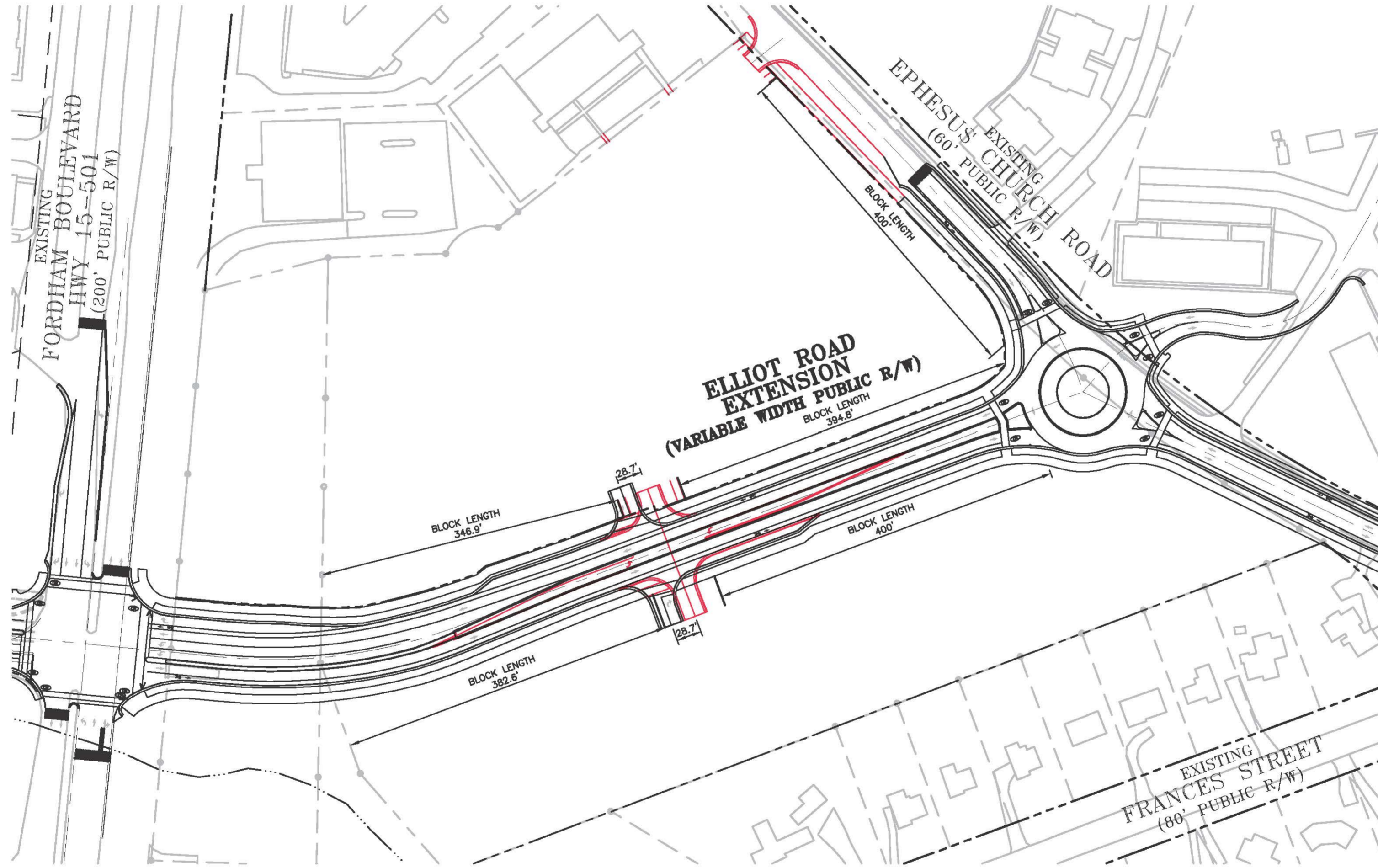
In addition, we request that Town Council instruct the appropriate Town staff to take the steps necessary to revise the speed limit for both Elliot Road Extension and Ephesus Church Road from 35-mph to 25-mph.

Sincerely,

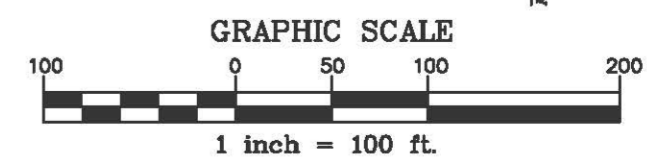


James G. Babb, III

X:\Projects\WDF\WDF-17000\Land\Exhibits\2017-11-07_Street_Layout\WDF17000-E2.dwg, 11/9/2017 9:13:54 AM, Spaulding,Luke



DESIGN OVERLAY



THE PARK AT CHAPEL HILL REDEVELOPMENT CHAPEL HILL, NORTH CAROLINA

INTERNAL STREET EXHIBIT

DEVELOPER:
BR CHAPEL HILL, LLC
C/O WEATHERSPOON & VOLTZ
3605 GLENWOOD AVENUE, SUITE 480
RALEIGH, NC 27612



THE JOHN R. MCADAMS
COMPANY, INC.
2905 Meridian Parkway
Durham, North Carolina 27713
License No.: C-0293
(800) 733-5646 • McAdamsCo.com

PROJECT NO.	WDF-17000
FILENAME:	WDF17000-E2
CHECKED BY:	-
DRAWN BY:	ZNB
SCALE:	1"=50'
DATE:	11-09-2017





MEMORANDUM

To: Chris Roberts, PE- Town of Chapel Hill

From: Chad Beck, PE *Chad Beck*
Kimley-Horn and Associates, Inc.

Date: January 17, 2018

Subject: Developer Requested Revisions to Elliott Road Design

Kimley-Horn has reviewed the provided letter from James Babbs, dated December 11, 2017, "The Park at Chapel Hill: Redevelopment" figure dated November 9, 2017, and "Ephesus Church Road-Fordham Boulevard (E-F) District TIA- Park at Chapel Hill Development Transportation Adequacy Summary" dated August 24, 2017 as prepared by HNTB. We offer the following guidance.

Driveway Location Revision

Based on the provided figure it appears the developer is requesting to move the proposed driveways accessing Elliott Road between Fordham Blvd. and Ephesus Church Road approximately 29 feet to the east. In addition, it is requested a median break be provided at the proposed driveway location to create a full movement intersection.

In an email supplementing Transportation Adequacy Summary, HNTB stated that the proposed east and westbound left turn lanes on Elliott Road at the proposed driveway will require 100 feet of full storage. HNTB indicated that the 100 feet of storage was preliminary and additional analysis is required to determine the actual queue lengths at the intersection. It is noted that the full storage length may require extension based on the final queue lengths, as NCDOT typically requires an additional 50 feet to account for deceleration. NCDOT would also need to provide final approval of the design modifications.

Based on the provided information, we recommend approving Mr. Babb's requested modifications to the driveway. It is noted that 100 feet of full left turn lane storage can be provided without modifications to the current 25% design beyond what is shown on the figure provided by McAdams. A storage of 150 feet can be accommodated by reducing the turn lane taper lengths from 100 feet to 75 feet. Required storage of more than 150 feet would require modifications to the roadway cross section and right of way width.

Based on an assumed storage of 100 feet and taper lengths of 100 feet, it is assumed the additional construction costs associated with this requested modification is approximately \$38,000. This is a preliminary estimate based on additional areas of pavement.

Speed Limit Reduction

Based on the provided analysis, we do not object to reducing the posted limit from 35 MPH to 25 MPH along the stretch of Elliott Road from Fordham Blvd. to Ephesus Church Road. NCDOT would need to provide final approval of the speed reduction, as it is anticipated this will be NCDOT maintained in the future. No specific geometric revisions to the design were requested because of the speed limit reduction. If the developer has specific design revisions, a formal request needs to be made prior to proceeding with the design so that the revisions may be reviewed by the project design team.

Transportation Adequacy Summary Recommendations

It is noted that the recommended northbound Fordham Blvd. right turn lane at Elliott Road would most likely impact and require extension of the existing culvert under Fordham Blvd.

As noted above, additional information and discussion is needed regarding the laneage along Elliott Road Extension at proposed site driveways. This is particularly true given that westbound traffic will not be metered by the nearby roundabout, which could necessitate greater eastbound left turn storage at the proposed site drive.

**TECHNICAL
 MEMORANDUM - DRAFT**



To
 Kumar Neppalli
 Traffic Engineering Manager
 Town of Chapel Hill

From
 Craig Scheffler, P.E., PTOE
 HNTB North Carolina, P.C.

Cc
 HNTB Project File: 69237

Subject
 Ephesus Church Road – Fordham
 Boulevard (E-F) District TIA –
 Park at Chapel Hill Development –
 Transportation Adequacy Summary

Date
 08/24/17

Per Town of Chapel Hill staff request related to the *Ephesus Church Road-Fordham Boulevard Area Planning District – Transportation Impact Analysis* (E-F TIA), the following information represents a summary of transportation impacts and recommendations specific to the proposed Park at Chapel Hill Apartments redevelopment project, one of the developments within the E-F District studied in the 2030 “Build” Scenario of the E-F TIA. This technical memorandum represents an assessment of current design plans to evaluate adequate intersection traffic operations adjacent to the proposed site and overall access/traffic circulation details using results and recommendations from the E-F TIA documentation for the 2030 “Build” and 2030 “Build+Mitigation” Scenarios.

1. Site Trip Generation

Based on information provided by the Applicant and a review of existing conditions on the proposed redevelopment site, a trip generation analysis was conducted using *Institute of Transportation Engineers (ITE) Trip Generation Manual, Volume 9* data. This information was entered into the TransModeler microsimulation software tool utilized in the E-F TIA study to generate trips for the proposed site redevelopment and to distribute and assign traffic to/from the site based on future traffic volume projections for the overall E-F TIA study area. **Table 1** summarizes the trip generation details. A nominal 10 percent reduction in vehicular trips was assumed for transit/pedestrian/bicycle trips, based on comparisons of 2030 future study area transit trip growth between the E-F TIA Build and No-Build Scenarios and to assume conservative levels of vehicular trip-making in analyses of roadway operations.

Table 1. Park at Chapel Hill Redevelopment ITE Trip Generation Summary

Land Use	ITE LUC	Variable	Daily			AM Peak			Noon Peak			PM Peak		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
New Apts	220	700 DU	2183	2183	4366	69	278	347	45	84	129	109	59	168
Existing Apts	220	198 DU	-662	-662	-1324	-20	-81	-101	-9	-24	-33	-15	-15	-30
Transit/Ped/Bike Trips			-152	-152	-304	-5	-20	-25	-4	-6	-10	-9	-4	-14
NET VEHICULAR TRIPS			1521	1521	3042	49	197	246	36	60	96	94	44	138

Table 2. 2030 Peak Hour Intersection Capacity Analysis Results

Intersection Name	LOS & Average Control Delay (sec/veh)					
	2030 Build + Mitigation Scenario			2030 Build Scenario		
	AM	Noon	PM	AM	Noon	PM
US 15-501 (Fordham Blvd) & Elliott Rd / Elliott Rd Extension	C/22.5	D/36.3	C/28.1	C/23.2	D/36.7	C/30.5
Ephesus Church Rd & Park at Chapel Hill Driveway	A/6.7	A/4.8	A/6.3	A/6.7	A/4.9	A/7.7
Ephesus Church Rd & Elliott Road Extension (Roundabout)	A/5.3	A/4.5	A/5.9	A/5.2	A/4.4	A/5.6
Elliott Rd Extension & Park at Chapel Hill Access Driveways	A/9.4	A/5.5	A/7.5	A/9.3	A/5.2	A/6.9

4. **Conclusions and Recommendations**

Per recommendations from the *Draft E-F District TIA Technical Memorandum #2 – 2030 Future Year Analysis*, the roadway laneage recommendations for the intersections in the vicinity of the Park at Chapel Hill redevelopment as shown in **Exhibit 2** below (taken from Figure 16C of the Technical Memorandum) are anticipated to provide adequate peak hour traffic operations in the 2030 analysis year. It is also recommended that the proposed roadway conceptual design details included in **Exhibit 1**, as shown previously, be completed as part of the redevelopment project. Additional mitigation improvements shown in **Exhibit 2** below (in blue) are necessary to mitigate potential peak hour operations and queuing issues in the vicinity of the proposed redevelopment, and were developed to account for the overall impacts of background traffic growth and E-F District development-related growth in the broader E-F TIA study area.

Exhibit 2.

Recommended Laneage and Traffic Control in Vicinity of the Park at Chapel Hill Redevelopment

