



TOWN OF CHAPEL HILL

Planning and Sustainability

Planning: 919-969-5066 [planning@townofchapelhill.org](mailto:planning@townofchapelhill.org)  
Form Code: [www.townofchapelhill.org/ephesusfordham](http://www.townofchapelhill.org/ephesusfordham)

Ephesus/Fordham Form District Permit Application

A Form Permit is required for all land distributing activity, as defined in LUMO 3.11.4.6.C.1.a, and any changes of use or change of type of occupancy of any land or structure as defined in LUMO 3.11.4.7.C.1.b, within the Ephesus/Fordham Form District as defined in LUMO 3.11.2. **Projects with multiple buildings must complete pages 3-4 for each building.**

Parcel Identifier Number (PIN): 9799366631; 9799461235; 9799367662 Date: 12-1-2016

Section A: Project Information

Project Name: Hillstone Chapel Hill  
Property Address: 1730 Fordham Blvd., Chapel Hill, NC Zip Code: 27514  
Project Description: Construction of two (2) Apartment buildings & parking deck (323 units)

Section B: Applicant, Owner and/or Contract Purchaser Information

Applicant Information (to whom correspondence will be mailed)

Name: Pennoni - Attn: Tim Smith  
Address: 401 Providence Road, Suite 200  
City: Chapel Hill State: NC Zip Code: 27514  
Phone: 919-230-9209 Email: tsmith@pennoni.com

The undersigned applicant hereby certifies that, to the best of his knowledge and belief, all information supplied with this application is true and accurate.

Signature:  Date: 12-7-16

Owner/Contract Purchaser Information:

Owner  Contract Purchaser

Name: Leon Capital Group Attn: Brian Nicholson  
Address: 5970 Fairview Road SUITE 450  
City: Charlotte State: NC Zip Code: 28210  
Phone: 704-956-3995 Email: bnicholson@leoncapitalgroup.com

The undersigned hereby certifies that, to the best of their knowledge and belief, all information supplied with this application is true and accurate. The undersigned further authorizes Town staff to enter the property(ies) for the purposes of conducting a site visit(s) to evaluate existing site conditions.

Signature:  Date: 12/5/16

**NOTE All fields in sections C - G refer to this specific Development application submittal unless otherwise noted. All fields must be filled. Enter NA for information that is not applicable to this Development application submittal.**

**Section C: Project Summary**

**Types of work proposed: (select all that apply)**

- Addition   
 Change of Use   
 Demolition   
 New Building   
 Parking  
 Street / ROW   
 Replace Building   
 Utilities   
 Other:

Zoning District	E/F (WX7 and WX5)	Net Land Area (Sq. Ft.): Requirement 3.11.2.3&4.1	286,102
Proposed Land Disturbance (Sq. Ft.):	283,140	Gross Land Area (Sq. Ft.): Refer to Standard 3.11.2.7.C	314,712
Project Limits (Sq. Ft.)	286,102	Proportion of residential floor area to non-residential floor area	100 % TO 0 %

Requirement: 3.11.2.3&4-1 Standard: 3.11.2.7.	Gross Land Area (Sq. Ft.)	Proportion of floor area	Ratio	Space Required	Space Provided	Sq. Ft. Payment in Lieu	PIL Note
Outdoor Amenity Space (non-residential)	-	X	-	X .20	= -	-	90% max
Active Recreation Space (residential)	314,712	X	100%	X .08/ .12	= 37,766	- 40,422	= 18,883 50% min

	Existing (pre- construction)	Proposed Demolition	Proposed New	Net Total, As Proposed
<b>Floor Area, Dwelling Units</b>				
Hospitality (Sq. Ft.)	-	-	-	-
Office (Sq. Ft.)	-	-	-	-
Retail (Sq. Ft.)	27,400	27,400	-	-
Residential (Sq. Ft.)	-	-	388,008	388,008
Institutional/Civic (Sq. Ft.)	-	-	-	-
Total Floor area (Sq. Ft.)	27,400	27,400	388,008	388,008
Total residential units	-	-	323	323
Affordable housing units	-	-	-	-
<b>Site Data</b>				
Number of Buildings	1	1	2	2
Vehicular parking	347	347	455	455
Bicycle parking	0	0	162	162
Impervious surface area (Sq. Ft.)	168,463	168,463	193,246	193,246
Impervious Surface (% of Net Land Area)	58.88	58.88	67.54	67.54
<b>Site Improvements</b>				
Public Streets (Linear Ft.)	950	0	975	1925
Bike facilities (Linear Ft.)	0	0	975	975
Sidewalk (Linear Ft.)	0	0	0	1320
Greenways (Linear Ft.)	0	0	605	605

**Submit a copy of pages 3-4 / Sections D-F for each building proposed.**

**Building Information**

<b>Building Address*</b>	Building 1 1730 Fordham Blvd.	<b>Floor Area (sf)</b>	280,300	<b>Height (ft. &amp; # of stories)</b> Requirement: 3.11.2.3&4.3 Standard: 3.11.2.7.1	5
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\*Established Orange County Emergency-911 addresses. Contact the Planning office to establish an address.

**Section D. Lot, Building Placement, Streetscape**

**Block Length:** 400' maximum. **Requirement:** 3.11.2.3&4.1 **Standards:** 3.11.2.7.B.2. Requirement applies to Type A/B/C frontages. Measured from ROW line to ROW line, or property line where not abutted by ROW.

**Pass Through:** 200' maximum spacing. **Requirement:** 3.11.2.3&4.1 **Standards:** 3.11.2.7.G.5. Requirement applies to each building face, measured from end of façade to end of façade.

**Setbacks & Build-To-Zone (BTZ) Requirements:** 3.11.2.3&4.2-3 **Standards:** 3.11.2.7.F-G. Setback and build to zone requirement applies to building face for Type A/B Frontages. Build-to-zone requirement is expressed as a percentage of lot width or project boundary width if project boundary is less than the lot width.

**Streetscape Requirements:** 3.11.2.5. Min average spacing for Canopy Tree Plantings is 40 ft. on center

**Parking Location:** 3.11.2.5 Except in vehicular way or below grade, parking must be 30 ft. behind facade for Type A-B.

Setback / Frontage Type	Setback (min/max)	BTZ	Ped Way Sidewalk	Ped Way Tree zone	Surface Parking	Hedge Zone	Street Sidewalk	Street Tree Zone
Front: Type A Frontage	0 ft. / 10 ft.	.80 min.	10 ft. min.	8 ft. min.	Surface parking not permitted on Type A			
Front: Type B Frontage	0 ft. / 85 ft.	.60 min.	8 ft. min.	8 ft. min.	60 ft. max.	5 ft. min.	6 ft. min.	8 ft. min.
Side/Rear: Type C Frontage	5 ft. / NA	NA	6 ft. min.	8 ft. min.	NA	5 ft. min.	6 ft. min.	8 ft. min.
Side/Rear: No Frontage	0 or 5 ft. / NA	NA	NA	NA	NA	NA	NA	NA

Site / Streetscape Element widths		Frontage 1	Frontage 2	Frontage 3	Frontage 4
Direction / Street Name		Fordham Ser. Rd	Collector Street	Collector Wrap on Ser. Road	
Setback / Frontage Type*		5/85 B	0/10 A	0/10 A	
Frontage Width (property line to line)		532 LF	560 LF	75 LF	
<b>Lot</b>	Block Length	532'	560'	75'	
	Pass-Thru Distance	400'	369'	-	
<b>Placement</b>	% of façade in BTZ	75%	65%	-	
	Front Setback	5'- 85'	10'	10'	
<b>Pedestrian Way</b>	Sidewalk	8'	10'	10'	
	Tree Planting Zone	8'	8'	8'	
<b>Vehicular Way</b>	Parking Area	-	-	-	
	Hedge or Wall (36" min)	-	-	-	
<b>Streetscape</b>	Sidewalk	8'	10'	10'	
	Tree Planting Zone	8'	8'	8'	

\*List "wrapped" or corner lot application of frontages separately from the applicable base frontage according to Section 3.11.2.D.4

**Section E. Mass, Form**

**Step-back:** 10' minimum step-back required for Type A/B Frontages where building is placed in first ten feet of the build-to-zone. **Requirement:** 3.11.2.3&4.3 Requirement does not apply to building elements that protrude from the building face as defined in section 3.11.2.6.A-F which are permitted to encroach into front setbacks and step-back zone.

**Pedestrian Access.** Required on Type A/B Frontages. 100' maximum spacing. **Requirement 3.11.2.3-4 Standard: 3.11.2.7.O**

**Building Form: Design and Transparency Requirements: 3.11.3&4.4 Standards: 3.11.2.7.K-N standards apply to street facing facades.**

	Ground Story Ceiling height	Upper Story Height	Ground Floor Elevation (min)	Ground Floor Elevation (max)	Ground Story Transparency	Upper Story Transparency	Blank Wall Area (Lf)
<b>Residential</b>	9 ft. min.	9 ft. min.	2 ft.	4 ft.	.20 min.	.20 min.	50 ft.
<b>Non-Residential</b>	13 ft. min.	9 ft. min.	0 ft.	2 ft.	.60 min.	.20 min.	30 ft.

**BUILDING 1**

Mass / Form Requirements	Frontage 1	Frontage 2	Frontage 3	Frontage 4	
Direction / Street Name	Fordham Serv. Rd	Collector Street	Collector Wrap on Service Road		
Ground Story Use (Res or Non-Res)	Residential	Residential	Residential		
Ground Story Ceiling Height (ft.)					
Upper Story Ceiling Height (ft.)					
Ground Floor Elevation min (ft.)	2'	1'	2'		
Ground Floor Elevation max (ft.)	19'	4'	5'		
Ground Story Transparency (%)					
Upper Story Transparency (%)					
Blank Wall Area max (linear ft.)					
Entrance Spacing max (ft.)	100'	100'	50'		

**Section F. Permitted Uses**

Proposed Use(s) 3.11.3.4	Use Key: P = Permitted, S = Special	Square footage	Floors	
Apartments #1	P	280,300	5	

**Submit a copy of pages 3-4 / Sections D-F for each building proposed.**

**Building Information**

<b>Building Address*</b>	Building 2 1715 Legion Road	<b>Floor Area (sf)</b>	107,708	<b>Height (ft. &amp; # of stories)</b> Requirement: 3.11.2.3&4.3 Standard: 3.11.2.7.I	4
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\*Established Orange County Emergency-911 addresses. Contact the Planning office to establish an address.

**Section D. Lot, Building Placement, Streetscape**

**Block Length:** 400' maximum. **Requirement:** 3.11.2.3&4.1 **Standards:** 3.11.2.7.B.2. Requirement applies to Type A/B/C frontages. Measured from ROW line to ROW line, or property line where not abutted by ROW.

**Pass Through:** 200' maximum spacing. **Requirement:** 3.11.2.3&4.1 **Standards:** 3.11.2.7.G.5. Requirement applies to each building face, measured from end of façade to end of façade.

**Setbacks & Build-To-Zone (BTZ) Requirements:** 3.11.2.3&4.2-3 **Standards:** 3.11.2.7.F-G. Setback and build to zone requirement applies to building face for Type A/B Frontages. Build-to-zone requirement is expressed as a percentage of lot width or project boundary width if project boundary is less than the lot width.

**Streetscape Requirements:** 3.11.2.5. Min average spacing for Canopy Tree Plantings is 40 ft. on center

**Parking Location:** 3.11.2.5 Except in vehicular way or below grade, parking must be 30 ft. behind facade for Type A-B.

Setback / Frontage Type	Setback (min/max)	BTZ	Ped Way Sidewalk	Ped Way Tree zone	Surface Parking	Hedge Zone	Street Sidewalk	Street Tree Zone
Front: Type A Frontage	0 ft. / 10 ft.	.80 min.	10 ft. min.	8 ft. min.	Surface parking not permitted on Type A			
Front: Type B Frontage	0 ft. / 85 ft.	.60 min.	8 ft. min.	8 ft. min.	60 ft. max.	5 ft. min.	6 ft. min.	8 ft. min.
Side/Rear: Type C Frontage	5 ft. / NA	NA	6 ft. min.	8 ft. min.	NA	5 ft. min.	6 ft. min.	8 ft. min.
Side/Rear: No Frontage	0 or 5 ft. / NA	NA	NA	NA	NA	NA	NA	NA

Site / Streetscape Element widths		Frontage 1	Frontage 2	Frontage 3	Frontage 4
Direction / Street Name		Legion Road	Collector St.	Collector Wrap on Legion Road	
Setback / Frontage Type*		5/85 B	0/10 A	0/10 A	
Frontage Width (property line to line)		27 LF	387 LF	75 LF	
Lot	Block Length	271'	387'	75'	
	Pass-Thru Distance	228'	227'	-	
Placement	% of façade in BTZ	84%	58%		
	Front Setback	5'-85'	10'	10'	
Pedestrian Way	Sidewalk	8'	10'	10'	
	Tree Planting Zone	8'	8'	8'	
Vehicular Way	Parking Area	-	-	-	
	Hedge or Wall (36" min)	-	-	-	
Streetscape	Sidewalk	8'	10'	10'	
	Tree Planting Zone	8'	8'	8'	

\*List "wrapped" or corner lot application of frontages separately from the applicable base frontage according to Section 3.11.2.D.4

**Section E. Mass, Form**

**Step-back:** 10' minimum step-back required for Type A/B Frontages where building is placed in first ten feet of the build-to-zone. **Requirement:** 3.11.2.3&4.3 Requirement does not apply to building elements that protrude from the building face as defined in section 3.11.2.6.A-F which are permitted to encroach into front setbacks and step-back zone.

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**Building Form: Design and Transparency Requirements: 3.11.3&4.4 Standards: 3.11.2.7.K-N standards apply to street facing facades.**

	Ground Story Ceiling height	Upper Story Height	Ground Floor Elevation (min)	Ground Floor Elevation (max)	Ground Story Transparency	Upper Story Transparency	Blank Wall Area (Lf)
<b>Residential</b>	9 ft. min.	9 ft. min.	2 ft.	4 ft.	.20 min.	.20 min.	50 ft.
<b>Non-Residential</b>	13 ft. min.	9 ft. min.	0 ft.	2 ft.	.60 min.	.20 min.	30 ft.

BUILDING 2

Mass / Form Requirements	Frontage 1	Frontage 2	Frontage 3	Frontage 4	
Direction / Street Name	Legion Road	Collector St.	Collector Wrap on Legion Road		
Ground Story Use (Res or Non-Res)	Res.	Res.	Res.		
Ground Story Ceiling Height (ft.)					
Upper Story Ceiling Height (ft.)					
Ground Floor Elevation min (ft.)	1.5'	1.5'	1.5'		
Ground Floor Elevation max (ft.)	10'	11'	4'		
Ground Story Transparency (%)					
Upper Story Transparency (%)					
Blank Wall Area max (linear ft.)					
Entrance Spacing max (ft.)	46'	57'	32'		

**Section F. Permitted Uses**

Proposed Use(s) 3.11.3.4	Use Key: P = Permitted, S = Special	Square footage	Floors	
Apartments #2	P	107,708	4	

**Section G. Parking**

Vehicle Parking* 3.11.4.1.C	Required Ratios		Proposed Units or Floor Area	Required Spaces		Proposed Spaces	
	Parking ratio (min)	Parking ratio (max)		Parking Spaces (min)	Parking Spaces (max)		
Attached, multi-family residential Efficiency, 1 bedroom	1 / unit	1.25 / unit	218	218	273		
Attached, Multi-family residential-2 bedrooms	1.25 / unit	1.75 / unit	78	98	137		
Attached, Multi-family residential- 3 bedrooms	1.5 / unit	2.25 / unit	27	41	61		
Attached, Multi-family residential- 4+ bedrooms	1.67 / unit	2.5 / unit	-	-	-		
All Group Living	1 / 4 beds	1 / 2 beds					
Civic / Place of Worship	1 / 500 sf of floor area	1 / 350 sf of floor area					
All Commercial uses, except as noted below	1 / 300 sf of floor area	1 / 200 sf of floor area					
Overnight Lodging	0.9 / lodging unit	1.25 / lodging unit					
Restaurant/bar	1 / 110 sf of floor area	1 / 75 sf of floor area					
<b>TOTAL PARKING</b>				357	471	455	

\*Refer to sections 3.11.4.C.1 and 5.9.3 for allowable reductions to minimum parking requirement.

Bicycle Parking 3.11.4.1.C	Required Ratios		Proposed Units or Floor Area	Required Spaces		Proposed Spaces		
	Min parking ratio	Short Term / Long Term		Short Term	Long Term	Short Term	Long Term	
Attached, Multi-family residential (all)	1 / 2 units	20% / 80%	323	32	130	32	130	
All group living	1 / 4 beds (4 min)	10% / 90%						
Civic/ Place of Worship	1 / 5000 sf of floor area (4 min)	80% / 20%						
All Commercial uses, except as noted below	1 / 2500 sf of floor area (4 min)	80% / 20%						
Overnight Lodging	1 / 15 lodging units (4 min)	20% / 80%						
Restaurant/bar	1 / 1000 sf of floor area (4 min)	80% / 20%						
<b>TOTAL PARKING</b>								

### Green Building Incentive

All projects in the Ephesus-Fordham district qualify for a Green Building Incentive whereby projects receive a 35% rebate of building permit fees for complying with the terms of the incentive. Details: <http://chplan.us/efgreenbuilding>

**Opt-out:** We have evaluated the Town's Green Building Incentive for this project and choose to opt out for the following reasons:

### Submittal Requirements

The following must accompany your application. Failure to do so will result in your application being considered incomplete.

<input checked="" type="checkbox"/>	<b>Application fee</b> ( <a href="#">refer to fee schedule</a> )	<b>Total \$</b>	189,153.60
<input checked="" type="checkbox"/>	<b>Existing Recorded Documents</b> — Refer to Section 1	<b>Application Fee \$</b>	186,253.60
<input checked="" type="checkbox"/>	<b>Supplemental Documentation</b> — Refer to Section 2	<b>Engineering Review \$</b>	2,775.00
<input checked="" type="checkbox"/>	<b>Stormwater Management Plan and Report</b> — Refer to Section 3	<b>Fire / Life Safety \$</b>	125.00
<input checked="" type="checkbox"/>	<b>Plan Sets</b> — Refer to Section 4		
<input type="checkbox"/>	<b>Single JPEG Image of Building Elevation / Perspective</b> — for use on application webpage		

Submit all Town Staff copies to the Development Services Desk on the 1<sup>st</sup> Floor of Town Hall. Submit External Agency copies directly to those agencies listed on the next page.

**Weekly Submittal Deadline (new and resubmittals):** Fridays, 12 noon.

<input checked="" type="checkbox"/>	<b>First Submittal:</b>	<b>Town Staff</b>	<b>External Agencies</b>
	Complete set of documents required in sections 1-3	1 copy	No copies
	Transmittal Sheet (Confirm External Agency submittal on Town submittal)	1 copy	1 per agency
	<b>Plan Set Packets, to include the following:</b>	10 copies	1 per agency
	1. Project Fact Sheet (portion filled out by applicant; 4-9 pages)		
	2. Plan sets, with the following requirements: <ul style="list-style-type: none"> <li>• Coversheet with project name, location, contact info, contents</li> <li>• Each sheet must be numbered and titled according to contents</li> <li>• Folded, collated plans are preferred, when possible.</li> </ul>		
	<b>Electronic Files, to include the following:</b>	1 copy	No copies
	1. One for each document required on application form		
	2. One file for each plan sheet, name must match page title/number		
	3. One "bundled" plan set file. <b>If this file exceeds 20MB, also submit multiple files with a size no larger than 20MB for application website.</b>		
<input checked="" type="checkbox"/>	<b>All Subsequent Submittals</b>	<b>Town Staff</b>	<b>External Agencies</b>
	Same requirements as above. <b>* Confirm number of plan sets with Planner</b>	See above	See above
	Comment Response Letter	10 copies*	1 per agency
	Plan sets must include revision dates on each revised sheet Changes must be bubbled, called out, listed or otherwise noted.		

## External Contacts

### **OWASA (Water / Sewer):**

Nick Parker  
400 Jones Ferry Rd  
Carrboro, NC 27510  
919-537-4201  
[NParker@owasa.org](mailto:NParker@owasa.org)

### **NCDOT**

Chuck Edwards / DeAngelo Jones  
Physical: 115 E. Crescent Square Dr.  
Mailing: PO Box 766  
Graham, NC 27253-0766  
[cnedwards@ncdot.gov](mailto:cnedwards@ncdot.gov)  
[dijones1@ncdot.gov](mailto:dijones1@ncdot.gov)

### **Orange County Erosion Control**

Steve Kaltenbach  
Physical: 131 W. Margaret lane  
Mailing: PO box 8181  
Hillsborough, NC 27278  
[skaltenbach@orangecountync.gov](mailto:skaltenbach@orangecountync.gov)

### **CAPS:\***

Catherine Mau  
Chapel Hill-Carrboro City  
Schools  
919-967-8211 X2894  
[cmau@chcss.k12.nc.us](mailto:cmau@chcss.k12.nc.us)

### **Contacts for Utilities:\*\***

#### **AT&T (Telephone / Cable)**

Send request email to:  
[Att.nc.private.row@att.com](mailto:Att.nc.private.row@att.com)

#### **Google (Fiber)**

<https://fiber.google.com/properties/>

#### **Spectrum (Telephone / Cable)**

Tony Jordan 919-573-7077  
[Tony.jordan@twcable.com](mailto:Tony.jordan@twcable.com)

### **Duke Energy Carolinas (Electric):**

Development Planning  
1-800-454-3853  
<http://www.dukeenergy.com/builders-developers/developmentplanning.asp>

### **PSNC (Gas):**

Property & Building 1-888-547-1288  
[psncbuildergroup@scana.com](mailto:psncbuildergroup@scana.com)  
<https://www.psnccenergy.com/for-my-business/property-building/builders-contractors>

*\*All residential projects require a Certificate of Adequate Public Schools (CAPS). Contact CHCCS to request a CAPS.*

*\*\*The Town does not coordinate plan review with these utilities unless they maintain an easement across the property. Thus, it may not be necessary to send materials to them as part of your application to the Town. Check with each utility regarding requirements for development planning and Utility Clearance and/or Service Availability Letters.*

## 1. Existing Recorded Documents

- a) HOA Documents
- b) Utility Easements
- c) ROW Plats
- d) Access Easements
- e) Drainage Easements
- f) Any other applicable easements or documents

## 2. Supplemental Documents

- a) Written Narrative with the following elements
  - 1) General description of developer's program
  - 2) Statement of compliance with intent of Form District regulations and regulating plan (LUMO 3.11)
  - 3) Description and analysis of adjacent land uses, roads, topography, soils, drainage patterns, environmental constraints, environmental features, and existing vegetation
- b) Certificate of Adequate Public Schools
- c) Utility Clearance Letters / Service Availability Letters
- d) Solid Waste Management Plan Application ([Orange County Solid Waste](#))
- e) Stream Determination
- f) Jurisdictional Wetland Determination
- g) Jordan Buffer Authorization Certificate or Mitigation Plan Approval (if applicable)
- f) Fire Flow Report – refer to Town Design Manual for specifications (Signed and sealed by a licensed P.E.)

### **3A. Stormwater Management Plan (signed and sealed by a North Carolina registered Professional Engineer)**

- a) Topography (2-foot contours)
- b) Existing roof drain locations, stormwater conveyance system, structures and surface drainage patterns with flow direction arrows
- c) Proposed roof drain locations, stormwater conveyance system, structures and surface drainage patterns with flow direction arrows
- d) Location of stormwater management structures, including dimensions. Provide seasonal high water table elevations.
- e) Stormwater management structure details, cross-sections and construction notes
- f) Planting and final stabilization plans and specifications
- g) Stormwater management structure and drainage easements, as required
- h) Proposed outfall locations and outlets structure dimensions and details
- i) Erosion and sediment control measures, including details (e.g., inlet protection, silt fence, steep slope protection and permanent stabilization specifications)

### **3B. Stormwater Management Report (signed and sealed by a North Carolina-registered Professional Engineer)**

- a) Stormwater design and site summary form
- b) Written narrative describing:
  - 1) Existing & proposed conditions,
  - 2) Pertinent onsite and offsite drainage conditions,
  - 3) Anticipated stormwater impacts
  - 4) Discussion of structural and non-structural BMPs and strategies chosen to mitigate development impacts that will be part of the stormwater management plan
  - 5) Soils information (classification, infiltration rates, depth to groundwater and bedrock)
- c) Pre-development and post-development drainage maps clearly labeled and showing delineated drainage sub-basins; connectivity of conveyance system and stormwater structures; points of analysis and time of concentration (tc) flow paths (may be included in plan set)
- d) Hydrology calculations, to include:
  - 1) Summary table of total land areas, land uses and areas (in square feet) within each drainage basin, soil types, curve numbers/runoff coefficients for each land use, Basin ID, and source of values used
  - 2) Time of concentration calculations
  - 3) Peak discharge calculations documenting results shown in summary table (See b above)
- e) Hydraulic calculations, to include
  - 1) Water quality volume calculations for providing 85% TSS removal for post-development stormwater runoff
  - 2) BMP sizing calculations, including stage-storage-discharge information and drawn down calculations
  - 3) Routings and hydrographs
  - 4) Pipe sizing calculations and schedule (including HGL & EGL calculations and profiles)
  - 5) Channel sizing calculations
  - 6) Outlet dissipater and spillway sizing calculations
  - 7) Jordan Lake Stormwater Load Accounting Tool, if required, printed on 11x17 paper
- f) Draft Operations and Maintenance Plan for each stormwater management structure

#### 4. 24x36 Plan Sets

Plans must be legible and clearly drawn. Elements indicated below may be contained on as many or as few sheets as necessary to legibly show all required information. All plan sheets should include the following information:

- a) Project name, designer information, site address, etc...
- b) Legend
- c) Labels
- d) North Arrow (North oriented to top of page where practical)
- e) Property Boundaries with bearing and distances. Include project and phasing boundaries where applicable.
- f) Scale (Engineering), denoted graphically and numerically
- g) Setbacks
- h) Streams, Jordan Riparian Buffer Boundary, Floodplain, and Wetlands Boundary, where applicable
- i) Revision dates and professional seals and signatures as applicable

#### Cover Sheet

- a) Include project name, address, PIN, Design Team and contact information, Owner/ applicant information
- b) Site data block with the following information showing requirements and proposed:
  - 1) zoning information – district, height limit, setbacks, build to zone distance
  - 2) Project area – net and gross land area, project boundary area (if different), limits of disturbance, impervious surface, recreation and outdoor amenity space. Separate any areas included offsite (i.e. in ROW).
  - 3) Floor area, unit count and vehicular and bike parking.
- c) Area Map
  - 1) Dedicated open space, parks, greenways
  - 2) Zoning district boundaries
  - 3) Property lines, land uses, project names of site and surrounding properties, significant buildings, corporate limit lines
  - 4) Existing roads (public and private), rights-of-way, sidewalks, driveways, vehicular parking areas, bicycle parking, handicapped parking, street names.

#### Existing Conditions

- a) Slopes, soils, environmental constraints, existing vegetation, and any existing land features
- b) Existing structures, building designations, uses, and impervious surfaces
- c) Existing property line and right-of-way lines
- d) Existing utilities & easements including location of water, sewer, electrical, & drainage lines and refuse facilities.
- e) Nearest bus shelters and transit facilities
- f) Existing topography at minimum 2-foot intervals and finished grade
- g) Existing structures within 15 feet of the subject property's boundary (identify structure use)

#### Proposed Site Plan

- a) Proposed structures and existing structures to remain, including all impervious surfaces such as roofs, driveways, and sidewalks. Include all proposed building elements
- b) Dimensioned rights-of-way and width,
- c) location of all vehicle entrances, exits, and drives
- d) Location, arrangement, & dimension of vehicular parking, with of aisles and bays, angle of parking, number of spaces, handicapped parking. Location, arrangement, and dimension of bicycle parking with detail drawing.
- e) Proposed transit improvements including any bus pull-offs and bus shelters as applicable
- f) Refuse collection facilities

## Zoning Plan

- a) Proposed structures and existing structures to remain, including all impervious surfaces such as roofs, driveways, and sidewalks. Include all proposed building elements noted in section 3.11.2.6
- b) Dimensioned proposed rights-of-way and width. Include frontage designation as applicable.
- c) Dimensioned proposed Public Right of Way and Utility Easements (public access easements)
- d) Proposed lot lines for recombination and subdivision as applicable
- e) Show blocks and call out block length distances per section 3.11.2.3&4.1
- f) Show location of pass-throughs and building entrances; call out dimensions and spacing per section 3.11.2.3&4.2,4
- g) Location of all vehicle entrances, exists, and drives, parking areas.
- h) Location of bike parking. Call out distance to building entrances per 3.11.4.1.E.3-4
- i) Show setback line, build-to-zone line. Call out width of each (i.e. minimum, maximum , and proposed setback)
  - 1) Provide calculation of building façade in build-to-zone as percentage of lot width or project boundary, if different per section 3.11.2.3&4.2.
  - 2) Call out dimensions of forecourts and outdoor dining areas.
  - 3) Identify unbuildable areas as defined in section 3.11.4.8
- j) Show frontage streetscape elements and call out widths per section 3.11.2.5.
  - 1) Call out width of each element and total for each zone
  - 2) Call out sidewalk clear area. Include a plan note that reads as follows “Improvements, structures, fixtures, signs, tables, chairs, planters, or any other object of a permanent or temporary nature shall not be placed in the sidewalk clear area”
  - 3) Call out and a total width for the vehicular way, as applicable.
  - 4) Provide cross sections of each frontage. Provide additional cross sections for “wrapped” corner lot frontage application and in areas where elements differ from the rest of the frontage – i.e. wider sidewalk or tree zone.
- k) Show areas being used to satisfy Recreation space and Outdoor Amenity Space. Provide tally in square feet.
- l) Show limits of disturbance and total area of land disturbance in square feet.

## Grading and Erosion Control

- a) Topography (2-foot contours)
- b) Cut and fill lines
- c) Cross-sections with roadways
- d) Detailed drawings of infrastructure (SCMs, curb inlets, infiltration systems, erosion control etc.)
- e) Limits of disturbance and tally
- f) Pertinent off-site drainage features
- g) Existing and proposed impervious surface tallies
- h) Ground cover
- i) Spot elevations when necessary
- j) Size calculations

## Utilities

- a) Indicate location and size of water, sewer, electric, cable, telephone, gas and fire safety apparatus, including fire hydrants. Indicate existing vs proposed and whether electric, cable, and telephone lines are above ground.
- b) Show drainage lines and features
- c) Fire Flow Report (See section 3): for a fire hydrant within 500 feet of each building, provide the calculated gallons per minute of residual pressure is 20 pounds per square inch. The calculations should be sealed by a licensed professional engineer in North Carolina and accompanied by a water supply flow test conducted within one year of the submittal (see Town of Chapel Hill Design Manual for required gallons per minute)

### Construction Management

- a) Proposed location for where construction workers will park. Designate space for vehicle for enforcement staff
- b) Proposed location of receptacles
- c) Post construction finalization details
- d) Proof of temporary parking permits (if applicable)
- e) Construction staging, laydown areas, storage area, and construction trailer location
- f) Location of temporary construction fencing (if applicable)
- f) Work zone traffic control plans, including MUTCD compliant signage, for vehicles and pedestrians. Show alternate pedestrian routes.
- g) Lane closure permit standard note "Prior to any traffic lane and/or sidewalk closures, the applicant shall contact the Town's Traffic Engineering office (919-969-5096 or 919-969-5100) at least 5 working days before the proposed work to apply for a lane closure permit"

### Landscape Protection

- a) Rare, specimen, significant tree, and significant tree stand survey within 50 feet of construction area
- b) Rare and specimen tree critical root zone
- c) Rare and specimen trees proposed to be removed
- d) Certified arborist tree evaluation, if applicable
- e) Clearing limit line - this should be coterminous with the limits of disturbance
- f) Proposed tree protection / silt fence location
- g) Pre-construction / demolition conference standard note
- h) Detail of tree protection fencing
- j) Landscape protection supervisor note

### Streetscape

- a) To be prepared in accordance with form district code, design manual, and Duke Energy standards
- b) Proposed location of street lights and underground utility lines and/or conduit lines to be installed
- c) Description and/or detail of proposed light poles, fixture, watts, lumens, and spacing
- d) Streetscape proposed improvement plan
- e) Streetscape proposed pavement/sidewalk details
- f) Streetscape proposed furnishing details
- g) Streetscape proposed lighting details

### Landscape, including required parking lot landscaping and utility screening

- a) Dimensioned and labeled tree zones, hedge zones, and residential buffer – if applicable
- b) Streetscape plantings
- c) Parking lot screening and shading plantings
  - 1) perimeter screening plantings and width of screening zone per section 3.11.2.4.C.2
  - 2) Interior Islands, include plantings, island dimensions and note spacing requirements per section 3.11.4.2.C.3
  - 3) Median Islands per 3.11.2.4.2.C.4-5
  - 4) Dimensioned tree distance circles demonstrating compliance with section 3.11.4.2.C.6
- d) Plantings screening utilities per section 3.11.4.2.E.4-5, as applicable
- d) Detailed composite plant list with installation sizes
- e) Landscape installation details and maintenance plan

### **Solid Waste**

- a) Existing and proposed dumpster pads
- b) Proposed dumpster pad layout design
- c) Proposed dumpster pad construction section
- d) Proposed dumpster pad protective bollard, screening wall, and gate details per section 3.11.4.2.E.1
- e) Proposed heavy duty pavement locations and pavement construction detail
- f) Existing pavement damage waiver note
- h) Refuse facility lighting plan

### **Detailed Exterior Building Elements (1 copy only)**

- a) Elevations – provide a straight-on, one dimensional view of each building façade including front, side, and rear elevations. Show and label materials and provide legend. Include all building elements defined in section 3.11.2.6, and all architectural elements used to screen utilities per section. Call out heights per section 3.11.2.7.I
- b) Material table with calculations. For each façade provide the following information to demonstrate compliance with Building Materials – section 3.11.2.7.P and Transparency – sections 3.11.2.3&4.4 and 3.11.2.7.M
  - 1) square footage of façade
  - 2) required square footage and percentage of primary / secondary materials
  - 3) proposed square footage and percentage of primary / secondary materials
  - 4) required square footage and percentage of transparency – for street facing facades only
  - 5) proposed square footage and percentage of transparency – for street facing facades only
- c) Typical drawings for proposed building elements. For each element proposed, demonstrate compliance with Section 3.11.2.6.A-F, as applicable showing widths, depths, heights, distance to lots lines, encroachments into setback, right-of-way, or step-back zone, with respect to requirements. Provide data block with applicable requirements.
- d) Site Cross-Sections: Provide simple, typical cross-section(s) indicating how the buildings are placed on the site in relationship to topography, public access, existing vegetation, or other significant site features. Label dimensions
- e) Building Cut Sections: provide cut sections demonstrating compliance with ground floor elevation and story height requirements in sections 3.11.2.3&4.3-4 and 3.11.2.7.K-L
- f) Floor Plans: Show the general interior layout of the building (demonstrate compliance with section 3.11.2.7.M.6 and 3.11.2.7.O) and the relationship of pedestrian circulation and entryways. Label dimensions.
- g) Utilities: indicate location of all utilities and mechanical equipment and show screening per section 3.11.4.2.E.3-5

### **Lighting Plan (1 copy only)**

- a) Site Lighting Plan: A detailed lighting plan for all proposed lighting fixtures on the site (including parking areas, pedestrian paths, building facades, landscape up lighting, etc.). The lighting plan should clearly indicate the locations of all light fixtures. The lighting plan shall also provide isographs with foot-candle and uniform ratios, candlepower of lamps, and types of illumination for all proposed lighting fixtures. The isographs shall be provided for the full extent of the site lighting (to the point where the lighting reaches 0.0 foot-candles), even if this includes off-site areas. The isograph shall be calculated with 100% lighting, and shall also identify and incorporate a site's topography.
- b) Cut Sheets: A detailed drawing and description shall be provided for each type of light fixture proposed on the site. The number, height, colors and materials for each type of fixture shall be clearly indicated. Demonstrate compliance with section 3.11.4.5.E-G
- c) Please note that in accordance with Section 3.11.4.5 (Site Lighting) of the Town's Land Use Management Ordinance, lighting sources shall be shielded or arranged so as not to produce, within any public right-of-way, glare that interferes with the safe use of such right-of-way or constitutes a nuisance to the occupants of adjacent properties.

### **Roadway Design Plan, if applicable**

- a) Horizontal alignment with curve data (if applicable)
- b) Vertical alignment (profile, curve length, grades, k-values, PVI stations)
- c) Typical street cross-section
- d) Cut and fill limits on topography
- e) Intersection curb radii
- f) Driveway locations and widths
- g) Sight distance triangles at intersections
- h) Geotechnical analysis (if applicable)
- i) Right-of-way widths
- j) Easements
- k) Drainage facilities (materials used, slopes, invert elevations, HGL, spread/intercepted flow, pipe & channel size calculations for 10 and 25-year storm, pertinent off-site drainage features)
- l) Work zone traffic control plan
- m) Pavement removals/demolitions
- n) Traffic Calming Plan – detailed construction designs of devices proposed & associated sign & marking plan
- o) Traffic Sign, Street Name Sign, and Pavement Marking Plan – in accordance with Manual on Uniform Traffic Control Devices. Street name signs in accordance with Town of Chapel Hill standards
- p) Traffic Signal Plan – in accordance with Manual on Uniform Traffic Control Devices and NCDOT traffic signal design standards (prepared by licensed professional engineer), if applicable