

CHAPTER 6 CONSTRUCTION DRAWINGS CHECKLIST

Instructions: All Construction Plan submissions shall at a **minimum** contain the requirements stated within. Any construction plan submissions with missing or incomplete information may be rejected and not reviewed until all necessary information has been provided. It should be noted that not all items contained within will necessarily be required for every project. **This list is intended to give general guidelines only and is not to be considered all-inclusive. Checklist may change; website should be checked to insure most current version is being used.**

The Engineer shall place a check mark in one of the boxes (as appropriate) on each item:

provided or **(N/A)** not applicable

Note: The following checklist is provided to assist the design engineer in developing a complete plan set to expedite our review process. Compliance with the checklist in no way is meant to relieve the design professional of his or her responsibility for project design. All construction plans submitted for review are to include a copy of this checklist signed by a NC registered Professional Engineer and/or Architect. Project submittals without a completed checklist will not be reviewed. Forms are available at: www.southernpines.net

PROJECT NAME: _____

ENGINEER: _____ ENGINEERING COMPANY: _____

COMPANY ADDRESS: _____

COMPANY PHONE: _____ EMAIL: _____

PROJECT PROPERTY OWNER: _____ EMAIL: _____

PROJECT ADDRESS/LOCATION _____

DATE SUBMITTED: ____/____/____

The Following Are the Minimum Plan Sheets to be Provided

		Applicant	
		Provided	N/A
1	Title/Cover Sheet	<input type="checkbox"/>	<input type="checkbox"/>
2	Existing Conditions\Demolition Plan	<input type="checkbox"/>	<input type="checkbox"/>
3	Overall Site Plan	<input type="checkbox"/>	<input type="checkbox"/>
4	Road Plan & Profile	<input type="checkbox"/>	<input type="checkbox"/>
5	Storm Drainage Layout Sheet	<input type="checkbox"/>	<input type="checkbox"/>
6	Storm Drain Plan and Profile(s)	<input type="checkbox"/>	<input type="checkbox"/>
7	Drainage Area map	<input type="checkbox"/>	<input type="checkbox"/>
8	Grading and Erosion Control Plan(s).	<input type="checkbox"/>	<input type="checkbox"/>
9	Utility Layout Sheet.	<input type="checkbox"/>	<input type="checkbox"/>
10	Water Plan & Profile	<input type="checkbox"/>	<input type="checkbox"/>
11	Sewer Plan & Profiles	<input type="checkbox"/>	<input type="checkbox"/>
12	Landscaping Plans	<input type="checkbox"/>	<input type="checkbox"/>
13	Details	<input type="checkbox"/>	<input type="checkbox"/>

1. General Plan Requirements

		Provided	N/A
1	Download latest Town Cover Sheet Requirements from: https://nc-southernpines2.civicplus.com/501/7447/Requirements?activeLiveTab=widgets	<input type="checkbox"/>	<input type="checkbox"/>
2	Each page is signed, sealed and dated by a NC Registered Professional Engineer and/or Architect.	<input type="checkbox"/>	<input type="checkbox"/>
3	All drawings in a set of construction plans are the same size sheet, 36 in. wide by 24 in. high. See folding instructions town stamp-final approval.dwg	<input type="checkbox"/>	<input type="checkbox"/>
4	North arrow with horizontal and vertical datum provided on each plan sheet.	<input type="checkbox"/>	<input type="checkbox"/>
5	Plans and Profiles contain sufficient vertical and horizontal references and information to allow stakeout and construction of proposed work by reference to the plans alone.	<input type="checkbox"/>	<input type="checkbox"/>
6	Plans have a horizontal scale not less than 1in. = 50ft. and a vertical scale of 1in. = 5ft. or to a scale clearly marked.	<input type="checkbox"/>	<input type="checkbox"/>
7	Profiles are located under the corresponding plans on the same sheet.	<input type="checkbox"/>	<input type="checkbox"/>
8	Profiles for all water and sewer mains are shown. (include all utility crossings)	<input type="checkbox"/>	<input type="checkbox"/>
9	Stationing is shown on plans. Stationing on plans should increase from left to right across the drawing. (Road centerline stationing can be used when water/sewer lines are located in/along roads).	<input type="checkbox"/>	<input type="checkbox"/>
10	All public right-of-ways and easements are shown and dimensioned.	<input type="checkbox"/>	<input type="checkbox"/>
11	All lot lines, setback and buffers are clearly shown.	<input type="checkbox"/>	<input type="checkbox"/>
12	All specifications, design data and calculations, are provided on an 8 ½ x 11 in. sheet, bound in a folder suitable for filing, and labeled for identification by the title.	<input type="checkbox"/>	<input type="checkbox"/>
13	Woodpecker and Environmental Impact Study included, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>
14	Turn around area provided for emergency and maintenance vehicles, where required.	<input type="checkbox"/>	<input type="checkbox"/>
15	Grading in buffer and setbacks areas must be approved by Planning Department (692-4003)	<input type="checkbox"/>	<input type="checkbox"/>
16	Plans shall be folded to approximately 8.5" x 11" in size with the project title showing in the lower right-hand corner and the Town Approval Stamp in upper right corner.	<input type="checkbox"/>	<input type="checkbox"/>
17	A .pdf copy of all plan and calculation submittals shall be provided for all submittals.	<input type="checkbox"/>	<input type="checkbox"/>
18	Upon approval of construction drawings (3) full size sets and one 1/2 size set of plans shall be submitted to the town for signature. A pdf version of the final signed plans, calculations and required documentation shall also be submitted prior to any permits being issued.	<input type="checkbox"/>	<input type="checkbox"/>

2. Title Sheet/Overall Site Plan

		Provided	N/A
1	Vicinity Map minimum scale 1 in. = 2000 ft., with clearly labeled intersecting roadway names major streams, towns, north arrow, etc. and the site location. Shade site to be constructed.	<input type="checkbox"/>	<input type="checkbox"/>
2	Site Plan shows overall subdivision/site layout to scale, section limits, phases, right-of-ways, adjacent subdivisions, property owners, existing and proposed street names, and at least two (2) permanent bench mark locations and descriptions. The section to be constructed is clearly labeled	<input type="checkbox"/>	<input type="checkbox"/>
3	Provide an Index map with match lines for multiple sheets for all plans as needed.	<input type="checkbox"/>	<input type="checkbox"/>
4	Title Information – Development/site name, type of plan, section number, and phase is provided.	<input type="checkbox"/>	<input type="checkbox"/>
5	A legend is provided of the specific graphic special symbols applicable to the project. Standard symbols are used to the fullest extent possible.	<input type="checkbox"/>	<input type="checkbox"/>
6	List of abbreviations applicable to the project is provided.	<input type="checkbox"/>	<input type="checkbox"/>
7	Revision block includes the date and reference of each revision.	<input type="checkbox"/>	<input type="checkbox"/>
8	Sheet index is provided.	<input type="checkbox"/>	<input type="checkbox"/>
9	Provide Site Data table as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
10	Table showing public and private improvement quantities for water, sewer, streets, sidewalk, curb & gutter. Contact PW to obtain .dwg format	<input type="checkbox"/>	<input type="checkbox"/>
11	Water Application Summary table as shown as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
12	Sewer Application Summary table as shown as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
13	Provide Traffic Data Table as shown as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
14	Provide Watershed Data Table as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
15	Town standard notes as shown in Town Title Block	<input type="checkbox"/>	<input type="checkbox"/>
16	Town approval signature blocks (upper right corner)	<input type="checkbox"/>	<input type="checkbox"/>
17	Indicate 100 yr flood plain (reference FEMA panel #, date) or make reference that site is not located w/in 100 yr flood plain	<input type="checkbox"/>	<input type="checkbox"/>

3. Existing Conditions/Demolition

		Provided	N/A
1	Provide note requiring contractor to contact the NC One-Call Center prior to any construction activity.	<input type="checkbox"/>	<input type="checkbox"/>
2	Trees to be removed shown and clearly labeled. Trees being removed within Town rights of way require Tree Removal Permit. Contact the B&G superintendent at 910-692-1983	<input type="checkbox"/>	<input type="checkbox"/>
3	Tree protection fence shown around trees to remain	<input type="checkbox"/>	<input type="checkbox"/>
4	Show and label all topography with a maximum of two-foot contour intervals for the development.	<input type="checkbox"/>	<input type="checkbox"/>
5	Show all water lines, sanitary sewer lines, services, cleanouts, valves, hydrants within 500', water meters vaults, backflow preventers, storm sewer systems, catch basins, headwall, junction boxes and other structures, ditches and swale, all other utilities, buildings, parking, mail boxes, etc.	<input type="checkbox"/>	<input type="checkbox"/>
6	Clearly label any structures, utilities etc to be removed	<input type="checkbox"/>	<input type="checkbox"/>
7	Flood plain boundaries (100 yr, 500 yr)	<input type="checkbox"/>	<input type="checkbox"/>
8	Horizontal and vertical control references are specified (State plane, U.S. Coast & Geodetic Surveys, etc.). Hydrants and manholes are not acceptable control.	<input type="checkbox"/>	<input type="checkbox"/>
9	Source of the topography used for the preparation of the plans is provided.	<input type="checkbox"/>	<input type="checkbox"/>
10	Show and label all buffers, overlay district, easements etc, as defined by planning and zoning	<input type="checkbox"/>	<input type="checkbox"/>
11	Adjacent property owner information	<input type="checkbox"/>	<input type="checkbox"/>

4. General Water/Sewer and Utility Layout Requirements

		Provided	N/A
Utility Layout Sheet			
1	The utility layout sheet shall be produced with a horizontal scale of 1"=100' or larger (i.e., 1"= 50') to indicate the new layout/extension and the relationship to other proposed or existing utilities, roadways, and other pertinent structures	<input type="checkbox"/>	<input type="checkbox"/>
2	Legend of sanitary sewer, water, and other utilities, structures; either proposed or existing.	<input type="checkbox"/>	<input type="checkbox"/>
3	Construction Notes	<input type="checkbox"/>	<input type="checkbox"/>
4	Overall plan of the water and/or sewer extension layout, indexed to sheet numbers	<input type="checkbox"/>	<input type="checkbox"/>
5	Existing utilities to include water and/or sewer labeled with size and material type, if known.	<input type="checkbox"/>	<input type="checkbox"/>
6	"Composite" of all information contained in the plan view of the individual plan/profile sheets.	<input type="checkbox"/>	<input type="checkbox"/>
Sewer Permitting			
7	NCDENR fast track sewer application http://ncdenr.gov/web/wq/swp/ps/cs/ext	<input type="checkbox"/>	<input type="checkbox"/>
8	Flow acceptance letter from Moore County	<input type="checkbox"/>	<input type="checkbox"/>
9	Analysis of receiving gravity sewer, lift station, force main etc.	<input type="checkbox"/>	<input type="checkbox"/>
10	Confirm proposed gravity laterals meet 15A NCAC 02T .0305 when crossing water mains	<input type="checkbox"/>	<input type="checkbox"/>
11	Provide calculations showing sewer is designed to carry the total peak tributary flow at 1/2 of full depth (50% capacity) for 16" and smaller pipes. Include all calculations and assumptions used to show design meets NCDENR design standards for gravity sewer.	<input type="checkbox"/>	<input type="checkbox"/>
12	Min. flow velocity under design conditions shall be at least 2.5 feet per second. Max velocity shall not be greater than 10 fps.	<input type="checkbox"/>	<input type="checkbox"/>
13	Collecting sewers are a minimum of 8 inches in diameter and are designed to carry present and projected future flows for natural drainage basin. Provide calculations	<input type="checkbox"/>	<input type="checkbox"/>
Water Permitting			
14	NCDENR –Public Water Supply Section water extension application	<input type="checkbox"/>	<input type="checkbox"/>
15	Engineers Report (Report shall include requirements listed in items 12,13,15 above)	<input type="checkbox"/>	<input type="checkbox"/>
16	Application for Water-Sewer New Installation of Service Application submitted	<input type="checkbox"/>	<input type="checkbox"/>
17	System demand shall include: fire flow, peak domestic demand, sprinkler demand, and any other flow demand on the system.	<input type="checkbox"/>	<input type="checkbox"/>
18	The following water main data and design calculations are enclosed: average day, maximum day, and peak hour demands, fire flow requirements (ISO calculations, future requirements, probable pressures, losses, and computations for determining pipe sizes. Provide a written report summarizing the water design calculations, include junction/pipe node report and diagram clearly indicating each node and pipe, summary table showing each hydrant is capable of providing required flow, and indicate all assumptions and methods used for design.	<input type="checkbox"/>	<input type="checkbox"/>
19	Mains sized to provide a minimum system pressure of 20 psi at all points of the system during fire flow conditions with peak system demands and 40 psi at average daily demand conditions.	<input type="checkbox"/>	<input type="checkbox"/>
20	Fire sprinkler design and calculation as required by the Fire Marshal.	<input type="checkbox"/>	<input type="checkbox"/>

5. Gravity Sewers Plan and Profile Requirements

	Provided	N/A
Proposed and existing water utilities are accurately and clearly shown on the plan and profiles using standard symbols and proposed utilities are accentuated by bold, heavy line weight to distinguish it from other utilities.	<input type="checkbox"/>	<input type="checkbox"/>
Pipe sizes and material type is shown on plans (SDR 35 or D.I.P.)	<input type="checkbox"/>	<input type="checkbox"/>
All sewer main crossings with other utilities are properly shown and called-out (include material) with minimum clearance dimensioned. Minimum vertical clearance of 24-inches from other utilities and/or storm drains is shown.	<input type="checkbox"/>	<input type="checkbox"/>
Manhole number, depth, inverts, pipe slope, length and material, flow angles between main lines and manholes	<input type="checkbox"/>	<input type="checkbox"/>
Call-out locations (sta #) are provided for manholes, clean-outs, connections, etc.	<input type="checkbox"/>	<input type="checkbox"/>
Gravity sewer is placed at a minimum of 0.5% grade and a maximum of 10%. (Grades greater than 10% may be approved on a case-by-case basis only.)	<input type="checkbox"/>	<input type="checkbox"/>
Minimum cover on gravity sewer is 3 ft from the top of pipe to finished grade.	<input type="checkbox"/>	<input type="checkbox"/>
A 4 in. water tight clean-out is provided at the Right of Way or easement for each sewer service connection. A road bearing clean-out is provided in areas of vehicular traffic.	<input type="checkbox"/>	<input type="checkbox"/>
50 ft maximum clean-out spacing on 4 inch service line. 6 inch service lines may have clean outs spaced at 75 feet intervals.	<input type="checkbox"/>	<input type="checkbox"/>
A terminal manhole is provided at the end of each line.	<input type="checkbox"/>	<input type="checkbox"/>
Show flow deflection angle at all manholes (max deflection angle per manhole = 90 degrees for 8"-10" pipe diameter)	<input type="checkbox"/>	<input type="checkbox"/>
Pipes greater than 6" must tie into a manhole.	<input type="checkbox"/>	<input type="checkbox"/>
All terminal reaches of sewer shall have a minimum slope of 1% .	<input type="checkbox"/>	<input type="checkbox"/>
Maximum distance between manholes is 400 feet or less	<input type="checkbox"/>	<input type="checkbox"/>
No service connections within the cone section of the manhole	<input type="checkbox"/>	<input type="checkbox"/>
Pipe diameter and or material changes must occur at manholes.	<input type="checkbox"/>	<input type="checkbox"/>
Pipe crowns matched with minimum drop of 0.20 feet between the inverts within the manhole.	<input type="checkbox"/>	<input type="checkbox"/>
Meets all other design requirements as specified by NCDENR	<input type="checkbox"/>	<input type="checkbox"/>
Provide SS Manhole Chart (Chart available in AutoCAD format from PW Dept.)	<input type="checkbox"/>	<input type="checkbox"/>
Sewer mains shall be a minimum of 24-inches below water main to prevent conflicts with service laterals and crossings.	<input type="checkbox"/>	<input type="checkbox"/>
Manholes out of roadway, pavement or in low lying areas are a minimum of 18-inches above grade.	<input type="checkbox"/>	<input type="checkbox"/>
Mains must be 100 feet from any private or public water supply source, including wells, WS-1 waters or Class I or II impounded reservoirs used as a source of drinking water	<input type="checkbox"/>	<input type="checkbox"/>
Mains a minimum of 50 feet from any waters classified WS-II, WS-III, B,SA, ORW, HQW or SB (and meet any NCDENR requirements)	<input type="checkbox"/>	<input type="checkbox"/>
Sewer mains are 25 feet from private wells	<input type="checkbox"/>	<input type="checkbox"/>
Mains shall be deep enough to serve the adjoining property and allow for sufficient slope in lateral lines	<input type="checkbox"/>	<input type="checkbox"/>
Add shading to all ductile iron pipe sewer lines in profiles to distinguish from PVC material	<input type="checkbox"/>	<input type="checkbox"/>
A minimum 20 ft. utility easement width centered over the main is clearly shown and identified.	<input type="checkbox"/>	<input type="checkbox"/>

6. Water Plan and Profile Requirements

		Provided	N/A
1	Proposed and existing water utilities are accurately and clearly shown on the plan and profiles using standard symbols and proposed utilities are accentuated by bold, heavy line weight to distinguish it from other utilities.	<input type="checkbox"/>	<input type="checkbox"/>
2	Water main sizes and materials (C900 or DIP) are indicated.	<input type="checkbox"/>	<input type="checkbox"/>
3	Call-out locations (sta #) are provided for fire hydrants, meter settings, blow-offs, manholes, clean-outs, tees, bends, valves, reducers, connections, etc.	<input type="checkbox"/>	<input type="checkbox"/>
4	Existing and proposed grade over the mains are indicated on the profile.	<input type="checkbox"/>	<input type="checkbox"/>
5	Minimum of 10ft. of horizontal separation between sanitary sewer and water lines is maintained.	<input type="checkbox"/>	<input type="checkbox"/>
6	Minimum 10ft. horizontal separation from storm drain structures or other utility structures is maintained.	<input type="checkbox"/>	<input type="checkbox"/>
7	Minimum vertical clearance from all crossing utilities is maintained.	<input type="checkbox"/>	<input type="checkbox"/>
8	Main line valves on straight runs between intersection shall be spaced at not less than 600' for 6" lines and 900' for 8" lines	<input type="checkbox"/>	<input type="checkbox"/>
9	All Transitions in pipe material shall have restrained joints.	<input type="checkbox"/>	<input type="checkbox"/>
10	Single water services are provided to each dwelling, business, warehouse or proposed lots, buildings and parcels. Backflow devices shall be installed at approved locations.	<input type="checkbox"/>	<input type="checkbox"/>
11	Fire hydrants spacing shall be approved by Town. The bury depth is provided on the profile.	<input type="checkbox"/>	<input type="checkbox"/>
12	Location of FDC, within 50 feet of fire hydrant	<input type="checkbox"/>	<input type="checkbox"/>
13	Water lines that serve hydrants shall be at least six-inch lines, and unless no other practicable alternative is available, no such lines shall be dead-end lines.	<input type="checkbox"/>	<input type="checkbox"/>
14	Minimum of 3 feet clearance around all fire hydrants.	<input type="checkbox"/>	<input type="checkbox"/>
15	Where a water main is in a casing under a roadway or crosses under a stream bed, valves are placed on each side.	<input type="checkbox"/>	<input type="checkbox"/>
16	All valves, tees, bends, fire hydrants, etc. are shown with a symbol and called-out with size, type and station	<input type="checkbox"/>	<input type="checkbox"/>
17	No 90-degree bends shown on any water main.	<input type="checkbox"/>	<input type="checkbox"/>
18	Minimum cover of 3-ft. for water mains is maintained as measured from top of pipe to finished grade.	<input type="checkbox"/>	<input type="checkbox"/>
19	Three (3) valves are provided at each water main tee and four (4) valves at each water main cross.	<input type="checkbox"/>	<input type="checkbox"/>
20	All details are provided. Town details shall be used when available	<input type="checkbox"/>	<input type="checkbox"/>
21	Location, make and model of Back flow preventer.	<input type="checkbox"/>	<input type="checkbox"/>
22	Irrigation system must have privately maintained reduced pressure principal backflow prevention installed in accordance with the NC Plumbing Code. RPZ must be installed above ground and within an insulated box.	<input type="checkbox"/>	<input type="checkbox"/>
23	BFP must be installed within 10' of the water meter.	<input type="checkbox"/>	<input type="checkbox"/>
24	No service connections are to be made on fire hydrant branches or fire lines.	<input type="checkbox"/>	<input type="checkbox"/>
25	Direct service connection shall be allowed on mains 16" and smaller.	<input type="checkbox"/>	<input type="checkbox"/>
26	Services connections are perpendicular to main.	<input type="checkbox"/>	<input type="checkbox"/>
27	Provide the appropriate backflow prevention notes from the Town Cover Sheet requirements.	<input type="checkbox"/>	<input type="checkbox"/>
28	Provide an above ground enclosure for the RPZ for all commercial, industrial and institutional developments (both domestic and fire lines)	<input type="checkbox"/>	<input type="checkbox"/>

7. Erosion Control Plans

		Provided	N/A
1	General plan requirements as noted above.	<input type="checkbox"/>	<input type="checkbox"/>
2	General Site Features (plan elements)	<input type="checkbox"/>	<input type="checkbox"/>
3	Existing and planned drainage patterns (include OFF-SITE areas that drain through project)	<input type="checkbox"/>	<input type="checkbox"/>
4	Limits of disturbed area (provide acreage total, delineate limits, and label)	<input type="checkbox"/>	<input type="checkbox"/>
5	Existing contours and Existing conditions (buildings, roads etc) including any demo	<input type="checkbox"/>	<input type="checkbox"/>
6	Proposed contours	<input type="checkbox"/>	<input type="checkbox"/>
7	Proposed building and road locations and elevations	<input type="checkbox"/>	<input type="checkbox"/>
8	Land use of surrounding areas.	<input type="checkbox"/>	<input type="checkbox"/>
9	Rock outcrops	<input type="checkbox"/>	<input type="checkbox"/>
10	Seeps or springs	<input type="checkbox"/>	<input type="checkbox"/>
12	Wetland limits	<input type="checkbox"/>	<input type="checkbox"/>
13	Easements	<input type="checkbox"/>	<input type="checkbox"/>
14	Streams, lakes, ponds, drainage ways, dams	<input type="checkbox"/>	<input type="checkbox"/>
15	Stockpiled topsoil or subsoil locations	<input type="checkbox"/>	<input type="checkbox"/>
16	Property lines of total tract	<input type="checkbox"/>	<input type="checkbox"/>
17	Erosion control legend	<input type="checkbox"/>	<input type="checkbox"/>
18	Location of temporary and permanent measures	<input type="checkbox"/>	<input type="checkbox"/>
19	Construction drawings and details for temporary and permanent measure	<input type="checkbox"/>	<input type="checkbox"/>
20	Maintenance requirements during construction	<input type="checkbox"/>	<input type="checkbox"/>
21	Borrow Source or waste destination.	<input type="checkbox"/>	<input type="checkbox"/>
22	Size and location of culverts and sewers	<input type="checkbox"/>	<input type="checkbox"/>
23	Name and classification of receiving water course or name of municipal operator	<input type="checkbox"/>	<input type="checkbox"/>
24	Construction sequence related erosion and sediment control (include critical measures prior to the initiation of the land-disturbing activity & removal of measures after areas they serve and permanently stabilized)	<input type="checkbox"/>	<input type="checkbox"/>
25	Vegetative Stabilization	<input type="checkbox"/>	<input type="checkbox"/>
26	Area and acreage to be vegetatively stabilized	<input type="checkbox"/>	<input type="checkbox"/>
27	Method of soil preparation	<input type="checkbox"/>	<input type="checkbox"/>
28	Seed type and rates (temp. and permanent)	<input type="checkbox"/>	<input type="checkbox"/>
29	Mulch and fertilizer type and rates	<input type="checkbox"/>	<input type="checkbox"/>
30	Watering Requirements	<input type="checkbox"/>	<input type="checkbox"/>
31	Is there flood plain associated with project? State on plan if there is or is not and give elevation and location on plans. (if not state in narrative that it is not required)	<input type="checkbox"/>	<input type="checkbox"/>
32	Add NPDES ground cover requirements to plans	<input type="checkbox"/>	<input type="checkbox"/>

8. Erosion Control Permitting

		Provided	N/A
1	Financial Responsibility/Ownership Form	<input type="checkbox"/>	<input type="checkbox"/>
2	Review fee See FRO: http://www.southernpines.net/DocumentCenter/Home/View/110	<input type="checkbox"/>	<input type="checkbox"/>
3	Certificate of assumed named, if partnership	<input type="checkbox"/>	<input type="checkbox"/>
4	Name of Registered Agent	<input type="checkbox"/>	<input type="checkbox"/>
5	Copy of the most current Deed for the site	<input type="checkbox"/>	<input type="checkbox"/>
6	Narrative describing the nature and purpose of the construction activity.	<input type="checkbox"/>	<input type="checkbox"/>
7	Color copy of USGS Quadrangle map with site indicated	<input type="checkbox"/>	<input type="checkbox"/>
8	Copy of County Soils map	<input type="checkbox"/>	<input type="checkbox"/>
9	Required Army Corps 404 permit and Water Quality 401 certification (stream disturbances over 150 linear feet) (if not needed state in narrative that it is not required)	<input type="checkbox"/>	<input type="checkbox"/>
10	Soil info: type, special characteristics	<input type="checkbox"/>	<input type="checkbox"/>
11	Design calculation and construction details for culverts and storm sewers	<input type="checkbox"/>	<input type="checkbox"/>
12	Design calculations cross sections, and method of stabilization of existing and planned channels (including temporary linings)	<input type="checkbox"/>	<input type="checkbox"/>
13	Discharge and velocity calculations for open channel and ditch flows	<input type="checkbox"/>	<input type="checkbox"/>
14	Design calculations for peak discharges of runoff (including the construction phase and final runoff coefficients of the site) for each outlet point on the site.	<input type="checkbox"/>	<input type="checkbox"/>
15	Design calculations and construction details of energy dissipaters below culverts and storm sewer outlets (for riprap aprons, include stone sizes and apron dimensions)	<input type="checkbox"/>	<input type="checkbox"/>
16	Design calculations and construction details to control groundwater, i.e. seeps, high water table, etc.	<input type="checkbox"/>	<input type="checkbox"/>
17	Design calcs and dimension of sediment basins and traps. (include pre and post drainage area maps, surface area requirements and volume requirements)	<input type="checkbox"/>	<input type="checkbox"/>
18	Design calcs for other erosion control measures.	<input type="checkbox"/>	<input type="checkbox"/>

9. Streets

		Provided	N/A
Plans			
1	Street design meets NCDOT and Town minimum requirements for CL grades, cut/fill slopes sight distance etc. based on classification type	<input type="checkbox"/>	<input type="checkbox"/>
2	Define with details typical roadway cross-sections for all proposed public or private streets/alleys. Details should include typical pavement structure, size of curbing, shoulders, sidewalks, pavement widths and right-of-way widths as applicable.	<input type="checkbox"/>	<input type="checkbox"/>
3	Sight distance triangles at intersections and driveways (include any landscaping, signs etc. that may interfere with sight triangles)	<input type="checkbox"/>	<input type="checkbox"/>
4	Label proposed street classification as dictated per Planning Department	<input type="checkbox"/>	<input type="checkbox"/>
5	Dumpster location, size and access (show turning radii)	<input type="checkbox"/>	<input type="checkbox"/>
6	Fire access to all units and/or fire lanes as required-Provide fire truck turning radius sheet.	<input type="checkbox"/>	<input type="checkbox"/>
7	Sidewalk within public right of way	<input type="checkbox"/>	<input type="checkbox"/>
8	Pavement marking and street signage included.	<input type="checkbox"/>	<input type="checkbox"/>
9	Show Center line road data (include data for all fire lanes as well)	<input type="checkbox"/>	<input type="checkbox"/>
10	Heavy Duty Pavement design minimum: per Geotechnical Report or minimum per Town Engineering and Construction Standards	<input type="checkbox"/>	<input type="checkbox"/>
11	Light Duty Pavement design minimum: per Geotechnical Report or minimum 2" SF 9.5 (A or B), 8" Aggregate Base Course	<input type="checkbox"/>	<input type="checkbox"/>
12	Reference State road numbers and street names of connecting roads	<input type="checkbox"/>	<input type="checkbox"/>
13	Provide road profile sheets. May be comined with Storm profiles but not water and sewer profiles.		
14	Label all grades on profiles to demonstrate compliance with Table 2-1 of the Engineering and Construction Standards.	<input type="checkbox"/>	<input type="checkbox"/>
Submittals			
15	Provide Geotechnical Report for the design of pavement cross sections	<input type="checkbox"/>	<input type="checkbox"/>
16	Traffic study as required See section 4.12 of the current UDO	<input type="checkbox"/>	<input type="checkbox"/>
17	NCDOT right of way encroachment (two party)	<input type="checkbox"/>	<input type="checkbox"/>
18	NCDOT right of way encroachment (three party)- four (4) originals must be provided)	<input type="checkbox"/>	<input type="checkbox"/>
19	NCDOT driveway permit	<input type="checkbox"/>	<input type="checkbox"/>
20	Town of Southern Pines - Construction on Town ROW	<input type="checkbox"/>	<input type="checkbox"/>

10. Stormwater

		Provided	N/A
Plans			
1	Storm drain discharges shall be released to an existing storm collection system or surface water system	<input type="checkbox"/>	<input type="checkbox"/>
2	Label junction boxes, manholes, and inlets with rim and inverts.	<input type="checkbox"/>	<input type="checkbox"/>
3	In no instance shall the load plane of a building or structure come within 5-feet of the outside edge of a storm pipe	<input type="checkbox"/>	<input type="checkbox"/>
4	Minimum pipe size is 15" to an inlet and 18" for open cross pipe culverts.	<input type="checkbox"/>	<input type="checkbox"/>
5	All storm pipes within the Public Right of Way shall be RCP. Private storm pipes shall be per the Town Engineering and Construction Standards	<input type="checkbox"/>	<input type="checkbox"/>
6	Note on plans: All stormwater management facilities shall be maintained by the property owner.	<input type="checkbox"/>	<input type="checkbox"/>
7	Provide stormwater summary results table found in the Town AutoCAD requirements.	<input type="checkbox"/>	<input type="checkbox"/>
8	Provide stormwater drainage schedule table found in the Town AutoCAD requirements.	<input type="checkbox"/>	<input type="checkbox"/>
9	Profiles to include HGL and all water and sewer crossings.		
10	O-ring culverts are required for pressurized systems.		
11	Min slope on Storm sewer is 0.50% or slope to obtain 2.5 fps. Max slope is 10% w/o special anchoring	<input type="checkbox"/>	<input type="checkbox"/>
Calculations			
1	Provide a stormwater engineering report including written narrative describing stormwater control method and calculations. Include summary of method used, steps taken and results showing requirements are met.	<input type="checkbox"/>	<input type="checkbox"/>
2	Provide stormwater pipe system calculations for the 10 yr storm. HGL calculations shall follow methods as describe by NCDOT.		
3	Provide culvert calculations. 25yr design storm for any road crossings. Check both inlet & outlet control.	<input type="checkbox"/>	<input type="checkbox"/>
4	Provide drainage area maps.		
5	HGL calculations shall take into account and show all head losses, friction factors and bypass flows. Tailwater conditions must identified.	<input type="checkbox"/>	<input type="checkbox"/>
6	Pre-construction runoff calculations for each outlet from the site (at peak discharge points)	<input type="checkbox"/>	<input type="checkbox"/>
7	Provide calculations for maintaining the pre-development runoff rate.	<input type="checkbox"/>	<input type="checkbox"/>
8	Submittals shall include: full Analysis & Justification for determination of the following pre and post construction: composite C factors, TC , DA (on and off-site) & other data used in the development of the computations.	<input type="checkbox"/>	<input type="checkbox"/>
9	Pre and Post development drainage area maps provided (scale no smaller than 1"=100') (include flow paths, Analysis points and Drainage areas in acres)	<input type="checkbox"/>	<input type="checkbox"/>
10	Provide riprap or approved alternative outlet protection calculations for all storm drain outlets	<input type="checkbox"/>	<input type="checkbox"/>
11	Provide permanent channel design calculations.	<input type="checkbox"/>	<input type="checkbox"/>
12	Provide inlet spread/capture computations	<input type="checkbox"/>	<input type="checkbox"/>
13	All flow rates shall be provided in cfs to the nearest hundredth of a cfs.	<input type="checkbox"/>	<input type="checkbox"/>
14	All bypass flows shall be accounted for in gutter spread calculations	<input type="checkbox"/>	<input type="checkbox"/>
15	All bypasses shall be noted. This note shall include the inlet that it will be directed to.	<input type="checkbox"/>	<input type="checkbox"/>