

The Following Are the Minimum Sheet Requirements

See specific sheet requirements as noted below

	Provided	Applicant Not Provided	N/A	Town Use	Comments
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A. General Plan Requirements

	Provided	Applicant Not Provided	N/A	Town Use	Comments
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23 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. See detail town stamp-final approval.dwg.		
24 A .pdf copy of all plan and calculation submittals shall be provided for all submittals.		
25 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.		

B. Title Sheet/Overall Site plan

		Applicant Provided	Not Provided	N/A	Town Use	Comments
1	Prefer 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.					
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					
3	Provide an Index map with match lines for multiple sheets for all plans as needed.					
4	Title Information - Development/site name, type of plan, section number, and phase is provided.					
5	A legend is provided of the specific graphic special symbols applicable to the project. Standard symbols are used to the fullest extent possible.					
6	List of abbreviations applicable to the project is provided.					
7	Revision block includes the date and reference of each revision.					
8	Sheet index is provided.					
9	Provide Site Data table as shown in Town Stamp -Final approval.dwg					
10	Table showing public and private improvement quantities for water, sewer, streets, sidewalk, curb & gutter. Contact PW to obtain .dwg format					
11	Water Application Summary table as shown in Town Stamp -Final approval.dwg					
12	Sewer Application Summary table as shown in Town Stamp -Final approval.dwg					
13	Provide Traffic Data Table as shown in Town Stamp -Final approval.dwg					
14	Town standard notes as shown in Town Stamp -Final approval.dwg.					
15	Town approval signature blocks (upper right corner)					
16	Indicate 100 yr flood plain (reference FEMA panel #, date) or make reference that site is not located w/in 100 yr flood plain					

C Existing Conditions/Demolition

	Applicant Provided	Not Provided	N/A	Town Use	Comments
1	Provide note requiring contractor to contact the NC One-Call Center prior to any construction activity.				
2	Trees to be removed shown and clearly labeled. Trees being removed within Town rights of way require approval from Appearance committee. Contact the B&G superintendent at 910-692-1983				
	Tree Removal Permit IA1				
3	Tree protection fence shown around trees to remain				
4	Show and label all topography with a maximum of two-foot contour intervals for the development.				
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.				
6	Clearly label any structures, utilities etc to be removed				
7	Flood plain boundaries (100 yr, 500 yr)				
8	Horizontal and vertical control references are specified (State plane, U.S. Coast & Geodetic Surveys, etc.).				
9	Source of the topography used for the preparation of the plans is provided.				
10	Show and label all buffers, overlay district, easements etc, as defined by planning and zoning				
11	Adjacent property owner information				

D General Notes

		Applicant Provided	Not Provided	N/A	Town Use	Comments
1	At a minimum, the following General Notes for Water and Sewer Construction shall be provided:					
2	All water and sewer construction shall be done in accordance with the Town of Southern Pines Standards and Specifications for Water and Sewer Construction. Contractor shall contact the Construction Inspector at least forty-eight (48) hours prior to start of construction. Phone number 910-692-1983. Contractor shall also contact the Construction Inspector before restarting work after work has stopped					
3	Contractor shall immediately contact the Town if there is a conflict between these plans and the published standards of the Town. Approval of these plans does not constitute any waiver from the Town standards.					
4	All fire hydrants that are installed, that are not yet operational, shall be bagged. It shall be the responsibility of the Contractor to furnish and install the required materials at their cost.					
5	Contractor shall not tap or otherwise penetrate existing water or sewer main lines without prior approval from NCDENR Public Water Supply Section and the Town. Contractor is responsible to avoid spillage of raw sewage. Contractor shall provide all sewer plugging and pumping equipment necessary to avoid spillage. Violations are subject to fines and penalties and will be enforced to the full extent of the Law					
6	Contractor is responsible for maintenance of traffic on existing roadways in accordance with NCDOT Standard Specifications latest edition and Town requirements					
7	Water and sewer main construction shall not commence until involved roadways, storm drains, and utility easements have been graded and contoured to approximately final grade. Property corners of all lots are required to be staked by a licensed surveyor prior to installing water and sewer service connections					
8	Only the amount of trench that can be opened, worked in and then stabilized in a work day shall be done so. If stabilization does not occur at the end of the work day, then appropriate erosion, sediment, and safety controls shall be installed.					
9	A Pre-Construction meeting is required prior to start of construction. Materials submittal shall be delivered and approved by the Town of Southern Pines for water and sewer construction prior to start of work.					
10	All pipes shall be cleaned before they are laid and shall be kept clean until acceptance of the completed work by the Town. Open ends of pipes shall be fitted with water tight devices to prevent entrance of foreign matter when pipe-laying operations are interrupted					
11	All public sanitary sewer mains shall be installed in dedicated street right of way or in dedicated utility easements. Mains installed in Town right of way shall be located in the center of pavement					
12	Before the system may be put into service the Town will require the as-built information for water, sewer and storm drainage: Contact TOSP GIS Department for requirements					
13	All utilities shall be electronically locatable using a locating method that is generally accepted by operators in the particular industry or trade in which the operator is engaged.					

E General Sewer Plan and Profile Requirements

	Applicant Provided	Applicant Not Provided	N/A	Town Use	Comments
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F Gravity Sewers

	Applicant Provided	Not Provided	N/A	Town Use	Comments
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G Sewers, Force Main (Pressure Sewers)

	Applicant Provided	Not Provided	N/A	Town Use	Comments
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H Water Plan and Profile Requirements

	Applicant Provided	Not Provided	N/A	Town Use	Comments
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29	Engineers Report (Report shall include requirements listed in items 12,13,15 above)		
30	Application for Water-Sewer New Installation of Service Service Application submitted		
31	Add Note: Contractor responsible for providing testing data that proves fire flow meets initial design requirements		
32	Provide an above ground enclosure for the RPZ for all commercial, industrial and institutional developments (both domestic and fire lines)		
33	RPZ for irrigation shall be in above ground insulated enclosures.		
34	Per section 244 subsection (e) of our UDO: 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.		
35	All Transitions in pipe material shall have restrained joints.		

36 Add note: All restrained joints shall be inspected by the Town's construction inspectors prior to being covered.		
37 Provide the following notes for the BFP program		

For Residential properties:

The backflow device shall be installed according to the NC Plumbing Code within ten feet of the meter on the customer's service line. Any water meters for service lines, in which a backflow device are required, will not be installed until full backflow compliance is assured. This includes proper installation, testing and verified reception of testing data by "BSI Online" from back flow tester. Contact For BSI Online Fax: 1-888-414-4990, Email: bsionline@backflow.com

For Commercial properties:

The backflow device shall be installed according to the NC Plumbing Code and within ten feet of the meter on the customer's service line on all new developments where applicable. Inside building BFP's are acceptable when meeting the NC Plumbing Code and proper drainage is available. Any water meters for service lines, in which a backflow device are required, will not be installed until full backflow compliance is assured. This includes proper installation, testing and verified reception of testing data by "BSI Online" from back flow tester. Contact For BSI Online Fax: 1-888-414-4990, Email: bsionline@backflow.com

I Erosion Control

	Provided	Applicant Not Provided	N/A	Town Use
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Comments

28	Location of temporary and permanent measures	Provided	Not Provided	N/A	Town Use	Comments
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	Provided	Not Provided	N/A	Town Use	Comments
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	Provided	Not Provided	N/A	Town Use	Comments
53	j	j	j	j	
54	j	j	j	j	

J Streets

	Provided	Applicant Not Provided	N/A	Town Use
1 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.	j	j	j	j
2 Driveway grades a maximum of 10%	j	j	j	j
3 Sight distance triangles at intersections and driveways (include any landscaping, signs etc. that may interfere with sight triangles)	j	j	j	j
4 Label proposed street classification as dictated per Planning Department	j	j	j	j
5 Traffic study as required See section 4.12 of the current UDO	j	j	j	j
6 Dumpster location, size and access (show turning radii)	j	j	j	j
7 Fire access to all units and/or fire lanes as required-Provide fire truck turning radius sheet.	j	j	j	j
8 Sidewalk within public right of way	j	j	j	j
9 Pavement marking and street signage included.	j	j	j	j
10 NCDOT right of way encroachment (two party)	j	j	j	j
11 NCDOT right of way encroachment (three party)- four (4) originals must be provided)	j	j	j	j
12 NCDOT driveway permit	j	j	j	j
13 Town of Southern Pines -encroachment agreement	j	j	j	j
14 Street design meets NCDOT and Town minimum requirements for CL grades, cut/fill slopes sight distance etc. based on classification type	j	j	j	j
15 Show Center line road data(include data for all fire lanes as well)	j	j	j	j
16 Provide gutter spread calcs.	j	j	j	j
17 Heavy Duty Pavement design minimum: 2" SF 9.5 (A or B), 3" I19, 8" Aggregate Base Course-- All depths compacted--No exceptions for public town roads	j	j	j	j
18 Light Duty Pavement design minimum: 2" SF 9.5 (A or B), 6" Aggregate Base Course-- All depths compacted	j	j	j	j
19 If requesting an alternated pavement section for private or fire are being requested a sealed Geotech report showing alternate pavement design that meets fire dept. loading requirements shall be submitted				
20 Reference State road numbers and street names of connecting roads	j	j	j	j

Comments

21 Add note: All grades for entrances and fire lanes shall be field verified by the Fire Dept. prior to acceptance. The contractor is responsible for coordination with testing by the fire department.	j	j	j	j
22 If an alternated pavement design/cross section or any other non conforming features is used for any private roadway system then a note must be placed on the plans and plats that states" The roads shown herein are private and do not meet town standards and as such are not eligible if the future to	j	j	j	j

K Stormwater

	Provided	Applicant Not Provided	N/A	Town Use	Comments
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21	Storm drain outfalls shall released to the natural drainage ditch or stream.	j	j	j	j
22	Provide channel design calculation for temporary and permanent conditions.	j	j	j	j
23	Add NPDES ground cover requirements to plans				
24	Provide Watershed data table as found on town stamp -final approval.dwg				

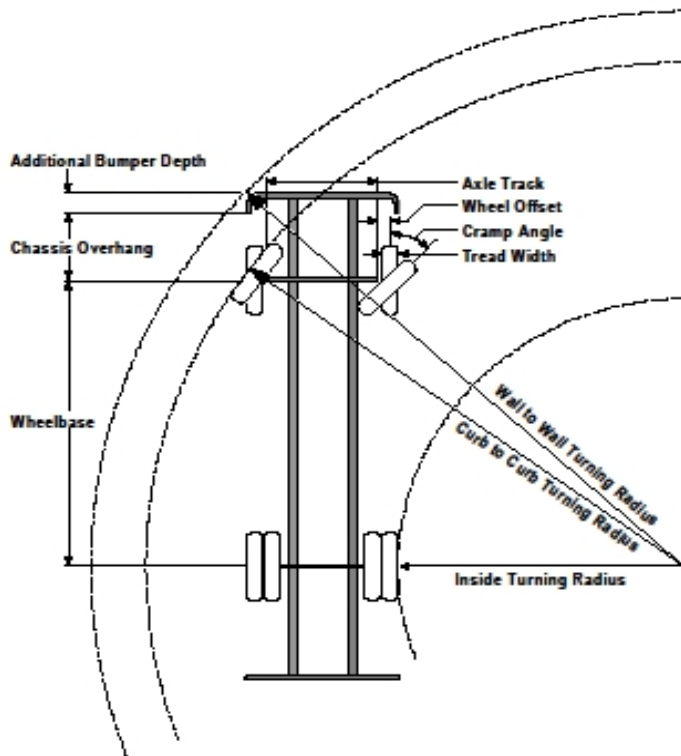
25 Provide table below to meet DWQ construction requirements:

GROUND STABILIZATION• SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTI			
PERIMETER DIKES, SWALES, DITCHES, AND SLOPES	7 DAYS	NONE			
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE			
SLOPES STEEPER THAN 3: 1	7 DAYS	IF SLOPES			
SLOPES 3: 1 OR FLATTER	14 DAYS	7- DAYS FOR			
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4: 1	14 DAYS	NONE (EXCEPT			
NOTE:					
CONTRACTOR RESPONSIBLE FOR WATERING GRASSED AREAS UNTIL ACCEPTABLE STAND OF GRASS HAS BEEN ESTABLISHED.					



Turning Performance Analysis

11/8/2010



Parameters:

Inside Cramp Angle:	45.00 °
Axle Track:	82.92 in.
Wheel Offset:	4.68 in.
Tread Width:	17.40 in.
Chassis Overhang:	68.99 in.
Additional Bumper Depth:	19.00 in.
Front Overhang:	87.99 in.
Wheelbase:	259.00 in.

Calculated Turning Radii:

Inside Turn:	20 ft. 6 in.
Curb to Curb:	36 ft. 10 in.
Wall to Wall:	41 ft. 5 in.

Comments:

Aerial Application
Turn radius report Pierce Job # 17506

Components	PRIDE #	Description
Front Axle	0508849	Axle, Front, Oshkosh TAK-4, Non Drive, 22,800 lb, Imp/Vel
Front Wheels	0019611	Wheels, Frt, Alum, Alcoa, 22.50" x 12.25" (425/ & 385/)
Front Tires	0052978	Tires, Goodyear, 425/65R22.50 20 ply G286 tread
Chassis	0054967	Arrow-XT Chassis, Aerials/Tankers, Tandem, 48K (Big Block)
Front Bumper	0012245	Bumper, 19" extended - all chassis'
Aerial Device	0120995	Aerial, 105' Heavy Duty Ladder

Notes:

Actual Inside Cramp Angle may be less due to highly specialized options.

Curb to Curb turning radius calculated for a 9.00 inch curb.