VILLAGE COUNCIL
AGENDA FOR WORK SESSION OF FEBRUARY 12, 2019
ASSEMBLY HALL
395 MAGNOLIA RD.
PINEHURST, NORTH CAROLINA

IMMEDIATELY FOLLOWING REGULAR MEETING

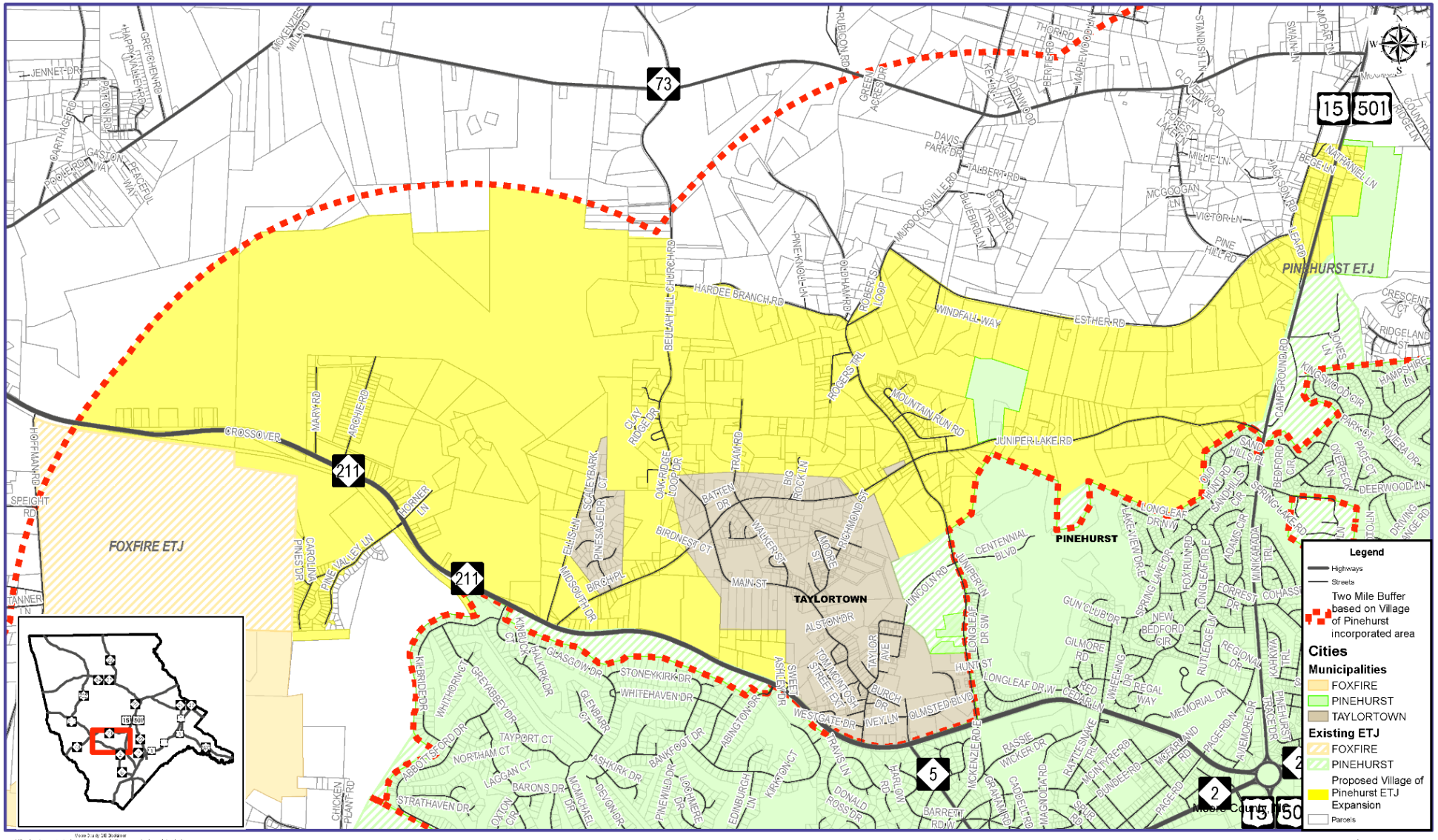
1. Call to Order.

2. Discussion on ETJ Expansion.

3. Work Session Business.

4. Adjournment.

Vision: The Village of Pinehurst is a charming, vibrant community which reflects our rich history and traditions.
Mission: Promote, enhance, and sustain the quality of life for residents, businesses, and visitors.
Values: Service, Initiative, Teamwork, and Improvement.



Proposed Village of Pinehurst ETJ Expansion

0 0.5 1 2 Miles

9/5/2018

WATER & WASTEWATER EXTENSION
POLICY & PROCEDURES MANUAL

Revised 4/16/2013

Purpose: The purpose of this Water and Wastewater Extension Policy & Procedures Manual (Policy Manual) is to establish the policies and procedures to be implemented by citizens and developers who wish to have water and wastewater service extended from the Moore County infrastructure.

Board of Commissioners Action: _____ *Adopted*
Date

_____ *Amended*
Date

I. CITIZEN INITIATED WATER AND SEWER EXTENSION POLICY

A. EXTENSION POLICIES WITHIN MOORE COUNTY'S SERVICE AREA

1. Moore County may provide the following basic facilities within the County's service area utilizing revenue bond, grant funds, current enterprise revenues, user charges, special assessments, availability fees and other available funds:

    a. Outfall sewers;
    b. Sewage pumping stations designed and intended to serve more than one property;
    c. Sanitary sewer force mains;
    d. Sewage treatment plants;
    e. Water distribution mains;
    f. Water booster pump stations;
    g. Water storage tanks; and
    h. Water treatment plants

2. The County will schedule the construction of the basic facilities described in Section 1.a each year on the basis of need and subject to budgetary limits. If an applicant for service desires to have unscheduled and expanded facilities constructed by the County, he shall file an application with the Department of Public Works.

3. Utility extensions from the basic facilities described in Section 1.a to individual customer services may be made by or through the County for the following reasons:

    a. The need to protect health, public safety and welfare.
    b. Upon request of property owners of existing development.

4. Except as provided in Section 2 of this Policy, all applicants for connection to the County's utility system shall pay availability fees in effect at the time the application is made.

5. Utility extensions within the Village of Pinehurst extra-territorial jurisdiction shall be approved by the Village Manager of the Village of Pinehurst and property owners requesting water and/or sewer extensions in the Village of Pinehurst extra-territorial jurisdiction shall petition the Village of Pinehurst for voluntary annexation.

B. EXTENSIONS FOR NEED AND EXISTING DEVELOPMENTS

1. All extensions from the basic facilities described in Section A.1.a to individual customer services for need or existing developments will be made by the County's Public Works Department or by a licensed contractor approved by the County. These extensions will be financed by connection fees, monthly user charges, and any applicable special district taxes.

2. Extensions of service within the County for existing developed areas shall be made as follows:

   a. Property owners requesting water and/or sewer service shall petition the County to provide services. The petition for extension of service shall be provided to the Public Works Department and shall designate the names, addresses, and signatures of property owners requesting service in conformance with the provision of this Policy.

   b. Whenever it is determined by the Board of Commissioners based on evidence presented that an area is without service and that the protection of the public health requires that extensions be made into such area, the Board of Commissioners may authorize the extensions of such lines.

   c. The Board of Commissioners may adopt other such rules and regulations as are necessary to carry out the requirements of this Policy.

3. Extension of utility service within the Village of Pinehurst extra-territorial jurisdiction for existing developed areas shall require a voluntary petition for annexation into the corporate limits of the Village of Pinehurst.

4. Extension of utility service outside the boundary limits of Moore County and/or the East Moore Water District shall be considered by special exception only.

5. Extension request petitions outlined in subsection B.2.b shall be reviewed by the Public Works Department. The Department shall prepare a feasibility study for the project, which includes cost estimates for extension of utility lines to serve the properties requesting service and a payback analysis. The payback analysis shall include project construction costs, connection fee revenue, monthly use revenue, any special district taxes, sewer disposal costs, and/or water supply costs. The feasibility of a project shall be determined by the Board of Commissioners based on the results

of the payback analysis and/or the construction costs of the necessary improvements. A feasible project shall have a payback period less than 10 years or revenues generated from tap fees that total at least 50 percent of the cost of construction. Petitioners shall have the option to pay additional funds to the County in order for the project to be able to meet the payback period of 10 years. Such additional funds will be designated for the specific project in question and shall be applied toward the overall cost of construction when calculating the payback period.

6. Projects may be disapproved if funds are not available to construct the necessary improvements.

II. WATER SYSTEM EXTENSIONS BY DEVELOPER POLICY

A. NCDENR

Water distribution systems which will or may be owned and operated by Moore County shall be designed and constructed in accordance with the requirements of Title 15A 18C, .0900 "Distribution System" of the North Carolina Administrative Code, NCDENR and Moore County Public Works (MCPW) policies, standards and specifications.

B. OWNERSHIP OF SYSTEMS

1. All extensions to the water distribution system of Moore County shall be considered as public facilities up to and including the meter and meter box on the water service. Therefore, all such facilities must be installed in public street rights-of-way or easements, having a width not less than 20 feet.
2. Any proposed water distribution infrastructure shall be approved by the County Engineer. All easements for such shall be fully platted and recorded with the Moore County Register of Deeds.
3. All water service lines beyond the meter connection are the property of and responsibility of parties other than MCPW.

C. WATER SYSTEM EXTENSION

1. If there is no or inadequate water service available to the property desiring potable water service, the Developer shall provide the infrastructure extensions needed to provide service to the property.
2. The water system shall provide a minimum system pressure of 20 psi at peak demand (fire flow) and 30 psi during peak flow at all points of the distribution system.
3. The size and capacity of the infrastructure extensions will be determined by Moore County to provide adequate water pressure and water quality, and to accommodate future growth projections. Dedication of additional utility easements may be required of the Developer.

4. Water system infrastructure extensions may include the following:

   a. Water system extensions may include water mains, elevated tanks, water booster pumping stations, pressure reducing valves, altitude valves and other facilities as

may be required to deliver the water service.

b. For subdivisions lots, water taps shall be provided to vacant and occupied lots with a one inch water service connection.

5. Water system infrastructure extensions within the Village of Pinehurst extra-territorial jurisdiction must be approved by the Village Manager of the Village of Pinehurst and applicants must submit a petition for voluntary annexation to the Pinehurst Village Council.

D. MANDATORY STANDARDS & QUALITY CONTROL

1. All water system extensions accepted by Moore County will have plans and specifications approved by the North Carolina Public Water Supply and bear the permit stamp of the NCDENR.
2. All plans shall be designed by a Professional Engineer, licensed in the State of North Carolina.
3. All extensions by developers will be constructed by a licensed contractor approved by the County.
4. The Developer shall provide "Record Drawings" before water service is provided.
5. A designated representative of MCPW will personally witness pressure tests and disinfection tests in accordance with the Fee Schedule included herein. The Developer's Engineer shall be responsible for day-to-day construction administration and inspection.
6. The Developer shall provide a one year warranty period from the date MCPW accepts the infrastructure for operation.
7. The Developer's Engineer shall certify that the work has been properly constructed to NCDENR and Moore County standards.

E. EASEMENTS

Where public water mains and facilities are installed within easements crossing private property, Moore County shall have the right to enter upon the easement for purposes of inspecting, repairing or replacing the water mains and performing utilities maintenance. Where paved private streets, driveways, parking lots, fence, docks, shrubs, flowers, ornaments, etc. have been installed within the easement, Moore County will not be responsible for the repair or replacement of such facilities which must be removed to facilitate repairs. Any excavations shall be backfilled to approximately the original grade and a stone surface placed in traffic areas. No large shrubs, trees, docks, drives or parking areas shall be installed inside the easement without approval from the County Engineer. Building structures are not allowed within the easement without the approval of the County Engineer.

F. SERVICE TAPS FOR NON-ADJACENT PREMISES

A water service tap may be provided to serve a lot not adjacent to a roadway or utility easement, containing a water line, which is separated by <u>one</u> intermediate property owner. To acquire this water tap the following condition must be met:

1. The County Engineer must approve the tap location and main length
2. A utility easement shall be obtained from the intermediate property owner(s)

3. A copy of the easement is to be provided to the County Engineer.
4. After collecting the water tap fee, MCPW will make a tap and provide a meter and meter box at the edge of roadway right-of-way or easement right-of-way with the user providing the line from the meter to the building to be served.
5. The MCPW Director may increase the one intermediate property owner crossing to two lots for recognized hardship cases.

   Reasons for hardship may include:

   a. Second property to be crossed is a very short distance.
   b. Water service may be available by crossing only one property, but the crossing of two properties is required for the service.
   c. A homeowner's well or septic tank has failed with no chance for repair.

G. DIVIDED HIGHWAYS

1. Where a divided highway contains an existing water main located on one side of the roadway, a single dwelling on the opposite side of the roadway may obtain a water tap for a single service, if approved by the North Carolina Department of Transportation (NCDOT).
2. To obtain a water main connection across a divided highway for a development, the Developer shall construct a water main of sufficient size to provide fire protection.

H. CROSS-CONNECTION CONTROL

1. Cross-connection control shall comply with the following:

   a. Federal Safe Drinking Water Act of 1974 (P.L. 93-523).
   b. North Carolina State Administrative Code (Title 15A, Subchapter 18C-.0709).
   c. North Carolina State Building Code (Volume II, Appendix D, Subsection 102.4.

2. This Ordinance shall apply to all users of the Moore County water systems and Water Districts.

I. METER POLICY

1. Separate Meters-Water furnished for a given lot shall be used on that lot only. Each customer's service shall be separately metered at a single delivery and metering point.
2. Master Meters- For commercial, industrial, apartment and other complexes, mobile home parks or recreation parks a master meter is allowed if the complex or park is owned and services are maintained by a single person or organization.
3. By-Pass Meters-In the case of a master meter requiring a bypass line, the bypass shall be equipped with a meter installed between two shut-off valves.
4. Irrigation Meters-Water used for outside purposes that does not result in the water entering the sanitary sewer system shall be metered by a separate yard meter. A Backflow preventer will be required at the meter.

J. FIRE HYDRANTS

PROPOSED USE	SPACING (FEET)
Rural (<10 units per mile)	2,000
Residential (<1 unit per 2 acres)	1,000
Residential (>1 unit per 2 acres)	500
Schools	300
Low & medium density nonresidential, single story	500
High density and multi-story nonresidential	300

1. A fire hydrant should generally be located at a street intersection.
2. All fire hydrants shall be installed on a minimum six-inch water main.
3. A hydrant shall be located within 100 feet of the "Fire Department Connection" for automatic fire sprinkler systems.
4. A "Fire Department Connection" shall be located outside of the anticipated collapse zone of a building containing a sprinkler system and approved by the Fire Marshall.
5. All hydrants and mains that are located on private property and are to be maintained by MCPW shall be within an easement dedicated to Moore County.
6. All hydrants shall have a safety red barrel.
7. Hydrant valves shall be located as close to the hydrants as practical.

NOTE: No one except Moore County Public Works personnel, authorized agents of Moore County and qualified Fire Department personnel are authorized to operate any of the water distribution system fire hydrants. This requirement is in accordance with the N.C. Register 10 NCAC 10D.1066 (b)(7).

K. Fire Flow

(1) The Developer shall be responsible for contacting the Fire Marshal to determine the estimated fire flow available at the point of connection to the water system. The Developer shall submit information on the required fire flow and calculations in accordance with the submittals section to confirm the required fire flow is available.

(2) The hydraulic/fire flow model shall include:

a. Static condition indicating only new domestic demand.
b. Separate fire flow models from each hydrant to indicate each hydrant is capable of providing the fire flow demand while concurrently providing peak domestic and sprinkler demand. Adequate system design and performance information including proposed elevations, facilities location, type of fire suppression system with technical data, shall be submitted to allow for a complete review of the proposed system.

(3) The Fire Marshal, or their appointee, shall make the final decision of required Fire Flow for site specific conditions. For fire hydrants locations see the Fire Marshall, check the Water & Wastewater Extension Policy Manual.

L. Needed Fire Flow Calculations (NFF)

An estimate of fire flow required for a given structure of fire area shall be based on the following ISO formula:

$$NFF = C_i \times O_i \times (1.0+X+P)i$$

Where: NFF is the needed fire flow in gallons per minute
C_i is a Construction factor that depends on the structure under consideration
O_i is an Occupancy Factor that depends on the combustibility of the occupancy
(X+P) is an Exposure Factor that depends upon the extent of exposure from and to adjacent structures.

For further information on the formula and its proper application, refer to the NFPA "Fire Protection Handbook", 18th Edition.

In all cases, the required fire flow shall not be less than the amounts listed below with greater amounts where required by the ISO equation and the State of North Carolina Fire Code tables unless otherwise modified by the Fire Marshal.

DISTANCE BETWEEN BUILDINGS	**NEEDED FIRE FLOW**
More than 100'	500 gpm
31' to 100'	750 gpm
11' to 30'	1,000 gpm
10' or less	1,500 gpm

The calculated (required) fire flow shall be reviewed by the County Engineer and Fire Marshal and the flows may be adjusted as determined appropriate by the Fire Marshal for site specific conditions.

III. WASTEWATER SYSTEM EXTENSIONS BY DEVELOPER POLICY

A. NCDENR

Wastewater collection systems which will or may be owned by Moore County shall be designed and constructed in accordance with the requirements of Title 15A 2T Sect. 0.0100-0.1600 of the North Carolina Administrative Code, Department of Environment and Natural Resources, "Waste Not Discharged to Surface Waters" (latest revision) and this Manual and Moore County Public Works (MCPW) policies, standards and specifications.

B. OWNERSHIP OF SYSTEM

1. All sewer infrastructure constructed for the benefit of the public and to be maintained by Moore County Public Utilities shall become the property of Moore County upon completion of the warranty period and acceptance by MCPW.
2. All extensions to the wastewater collection system of Moore County shall be considered as public facilities up to and including the cleanout on the service line. Therefore, all such facilities shall be installed in public street rights-of-way or easements, having a width not less than 20 feet.
3. Any proposed wastewater collection system infrastructure shall be approved by the County Engineer. All easements for such shall be fully platted and recorded with the Moore County Register of Deeds.
4. All wastewater service lines beyond the cleanout connection are the property of and responsibility of parties other than MCPW.

C. SEWER SYSTEM EXTENSION

1. If there is no or inadequate wastewater service available to the property desiring wastewater service, the Developer shall provide the infrastructure extensions and upgraded pump station infrastructure needed to provide service to the property.
2. Service cleanouts shall be constructed on new gravity mains between existing and new developments to provide requested owners with service connections.
3. For commercial, industrial, apartment complex, etc., one service cleanout is allowed per building if the building is owned and the service is maintained by a single person or organization.
4. Sewer main extension to be owned by others shall provide a monitoring station or pump station with flow metering capabilities built to MCPW specifications, or the sewer main user shall pay MCPW sewer fees based on water use.
5. Wastewater system infrastructure extensions may include:
   a. Sewer mains, manholes, cleanouts, services, sewage pumping stations, force mains, air release valves, monitoring stations and other facilities as may be required to provide sewer service.
   b. For subdivisions lots, wastewater service lines with cleanouts shall be provided to vacant and occupied lots with a four inch sewer service connection.
6. Wastewater system infrastructure extensions in the Village of Pinehurst extra-territorial jurisdiction must be approved by the Village Manager of the Village of Pinehurst and applicants must submit a petition for voluntary annexation to the Pinehurst Village Council.

D. MANDATORY STANDARDS & QUALITY CONTROL

1. All wastewater collection system components shall be constructed, tested, and operated in total compliance with the North Carolina Department of Environment and Natural Resources Rules and Regulations; and standards established by MCPW.
2. All plans shall be designed by a Professional Engineer, licensed in the State of North Carolina.
3. The Developer shall provide "Record Drawings" before wastewater service is provided.
4. The designated representative of MCPW will personally witness manhole vacuum tests, air leak test, mandrel tests, force-main tie-ins, manhole construction over existing sewer lines, sewer lines etc. in accordance with the fee schedule provided herein. The Developer's Engineer shall be responsible for day-to-day construction administration and inspection.
5. The Developer shall provide a one year warranty from the date MCPW accepts the infrastructure for operation. If no problems exist after the one year warranty period, the Developer will be free of any construction obligation.
6. The Developer's Engineer shall certify that the work has been properly constructed to NCDENR and Moore County standards.

E. EASEMENTS

Where public wastewater mains and facilities are installed within easements crossing private property, Moore County shall have the right to enter upon the easement for purposes of inspecting, repairing or replacing the wastewater mains and performing utilities maintenance. Where paved private streets, driveways, parking lots, fence, docks, shrubs, flowers, ornaments, buildings, etc. have been installed within the easement, Moore County will not be responsible for the repair or replacement of such facilities which must be removed to facilitate repairs or new construction. Any excavations shall be backfilled to approximately the original grade and a stone surface placed in traffic areas. No large shrubs, docks, drives or parking areas shall be installed inside the easement without approval from the County Engineer. Building structures are not allowed within the easement without approval of the County Engineer.

F. SERVICE TAPS FOR NON-ADJACENT PREMISES

A Wastewater Service Tap may be provided to serve a building not adjacent to a roadway or utility easement that is separated by only <u>one</u> intermediate property owner. To acquire this wastewater tap the following must be met:

1. The County Engineer must initially approve this tap for location, length and pipe size.
2. A utility easement shall be obtained from the intermediate property owner for the service.
3. A copy of the easement is to be provided to the County Engineer.

4. After collecting the wastewater tap fee, MCPW will make a tap and provide a cleanout at the edge of roadway right-of-way or easement right-of-way with the user providing the line from the cleanout to the building to be served.

5. The MCPW Director may increase the one intermediate property owner crossing to two lots for recognized hardship cases.

   Reasons for hardship may include:

   a. Second property to be crossed is a very short distance.
   b. Sewer service may be available by crossing only one property, but the crossing of two properties is required for the other service.
   c. A homeowner's septic tank has failed with no chance for repair.

G. INDUSTRIAL PRETREATMENT

Refer to Moore County Sewer Use Ordinance.

H. GREASE, OIL AND SAND INTERCEPTOR

Refer to Moore County Sewer Use Ordinance

I. WASTEWATER FACILITIES OWNED BY OTHERS

Wastewater pump stations, force mains, monitoring stations and other components of the wastewater collection system owned by others that feed into MCPW wastewater system shall follow NCDENR and MCPW standard specifications for design, construction, maintenance and chemical analysis.

J. INTERCEPTOR TAPS & MONITORING STATIONS

1. With approval of the County Engineer, sewer collector mains are permitted to tap into the Interceptor Gravity Sewer Line. These taps shall be made into manholes only, not into the pipe.
2. A Flow Monitoring Station shall be constructed at all interceptor taps, consisting of a manhole, flow meter and flow monitoring equipment, ultrasonic sensor, flow transmitter, circular chart recorder, electrical works, yard hydrant(if water service is available to the site), fencing, gravity line from the monitoring station to the interceptor manhole, and appurtenances.
3. Monitoring Stations for Sewer Systems shall be designed to MCPW standards and constructed by the user. MCPW will maintain and collect meter readings for billing and monthly usage payment by the user.
4. If at a later date the Monitoring Station needs to be upgraded, the user shall be required to design and construct the improvement.
5. Moore County will become the owner of the monitoring station after acceptance.

6. Individual Sewer Taps for homes, business, etc. are not permitted to tap the interceptor.

K. LOW PRESSURE SEWER PUMP STATIONS

MCPW will permit installation of Low Pressure Sewer Pump Stations with force mains, where gravity lines are not possible, that are individually owned for small commercial and residential developments with prior approval from MCPW. The operation and maintenance of this unit shall be the responsibility of the user up to the connection to the gravity main.

L. BACKWATER PREVENTER VALVE

A Backwater Preventer Valve is required by the owner for their sewer service line if the first up-stream manhole top elevation is higher than the floor elevation of the service building.

IV. DEVELOPMENT SUBMITTAL PROCEDURES

A. DEVELOPMENT PLAN

1. Development Review Procedures

Refer to the development review procedures established by the Moore County Planning Department.

B. PRELIMINARY CONSTRUCTION PLANS

1. Letter of Intent to Develop

The first step required of a developer is to submit a completed "Letter of Intent to Develop" form (See Appendix A). The form is to be forwarded to the County Engineer, Moore County Public Works, P.O. Box 1927, Carthage, N.C., 28327.

2. Sketch Plan

The sketch plan of a proposed development should be provided and contain or be accompanied by the following information:

a. Maps of property for proposed development including north arrow and graphic scale;
b. Vicinity or location map;
c. Tract boundaries and total acreage;
d. The name and number of all abutting NC Department of Transportation, Municipal, private or public road rights-of-way;
e. Closest available existing water and wastewater utilities and where proposed utilities are to be connected to public utilities.

3. **Calculations**

The following calculations for the proposed project should accompany the Letter of Intent to Develop:

a. Potable Water Demands
b. Fire Flow Requirements
c. Wastewater Flow Rates

It is the responsibility of the Developer's Engineer to provide proof that the existing and proposed water and wastewater systems can provide the needed water and wastewater service to the proposed development.

A water hydraulic model shall be developed with results submitted verifying the capability of the existing and proposed water systems. Existing system conditions used in the model shall be clearly stated in the submittal. Calculations for average and maximum day demands and fire flows shall be clearly denoted.

A sewer hydraulic model shall be developed with results submitted verifying the capability of the existing and proposed wastewater system. Existing system conditions used in the model shall be clearly stated in the submittal. Calculations for peaking factors used for pump station flows shall be clearly denoted. The County will model the submitted data in their overall system model.

4. **Fees**

To defray the cost of reviewing and processing the Letter of Intent to Develop, Sketch Plan, and Calculations, the fees shall be paid to MCPW in accordance with the adopted Fee Schedule.

5. **Response to Letter of Intent**

Once MCPW has reviewed the Developer's information noted above, a Flow Tracking Form can be generated.

A project will be considered cancelled and removed from active status if the project has not begun construction within a 36 month period from the date of approval, unless proper documentation has been provided to the County Engineer demonstrating that the project is being actively developed. Cancellation includes wastewater flow allocation and potable water assurance. Once the project is cancelled, future return to active status will require that the project be resubmitted as a new project with new fees being assessed.

C. CONSTRUCTION PLANS

1. General

The construction plans of a proposed water and/or wastewater construction project shall be clearly and legibly drawn to maximum scale of one (1) inch equal (50) feet horizontal and (1) inch equals (10) feet vertical on twenty-four inches by thirty-six inches (24 x 36) plan sheet. Plan and profile views shall be submitted for all wastewater collection projects. If the construction plan requires more than one sheet, a key diagram showing location of the sheets relative to each other shall be provided on the cover sheet.

2. Content

The Construction Plan shall contain the following information:

a. Name of owner of record.
b. Name of subdivision, date, north arrow, graphic scale, and vicinity map.
c. Name, registration number, and seal for Professional Land Surveyor and/or Professional Engineer as appropriate.
d. Sufficient data to determine readily and reproduce on the ground the location, bearing, and length of every street and alley line, lot line, easement, boundary line, whether curved or tangent, and sewer and/or water infrastructure improvement. This shall include the radius, point of tangent, and other data for curved property lines and curved streets, to an appropriate accuracy and in conformance with surveying practice.
e. Names of owners of record of all adjoining land and all property boundaries, water courses, easements, utilities and other such improvements, which cross or form any boundary line of track being developed.
f. Streets and alleys, right-of-way, and street names.
g. All lengths shall be to the nearest one hundredth of a foot and angles to the nearest second.
h. Accurate description of the location of all property monuments and/or markers.
i. All platted information shall conform to the Moore County Planning Department subdivision and land use regulations.
j. Proposed utility easements, showing the accurate dimensions in hundredths of feet and including notation of any limitations on such easements. Easements shall be 20 feet wide, 10 feet each side of pipe line, unless an additional width for construction of facility is needed.
k. Plan and profile sheets along the center line of proposed roadway shall be provided. Such sheets shall show natural and finished pavement grade with typical road right-of-way section shown. Show profiles of water and sewer crossings or other utility crossings.

l. Water system design shall indicate pipe size and all special appurtenances, valves, tees, and bends. The water system design shall also indicate the location of fire hydrants, air relief valves, and any special appurtenances. Sufficient data shall be provided to determine and readily reproduce the location on the ground.
m. Wastewater plan and profile sheets will contain the following information: elevations relative to mean sea level (with benchmarks) for inlet invert, outlet invert, manhole rim, 100 year flood; all pipe crossings; percent grade; and length and type of pipe. Plan view will show service connection location with reference to existing utilities and utility easements. Station numbers shall be shown numbered to a minimum interval of 100 feet. Sufficient data shall be provided to readily reproduce the location on the ground.
n. Site plans shall be provided for water booster pumps stations, water tanks, wastewater pumping stations, monitoring and metering stations, and other facilities. Site plans shall include proposed dimensions, delineation of boundaries and designation of the ownership of the property on which the site is located. The 100 year flood elevation shall be shown. Detailed design of facilities shall include site grading, storm drainage, roadway access, fencing, plan and elevation views of structures, electrical, mechanical, and architectural design, as applicable. Provide detailed design for tie-ins, construction details and specifications.
o. For sewage force mains, provide plan and profile sheets; include type of pipe, utility crossings, air relief valves and details. Sufficient data shall be provided to determine and readily reproduce location on the ground.

3. **Accompanying Information**

Detailed information shall be provided identifying necessary construction specifications and procedures along with the required construction documents, Performance and Payment Bonds, General and Special Conditions, etc.

a. A copy of completed NC DOT Encroachment Permit Application Form, if applicable.
b. A copy of Railroad Encroachment Permit Application Form, if applicable.
c. A copy of Municipal Encroachment Application Form, if applicable.
d. A copies of NCDENR Public Water Supply Application
e. A copies of NCDENR Water Quality Application
f. A copies of NCDENR Land Quality Application
g. Engineering Report to cover the basic factors and principles considered in planning of the project.
h. A copy of NCDENR – Public Water Supply Authorization to Construct.
i. A copy of NCDENR – Water Quality Authorization to Construct.
j. A copy of NCDENR – Land Quality Authorization to Construct.
k. A copy of the Moore County Subdivision Review Board Approval, if applicable.
l. A copy of the Municipal Review Board Approval, if applicable.
m. A copy of the certified Petition for Voluntary Annexation to the Pinehurst Village Council, if applicable.
n. The County or Municipal Fire Marshall's Letter of Approval.
o. Submittal of all shop drawings for materials used in project must be approved prior to MCPW authorization to proceed.

p. Computation showing any excess Impact Requirements by the Water Pollution Control Plant.
q. A copy of Power Company easement approving High Transmission Line crossing, if applicable.

4. **Fees**

To defray the cost of reviewing the construction plans, reviewing the accompanied information, and providing the needed field inspection and testing, fees to the MCPW shall be provided in accordance with the adopted Fee Schedule.

5. **Approval of Construction Plan**

Preliminary plan review shall be obtained from MCPW staff with at least a 30 day review period. Before the final construction plan can be approved, all requirements of this Manual must be satisfied.

D. CONTRACTOR DOCUMENTS

The standards listed herein define a number of documents and standards that Contractors must possess.

1. **Contractor's License**

All Contractors must be licensed by the North Carolina Licensing Board for General Contractors, as a Public Utilities Contractor, minimum. The MCPW reserves the right to accept or reject the Contractor selected to perform work on systems to be conveyed to the MCPW based upon past performance and experiences.

2. **Federal I.D. Number**

Contractors shall provide their Federal Identification Number, if applicable.

3. **Performance Bond**

Performance Bond in the amount of one hundred percent (100%) of the contract amount, conditioned upon the faithful performance of the contract in accordance with specifications and conditions of the contract is required. The bond shall be in the name of Moore County.

4. **Payment Bond**

Payment Bond in the amount of one hundred percent (100%) of the contract amount, conditioned upon the faithful payment of the contract in accordance with specifications and conditions of the contract is required. The bond shall be in the name of Moore County.

5. **Certificate of Insurance**

The Contractor, at his sole expense, shall provide an original signed certificate of insurance.

a. Workers' Compensation – Statutory Limits – Employers' Liability - $2,000,000.

b. Coverage shall be provided under a Comprehensive General Liability or Commercial General Liability and Automobile Liability form of Insurance, such as is usual to the practice of the Insurance Industry, including (but not limited to) all the usual coverage referred to as:

- Comprehensive/Commercial Form;
- Premises/Operations Liability (M&C);
- Underground Explosion & Collapse Hazard;
- Products/Completed Operations;
- Blanket Contractual;
- Broad Form Property Damage;
- Personal Injury;
- Automobile Liability, Including Coverage for owned, non-owned, leased or hired vehicles, and
- Garage/Garage keepers, Bailers, or Ship keepers Liability, if applicable

c. Minimum Limits of Protection must be:

- $2,000,000 – Professional Liability
- $1,000,000 – Bodily Injury Liability
- $ 500,000 – Property Damage Liability
- $3,000,000 – Combined single Limit bodily Injury and Property Damage

d. Policy period must cover the term of contract

e. The County of Moore shall be given not less than 30 days notice of any change, cancellation, expiration, or renewal of the policy.

f. Enforcement

1. A copy of the fully completed Endorsement must be provided. The Endorsement must name the County of Moore as an Additional Insured, identify the policy number and be signed by an authorized representative. The Certificate of Insurance and Endorsement must be submitted as one document. To expedite approval, a Binder (ACORD #75) for the Endorsement will be accepted for 90 days until the actual policy is issued, or
2. The broker/agent submits a certified copy of the insurance policy, which includes the County of Moore as an additional insured.

6. **Observation of Laws**

The Contractor shall at all times observe and comply with all Federal, State, and local laws, ordinances, regulations, and all such decreed as exist at present or as may be enacted during the period of construction, by bodies or tribunals having any jurisdiction or authority over the work, in any manner effecting the conduct of the work or those employed on the work. No plea of misunderstanding will be considered on account of their ignorance thereof.

7. **Indemnity**

To the fullest extent permitted by law and regulations, the Contractor shall indemnify and hold harmless the County and its officials, agents, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers or architects, attorneys, and other professionals and costs related to court action or arbitration) arising out of or resulting from the performance of a Contract or the actions of the Contractor or its officials, employees, or Subcontractors.

The Contractor shall comply with the North Carolina Workers' Compensation Act. In the event the Contractor is excluded from the requirements of such Act and does not voluntarily carry workers' compensation coverage, the Contractor shall carry or cause its employees to carry adequate medical/accident insurance to cover any injuries sustained by its employees or agents during the performance of service.

6. PRE-CONSTRUCTION CONFERENCE

A pre-construction conference shall be scheduled with MCPW by the Developer's Engineer when the construction plan has been approved by MCPW and NCDENR and the Contract Documents have been executed. A minimum five business days of advance notification to MCPW is required to schedule the conference. Upon notification of the pre-construction conference by the Developer's Engineer, MCPW will review the project to see if all requirements set forth have been met.

The Developer's Engineer shall make arrangements to invite those public agencies involved with the project to attend the pre-construction conference. Those in attendance shall include representatives of the following: General Contractor, Subcontractor(s),

Developer, Developer's Engineer, County Engineer, County Inspection personnel, and Public Utilities personnel. Others who may be in attendance are representatives of the NC Division of Highways, Municipality, and applicable utility companies and regulatory agencies.

Topics to be discussed at the meeting include the scope of the project, safety (being the Contractor's responsibility), inspection, preliminary progress schedule, preliminary schedule of shop drawings and submittals, insurance and bonds, project close-out procedures and additional issues that the attending parties feel need to be addressed.

The Contractor is reminded that before digging, all contractors are required by state law to notify the North Carolina One Call Center at 1-800-632-4949 or 811 in order to request locations from each utility company to make an on-site visit for the purpose of locating all existing underground utilities. The Contractor is responsible to ensure that all subcontractors follow this requirement. No construction will begin until the pre-construction conference is held, and the Developer's Engineer and the County Engineer give authorization to proceed.

F. CONSTRUCTION

1. Interpretation of Plans

The approved plans will show the locations, details, and dimensions of the work contemplated, which shall be performed in strict accordance therewith and in accordance with the approved specifications. Interpretations of the plans and specifications shall be the responsibility of the Developer's Engineer. Any deviations from the approved plans, specifications, etc., in all cases will be determined by the Developer's Engineer, with the approval of the County Engineer. A set of approved plans shall be kept at the job site as long as construction is in progress.

2. Shop Drawings

The Contractor shall provide shop drawings for all materials required for the execution of the work. The Developer's Engineer and County Engineer shall review all shop drawings with at least a two week review period. The Developer's and County Engineers' approval of any shop drawing shall not release the Contractor from responsibility to strictly adhere to the contract documents. Changes in the contract documents shall only be made by a change order.

Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or submission has been approved by the Developer's and County Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to inspectors and engineers.

3. Construction Layout

The Contractor shall furnish all line and grade necessary to construct the project. The work, as completed, shall conform to the approved construction plans except where grade and/or alignment are changed to avoid obstructions and such changes have been previously approved by the Developer's Engineer.

4. Field Changes

If the project work site requires any field changes, then all such changes must be approved by the County Engineer. Major changes must be addressed by re-submitting the revised plans to County Engineer, and NCDENR for the necessary approval. Minor change may be documented on the as-built record drawings once the construction is completed.

5. General Inspection

Moore County Public Works Inspection personnel shall make periodic inspections, during construction to ensure that the Contractor is complying fully with project design and specifications, as well as the policies and procedures herein established that the materials and methods used in the construction are of acceptable quality.

Public Works personnel will at all times have access to the work. In addition, authorized representatives and agents of any participating Federal or State Agency shall be permitted to inspect all work, materials, and other relevant data and records. The Contractor will provide proper access for observation of the work and for testing thereof.

Public Works inspection personnel shall be present to inspect the following items of work:

a. Concrete Placement
b. Critical Pipe-laying operations
c. Tie-ins
d. Pump Stations, vaults, and major structures
e. Testing as required below

If any underground work is covered prior to proper inspection by the County Engineer or the Public Works Inspection Personnel, it must, if requested, be uncovered for their observation and replaced at the Contractor's expense.

6. Preliminary Final Inspection

A preliminary final inspection may be requested by the Contractor for the purpose of preparing a "punch list" of items to be completed prior to final inspection. This inspection does not authorize the Developer or Contractor to discharge wastewater into the County sewer system or to transmit potable water by County water system. After the final construction is approved by the County, easements are dedicated and NCDENR has issued approval, the County will accept waste from and/or transmit potable water to the proposed development.

7. Tests Required

The Contractor shall provide, at his expense, the necessary testing required.
Public Works Inspection personnel are required to observe the following tests:

a. Water system Pressure Test
b. Water system Bacteriological Sampling
c. Water system Tracer Wire Test
d. Sewer system Mandrel Test
e. Sewer system lines Air Leak Test
f. Sewer system manhole Vacuum Test

If the contract documents, laws, ordinances, regulations or request of any public authority having jurisdiction require any work to be inspected, tested, or approved by someone other than the Contractor, the Contactor will give the County Engineer timely notice of readiness. The Contractor will then furnish to the Developer's and County Engineer the required certificates of inspection and testing.

8. Responsibilities of Inspectors

Moore County Public Works Department Inspection personnel are authorized to inspect all work preformed and materials furnished. An inspector shall be assigned to the project to report the progress of the work and the manner in which it is being performed. They shall report to the County Engineer whenever it appears that the material and/or work performed by the Contractor fail to fulfill the requirements of the standards and specifications, and to call to the attention of the Contractor such failure. Such inspection, or any failure to provide such inspection, however, shall not relieve the Contractor or Developer from their obligations to perform all work strictly in accordance with the requirements of the Construction Plans and Specifications nor, shall it release the Developer from any of the terms of the Contract with the County for the work. The inspector is not authorized to revoke, alter or waive any of the requirements of the Developer's Contract; to approve or accept any portion of the completed project; nor to give any instructions to the Contractor which are contrary to the construction plans and specifications. They shall have the authority to reject materials and to refer other items to the County Engineer. Any advice or instructions which the inspector may give the Contactor shall not be construed as binding upon

the County in any way, nor as releasing the Contactor or Developer from fulfilling the terms of the County standards and specifications or the Developer fulfilling all of the terms of his Contract with the County.

9. Responsibilities of the Developer's Engineer

The Developer's Engineer will interpret the intent of the contract documents. He is responsible for certifying that the project is constructed in accordance with the plans and specifications. The Developer's Engineer is expected to perform the construction administration and inspection services for the construction of the project, including the following:

a. Schedule and run the preconstruction conference
b. Review shop drawings and coordinate County review with the County Engineer
c. Schedule and run construction progress meetings
d. Issue change orders to change the scope of the work
e. Inspect the work to ensure compliance with County and NCDENR requirements
f. Prepare punch lists for work to be completed
g. Coordinate start-up of equipment and facilities
h. Certify to NCDENR that the project is built in conformance with the project plans and specifications

10. Responsibilities of the County Engineer and Stop Work Orders

The County Engineer will direct the inspection of the work to ensure compliance with County standards and specifications.

The County Engineer may issue a Stop Work Order, with approval of the Public Works Director, (written or verbal with written follow-up) instructing the Developer/Contractor to immediately cease (any or all) work if such work posed a threat or hazard to the public, Contractor employees, government employees, private or government property; is being performed without proper approvals; is not following approved plans and specifications; is not following Moore County standards and specifications; or if there is no current set of approved plans onsite. In the event work is undertaken prior to appropriate approvals being secured or is not properly inspected, the Contractor may be required to remove and reinstall all work not properly inspected or approved and may receive a Stop Work Order for all other construction at the site until the matter in question has been fully corrected to the County Engineer and the Director's approval.

The Stop Work Order may also include instructions for remedial work or repairs deemed necessary to correct such threats or hazards. In the event that corrective measures are not taken properly or in a timely manner, County reserves the right to implement such corrective measures and to pursue any and all legal means to seek reimbursement for any costs to the County incurred as a result. The County will not bear any responsibility for consequential damages incurred by the

Developer/Contractor or others resulting from issuance of a Stop Work Order, such damages including, but not limited to, lost time or liquidated damages, loss of materials, payroll and overhead costs, equipment rental cost, permit cost, fines or legal costs, etc.

11. Public Convenience and Safety

The Contractor shall, at all times, conduct the work in such a manner as to ensure the least obstruction to vehicular and pedestrian traffic. The convenience of the general public and of the residents along and adjacent to the work shall be satisfactorily provided for, including provisions for and maintenance of access to passageways and entrances into public and private property. The Contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient warning lights and danger signals, provide workmen, and take all precautions necessary for the protection of the work and safety of the public. Any necessary signs shall be suitable mounted and shall be conspicuously placed adjacent to the work where traffic will be alerted.

The Contractor shall, at their own risk and expenses shore up and otherwise protect buildings, bridges, fences, walls, property monuments, pipes, and other structures and objects legally existing along the line or adjacent to the work; and in the event of any damage to such public or private property by reason of, or consequent upon any act, omission, neglect or misconduct in the execution of the work provided for herein, the Contractor shall, at their own cost and expense, make all such repairs as may be necessary to restore such property to its former condition. Failure on the part of the Contractor to make all necessary repairs, or to satisfy any legal demand or liability, shall confer upon the MCPW the right to disallow the connection of the project to the County's system.

It is clearly understood that it is the responsibility of the Contractor to maintain reasonable cleanliness of all streets which are used in the construction of the project. When, in the opinion of the Engineer's representative, any street inside or outside of the project becomes excessively dusty or unclean due to its use by the Contractor's equipment, the Contractor shall, at their own expense, furnish employees and equipment to clean (flush, etc.) said street to a degree acceptable. At the completion of the project, the Contractor shall thoroughly clean the above mentioned streets to a degree acceptable to the County Engineer, Municipal Officer and Department of Transportation standards. The inspection of these streets will be a part of the overall inspection.

G. POST CONSTRUCTION

Post Construction is the process of conducting final inspection, to verify that all deficiencies have been corrected, assuring all other agencies concerns have been honored and obtaining certain historical documents from the Contractor.

1. Final Inspection

a. It is recommended that the Developer's Engineer make an inspection of the project to determine what items require attention and to determine that such items are subsequently completed by the Contractor prior to notifying MCPW and NCDENR.

b. It is recommended that a pre-final inspection be conducted by MCPW at the Developer's Engineer's request in order to list all items that in the opinion of the County Engineer still need attention.

c. A final inspection shall be conducted by the County Engineer and Developer's Engineer, with other agencies and parties of interest, such as NCDENR, Municipality, NCDOT, Railroad, project inspectors, etc. A preliminary Record Drawings (As-Built) shall be supplied by the Developer's Engineer at this time to verify the accuracy of same and to make the necessary changes prior to final submittal.

2. Final Approval by Other Agencies

a. NCDENR approval letter has been issued and copies are on file in the MCPW office.
b. NCDOT approval of work performed under their Encroachment Agreement.
c. Railroad approval of work performed under their Encroachment Agreement.
d. Municipality approval of work performed under their Encroachment Agreement and policies.

3. Final Reports of Developer's Engineer

a. Record Drawings (As-Built) shall accurately depict the locations and condition of the project. The plans shall be noted "Record Drawings", dated and signed by the Developer's Engineer. All valves, manholes (including final depth) service connections and appurtenances shall be located by station number and by distance from at least two permanent structures that are readily visible near the appurtenance, or by G.P.S.

b. A Digital file and a hard copy of the Record Drawings shall be provided to the County Engineer.

c. The encroachments to be recorded in Moore County Register of Deeds, must include a certificate of ownership and dedication to Moore County Public Works, and be placed on the cover sheet of the plans. This certificate must be signed and dated by the Developer, and must use the text written in the following paragraph:

Certificate of Ownership and Dedication – I hereby certify that I am the owner of the property shown and described herein. That I certify the land shown hereon is within the planning jurisdiction of Moore County, North Carolina and that I hereby adopt this plan of subdivision with my free consent, establish minimum building lines, and dedicated all streets, alleys, walks, parks and other sited and easements to public or private use as noted. Furthermore, I hereby dedicate all sanitary sewer and water lines to the County of Moore.

_____ _____

Date *Owner*

d. Two (2) copies of deed or easement along with two copies of any plat, if applicable, prepared by the Developer's Attorney for conveyance of property associated with a pump station site, well site, elevated storage tank site, or other facility site to be deeded to the County. Appropriate notations for transfer and recording by the Moore Clerk of Court, indication the date and time of recording, the plat book and location thereof, and instrument number.
e. The Developer's Engineer shall receive final approval from the NCDENR Water Supply Section,
f. The Developer's Engineer shall receive final approval from the NCDENR Water Quality Section

H. **WARRANTY PERIOD**

Upon completion of construction and upon acceptance by the MCPW, the Contractor shall warranty all material and equipment furnished, and work performed for a warranted period of one year. It shall be the responsibility of the Developer to ensure that the water/sewer utilities are in first class condition and shall remain in said condition, less normal wear, for a period of one (1) year from the date of acceptance. During the eleventh (11) months following acceptance by the MCPW of any and all water/sewer utilities so constructed, the MCPW, in conjunction with Developer's Engineer, and the municipality representative, shall conduct a field inspection. All remedial items noted in the inspection shall be the responsibility of the Developer. Once the remedial items have been addressed, the MCPW will send the Developer a letter to inform that the warranty period has ended and that MCPW has accepted the water and/or sewer extension as a permanent part of their system.

After the Warranty Period beginning date has been established, water and/or sewer service connections will be permitted.

END OF SPECIFICATIONS

APPENDIX A

LETTER OF INTENT TO DEVELOP

1. PROPOSED PROJECT NAME:_____
   _____

2. CONTACT PERSON: (Name, address, telephone number)
   _____
   _____
   _____

3. DEVELOPER OR DEVELOPMENT FIRM: (Name, address, telephone number)
   _____
   _____
   _____

4. PROPERTY OWNER(s): (Name, address, telephone number)
   _____
   _____
   _____

5. NORTH CAROLINA LICENSED ENGINEER OR ENGINEER FIRM: (Name, address, telephone, number)
   _____
   _____
   _____

6. PLAT SHOWING LOCATION OF PROPERTY TO BE DEVELOPED: (Acreage, tax map and lot number, road name or number, location map, adjacent property owners, zoning, existing water & sewer location):
   _____
   _____
   _____

7. NATURE OF PROPOSED DEVELOPMENT: (Describe in detail the proposed Development(s), e.g. subdivision, mobile home park, shopping center, apartment, etc., including number of residential units, commercial and industrial square footages, if possible)
   _____
   _____

8. NATURE OF PROPOSED COMMERCIAL BUSINESS: (Retail square footage, restaurant seating, motel /number of rooms, etc)

   _____

   _____

9. DISTANCE TO NEAREST WATER MAIN and SIZE:

   _____

10. FIRE FLOW CALCULATIONS:

    _____

11. DISTANCE TO NEAREST SEWER LINE and SIZE:

    _____

12. WILL ROADS BE DEDICATED TO :

    City: _____
    State: _____
    Public: _____
    Private: _____

13. ANTICIPATED COMPLETION DATE:

    _____

14. ANTICIPATED BUILD OUT DATE FOR PROJECT: _____

15. IF PROJECT IS TO BE PHASED, LIST THE NUMBER OF UNITS TO BE CONSTRUCTED FOR EACH PHASE AND DATE PLANED FOR THE START AND COMNPLEION OF EACH PHASE:

    _____

    _____

This Letter of Intent to Develop is valid for one year of Date of filing. (To be dated by MCPW) _____

Date

Study Committee Report to the Village of Pinehurst

March 2017

The committee recommends amendment of the Pinehurst Development Ordinance to:

a. control the scale of new development by requiring special permit review for all new construction that would result in total gross floor area on any lot in excess of a stated square footage;

b. improve landscape screening between uses of higher and lesser intensity; and

c. improve control of on-site lighting to prevent spillage onto neighboring properties.

These recommendations, described in detail below, are in keeping with the strategic vision for Pinehurst as established in the Comprehensive Long Range Plan of Development and restated in the Village's plans, ordinances and guidelines. The recommendations are also in keeping with ordinances already in use in peer municipalities in North Carolina.

Background

In April 2016 a Town Hall meeting was called by the Village to discuss future Highway 211 corridor development, including the portion of the corridor that falls within the Pinehurst Extraterritorial Jurisdiction. The Village had recently completed its draft 2015 Highway 211 Corridor Study following the State's widening of 211 through Pinehurst, and recognized the importance of guiding its future development to maintain the Village's planning priorities to protect character, aesthetics and quality of life for this major "Gateway to Pinehurst".

At this meeting, Mayor Fiorillo invited a committee of volunteer citizens to work with the Village on ways to meet these goals. The Mayor then hosted an introductory meeting with members of the Village Council, the Village Manager and members of the Village Planning Staff. Subsequently, the committee has met several times with the Village's Principal Planner, Bruce Gould. The committee extends its deep appreciation for the generous time commitment and guidance on the part of everyone at the Village.

The committee's goals are to offer suggestions for guiding development to preserve Pinehurst's character and aesthetic ambiance, and to protect lesser intensity zoning uses from adverse impacts of higher intensity uses, while preserving the rights of property owners to engage in permitted use activities in each zone. Although the Highway 211 corridor was the focus of the original Town Hall meeting, analysis of existing conditions and research on possible suggestions required looking more broadly at the Village as a whole, as well as studying the plans and ordinances of other municipalities.

The committee reviewed the State's land use enabling legislation, and Pinehurst's Comprehensive Long Range Plan of Development (2011 Strategic Element and 2010 Implementation Element), Development Ordinance ("PDO"), and study of the Highway 211 Corridor. It visited commercial sites across Pinehurst, and noted that much of Pinehurst's existing commercial development already exhibits

these characteristics. The committee also looked at the Turnberry Wood Office Park in Southern Pines, which was particularly recommended by the Village. The committee reviewed the private deed restrictions which have guided Turnberry Wood's development. The committee also reviewed the development ordinances of a list of peer municipalities provided by the Village Staff, including Cornelius NC and Holly Springs NC.

Findings

The following are the committee's findings as to building scale, landscape screening and lighting mitigation.

We believe it is critical to guide development of the NC 211 corridor so that this major gateway to Pinehurst will always exhibit the Village's essential character to the first class standard of the Village's other major gateways. We also believe that implementation of these recommendations will help protect Pinehurst's character and quality of life by guiding future development across the Village. Each of these steps has been adopted by our peer municipalities for the same goal of successfully incorporating new development while preserving the very qualities that attract newcomers.

The Village also should remain mindful of development along our perimeter and work proactively with adjoining jurisdictions in order to protect Pinehurst's character.

A. Scale

The Village first suggested that the committee look into landscaping and screening. These can be practical tools for protecting neighboring properties from adverse impacts of new development, but they are not always effective. For example, topography can prevent even the densest landscaping from shielding neighbors whose land overlooks a commercial site.

One solution is that reducing the scale of commercial and multifamily buildings to a size in keeping with neighboring residential areas, along with improving landscape screening and controlling on-site lighting, can be a very effective transition between different uses.

Turnberry Wood Office Park is a positive example. It houses thriving professional and office uses, but its residential-scale buildings, small parking areas and leafy streets gracefully transition from the surrounding residential neighborhoods and so preserve their property values, privacy and quality of life. The private declaration of restrictions that sets out the developer's vision for Turnberry Wood establishes a formula of 20% building footprint, 40% other impervious surface and 40% green-space for balanced development on each lot. However, the other component is that these subdivision lots are all about an acre in size. On a larger tract, even a balanced development formula would not maintain a residential scale.

The committee therefore recommends expanding the Pinehurst Development Ordinance's special permit review for large buildings, already in place for general retail uses (SR-13 of PDO Section 8.6), to new construction in any zone that would result in total gross floor area on a single lot over a threshold size, such as 10,000 square feet.

Special permit review allows the Village to consider the impact of proposed large-scale buildings on neighboring residents and other uses, and to seek smaller scale site design that is in keeping with the scale of lower intensity uses, and in keeping with the aesthetic character of the Village.

North Carolina case authority upholds special permit review based on scale as a valid planning consideration. See, Templeton Properties LP vs. Town of Boone, 234 N.C. App. 303 (2014).

Also appended are copies of building size review criteria and special permit review standards from other municipalities, including Cornelius NC, Holly Springs NC and Aberdeen NC.

The committee also notes that the Pinehurst Development Ordinance does not have a maximum gross floor area ratio to lot size, which could be an additional effective planning tool. The allowable maximum impervious coverage ratio might also be reviewed.

B. Landscaping

The Pinehurst Development Ordinance treats landscape buffers mainly as a decorative element, not as a true screen between uses of differing intensities (Section 9.5.1). In addition, setbacks may be included as part of required landscape buffers (PDO Section 9.5.1.2 (e) (2)), and yet setbacks may also contain exposed areas for driveways, parking and loading areas (PDO Section 9.1 (c)(2)(vii)). The Pinehurst Development Ordinance does have an opaque screening standard but it is limited to such accessory uses as dumpster areas, mini-warehouses, service courts and loading docks (Section 9.5.1.3).

Other North Carolina municipalities have taken a more proactive view of landscaping to create a true opaque screen against visual and noise impacts between higher and lower intensity uses. Cornelius NC adopted a new opaque screening regulation in December 2016. It also mirrors opaque landscape screening requirements along zone boundaries enacted by Holly Springs NC.

The committee recommends that Pinehurst increase its landscaping requirements along zone boundaries to provide a true screen against both visual and noise intrusion to ameliorate the adverse impacts of higher intensity uses upon lower intensity uses.

C. Lighting

The committee, focusing on on-site rather than municipal street lighting, visited Pinehurst commercial zones as well as Turnberry Wood Office Park to observe lighting. The lighting of Turnberry Wood appears residential in nature, with a low impact on nearby residential areas. This is due to the small scale of parking areas - tall light poles are unnecessary - and to the high density landscaping on each site. The office park makes a striking contrast with large-scale big box stores and their vast, exposed, starkly-lit parking lots.

Scale and landscaping can both help to limit spill-over lighting. However, the committee notes that peer municipalities such as Cornelius NC and Holly Springs NC have stricter lighting limitations than does Pinehurst, and recommends adopting stricter standards here.

Supporting Material

A. Village of Pinehurst Plans and Code

Comprehensive Long Range Plan of Development (2010 and 2011) portions attached

Pinehurst Development Ordinance, Chapter 1 and Section 2.1 attached

B. 2015 Highway 211 Corridor Study

C. Scale

PDO Section 9.2s Table of Dimensional Requirements

DPO Section 8.6 Special Requirement #SR-13

PDO Sections 4.5.1 and 4.5.6 concerning Special Uses Permits and their Standards of Review

Templeton Properties LP vs. Town of Boone, 234 N.C. App. 303 (2014)

Ordinances providing additional requirements for certain uses based on building size, together with special permit standards, from the Towns of Boone NC, Cornelius NC, Holly Springs NC and Aberdeen NC

Turnberry Wood Office Park, Southern Pines: subdivision map dated December 18, 1984, revised March 11, 1985 and recorded in Cabinet 3, Slide 103; and Declaration of Covenants and Restrictions recorded in Book 532 at Page 414 of the Moore County Registry of Deeds

D. Landscaping

PDO Sections 9.1 (e), 9.5.1.2 and 9.5.1.3

Development Ordinance sections pertaining to landscaping from the Towns of Cornelius NC and Holly Springs NC

E. Lighting

PDO Section 9.8

Development Ordinance sections pertaining to lighting requirements from the Town of Cornelius NC and Holly Springs NC