

**REQUEST FOR QUALIFICATIONS
On-Call Professional Services
November 4, 2019**

The **Town of Lake Lure**, Rutherford County, North Carolina is seeking Consultants to provide Qualifications for **On-Call Professional Services**.

The term of the possible contract will be through **June 30, 2022** with options to renew.

NO LATE SUBMITTALS WILL BE ACCEPTED

Submittals to:

Mr. Shannon Baldwin, Town Manager
Town of Lake Lure
2948 Memorial Highway
PO Box 225
Lake Lure, NC 28746

ENVELOPE MUST STATE CLEARLY THAT THE ENCLOSED SUBMITTAL IS FOR THE:

STATEMENT OF QUALIFICATIONS FOR ON-CALL PROFESSIONAL SERVICES

Submittals are Due by December 2, 2019 2:00 P.M.

**REQUEST FOR QUALIFICATIONS
On-Call Professional Services
Engineering, Surveying, Architectural
Town of Lake Lure
Rutherford County
North Carolina
November 4, 2019**

1.0 INTRODUCTION

The Town of Lake Lure, population 1,200, is located in the Hickory Nut Gorge in western Rutherford County, North Carolina. It was originally created in the 1920s by the construction of the Lake Lure Dam and supporting infrastructure.

Currently the Town of Lake Lure is responsible for the following infrastructure:

1. Lake Lure Dam (the structure itself)
2. Lake Lure hydro-electric powerhouse located at the Dam, which generates power sold back to Duke Power
3. Lake created by the Dam including approximately twenty-four (24) miles of shoreline and scheduled dredging operations
4. Subaqueous sanitary sewer collection and conveyance system consisting of approximately twelve (12) miles of 18-inch cast iron pipe under the lake, approximately sixty-five (65) manholes around the perimeter of the lake and one wastewater pump station
5. Wastewater treatment plant rated at 0.995 MGD
6. Potable water system consisting of approximately six (6) wells within the town limits, approximately twenty-five (25) miles of water distribution piping and five (5) reservoirs including both elevated and above ground storage tanks
7. Twenty-seven (27) miles of town roads
8. Parks totaling over 1,600 acres and over 15 miles of trails
9. Water Resources Facilities such as storm drainage systems, local sedimentation and erosion control programs, etc.

The Town finds itself in a unique situation of a convergence of State mandated infrastructure repairs, renovations and replacements together called “improvements” that will be a significant challenge for a small town like Lake Lure to accomplish. The Town, therefore, is seeking an On-Call professional firm to partner with the Town’s administrative staff to help solve the many challenges to successfully address these improvements. The successful firm will need to be able to respond to the many challenges with a nimble and quick response time. The successful firm is expected to assist the Town with Grantsmanship services to assist in funding some of the anticipated infrastructure projects.

The Town has created a draft Project Tracker Excel® based database to keep track of and prioritize the many improvements the Town currently faces. A copy is presented in Exhibit A. The successful firm will assist the Town staff in managing and updating the Project Tracker database on a go-forward basis.

The Town of Lake Lure will to have a town engineer on staff by the time the prospective firm has been selected through this RFQ process. This individual will either be a full-time employee or retained under contract. The successful firm will be expected to communicate effectively with the town engineer incorporating this person in all correspondence; cooperate well with him/her;

keep the town engineer apprised of the successful firm's activities and answer any questions he/she may have.

The Town is currently under contract with a professional engineering firm to provide a Comprehensive Financial Analysis (CFA) and develop a Capital Improvement Program (CIP) so that the Town can use it as a guide to meet its current and future infrastructure challenges. The firm that has been selected through this RFQ process is expected to communicate effectively and cooperate as necessary with the firm conducting the CFA.

2.0 PROJECT DESCRIPTION/ SCOPE OF WORK

The Town of Lake Lure is seeking qualifications from professional consulting firms to provide professional services including engineering, surveying, architectural, and other professional services to support the Public Works, Lake Operations, Community Development and other Town Departments. The Town has identified the following categories that firms may submit for which to provide professional services. Firms may elect to submit on one, multiple, or all categories in a single Statement of Qualifications.

The services required in each category named below may include but not be limited to the following professional services:

- project management,
- project development,
- budgeting,
- rate setting,
- grantsmanship,
- engineering analysis and studies,
- surveying,
- subsurface utility engineering,
- geotechnical engineering,
- architectural services,
- landscape architectural services,
- geodatabase services including ESRI products such as ArcGIS
- preliminary design,
- detailed design,
- permitting,
- stakeholder coordination,
- easement and real property mapping and acquisition,
- preparation of construction documents,
- construction management,
- construction observation,
- preparation of as-builts,
- project closeout, and
- other professional services as needed to meet the Town's goals.

2.1 Lake Lure Dam and Powerhouse

The Town has retained the firm of Schnabel Engineering to assist with the challenges it faces with the physical Dam and the hydro-electric Powerhouse. Therefore, this Request for Qualifications does **not** include professional engineering services for the Dam nor the Powerhouse. However, these two infrastructure assets are mentioned in this context to inform

the other proposing engineering firms that the Town may need for the successful firm to coordinate with Schnabel Engineering on an as needed basis regarding issues that might potentially overlap with the Dam or the Powerhouse.

2.2 Sanitary Sewer Collection and Conveyance System

The Town has a unique sanitary sewer collection and conveyance system in that the heart of the collection system consists primarily of approximately twelve (12) miles of 92-year old, 18-inch cast iron pipe lying at the bottom of the lake (subaqueous sanitary sewer collection and conveyance system). The collection and conveyance system includes approximately sixty-five (65) manholes surrounding the perimeter of the lake. Sanitary sewer customers connect to the collection and conveyance system chiefly through these manholes. The wastewater then flows by gravity via a main collection line from each manhole to the 18-inch cast iron trunk line lying at the bottom of the lake. From there the wastewater is conveyed under the dam to a pump station located at the tow of the Dam which pumps all of the wastewater to a nearby wastewater treatment plant. Although the 18-inch cast iron pipe collection and conveyance system under the lake was considered an engineering marvel in 1927 when it was first constructed, this system is now antiquated, poses serious maintenance issues, and has become a significant challenge as the town attempts to phase in an approach to ultimately replace this system with an alternative collection and conveyance system. The Town also has other bulk sanitary sewer customers. Currently, the town has submitted to the North Carolina Department of Environmental Quality (DEQ) a draft Engineering Report & Environmental Information Document (ER & EID) for a proposed replacement system. The Town wishes for the successful firm to review a copy of this ER & EID and then provide a written Technical Memorandum to the Town of their own opinion as to the feasibility of the system currently proposed in this ER & EID. It is contemplated that the Town may wish to choose an alternative system that is more in line with the Town customers' ability to pay. The successful firm will partner with the Town staff in order to develop alternative approaches, working in concert with both the main and regional offices of DEQ, to arrive at the most cost-effective solution to this problem. This component of the RFQ is time sensitive. As soon as the professional agreement has been signed, the Town will task the successful firm to immediately review a copy of the ER & EID, which will be provided to them, and submit said Technical Memorandum to the Town within three (3) weeks of notice to proceed. After this Technical Memorandum has been reviewed by the Town, meetings with both the main and regional offices of DEQ will be conducted to obtain their input. From there a strategy will be developed as to how to supplement the existing ER & EID, with DEQ's input, so as to implement the selected alternative approach. It is expected that the successful firm will complete the supplement in a timely fashion as described in Section 3.0.

2.3 Wastewater Treatment Plant

The Town owns, operates and maintains a 0.995 MGD wastewater treatment plant (WWTP). The process treatment at this WWTP was changed out of necessity from biological to physical/chemical (PC) due to the amount of lake water leaking into the antiquated 18-inch cast iron trunk line lying at the bottom of the lake and the sixty-five (65) manholes surrounding the lake. The lake water infiltrating the system has weakened (diluted) the strength of the influent wastewater to the point that a biological process is no longer sustainable. The PC plant utilizes aluminum sulfate and polyaluminum chloride as the primary chemicals for settling. The PC operation has posed a number of challenges to the operations staff. The Town wishes to consider alternatives to either rehabilitating this existing WWTP or replacing it on property already owned by the Town at another location. Alternatives to addressing the WWTP will be part of the phased in approach in addressing the sanitary sewer collection and conveyance system mentioned in paragraph 2.2. It is hoped that as the antiquated sanitary sewer collection

and conveyance system is replaced, the amount of lake water entering the sanitary sewer collection and conveyance system will be greatly reduced or eliminated. This will result in the influent wastewater being of sufficient strength for the WWTP to be converted back to a biological process.

2.4 Public Water Distribution

The Town owns, operates and maintains a potable water system consisting of approximately six (6) wells within the town limits, approximately twenty-five (25) miles of water distribution piping 8-inch in diameter and less, and five (5) reservoirs including both elevated and above ground storage tanks. Only part of the town residents are on this system, the other residents obtain their drinking water from private wells. The Town and Chimney Rock Village have an agreement to share resources relative to the water system. There are no major issues with the drinking water system at this time, however, there are needs that must be addressed.

2.5 Lake Maintenance (dredging)

The Town anticipates a major one-time effort to remove a significant amount of silt from the lake. Then on an on-going rotational basis dredge the lake in order to maintain it for boat traffic and other recreational purposes.

2.6 Transportation

The Town maintains twenty-seven (27) miles of town roads. US HWY 64 / ALT 74 (Memorial Highway) runs through the heart of town. NC State Road 1306, Buffalo Shoals Road, runs over the top of the Lake Lure Dam; this bridge over the Dam is slated to be replaced. Currently NCDOT proposes to replace it with a new bridge relocating part of Buffalo Shoals Road. However, the Town wishes for NCDOT to repair or replace the bridge in its current location.

2.7 Parks and Recreation

Chimney Rock State Park (CRSP) is owned and operated by the North Carolina State Park system. The state is contemplating changing the egress from the park. This new egress is proposed to open into the heart of downtown Lake Lure approximately behind the Lake Lure Inn. This poses new challenges to the Town in addressing the many needs and opportunities that this new egress from the CRSP will create. The Town plans to replace the current lakeside boardwalk. The Town has other parks and recreation plans slated for consideration. Moreover, the Town has a desire to develop a new Main Street complete with commercial and residential uses.

2.8 Water Resource Facilities & Programs

The Town has water resource issues related to stormwater pipes and culverts, stream and bank restoration/stabilization, Best Management Practices (BMPs), stormwater/flooding management and mitigation, and erosion control management.

2.9 Administrative

The Town anticipates the need for program management, engineering plan reviews, rate studies, system development fee studies, long range planning, GIS assistance, grants and loans assistance, delegated local permitting authority, and other professional services as may be needed to meet the Town's goals.

2.10 Special Order by Consent

The Town of Lake Lure anticipates entering into a Special Order by Consent (SOC) with the DEQ for the subaqueous sanitary sewer collection and conveyance system and WWTP (see items 2.2 and 2.6 above). The firm should present its experience in dealing with SOC's with the DEQ.

2.11 Grantsmanship Services

The Town of Lake Lure anticipates applying for federal, state and other loans and grants to assist with funding some of the proposed infrastructure projects. The successful firm should demonstrate its Grantsmanship services.

3.0 TIME IS OF THE ESSENCE

Relative to the improvements mentioned above the Town wishes to point out to the proposing firms that the needs associated with the sanitary sewer collection and conveyance system identified in paragraph 2.2 and the needs associated with the wastewater treatment plant identified in 2.3 are urgent. Time is of the essence in connection with these two categories. The Town will immediately engage the successful firm to complete the necessary professional engineering services described in those paragraphs in order to comply with the following state mandated deadlines

- The Town must be under contract with the successful engineer based on this RFQ by the end of December 2019.
- The Town must secure approval from DEQ for the Amendment to the ER & EID by the end of April 2020.

4.0 PROPOSAL REQUIREMENTS

4.1 Proposal Content

4.1.1 A cover letter

Provide a cover letter on company letterhead signed by a Principal or other member of the firm authorized to commit the firm to contract for professional services.

4.1.2 Executive Summary

The summary should address the highlights of the RFQ, along with the strengths and special expertise of the firm and the associated team to successfully accomplish the objectives of the Town.

4.1.3 Statement of Qualifications

Identify and describe the qualifications of the firm and professional services that may be provided by the consultant or consultant team in response to this Request. Include information pertaining to items 2.10 and 2.11. Also include information on any proposed sub-consultants. Note which team members were involved in referenced projects and time period involved in referenced, completed or current projects. Also highlight any projects performed for the Town during the past 5 years.

4.1.4 Project Team & Project Management

Identify the proposed project team (including any sub consultants) and key personnel for the successful completion of projects in partnership with the Town. Include brief resumes of the project team members including office location, years of experience, certifications, and

education. Identify the project manager or primary contact and any other team leaders proposed, and briefly describe how projects will be successfully managed. It is expected that the team members proposed in the RFQ will be the ones that will actually work on projects for the Town. Also describe the firm's quality assurance / quality control methods.

4.1.5 Scheduling / Availability of Team Members

Describe the planned and envisioned workload of the proposed team members for the timeframe of this contract and verify that proposed staff will be prepared for timely completion of projects under a potential contractual agreement with the Town. Submittals should also include a description of the firm's ability to respond to rushed and emergency projects.

4.1.6 References

The Project reference list should describe at least four (4) projects completed within the past five years that represent the strengths and unique qualifications of the firm or team in the areas identified in the Scope of Services described in this document. The list should contain project titles, locations, cost of projects, start and end dates, name of project managers, and name, phone number, and email address of references. The contact person should be capable of speaking to the firm's and team's ability to finish projects within the project timeframe and the firm's demonstrated ability to respond to the proposed project.

4.1.7 Other Information

Provide additional information you feel answers the question "Why should the Town of Lake Lure select my firm?"

4.2 Proposal Formatting Requirements

RFQs must be limited to no more than 30 pages and utilize a font size of 11 pt. Arial. A page is counted as a single side of an 8.5" x 11" piece of paper. Section dividers are for section identification only and are not to be utilized for additional information space or they will be counted in the page limit. The proposal shall be submitted by an official authorized to bind the submitter to its provisions and who is authorized to negotiate the final scope of work and fees for inclusion in a later Supplemental Professional Services Agreement with the Town.

4.3 Proposal Evaluation Criteria

Proposals will be evaluated according to the following criteria:

1. Completion of all of the Proposal Requirements	5%
2. Related project experience.	20%
3. Project staff experience.	20%
4. Methodology-understanding and approach to the project.	20%
5. Proximity to Town and Knowledge of Town's system	15%
6. Availability and interest in providing Services	10%
7. References	10%
Total	100%

5.0 SUBMISSION DEADLINE and ADDRESS

Submit five (5) sealed copies of the Qualifications, clearly labeled as “**STATEMENT OF QUALIFICATIONS FOR ON-CALL ENGINEERING SERVICES**” to the Town of Lake Lure, North Carolina, no later than **2:00 p.m. December 2, 2019** at the following address:

Mr. Shannon Baldwin, Town Manager
Town of Lake Lure
2948 Memorial Highway
PO Box 225
Lake Lure, NC 28746

All questions concerning the proposal requirements or project in general should be submitted by email to Shannon Baldwin at townmgr@townoflakelure.com

Phone call inquiries regarding this RFQ will **not** be accepted.

All inquiries by email must be submitted no later than **2:00 p.m. on November 18, 2019** in order to allow sufficient time for a response prior to the submission of the document.

6.0 ADDITIONAL REQUIREMENTS

The Town of Lure reserves the right to reject any “Statement of Qualifications”. “Statement of Qualifications” shall be prepared at the sole expense of the consultants. All proposals shall be subject to public review and copying as a public record. After evaluation, the Town may select one or more firms for any of the categories. Each of the selected firms will enter into a master agreement covering the general terms of the contract. Upon identification of a project or task the Town will utilize the information submitted in the response to the RFQ to select the most qualified firm. A task authorization against the master agreement will be used to define the scope and price of the work. The Town of Lake Lure has a right to enter into agreements with the firms which, at the Town’s sole discretion, best satisfies the requirements, goals and objectives of the Town. The Town reserves the right to reject all Statements and not enter into any contracts as part of this process.

7.0 TERM OF AGREEMENT

Each firm selected under this RFQ will be eligible for an initial term of three (3) years from the date of selection. The Town has the sole option to extend the selected firm(s) for one (1) additional three (3) year term. Therefore, the maximum length of time that a selected consultant is eligible to complete work under this RFQ is six (6) years. However, the Town reserves the right to cancel this at any time and solicit new Statements of Qualifications. Firms that do not meet the Town’s performance expectations, routinely decline opportunities to participate in this program, or lose significant internal expertise submitted with the original Statement of Qualifications may result in the Town removing that consultant from the qualified list.

EXHIBIT A

PROJECT TRACKER TOWN OF LAKE LURE, NC

Projects are Listed by Priority (C, H, H-M, L-M, L, PL)					
NUMBER	PRIORITY	DESCRIPTION	COST	DURATION (Years)	OWNER
Critical (C)					
1	Dam - Structural Renovaton		\$45,000,000	5	
2	Sewer - Subaqueous Collection System Repair		\$10,000,000	3	
3	Sewer - Subaqueous Collection System Replacement		\$20,000,000	10	
4	Sewer - Waste Water Treatment Plant Replacement		\$6,000,000	3	
5	Sewer - Waste Water Treatment Plant Rehab		\$3,000,000	3	
6	Lake Dredging - Annual		\$500,000	ongoing	
		<i>Subtotal</i>	\$84,500,000		
High (H)					
7	Dam - Hydro Electric Rebuild		\$4,000,000	1	
8	Dam - Hydro Electric Repairs (Starts Oeprations)		\$750,000	0.5	
9	Dam - Bridge		\$25,000,000	2	
10	Town Center Main Street - CRSP Egress		\$3,000,000	3	
11	Telecom - Cellular		\$5,000	1	
12	Telecom - High Speed Internet Around Lake		\$500,000	2	
13	Water - Supply (Interconnect w/BRWA)		\$500,000	2	
14	Water - Distribution		\$500,000	2	
15	Marina (Phase 1) & Boardwalk		\$1,500,000	2	
		<i>Subtotal</i>	\$35,755,000		
High - Medium (H-M)					
16	Refine & Fund Spot Dredging Program		\$100,000	ngoing	
17	Dredging - Big Dig (One & Done)		\$5,000,000	1	
18	Sedimentation Mitigation in Tributaries - UBRWS		\$3,000,000	5	
19	Telecom - WiFi in Town Center		\$18,000,000	0.5	
20	Asset Management Program		\$15,000	ongoing	
21	Street Paving Program (Intense) - Annual		\$200,000	ongoing	
22	Westside Connector		\$700,000	1	
23	Risk Management Program		\$5,000	0.5	
24	Computer Software Package		\$50,000	1	
25	Employee Position & Salary Study		\$6,000	0.5	
		<i>Subtotal</i>	\$27,076,000		
Low - Medium (L-M)					
26	Morse Park Welcome Center Restrooms		\$200,000	0.5	
27	Morse Park Event Lawn		\$200,000	0.5	
28	Trail Maintenance Program		\$50,000	0.5	
29	Staff Succession Plan		\$15,000	0.5	
30	Boys Camp Road Campground		\$350,000	1	
31	Public Works Facilities Relocation		\$1,500,000	1	
32	The HighInds Mitigation		\$7,000	0.5	
		<i>Subtotal</i>	\$2,322,000		
Low (L)					
33	Public Safety Building		\$5,000,000	1	
34	Fire Department Façade Rehab		\$30,000	0.5	
35	Fire Department Generator Replacement		\$25,000	0.5	
36	Marina (Phase II)		\$400,000	1	
37	Fleet Management Program		\$1,500	0.5	
38	Fleet Service Facility		\$250,000	1	
39	Employee Position & Salary Study		\$6,000	0.5	
		<i>Subtotal</i>	\$5,712,500		
Parking Lot (PL)					
40	Riverwalk to Chimney Rock Village		\$500,000	5	
41	Pedestrian Plan		\$7,000	1	
42	County Outreach/Goodwill Plan		\$3,500	0.5	
43	Urgent Care - Possible Ingles Extension			TBD	CHNG
44	Ace Hardware - Possible Ingles Extension			TBD	CHNG
		<i>Subtotal</i>	\$510,500		
		GRAND TOTAL	\$155,876,000		

EXHIBIT B



Town of Lake Lure Sewer System Meeting Notes

September 17, 2019, revised 10/18/19, 10/21/19

The following persons met to discuss the Town of Lake Lure sewer collection system and the waste water treatment plant: Christyn Fertenbaugh, Environmental Engineer (NC DEQ – Collection System Permitting Program), Tim Heim, Regional Engineer (NC DEQ – Division of Water Resources), Melissa Abbott, Environmental Specialist (NC DEQ – Collection System Compliance and Enforcement), Mikal Wilmer, Environmental Specialist (NC DEQ - Water Resources - Water Quality Regional Operations), Kurt Wright, Town Engineer (Owner, SDG Engineering), Dave Diorio (Utility Advisory Board Member, Town of Lake Lure), Shannon Baldwin (Town Manager, Town of Lake Lure), Don Byers (Lake Lure WWTP Operator, Byers Environmental), Myron Steppe (Owner, Steppe Construction) and Jason Beard (Project Manager, Brushy Mountain Builders, Inc.)

Meeting on the Lake at approximately 9:30 am

--Reviewed many lakefront lots relative to difficulty (or impossibility) of installing grinder pump stations and pumping to higher elevation roadways as part of the Low Pressure Sewer System (LPSS) concept recently developed as part of the ER submitted to NC DEQ. The following conditions were reviewed/discussed:

- Slope (very steep) creates poor, impossible working conditions for excavation equipment to install grinder pumps and force mains for each residence
- Relative position of houses on many lots (some house at the lowest point of the lot and no room on land for a grinder pump station)
- Relative position of houses to the lake (some at the lakes edge, thus no room and no fall for grinder pump unless located in the lake)
- Geology (lots of rock; produces extremely difficult subsurface working conditions on some lots)
- Seawalls (lots of manmade retaining structures along the shore between lake and lot)
- Cost of Low Pressure Sewer System (LPSS) was projected to be approximately \$40 million. This did not include the high costs estimated by Steppe/Beard for some of the very difficult installations, some estimated at \$25 to \$30k each. The town cannot afford this magnitude of a project.

--Reviewed location/exterior of manholes.....

- Manholes located near water's edge, on land, in lake or partially on both
- All are concrete/masonry construction with ductile piping extensions/laterals to the main
- All are heavy and susceptible to being undermined, impinged, stressed, and/or excessively corroded by lake-wave action and higher oxygenated water at the lake surface.
- Most tapped multiple times with home service lines
- Some seem to be leaking in the first 5-6 feet of lake level per town staff. Staff will verify this winter when lake is lowered
- One was recently replaced because it collapsed due to severe degradation

--Reviewed service lines from houses to manholes....

- Different piping sizes, materials, and configurations
- Many have long lines/pipes that extend in and out of water as they snake from lot through water to a manhole
- Some taps at manhole are made above water; some taps at manhole made below water
- Very visible. Per staff these lines frequently separate and often need to be repaired.

--Discussed developing pilot solutions and implement best practices using.....

- Possibly replacing manholes with manifolds or composite manholes that are resistant to erosions and weather
- Resilient and strong HDPE lines below the water running parallel to the shore or along existing piping systems
- Replacing all iron piping with HDPE, or some hybrid approach
- Trenchless technology / line bursting / slip lining of existing iron lines was discussed
- Divers working from barges is feasible and used in Lake Lure from time to time
- A stub out at every lot with new system that will standardize connecting and eliminate the need for long and susceptible service lines that snake over multiple properties and sometimes through water to get to a manhole.

Meeting in Town Hall at approximately 11:30 am

--Attributes of Concept A – Replacement of 18-inch CIP with HDPE Pipe on Bottom of Lake

- Predominantly Gravity System – Few or No Pumps
- HDPE Collection Rings that feed HDPE collection trunk
- Replaces 18" Trunk Line with New Trunk Line in deep lake sections
- Requires specialized Underwater Work & Work from Barges
- Limited Access to deep Collection System even with lake lowered
- Questionable Perception of pursuing partially inaccessible system
- High Initial Costs for trunk line replacement
- Low Maintenance Costs absent pumps
- Must be integrated with Dam Rehabilitation

--Attributes of Concept B – HDPE Ring System Around Lake Shore Boosted by Pumps

- Totally eliminates deep 18-inch CIP trunk line on bottom of lake
- Booster or Step Pumps (Approx. 10-15)
- HDPE Collection Ring phased in by cove or lakefront sections
- Operations and Maintenance Costs Higher for pump stations

- Less Pipe to Construct (maybe)
- Full Access to Collection System with normal lowering of the lake
- Better Perception due to being fully accessible for inspections and maintenance
- Independent to Dam Rehabilitation
- Would allow flexible location of WWTP

--Attributes for/of both Concepts A & B

- Durable and resilient HDPE Collection Rings that are phased in over time
- Rehab WWTP
- Use SBR process at WWTP
- Eliminates/Modifies Manholes
- Install Cleanouts at Various locations
- Requires a new Special Order of Consent (SOC)
- Resolve Penalties **(get with Charles Weaver ASAP), create a better atmosphere in Raleigh about the Town to enhance DEQ cooperation and secure needed input on a go-forward basis**
- Coordinate interface of new system with Schnabel and Dam Rehabilitation Process

--Discussed Town Expenditures/Fund Balance/Cash Flow/Loan Amount

- Spent \$142,774 on Low Pressure Sewer System (LPSS) concept / ER
- Spent \$1,061,834.29 on green line concept/design/other items
- Of the \$142,774, spent \$48,900 on geo-tech work to ground truth LPSS line routes. Cost and other items convinced Town not to go into design phase for LPSS
- Currently have \$106,531.77 in water/sewer fund
- Rates are now set to accommodate the 12.5 million dollar loan pre-approved by DWI-SRF
- New rates are now generating approximately \$25,000/month in revenue
- Town is facing numerous very expensive, complex infrastructure projects now:
 - Sewer Collection System & WWTP Rehabilitation
 - Dam Structure Rehabilitation
 - Hydro-Electric Improvements
 - Lake Dredging (one-time event plus ongoing annual costs)
 - Downtown Redevelopment: New State Park Egress being into Lake Lure Town Center

Meeting over Lunch at approximately 12:30 pm

- Design-Build process versus traditional process (Design, Bid, Build)
- Traditional funding process

Meeting at WWTP at approximately 1:30 pm

- Rehabilitation on existing footprint is likely more cost effective and acceptable
- Utilize Rectangular SBR (at Chemical Storage Building and Storage Tank locations)
- Create New Storage for Chemicals, or Eliminate Chemicals by Using UV
- Excavate into hill/mountain build retaining walls to gain additional area for improvements
- Use area where geo-tubes are now located for additional improvements
- Penetrate Dam at Higher elevation with trunk line and eliminate Lift Station below the Dam
- Trunk line valve is being placed in the sewer line by Steppe Construction this winter as mandated by NC DEQ. Valve has already been purchased.

Meeting at Lake Lure Classical Academy at approximately 2:30 pm

- Distance from New WWTP identified by Brown to current discharge point in Broad River is a long way (approximately 1 plus/+ miles) raising complexity, cost and perhaps community acceptance. Everything that is pumped to the new WWTP at this site from the lake collection system, has to then flow by gravity back to the river at existing release/discharge site.
- Upcoming RFQ - Town wants to go with a major firm with a deep bench to assist with the multitude of complex and expensive issues faced by the Town