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August 17, 2018

Gainesville Regional Utilities  
Utilities Purchasing / Administration Building  
301 S.E. 4<sup>th</sup> Avenue, 3<sup>rd</sup> Floor  
Gainesville, FL 32601

**Best and Final Offer for Community Broadband Study**

Following is the best and final offer from CCG Consulting for conducting a Community Broadband Study for GRU.

We've clarified some of the deliverable products and kept the same pricing as our original proposal.

I am responsible for submitting this response and am authorized to represent the company:

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## Our Proposal

### Project Solution

*Include a narrative that clearly demonstrates Respondent's approach toward meeting the goals and objectives outlined in the ITN. Address how each specific requirement of the ITN will be met by the proposed solution, including proposed use of any subcontractors or partnering firms. Address how the system could be built to provide flexibility in future capital cash flow.*

*Clarity of the proposed solution to meet the City of Gainesville's need is the aim and, therefore, use of product boilerplate and marketing releases through this section is discouraged.*

Following is a detailed description of how we would meet each one of the requirements for the Community Broadband Study.

### Engineering Analysis

#### Engineering Cost Estimate

- *Feasibility engineering cost estimate of each option*
  - *Universal service in City, other areas would be business case driven*
  - *GRU Service Area*
  - *Urban Reserve with consideration for density*
  - *Municipal areas within the county where GRUCom has infrastructure (Newberry, Hawthorne, Archer, High Springs, Waldo and Alachua)*
- *Best available technology for the application*
- *Leverage AMI and Smart City plans*

We generally refer to high-level engineering designs used for the purpose of looking at the feasibility of a project as pre-engineering. The goal of pre-engineering is to produce a conservative estimate of the cost of providing a network solution that is reasonably close to the cost of a fully-engineered solution. We strive to make our estimate a little high to be conservative when doing these estimates.

This sort of engineering is mostly done from our offices and involves only a few days of field work. More engineering will be required if the project eventually moves forward and you build the network. The goal at the feasibility stage of the project is to do just enough work to make a good estimate of the cost of the network without spending a lot of money doing any detailed field engineering. Unless there is something very different about your city, this high level of engineering will be sufficient for cost estimation purposes and we have made hundreds of these kinds of estimates. Once it is time to build fiber the construction engineers will look at every foot of the network as part of the design. But it would be wasteful to do any more work than necessary at the early stages, because any

preliminary engineering would have to be redone again later as part of the final build-out. In this case we are going to make three separate cost estimates for each of the three scenarios.

We will talk to construction companies that have worked recently in your area to get the most recent costs for building fiber locally. We will also look at the other assets needed to build a network. This would include such things as the electronics needed to light the network, the drops and electronics needed to serve customers, and the electronics needed to provide the triple play service. Finally, we will look at issues such as whether there is a need to build a new buildings or huts to house the business as well as at the cost of ancillary equipment including vehicles, computers, furniture, software, etc.

We always build in a construction contingency and we vary this between 10% and 15% percent of the project depending upon how good we feel about all of the assumptions used in the study. I can't think of any time that we have had a project come in with higher construction costs than what we had projected.

Since the footprint of the city and outlying areas is so large we want to take the approach of sampling some parts of the city and then extrapolating these detailed studies to the larger market. In these sample areas we would do a detailed analysis of the cost and apply the results of these detailed studies to similar areas elsewhere in the city. We would work closely with the city to determine the areas to be studied. For instance, we might study one residential neighborhood with service on poles, another residential neighborhood with buried utilities, neighborhood with mixed residential and business usage, etc. We are going to want to look at some of the rural areas in the county in the same manner.

In smaller cities we most normally estimate network cost by determining a cost per mile for various types of fiber construction and applying that to the different kinds of road miles. We are also likely to take this approach in Gainesville to give us a second look at the cost of building fiber everywhere.

In a city of your size there are several possible network configurations for deploying fiber and the associated electronics. In our design we will look at the options and we will discuss our ideas with GRU staff before finalizing a network design.

Our pricing includes developing a cost for the various footprints you have identified in the IFN. We will develop a separate cost for the fiber and electronics for each of these areas. We will work with GRU staff and/or the city to understand the potential future expansion into the Urban Reserve areas so that we can plan a network with enough capacity to handle future expansion into these areas.

Since one of the options being studied is universal service, our network design will include sufficient access points in the fiber network to reach all of the homes and businesses in the various service footprints. We plan to discuss this with your first to understand those areas where you might or might not want to provide universal service. From our phone discussion we take it that GRU is not interested in building inside of MDUs, but that you'd like a fiber

connection to the front of each apartment complex. Our studies will include any such nuances that you want to study.

We will work with GRU staff and the city to determine how to incorporate the ability to accommodate future smart city needs into the network as well as incorporating any current or future AMI needs. We know the city has already done some exploration of smart city applications and that many of the applications will be largely wireless. But there are also likely to be demands to support devices like small-cell 5G sites on utility poles or light poles that are likely to want a fiber connection. Our goal is to design a robust enough network to cover both fiber to households and businesses as well as for future smart city demands.

One of the hardest issues for anybody to estimate is the cost of make-ready on poles. We plan to rely on your experience from already building a lot of fiber already to help us to make a reasonable estimate of these costs.

We also do something in our business plans (described below) that many other consultants don't do. We know that assets have to be replaced. For example, vehicles rarely last more than five years. The core electronics are going to be obsolete within 10-12 years. The fiber is likely to last until all of us are dead, but there will still have to be repairs made every year. We make sure that we build replacement costs into the business plan so that we can always make sure that you will have sufficient cash in future years to cover these routine and predictable events.

### **Assess Existing Infrastructure**

- *Infrastructure assessment (Gap analysis from current to implementation)*

One of the challenges of designing a network for GRU is to account for your extensive 512-mile fiber network into the network design. We know from past experience in working with other existing wholesale networks that some of this fiber will be able to provide the needed rings or other transport fiber needed to connect to the needed new fiber huts or other nodes needed for the new network application. There should be significant savings to take advantage of fiber that already reaches some of the smaller towns and other remote parts of the service area.

We also know from experience that many of the existing fibers will not be sufficient to provide the needed last mile access demanded by the new network. Many of these fibers won't have sufficient fiber pairs or sufficient access points to meet both the current demand and the future demand from providing access to a last-mile network to reach everybody.

We will work with GRU staff to help identify fibers that we think will be beneficial to the new network and those that likely will still need to be overbuilt to meet the demands of the new network. Even where new fibers must be added to existing routes we will work with you to understand where there can be cost savings from using existing conduits or

where aerial fibers can be hung in conjunction with existing GRU fibers.

Our plan is to do enough analysis, and to work with GRU staff who are familiar with the existing network to be able to learn what we need in order to make a reasonable estimate of the existing fiber that can be beneficial to the expanded network.

### **Implementation Timeline**

Building anew network of this magnitude is a major undertaking and our analysis will include a timeline showing what we think is a reasonable time from to build the network. Our experience with other cities is that building the network in neighborhood nodes is probably the best approach, so that as each neighborhood is constructed it can be activated and start serving customers. Our timeline will thus look in detail at the time required to build one neighborhood node as well as an overall timeline that covers building to all of them.

The financial business plans will incorporate this timeline so that the projections of the start of customer revenues coincides with the progress on constructing and activating neighborhood nodes.

Our deliverables for the engineering analysis includes the following:

- We will assess GRU's current network to determine how much of it would be usable for a last mile network. This analysis will be high-level and our goal is to be conservative in our cost estimates.
- We will work with GRU to identify representative neighborhoods which we would then study in more detail. Our goal is to determine a cost per mile or cost per passing to build in different kinds of neighborhoods.
- We would then extrapolate those results to estimate the cost to build everywhere. We will double-check our results by also doing a more standard estimating process of determine a cost per mile for various kinds of fiber construction and applying those costs to the street miles in the service areas. Our estimates will include a construction contingency.
- Our analysis will consider different network configurations for electronics, but we will make a specific recommendation of what we see as the best solution. We will discuss these options with GRU staff before making any cost estimates.
- We will also estimate the cost of the ancillary assets needed to operate the businesses. This would include assets like huts or buildings, vehicles, computers and the electronics needed to provide the triple play services.
- The results of our analysis will be included in the written report discussed below and will discuss our research, our findings and our rationale for making the choices we made.

### **Financial feasibility models**

- *Should study each alternative and provide sensitivity analysis of key variables*
- *Goals are free, and/or lowest priced gig for residential and commercial*

- customers, however each scenario would need to be compared to a market rate*
- *Recognize change to GRU/GRUCom's business model and determine impact on current business*
  - *Various market-based levels of service (content partners considered)*
    - *Broadband only*
    - *Content package included*
    - *Phone or other services*
    - *Triple play combination*

## **Understanding Current Products and Prices**

The first step needed to create a business plan for a market is to understand the products and prices available in the market today. We generally undertake this in three ways:

We first do standard research such as web searches to see if we can determine what existing carriers charge and the services they offer. We will also talk to local providers who are willing to share their pricing with us. But we realize in today's market that a lot of companies don't have a set of fixed prices. Rather, they offer various promotions and negotiate prices individually with customers, and so there might be a wide range of different prices being charged in the market today for the same products. Further, with bundling it's often difficult or impossible to understand what a carrier is charging for a single product in the bundle.

Understanding prices in a market is also complicated by the fact that carriers today often have somewhat deceptive billing practices. They often break out pieces of their charges and make them look like taxes or fees, when in fact these extra charges are all revenues for the carrier. We see this with both telcos and cable companies in many markets. So, in addition to the normal kind of web research on prices we want to solicit copies of actual customer bills in the city. We would ask GRU's help in asking the community to send us copies of their telecom bills. The detailed bills tell us what people in the market are actually paying, which is often quite different than the standard prices the carriers might publicly quote.

We pledge to anybody who sends a bill to keep their identity and the amount they pay confidential. In fact, they can feel free to black out or cut off any identifying information from the bills before they provide them to us. But even if they don't remove their name, we would not reference any specific customer in our reports and we will destroy the bills once they have been analyzed and summarized. We would not make the bills part of the public record and we would not give them back to the City when we finish the report.

We also would like to ask citizens to take a simple Internet speed test. We will set up a web site with instructions and ask us them to tell us what speeds they are buying and comparing that against the results of the speed test. We find in some markets that ISPs deliver roughly what they are selling and in other markets it's not even close. We think this it is vital to understand the nature of the primary product you would be competing against. Again, we would ask GRU to assist us in getting citizens to take the speed test.

## Financial Models

CCG has prepared hundreds of financial business plans for our clients. We have studied and helped implement almost every conceivable type of competitive communications network and venture. Through years of this experience we have refined our business plan models such that they are thorough, focused and grounded in experience. Our business plans are not pie-in-the-sky since we have extensive experience of how companies function after they build the network.

The financial business plan will include in-depth detail relative to the organization, operating costs, overheads, equipment and materials required to operate the proposed business. This is a normal product of our business plan models due to the way we develop our plans. We build our business plans from the 'bottom up' and we can make detailed projections of the required staffing, capital and equipment needed to meet the plan objectives.

We will start the financial modeling process by visiting GRU and talking through the many options that can be explored in building forecasts. In your case there are numerous variables such as different geographic footprints, different methods of financing, different customer pricing (with the goal to get prices as low as possible), and different optional options such as outsourcing triple play products. The goal of this meeting will be to produce a list of studies that will be created to answer all of your questions. For a study with this many variables we would expect to produce as many as 40 studies that kick the tires on the various assumptions so that you can understand the opportunities or risks associated with different business plans.

We typically create studies that look at the incremental impact of creating a broadband business. That means looking at the new revenues, new expenses, new capital costs and new financing costs to understand if there is enough new revenue to cover all of the new costs. However, GRU is already operating a large broadband wholesale business. A new fiber business would likely be layered upon that existing operation. It would use the same fiber management and operational team along with new staff needed to operate the wider retail fiber business.

We propose looking at the financial impact of fiber by layering the new business on top of the existing one. That will enable us to make sure that we don't estimate any new expenses that are already being incurred by the new business. We are also going to want to estimate the impact of a new retail fiber business in the revenues of the existing fiber business. We know from experience in other cities that some of the businesses using the wholesale connection would likely migrate to the new retail products.

Making this analysis requires the following:

- Creating a base forecast for the existing wholesale business that shows the actual revenues and costs of operating that business. We'd want to eliminate any internal subsidies or cash transfers to understand the margin from that business today.

- Layer on new expenses onto the existing expenses incurred today by the wholesale group.
- Estimate the impact of new retail revenues along with decreases in existing wholesale revenues as a result of a new retail fiber business.

We will study the options requested by the ITN. For example, we will produce separate financial models that cover the different geographic footprints, ranging from the city limits only to options that include much of the county. As requested, we will also look at different options for ways to offer the triple play products. Most new fiber businesses today outsource telephone and cable TV and our models will look at outsourced options. However, since you own a telephone voice switch we will also explore the option of using that switch for telephone service.

We will also create studies that look hard at your preferred options. The ITN asks us to explore options that provide free or the lowest price gigabit connections possible. In order to do that we would first create a model where prices are at, or slightly below market rates. This base study will help us understand the Gainesville market and the breakeven penetration rate for an ISP operating at market rates. From that base study we will explore options that can be used to lower prices and still remain financially viable. It is our expectation, from our experience, that achieving lowering prices will require creativity in financing the network. We have recently been helping other cities explore this same option and there are likely ways that can be used to lower prices and still remain viable.

Our reading of the ITN is that the most likely scenario is that GRU would be the retail provider. However, we are familiar with all of the other common operating models in the industry and we can look at any other business models that GRU wants to explore.

The ITN asks for us to look at several operating options. For example, you want us to look at a business that only offers broadband as well as an option that would layer on other triple play products. We will produce all of the desired scenarios that GRU wants to study. Our plan would be to visit with GRU at the start of the project to discuss and pin down the options to be studied.

The ITN asks us to consider the impact of the fiber business expansion on the existing wholesale fiber business. We can think of at least two major impacts now and will probably discover more as we dig deeper into the study. The first impact will be layering the new work responsibilities onto the existing GRU staff. We will propose the number and specific functions for new employees that we think should be added for the new business and will then work with GRU staff to understand how this might best be fit into your existing organization.

There is also going to be a revenue impact on the existing wholesale fiber business. We would expect that when a shared fiber network is made available everywhere that there will be customers who leave your wholesale network and join the retail network. We will try to estimate this impact on the current business.



Our financial forecasts are built from the bottom up. This means that our models show you the details behind our assumptions. For example, we have seen business plans that estimate revenues by using a simple ARPU, or average revenue per user. The trouble with this kind of analysis is that you have no idea of what is contained within that number and if those revenues can actually be achieved. Instead we show you the detailed pricing assumptions that drive revenues. This way we can understand that the revenues in the model are based upon the prices that we are proposing that you charge.

The primary approach we take in looking at a business plan is to determine the market penetration rate needed for success – we call this the breakeven penetration rate. We know today that the primary product is going to be broadband. Every other product is going to have a lower market penetration rate. And we know that each year into the future that both telephone and cable customers will decrease as customer move to alternatives. Our models are going to assume a decreasing penetration of voice and cable customers over time. We propose to calculate the minimum broadband penetration rate you need to be successful. We will determine the lowest number of customers you must get for the business to break even. This is probably the most important use of the forecasts because that one piece of information is going to tell you about your chances of being successful. If your breakeven is low, say 20% or 30% of the market, then you can have a good assurance that you can be successful with a retail model. If the business plan needs a medium level of success, say a 40% or 50% penetration, then you know that you are going to have to work harder to make this a success. But if the business plan needs a higher penetration rate then you know it is going to be a real challenge to make the project a long-term success.

In this study we are also going to get feedback from public through a survey that will provide a way to better understand how easy it might be to reach the breakeven penetration rate. We will also incorporate the other research done with this project into our assumptions, including such things as the analysis of customer bills and the speed tests.

We normally build our models to coincide with the expected length of the debt financing just to be sure that there are not underlying assumptions that eventually mean trouble.

All of CCG's business plans provide monthly level of detail for the first two-years of operation. Subsequent years are provided on an annual basis. Our models are so detailed and easy to use that many of our clients often utilize our models as budgetary and ongoing management control tools.

Our business plans are sufficient to use as a basis for exploring financing of a fiber project. While our models are feasibility models, they are "banker ready" in terms of the detail provided. Before final financing you would want to fine tune assumptions and perhaps make more detailed engineering estimates, but our models will provide an easy path to grow from feasibility to financed project. Many bankers have remarked that ours are the best telecom business plan they have ever seen.

As you have requested we routinely perform a sensitivity analysis to understand the impact of varying the sensitive variables in the studies. For instance, we will show you the impact

of increasing the interest rate on debt, increasing the number of customers, changing the assumed product prices, etc.

As a final note, we will provide you with our spreadsheets containing the financial analysis. We know that there are consultants who will not give you the spreadsheets – so please ask about this. If somebody won't give you the spreadsheets it means that they don't want you to see their underlying assumptions, but it also means that they insist that only they remain as your permanent financial modeler. We think that is arrogant and that the work that you have paid for belongs to you. We want our model to be more than a concept – we believe it is the roadmap to launching a successful venture.

Our deliverables:

- We will start the process of building forecasts by having a meeting at GRU to explore the many options that can be studied, with a goal of producing a list of studies needed to answer all of your questions.
- We would then prepare a base study for each geographic footprint that will look at operating with pricing set at or near to market rates. This base study will begin with the existing GRU wholesale fiber business and will layer the new business onto that operation.
- From these base studies we can then explore other options such as alternate financing, lower customer prices, and the other variables that can affect the success of the business.
- Our goal for any studies that show promise will be to calculate the breakeven penetration rate needed to achieve financial success. For a municipal venture we define financial success as having a business plan that should always produce enough cash flow to maintain a cash balance and not require subsidies from GRU or the city.
- Starting with each base study we will then do a sensitivity analysis on the most important variables in the study so that you can understand what happens if you perform better or worse than a given variable (such as, what happens if interest rates go higher).
- The models will cover the period of anticipated financing. Our models will show monthly detail for the first two years with annual data after that. The model will include an estimated cost of debt;
- The models include standard financial statements including an income statement, a balance sheet and a statement of cash flow.
- We will provide our spreadsheets for the various model to GRU to use as the basis for future refinement of forecasts.
- In our written report, described below, we will discuss the assumptions we made in the various studies as well as discuss the various results achieved.

## Funding Options

- *Analysis of available funding options and mechanisms for community investment, including potential grants to close funding gaps*

Helping broadband ventures get financed is a core competency of CCG Consulting. Doug Dawson has helped many municipal and commercial ventures find the money they need to build and operate a network.

We already know that in order to meet the stated goal of having the lowest possible broadband prices that you are going to have to consider alternatives other than revenue bond funding. There are communities around the country that are financing fiber projects through revenues sources such as property taxes, sales taxes or a utility fee of some sort and we can look at such alternatives to see if there is a way to achieve low prices and still have a financially viable fiber business.

Our financial studies will begin with an analysis of traditional bond funding and then will explore these other alternatives.

We will also look at other possible sources of funding including grants and federal government programs that can be used to guarantee loans to get lower interest rates.

We have come to understand that getting networks funded is very often the most difficult step in the process of getting broadband. Often, even funding with municipal bonds can face major hurdles. We will not only look at the possible sources of funding, but we will discuss the practical issues associated with each kind of funding in the market today. These discussions will be included in the written report described below.

## Market Analysis

- *Market analysis (How many potential customers and at what cost?)*
  - *Description of methods*
  - *Residential and commercial surveys*
  - *Likely and required adoption rates and schedules*
  - *No MDU's*

## Residential Market Demand

The ITN asks us for a survey to understand residential market demand. The good news is that a well-designed survey is the only reliable way to understand that market.

A survey can provide a lot of useful information. For example, we can identify the broadband market share today for other service providers – something you likely don't know. We can also use the survey to find out if residents are satisfied with the prices and speeds of broadband in the market today.

The most cost-effective way to do a residential survey is by telephone. The primary issue to consider when doing a telephone survey today is to make sure that the calling list contains both cellular and landline telephone numbers. Surveys that are made only to landlines are no longer a representative sample of the community.

There are two options for getting a calling list that contains landlines and cellular numbers. First, we can purchase a list from marketing firms that have amassed a database of telephone numbers. If you select this option there are several options for buying a calling list that would likely vary from \$1,000 - \$4,000 depending upon how many numbers you want to buy. If you want to pursue this option we will seek quotes for various options for you to choose from. The city might find these calling lists useful for other city purposes.

But it's likely that the city also can assemble such a list out of your own records. For example, GRU has likely amassed a large list of phone numbers in utility customer records. The city is allowed to survey your own customers and you would not be violating customer privacy rules by using this information to survey your own customers about their desire to have a city-owned fiber network. For example, you can call your own customers without violating Do Not Call rules and other privacy rules affecting telephone records and calling. We would not need to see any details of your customer records other than the phone numbers, so disclosing only that to us should pass muster for any privacy concerns.

At CCG we have assembled an in-house calling group and our rate for conducting these surveys is among the most affordable in the country. Our callers work for CCG directly and we control the quality of the calling. Other cities have praised us for the courteousness and friendliness of our callers. We won't do things like interrupt folk's dinners.

There are general issues that are important for any kind of survey. First, the survey questions must be unbiased and shouldn't lead respondents into answering in a given way. At CCG we have developed hundreds of similar surveys and we can prepare survey questions that are not biased, and for which you can then believe the answers. It's also important for a survey to be valid that it is given randomly to participants. We have a lot of experience in designing surveys procedures that meet the random test.

You also want a survey that you can believe, and this speaks to the accuracy of the overall survey. Most business and major political surveys are done with an accuracy of 95% plus or minus 5%. What this means is that if you were to ask the same questions to 100% of the people in the City that the results should not vary by more than 5% from what was obtained in the survey. The key to getting the accuracy you want is determined by the number of completed surveys. We can make sure that you reach the desired level of accuracy.

The primary benefit of a survey, when done correctly, is that it can be used to predict the behavior of the whole universe (in this case meaning everybody in the city). In this case a survey could answer your questions about how residents feel about broadband today. The downside of a survey is that you can only ask a limited number of questions. There is a well-known phenomenon called survey fatigue and a large percentage of people will hang

up when they feel a survey is taking too long. So you never want a survey that lasts more than ten minutes, and hopefully for less time.

### **Business Market Demand.**

Unfortunately, surveys are not a good tool for understanding the business community. Where residential surveys are a great tool for accurately understand residential market demand, we've learned through experience that surveys do not work well in the business community. There are several reasons for this:

- When you give a survey to a business it must be given to the person who most understands the broadband needs of the business. A survey given to anybody else has no statistical validity. It's often not even clear to a business who that person might be, and in many businesses this would be a group decision.
- Businesses generally won't immediately know what they want from broadband. The telecom sales process for selling to businesses looks at how a business uses broadband today and then proposes a solution that best fits that business. Until a business has gone through that analysis and process they can't accurately tell a surveyor what they want from broadband.
- There are a lot of reasons in the way statistics work that make it difficult to produce meaningful results that include a wide array of business that might include a huge manufacturer and a small retail store. Ideally you would want to do a survey for each different class of businesses to be able to make sense of the results.
- Businesses are often too busy to take a survey and it's often hard to get a valid sample. Because the business community is always a lot smaller than the number of residential households it often requires a lot more completed surveys to achieve the desired accuracy for the business community.
- GRU has a particular challenge in that a significant percentage of businesses in the community already use the GRU fiber network through your wholesale program of selling fiber to other carriers. It's likely that many of these businesses don't even realize they are using your network and identify their ISP as the service provider.

Telecom carriers gave up using business surveys almost two decades ago since the predictions made by the surveys were often drastically different than what the carriers saw in the market after they got into business.

With these facts in mind, we offer the following option for looking at the business community. We have had good luck in getting smaller businesses to tell us their telecom stories through a questionnaire. The results of this process do not carry the same statistical significance as a survey. On the questionnaire we ask businesses to tell us their broadband story – what service they have today and if they are able to buy broadband at a price they can afford. These questionnaires are usually very good at identifying glaring problems or needs in the business community. We would need GRU's help in distributing the questionnaires somehow in the business community. There are a number of ways to do this fairly easily, such as asking help from groups like the Chamber of Commerce. GRU could perhaps also distribute the questionnaire in power bills sent to businesses.

We've learned from experience that business customers will accept a new network only after they understand it to be reliable. Business generally care more about the quality of their telecom products than they do about price. We are sure that GRU has encountered this through your wholesale channels. We also know that many businesses will eventually consider the new network and we have extensive experience with clients that serve businesses to enable us to make some reasonable estimates of business penetration rates that are better guesses than we would get by using the results of an unreliable survey.

Our deliverables for market research include:

#### Residential Survey

- We will work with GRU to obtain a list of telephone numbers that contain both landline and cellular telephone numbers.
- We will provide a draft of survey questions. It is very important that survey questions are not written in such a manner as to bias respondents towards a certain response. We have conducted hundreds of surveys and we will prepare a list of questions that we think work well. You are free to modify the questions but we want to work with you to make sure that any changes don't add bias. We will also help to make sure that the survey doesn't get too long.
- We will determine how many completed surveys are needed to be statistically significant. Ideally we will shoot for getting an accuracy of 95% plus or minus 5%.
- We will devise a plan to make sure that the sample is random.
- CCG staff will administer the surveys.
- Once the survey is completed, we will summarize the responses and analyze the results and tell you what the responses mean statistically (meaning how much faith you can put in interpreting the answers). The results of the survey will be included in the written report discussed below.

#### Business Market Research

- We will create a questionnaire asking smaller businesses to tell us about their telecom issues and needs, and with the GRU's help will get it circulated in the community.
- The results of these questionnaires will be included in the written report discussed below.

### **Legal and Regulatory Assessment**

The ITN asks us to look at the legal and regulatory obstacles and risks for a fiber business. For this portion of the project we are teaming with Milda K. Hedblom of Dain International. Milda is a consultant, lawyer and policy expert with a broad range of experience in broadband network development for both public and private clients. Her work includes expertise in development of community broadband projects, entry of new services, broadband applications, regulation, cable franchise and multi-party agreements. As a consultant she has worked on a number of public FTTH feasibility studies and dozens of varied projects in fiber, cable services, wireless and broadband applications nationally. The most recent national project was to study the feasibility of an area wide FTTH network for the largest public electric utility in the Four Corners area of New Mexico. In Minnesota

most recently she was a connectivity consultant to HBC Communications in Winona with responsibilities relating to the expansion of FTTH to six communities in southeastern Minnesota over the past few years.

Milda has held positions in the Plans and Policy office of the FCC, as a Senior Fellow in International Telecommunications at the Center for Strategic and International Studies in Washington, D. C., and Executive Coordinator of the UN World Summit on Information project in Geneva. She organized the Telecommunications Policy and Information Society Forum at the University of Minnesota Humphrey Institute and is a Professor of politics and communications at Augsburg College, in Minneapolis. She has a B.A. from Macalester College, St. Paul, MN, a Ph.D. from the University of Minnesota including study at Oxford University, and a J.D. from the University of Minnesota.

Milda will examine your specific circumstances and our deliverable will be a written report describing city, state and federal legal issues that must be considered when looking at the various fiber business plan alternatives. She is already familiar with federal issues and will take a fresh look at state issues as well as dig into potential city issues.

We will work with GRU to see how best to convey the results of this research to you. Some municipalities want this to be included in the written report while other prefer it be sent as a legal opinion from our attorney to GRU or city attorneys.

## **SWOT Analysis**

The ITN asks for a SWOT analysis.

We would focus our SWOT analysis in two areas:

- First we look at the strengths and weaknesses of GRU as a potential retail broadband provider. We think you will find it valuable to get our unbiased opinion of the where you are or are not ready to tackle this major new business line.
- We will also look at wider issues. For example, we will look at external threats from new technologies. We will discuss the opportunities and threats facing any retail broadband provider and will discuss some of the issues in the industry and marketplace today that should be considered when making a major decision like launching a new broadband business.

The SWOT analysis will be included in the written report discussed below.

## **Competitive Analysis**

The RFP asks us to look at the expected competitive response of the incumbent providers. In working with a number of cities in the fiber business we have seen these responses range from almost no reaction from the incumbent to the other extreme of having an all-out price war.

We are familiar with the major incumbent providers in the city and we can tell you how they have responded to competition in other markets.

We also track the large ISPs and we can tell you what these companies likely have planned over the next few years so you can understand how their response to competition might change.

The results of this analysis will be included in the written report discussed below.

## **Report of Findings**

*Description of the work done*

*Description of the findings*

*Recommendations for moving forward*

*Executive summary*

### **Written Report.**

All of the tasks required by this ITN will result in producing a written report that describes the tasks we undertook and the results we obtained. Our analysis of each task will be brought together into the form of an overall coherent report.

We know that some of the staff at GRU already read my daily telecom blog, and from that you can understand the writing style that will be used in the written report. I generally write these reports so that they can be understood by the general public, by politicians and by senior staff who are not knowledgeable about broadband and telecom issues. The report will avoid the use of jargon and will attempt to explain complex issues in an understandable manner.

The goal in writing the report is to tell a comprehensive story. We could write a report that just reports on each of the tasks required by the ITN. But since you are considering launching a retail broadband business we think it's important for the whole narrative to tie together so that you can see the big picture and not just the details.

Our reports normally follow the format you have requested. We will begin with an executive summary of our results, which will be written so that somebody who wants to understand the most important aspects and findings of the study can gain that just from reading the executive summary.

We always make specific recommendations that we think are warranted by the results of the study process. We hope that you don't consider us just for our ability to complete the required list of tasks, but also for our insight into what it all means. The report will reach conclusions about the feasibility of meeting your stated goals and will then go on to recommend a specific list of next steps that ought to be considered after receiving our report.



We always prepare a draft of this kind of major report for your review and will solicit GRU feedback before the report is final. We will want to make sure there are no factual errors in the report and also that it is in a format that is of the most use to you to move forward.

## **Presentations**

We are also proposing a live presentation of the study results. This would involve a visit by Doug Dawson to GRU. We can tailor this presentation to any format you desire. For example, we could make a short presentation to GRU management or to city officials. We could instead hold an intensive question and answer session to allow GRU and others to ask about our findings. We have built in the cost of one visit and can make multiple presentation during the same day. While not included in the proposal, we are open to visiting addition times to make presentations to different stakeholders if that makes sense.

## **Other RFP Requirements**

### **Qualification and Experience of Respondent**

- *A narrative which profiles the background, experience, business philosophy and qualifications of the Respondent.*
- *A listing of Respondent's contracts, 2013 to present*
- *Executive Summary of all current/anticipated projects for 2018*
- *Demonstrate sufficient financial capacity to execute the project*
- *Brief description of all lawsuits or threatened litigation for the last three years 2015-2018. Either filed or pending against Respondent.*

### About CCG Consulting

We have assisted numerous other communities with similar studies and we can bring this experience to help you find the right solution. CCG is the largest telecom consultant in the country in terms of clients and has served over 850 broadband providers in our 20-year history. Among those clients are about 175 municipal clients, but we also serve a lot of commercial broadband providers. Our work in the commercial sector has taught us to have a very strong focus on profitability and efficiency which we think is essential for municipal projects.

CCG is a full-service telecom consulting firms, meaning that we help with a very broad array of services that are needed by broadband providers. CCG has one of the broadest technical knowledge bases in the industry because we work with almost every kind of network possible including fiber, copper, HFC/coaxial, and a wide variety of wireless technologies. We work with clients that serve farms and very rural areas and other clients who work in NFL cities. This wide range of client work means that we have to stay current and on the cutting edge of technology to anticipate the needs of tomorrow.

CCG Consulting, LLC was founded by Doug Dawson, the President who started the firm in 1997. Our full corporate name is Nationwide CLEC LLC dba CCG Consulting and we

are a Delaware corporation. The company was founded as a C corporation in 1997 and was subsequently reorganized to an LLC. Our website is <http://www.ccgcomm.com>.

Following is a brief summary of CCG's key accomplishments and successes.

- CCG has worked with over 850 clients on all aspects of communications. We have worked in every state in the country. Our clients include cities and municipalities, independent telephone companies, CLECs, ISPs, cable companies and wireless carriers. We have assisted many of the largest and most successful municipal clients get into the telecom business including places like Lafayette, LA, Chattanooga, TN and Bristol, VA. We have over 175 municipal clients.
- CCG has completed over 250 similar financial business plan studies similar to this project.
- CCG has a high percentage of retained client business, even though our work is project related – that is, we complete specific projects for clients with no guarantee of an ongoing relationship. For example, over 80% of our clients in 2016 were also clients in 2017. This reflects the fact that our clients continue to come back to us for operational support as they implement our recommendations.

CCG is a full-service telecom consulting firm and we help clients with almost every aspect of providing any or all of the triple play services. We specialize in helping businesses to get started, to open new markets and to stay profitable once in business. Some of our areas of expertise include:

**Planning Services.** Strategic Planning, Policy Development, Business Plan and Feasibility Studies, Assistance with Financing

**Regulatory Services.** Interconnection Agreements, Regulatory Compliance

**Marketing Services,** New Product Development and Implementation, Market Research, Marketing Plan Development, Development of Pricing, Packaging and Promotional Programs

**Implementation Services. Project Management,** Timelines and Gantt Charts, Customer Service and Billing Platforms, Hiring and Training, Setting Sales Quotas and Sales Training, Number Portability, Finding Vendors

**Engineering Services.** Facilities-based Network Design and Optimization, Design Central Office Facilities, Network Interconnections, Sizing, Ordering and Implementing the Network, Network Migration Strategies, Detailed Customized RFPs, Vendor Selection

**Contract Negotiations.** Contract Mediation and Dispute Resolution, Local Exchange, Utility and Municipal Agreements, Right of Way and Pole Attachment Fees

**Partnership Opportunities.** Financing Solutions, Strategic Alliances, Third Party Relationships, Outsourcing of Non-strategic Competencies

Doug Dawson, the President of CCG writes a daily telecom blog for small ISPs and municipalities at <http://potsandpansbyccg.com>. We invite you to look at the blog to see a sample of the wide range of topics we cover. We look not only at the current market, but we are focused on what they industry might become in the next five to ten years. We don't think there are many firms that spend us much effort as us in looking forward. You will also see Doug's style of writing. We propose writing the report for this project in plain English with the target audience being the public or others who are not technologists. We will not fill the document up with jargon and terms that can't be understood.

Our Contracts since 2013

We are declining to provide this information in writing. The majority of the work we do is not under contract. For example, it's been years since a commercial client asked for a contract with CCG and so all of our work with commercial entities is project work done without contract. We have contracts with some, but not all of our municipal clients. The number of consulting firms that are qualified to respond to this ITN is small and we have always avoided publishing a list of our clients since we don't want our competitors to know our client base. But we will be glad to tell you about our clients as long as it's not included in a public document.

Executive Summary of Current / Anticipated Projects for 2018.

We also decline to respond to this request for similar reasons of not publishing our customer base. We understand that GRU wants to make sure that we have the capacity to handle this project. Our consulting work consists almost entirely of project work that lasts less than 3 or 4 months to complete. So the second reason we decline to answer the question is that we really don't know what we will be doing in the second half of 2018. All of the projects we are currently working on will largely completed within the next few months. We only respond to RFPs for projects when we know we have the capacity to do the work in a timely manner. We have done hundreds of feasibility studies similar to this one in the last few years and we have only ever missed a completion deadline a few times – and only when our client had troubles providing us the information we needed to complete the study. We have a long history and track record of meeting customer expectations and deadlines and know we can do that for this project.

Financial Capacity to Execute the Project

We have to assume that this is standard language that goes into all GRU proposals. Probably the best proof of our long-term stability is that CCG Consulting has been in business for twenty years, which is a long tenure in the telecom consulting world. Our only product is our labor and we have no balance sheet and own no company assets. Consulting revenues largely get paid out to the consultants who work on a given project, which means we never have had any liquidity problems.

### Brief Description of all Lawsuits

We have never been involved in a lawsuit.

### **Project Management and Development Team**

*Provide a brief description of how Respondent proposes to successfully manage this project. Include a description of how the project team will be structured, its roles and responsibilities, location within the company's organizational framework and chain of command. Brief resumes of staff/ consultants to be assigned to this project along with their responsibilities are to be included in this section. Indicate the specific individual who would serve as the day-to-day contact and be responsible for meeting the deliverables of this project and where they would be located.*

*Since Contractor staff experience and knowledge are a vital component of project success, GRU expects and requires that resumes submitted are for staff that will actually be assigned to the project. GRU reserves the right to request a substitution of personnel.*

### Our Approach to this Project.

Assuming that we can obtain the required input from GRU, our goal is to deliver a draft report in 4 months or less from the date of an executed contract. We can't predict when final presentations might be made after that.

As noted earlier, we have done a few hundred similar feasibility studies and we have developed an internal process that has allowed us to be efficient and deliver results on time. Our basic approach is as follows:

- One of the first tasks will be contact from our engineers. They typically will issue a data request to identify that types of information they would need from GRU. This is generally then followed up by a visit to GRU where our engineers will work with GRU to gather the needed data as well as undertake field analysis to understand the issues with building fiber in your area.
- We also would immediately provide a list of possible survey questions for the residential survey. We then work with you to refine the survey questions and schedule the survey. In your case we will need to determine if we must buy lists of phone numbers or if these can be supplied by GRU.
- We will also start the process early of working with GRU to solicit citizens to take the Internet speed tests and to send us copies of broadband bills.
- We also undertake the other data gathering needed during the first month. This would include looking at the incumbent providers in your market, looking at published products and prices, looking at demographics and other information that let's use build financial models.
- After the engineering analysis is started and any issues are identified, we would have a visit by Doug Dawson to meet with GRU staff to determine the specific financial studies that should be created. Doug will also begin gathering information

about GRU data that impacts the business plans such as organization structure, salaries and benefits and internal GRU allocations of overhead costs.

- After Doug's visit we generally would start the legal and regulatory analysis.
- For a study footprint of this size we would plan to present you with our preliminary estimates of the cost of building the network, for your feedback on our assumptions.
- Once we have the results of the survey and the engineering cost estimates Doug Dawson will begin creating the financial business models. When those are complete Doug would present them to you on a phone call and discuss the results.
- Finally, the report will be written that describes all of the work done, the assumptions made, the results we obtained and our recommendations of next steps.
- From there we deliver a draft report for your feedback.
- Once the report is finalized we schedule the on-site presentations.

### Key Personnel

Following is the primary staff that would be assigned to this project. We will be using additional employees for various clerical and research functions, but the following two employees will be directly responsible for the work required for this project and are the only two of us who you will see during the study process.

**Douglas A. Dawson**, President, CCG Consulting. Doug's primary responsibilities at CCG are helping clients realize their potential through detailed needs assessment and strategic planning. Doug has helped devise strategies enabling clients to survive and thrive during the recent telecommunications industry slowdown. Doug brings a broad background to his work with experience in telephone accounting, engineering, regulatory and business planning. He is directly in charge of all client consulting at CCG.

Doug's role in the project will be hands-on analysis of the data and formulation of ideas and plans. Doug will prepare all business plans and other financial analysis. Doug will author any written reports. Doug will be the one presenting results to the City.

Doug has been working in the telecom industry since 1978 at several different companies. He has both a consulting and an operational background. Doug has a Bachelor's degree in Accounting from the University of Maryland.

**B. Derrel Duplechin**, Vice President of Engineering, CCG Consulting. Derrel Duplechin's primary responsibilities at CCG Consulting are network design, cost estimation, planning, specification and procurement of equipment, construction management, commissioning, testing, and interconnection of networks. Derrel is a competent and well-rounded engineer who understands all of the technologies now in deployment in various fiber networks.

Mr. Duplechin began his career with the State of Louisiana, Office of Telecommunications Management where he served as a Project Engineer for the design and implementation of State telecommunications projects. In 1992, he joined Hart Engineers in Baton Rouge, LA, where he held various engineering positions. He was responsible for multiple stages of telecommunications network implementation including strategic planning, network design,

financing, testing and installation. In April 1999, Mr. Duplechin joined CCG as the Director of Engineering.

Mr. Duplechin received his Bachelor of Science in Electrical Engineering from the University of Southwestern Louisiana. He continues to attend professional courses and seminars to maintain expertise in the newer technologies, services and service methods associated with a competitive telecommunications environment.

### **Past Performance**

*References from three (3) organizations that incorporated the vendor's design and recommendations. Projects should be similar in scope and size. All projects referenced shall be verifiable. Referenced clients should be able to attest to the firm's knowledge, quality of work, timeliness, diligence, flexibility, and ability to meet budget constraints. Each reference shall include current information for the following: Client's name, address, contact person, contact Email and phone number, project dates (beginning and end), and a brief summary.*

It's not possible to provide references for projects that are similar in size in scope since there are no cities of your size that have yet built FTTP networks! We think the following projects are the most similar projects to what you are requesting:

Lafayette Utility Services – Lafayette Utility Services (LUS) is the electric and water utility operated by the City of Lafayette, Louisiana. The work there began with a feasibility study from CCG Consulting for developing a wholesale network, done in 2005. The City went on to build a wholesale network similar to yours to sell fiber connections to businesses and other carriers. That business quickly became financially successful. The City next hired CCG to create a business plan for creating a retail fiber network where the City directly serves as the ISP. This network was built starting in 2009 and the city is now profitable as a retail ISP.

CCG still consults with LUS monthly with a wide range of different services such as engineering, regulatory and strategic advice.

The contact for CCG is Terry Huval, Director, Lafayette Utility Services, Lafayette, LA: 337-291-5804, [thuval@lus.org](mailto:thuval@lus.org)

Davis, California. This is a fiber feasibility study we just recently completed. The project was similar in scope to what is requested in your ITN, with the one exception being that Davis doesn't have an existing fiber network. However, Davis is a university town and faces many similar issues to Gainesville.

The contact is: Sarah Worley, AICP, Deputy Innovation Officer, City of Davis. 530 747-5882. [SWorley@cityofdavis.org](mailto:SWorley@cityofdavis.org).

Idaho Falls Power. This was a feasibility study completed jointly by CCG Consulting and Finley Engineering for Idaho Falls Power, the municipal power company in Idaho Falls, ID. The study was similar in scope to this one. The consulting contract had us estimate the cost of building a network and also looked at different operating models. We created numerous financial projections and produced a written report.

The project was completed in May of 2016. The study demonstrated that there were several scenarios for creating a financially successful fiber business. The City is currently exploring the possibility of creating a public-private partnership. CCG has also been working with the city since it was completed helping to look at funding options.

The contact is Jackie Flowers, General Manager of Idaho Falls Power. 208-612-8430, [JFlowers@ifpower.org](mailto:JFlowers@ifpower.org)

### **Distinguishing Characteristics**

*Respondents are also encouraged to identify any distinguishing characteristics of their firm that the evaluation committee should be made aware of including any unique features that set them apart from other competitors. These may include suggestions and alternatives that the Respondent believes will improve the quality of service and/or reduce the cost of services, warranties, guarantees, or other assurance of quality, service, and customer satisfaction. These characteristics may also be beyond the scope of this ITN if Respondent deems they would provide value to the long-term goals of GRU.*

We think there are a few characteristics that distinguish from our competitors.

- Most of our competitors only serve municipal clients. Two-thirds of CCG's client base are commercial companies like telcos, cable companies and fiber overbuilders. These companies must always focus on profitability and cash flow for anything they undertake, and through working for them this is our focus for any feasibility work. We know how important it is for a fiber business to pay for itself without needing subsidies, and this has made us conscious of making sure that have accounted for all possible costs of a new venture. Most of our competitors do not have the same focus.
- Doug Dawson has spent a lot of time during the past ten years helping projects obtain funding. Funding fiber projects has become the most challenging step of getting into the fiber business and Doug has more practical experience than any of his competitors in this key area. While Doug can help you get your project funded, probably more importantly he can help you identify issues and solve issues that will make it hard to finance a network.
- Many other consultants are only engineering oriented and put their emphasis on finding the exact right technology – and while that is important, and our team has experienced engineers – all of the technical analysis in the world is wasted if it's used to propose a project you can't realistically get financed and that will be cash self-supporting. Doug Dawson at CCG has a long career of helping projects get

funded and that expertise and focus will produce recommendations that are achievable.

- CCG has a philosophy of telling clients the truth about the potential for launching new ventures. Some of our competitors always tell clients that projects are feasible, probably do they can get ongoing consulting work. But we will tell you when we think it's not a good idea to move forward. CCG has been hired a number of times to help bail out projects that were launched following bad advice from other consultants.

**Other RFP Requirements:**

There are a few other housekeeping items we should mention:

- We are already a GRU vendor. We carry the needed insurance and already meet the other expectations you have for vendors.
- We are a Small Business Enterprise with revenues under \$5 million and fewer than 200 employees.
- We are prepared to sign any needed contract for the project.
- We are not seeking a local vendor preference.



## Proposed Pricing

We are not providing an estimate of hours and rates. In order to be responsive to the ITN we have priced all of the above tasks at approximately 75% of our normal hourly rates. This is not unusual when working on a feasibility study. But this means that the prices are fixed and we expect to bill the prices we have quoted below. We want you to know, though, that we do not feel constrained by these fees and that we will expend whatever time and effort is needed to complete the project to your satisfaction. You will not get a degraded product due to us exceeding our time estimates.

There is one estimated and optional cost listed at the end of the pricing below. If GRU is unable to provide us a list of customer telephone numbers, including cellular numbers for the survey, then we will have to purchase a list of telephone numbers. There are several vendors that sell such lists and there are further options about how many numbers we purchase, so at this time we don't know the cost of such a list, but guess it might be between \$1,000 and \$4,000.

We bill on a monthly basis as work is performed. We do not require a retainer. We bill travel expenses or other direct expenses at actual cost, without mark-up. Our pricing for the work described in the RFP response is as follows:

### **Engineering Cost Estimate**

**\$ 35,000**

This includes the following tasks described in the RFP response:

- Kick-off Meeting and Field Assessment
- Assess existing city assets
- Network design alternatives
- Estimate the cost of the network alternatives

### **Research**

**\$ 3,000**

This includes the following tasks described in the RFP response:

- Product and price research
- Customer bill analysis
- Citizen speed tests

### **Financial Business Models and Related Research**

**\$ 23,500**

This includes the following tasks described in the RFP response:

- Kick-off Meeting
- Create Numerous Financial Models
- Sensitivity Analysis

**Other Analysis****\$11,000**

This includes the following tasks described in the RFP response:

- SWOT Analysis
- Expected Competitive Response
- Explore Funding Options
- Regulatory and Legal Assessment

**Market Analysis****\$11,000**

This includes the following tasks described in the RFP response:

- Residential Survey
- Business Questionnaires

**Written Report / Presentations****\$11,000**

This includes the following tasks described in the RFP response:

- Written Report covering all of the above topics. Final report will include specific recommendations.
- Preparation of presentation materials
- Presentation of Results in Gainesville

**Subtotal of Consulting****\$94,500****Travel Expenses.****\$ 7,000**

This anticipates travel for an engineering kick-off meeting and subsequent field visit, for a financial feasibility kick-off meeting and for a final presentation of our results. We will actual expenses without mark-up – it's likely that actual expenses will be less than this estimate.

**Total Price****\$101,500****Optional Cost of Telephone Numbers****Up to \$4,000**

This would only apply if GRU is unable to provide us a list of customer telephone numbers for the survey.