

Mr. Michael Baldino  
Director of Board Relations & Associate General Counsel  
Massachusetts Technology Collaborative  
75 North Drive  
Westborough, MA 01581

April 18, 2016

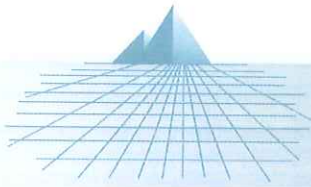
Via Email- [baldino@masstech.org](mailto:baldino@masstech.org)

Federal Express

Dear Mr. Baldino,

By this letter, I hope to clarify any of the misinformation and or misunderstanding of what Matrix Design Group is proposing for the un-served towns of Central and Western Massachusetts and specifically to the partially served Towns of Hardwick and Montague. Before addressing each one of the paragraphs in your April 7, 2016 letter to me, I think it will serve all involved if I reiterate a few points I have made throughout this entire process.

1. Unlike other respondents to your RFQ, Matrix/Millennium (MM) are not asking for grant money directly. Instead, we are working with the towns to help them secure funding directly from MBI through the grant process. In our plan, the towns participate by providing a pathway along the right of way, one that may require them to pay other service providers to move their respective pole attachments in preparation for the new FTTH attachment. MBI grant money would be directly paying the towns for some or all aspects of this task.



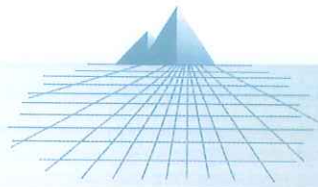
2. MM will be providing intellectual property, capital, goods, and services to build a true FTTH network over the town's provided pathway. This contribution will be far in excess of the amount of capital we are asking the towns to contribute.
3. In accordance with the MBI's last mile policy, at the end of a twenty year period or under circumstances negotiated between the towns and MM, the towns have the option of owning the asset outright. This is an option that is unique to our proposal.

These three facts will form the basis of my answers to each individual paragraph of your letter.

Please find our responses below -

**Paragraph 1** – Even though technically MM is the grant applicant, MM would not be the grant recipient. Our response to the Cable Extension RFQ was on behalf of the Towns of Hardwick and Montague. We had been working with these towns for months prior to the release of the RFQ to help solve their need for broadband in un-served areas of their towns. All grant funds from the MBI would go to the Towns of Hardwick and Montague to pay for the specific financial responsibilities spelled out in detail in our initial response to the RFQ dated July 31, 2015. MM has been active with many communities in Central and Western Massachusetts in their quest for real broadband. We have also been active in helping them in their efforts to raise capital for paying the make ready costs on the telephone poles, as this would be their responsibility.

**Paragraph 2** - MM has provided all information that has been requested in a timely fashion to the MBI, MM was vetted and approved as a provider through the MBI RFQ process on October 29, 2016, and we are contributing a majority of capital and the financial risk involved in building these networks. Our response on January 29<sup>th</sup> to Eric Nakajima was sufficient and detailed enough that on February 3, 2016 the Director of the MBI informed the Towns of Hardwick and Montague that the final step in this RFQ



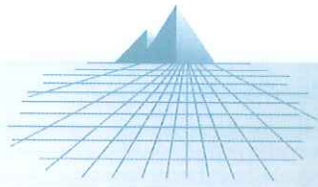
process was for the Select Boards of the two towns to vote to formally approve the MM plan. Those votes were taken on February 8, 2016 and were both unanimously in favor of the MM plan. (see attached **Exhibit 1**).

As to our experience, the founders of MM have a combined total of 100+ years of experience in the building and operation of broadband networks. (I have included some of our key personnel's professional profiles in **Exhibit 2**.)

As previously disclosed to MBI, our experience in FTTH projects involves the EC Fiber FTTH system in Vermont, which would not have gotten off the ground without our engineering and operational expertise. Additionally, the complete redesign, engineering, construction and provisioning of the highly successful Leverett FTTH network, arguably the most advanced FTTH system in the northeast if not the country. Both of these projects are successful today, due the operational and design/build expertise of MM leadership and personnel.

In addition, for the past three consecutive years MM has been nationally recognized as one of the Top 100 FTTH Companies by Broadband Communities the leading publication for professionals involved in FTTH.

**Paragraph 3** - As previously noted, all non proprietary information was provided to the MBI as requested by the then director, Eric Nakajima. There was a proposed meeting whereby MM could share proprietary information with representatives of MBI, however this meeting never materialized. A meeting scheduled for March 2, 2016, with Interim MBI Director Elizabeth Copeland was cancelled by the MBI with no reschedule date offered. While we were and are happy to share information with MBI, there are two points I'd like to make- 1. The other respondents flatly refused to provide any public information with regard to their business plans and 2. As stated, we are not directly asking for grant money from MBI.



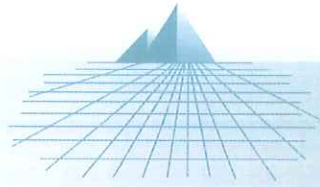
**Paragraph 4** – Please refer back to the Rural FTTH Fiber Business Plan for NEWCO that was forwarded to MBI on January 29, 2016 and again attached here as **Exhibit 3**. It details everything you are asking us for in this section.

We would not argue with you that giving money to the large corporation is the “safe path” but this corporation is bringing technology that is far inferior to the network we are proposing, is undoubtedly asking for more and direct funds from MBI, offers no ability for the town to own the network, and would be in direct contradiction of the MBI’s own stated Last Mile Policy.

We are also concerned by the implication that we have not been cooperative. We have responded in a timely fashion to every request put forth by the MBI. For the past two years, Mr. Lynch has been meeting with the broadband committee members in a preponderance of the un-served towns, several times a month. We have worked diligently with them day in and day out in their quest to provide real broadband service to their communities. The “large public companies” you point to have not attended one meeting, with any of these towns.

As to the “Newco” designation in our business plan, this is being done in order to create separate entities on a town by town basis. In this way, if a town wanted to purchase the network prior to the end of the twenty year term, or as the twenty year term expires, it is easier to unbundle the towns from one another. It is a common occurrence in the cable television world to separate communities into separate LLC’s.

**Paragraph 5** – MM welcomes an inquiry into any and all activities we have been involved with in the State of Massachusetts. It troubles me that you point to “growing concerns based on existing record in Massachusetts”. The existing record I am aware of is one of total success, re-designing, building and provisioning a state of the art Active Ethernet system in Leverett. I would certainly want an opportunity



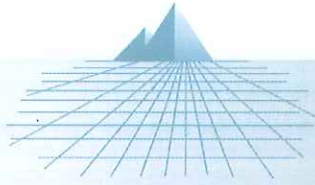
to address any statements to the contrary and am respectfully requesting a meeting with MBI to address any misrepresentation made about our company.

Our company put forth a tremendous effort in successfully delivering the Leverett FTTH project to the townspeople, on time and on budget, despite numerous obstacles and shortcomings in the town planning. MM also provided a fiber design to the Town of Alford which was praised by David Charbonneau, Technical Director of the MBI, for being both very detailed and cost effective.

**Paragraph 6 (1)** - As the provider of the capital to build the networks, MM will be assuming all responsibility for construction and operation of the network and will source all components of the project with internal or external resources as necessary. Our business plan forwarded earlier this year gives an overview of our plan, including operational strategy, staffing, marketing, and pricing. As we are not a public company and consider certain aspects of our business plan to be proprietary, we will only discuss the remaining areas of the plan under an NDA. This was discussed and agreed to by Eric Nakajima, present members of the MBI and MBI consultants. We are still willing and available to discuss the plan under this arrangement and would welcome it.

It should also be noted that MM attended public meetings in both Hardwick and Montague where the effected un-served residents had the chance to ask specific questions regarding the MM plan. Every question was answered to the residents' full satisfaction.

**Paragraph 7 (2)** - MM will be delighted to meet with representatives from MBI to discuss the operational plan, however, as stated previously, we consider those portions of our plan not already released, proprietary and will only discuss under NDA.



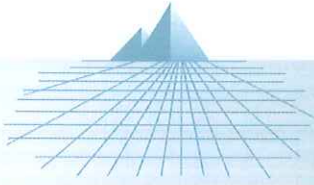
**Paragraph 8 (3)** – MM is not requesting funds from the MBI. The individual towns are requesting grant monies to offset their commitment to the project.

Each property will be its own LLC, defined by the boundaries of the town it serves. These LLC's will be wholly owned by MM until which time as the town purchases the network.

Bonding, Guarantees, letter of credit or other contractual obligations will be negotiated by and between MM and the individual towns.

**Paragraph 9 (4)** – MM will be using best business practices in the implementation of its business plan. As noted to the MBI previously, MM has standardized on Calix for our fiber access equipment and Cisco for any IP networking requirements. Both manufacturers are recognized as best in class in their fields. Since we are not asking for grant monies directly, all capital and operational expenditures will be derived from investment or ongoing operations.

**Paragraph 10 (5)** – Please refer to the Business plan summary submitted on January 29, 2016. The plan outlines actual (not suggested) pricing and back office operational support from MM. Any subsequent price increases above CPI will have to be approved by the Town or Town Broadband MLP.



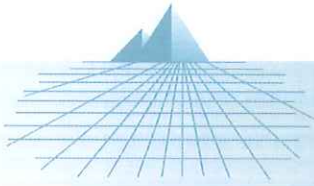
In closing, I again reiterate, we are not asking the MBI for grant money. Our plan is to work with the towns in their quest for broadband service. We are not asking for any funds from any source at this time.

We are instead asking the towns and potential subscribers to provide and/or contribute to a portion of the FTTH build, a true public private partnership. However, it is MM that is putting up the majority of the capital to design, build and operate the network, at our risk.

Our business plan is very simple, straight forward, and is currently implemented in Vermont. It is a resounding success, so much so that the project is seeking additional investment to expand, to the tune of \$40 million dollars. The key elements to its success are low capital costs, low operating costs and customer participation. All three of which we have proven experience in attaining and retaining.

Our company is prepared to invest millions of dollars into the plan provided the towns make the commitment to the project. In exchange, the towns will receive state of the art broadband service over the life of the agreement with an option to purchase the network for \$10.00 at the end of the twenty year term (or sooner as per the agreement). They will achieve this at a fraction of what it cost Leverett to provide the same service to its residents. Additionally, those residents not participating in taking service are not on the hook for any of the costs of the network.

We have provided service under the exact same plan for EC Fiber in Vermont, since 2010. It was MM that afforded the EC Fiber project the option of getting off the ground and it was MM that provided start-up capital, engineering, construction, installation and the operational expertise that has enabled EC Fiber to become a success.



## MILLENNIUM COMMUNICATIONS GROUP INC.

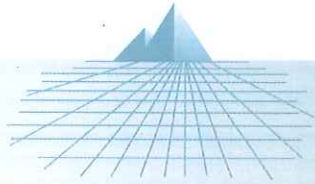
Besides our operational experience at EC Fiber, the founding partners at MM were all pioneers of a large cable television start up in 1975, which is now a Comcast flagship system. Additionally, we started and continue to run MM, a large, successful government contracting firm with more than seventy employees providing advanced fiber optic based network services to our clients on a daily basis. These clients include every major telecom carrier in the US, Federal, State and Local Government agencies, several major universities, the US Military, K-12 schools, and enterprise customers. Our staff of Cisco Engineers provides complete networking solutions including switch/router, wireless, data center, server, IP telephone and physical security applications.

Simply put, we understand our business and the business of FTTH. We are confident in our abilities as is evidenced by our willingness to put up our own capital. No other participant in your process will offer the same thing. No other participant in your process will offer to turn over the network to the towns and no other participant in your process will come close to the technological advantage of the fiber to the home network like the one we are proposing.

We look forward to working with the towns in their pursuit of true broadband service. We believe that the monies that MBI has available can and will help these small towns secure the capital they need to meet their obligation under our plan.

Of course, the easiest, safe bet for MBI would be to provide the grant money directly to Comcast, a large public company that will use the State funds to totally subsidize the build and reap profits from the free money. But in doing this, you would give the residents outdated technology, poor service and no chance to control their destiny. Our plan meets the highest available standard of network delivery, has advanced operational efficiencies that dramatically reduce outages and trouble calls, provides local service





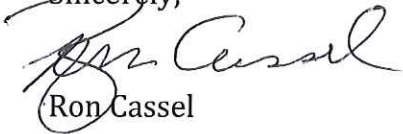
**MILLENNIUM**  
COMMUNICATIONS GROUP INC.

restoration as needed, is turned over to the towns for ownership at their discretion and it does it with the least amount of contribution from the taxpayers and residents we intend to serve.

Matrix and Millennium are moving forward with our plan in surrounding communities, communities who have bonded money to fulfill their obligations under the plan. These communities will realize, just as Leverett and EC Fiber have, the power of FTTH. It is the MBI that controls the fate of the towns who are unable to bond for themselves. They are looking to you to help them, with a plan that they support, because in the long run, it is in their best interest

We would welcome a constructive conversation with the MBI that would further the cause of these towns. Please don't hesitate to contact me if you think that would be helpful.

Sincerely,



Ron Cassel

CEO

**TOWN OF HARDWICK**  
Commonwealth of Massachusetts



Board of Selectmen, P.O. Box 575, Gilbertville, MA 01031  
Phone: (413) 477-6197

February 8, 2016

Mr. Eric Nakajima, Director  
Massachusetts Broadband Institute  
75 North Drive  
Westborough, MA 01581

Re: Broadband Project Direction for the Unserved Portion of Hardwick

Dear Mr. Nakajima:

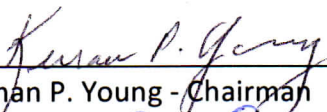
We are delighted to hear the Massachusetts Broadband Institute (MBI) has completed its request for qualification process. We understand that two vendors, Comcast and Matrix Design, made proposals for Hardwick.

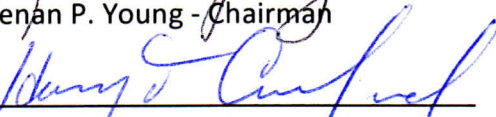
After a briefing from the town Broadband Advisory Committee, we endorse the committee's recommendation that the Town of Hardwick, in conjunction with the MBI, pursue the fiber broadband project as proposed by Matrix Design Group.

We realize that much analysis and further due diligence is required before this becomes reality and we greatly appreciate your diligence to help expedite completion of negotiations and proceed with a build as soon as practical.

Sincerely,

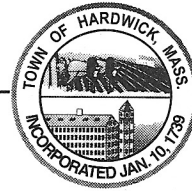
HARDWICK BOARD OF SELECTMEN

  
\_\_\_\_\_  
Kenan P. Young - Chairman

  
\_\_\_\_\_  
Harry T. Comerford - Vice Chairman

  
\_\_\_\_\_  
Richard V. Kmiec

**TOWN OF HARDWICK**  
Commonwealth of Massachusetts



Board of Selectmen, P.O. Box 575, Gilbertville, MA 01031  
Phone: (413) 477-6197

March 28, 2016

Ms. Elizabeth Copeland, Interim Director  
Massachusetts Broadband Institute  
75 North Drive  
Westborough, MA 01581

Re: Broadband Project Direction for the Unserved Portion of Hardwick

Dear Ms. Copeland:

Since our last letter to then Director Eric Nakajima on February 8, much has happened with the MBI and the Town of Hardwick. We have further assessed the needs of our town, held a community informational meeting and feel very confident in our decision. Further, the MBI has provided no further analysis or due diligence since then about either vendor or their proposals. More time has passed with no clarity about funding.

The community has expressed a strong desire to proceed with the Matrix Design proposal. The MBI formally qualified Matrix Design as a vendor back on October 29, 2015. This Select Board formally stated our position to you on Feb. 8 and since then our legislators and broadband committee have had nothing but pushback on Matrix Design without formal reason or evidence for doing so.

The Matrix Design proposal is in the best interests of the residents of Hardwick, the Town of Hardwick and the Commonwealth of Massachusetts. With the Matrix Design proposal, the Town of Hardwick would be contributing approximately \$2,000 per month to MassBroadband123 network revenue. This is nearly a half million dollars over 20 years. This proposal further gives the town the option to purchase the network any time during the first 20 years. The Comcast proposal does not use the MassBroadband123 network and does not allow for town ownership. Further the Matrix proposal is contributing over \$750,000 of their capital to this project vs. unknown, redacted information from Comcast. And the Matrix build is all fiber and Comcast is coaxial cable. It is absolutely irresponsible for the MBI to allocate state funds to an inferior technology and to a vague vendor proposal that is not supporting the state's \$90 million investment in middle mile fiber.

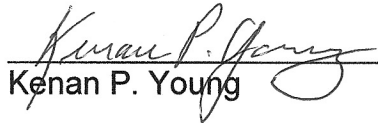
We advocate the best interests of the Town and the Commonwealth. As a result, we request that the funding for the Matrix Design proposal be granted for Hardwick. We have no interest in a coaxial expansion and feel appropriating the funds in this manner


is a highly inappropriate use of Commonwealth funds – for both the future of Hardwick and the MassBroadband123 middle mile.

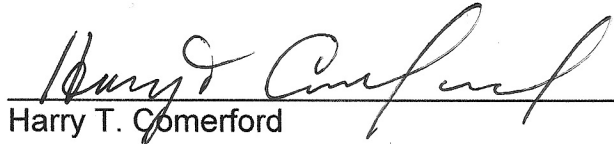
If the MBI will not release the funds for the Matrix Design proposal we will leave it to legislative advocacy to identify an alternative source of funds. We have been attempting to work with the MBI in a constructive manner for nearly a year and can't continue on the current dysfunctional course. We need to move forward with partners and agencies willing to engage in thoughtful dialogue with a sense of urgency to complete the broadband project.

Sincerely,

HARDWICK BOARD OF SELECTMEN

  
\_\_\_\_\_  
Kenan P. Young

  
\_\_\_\_\_  
Richard V. Kmiec

  
\_\_\_\_\_  
Harry T. Comerford



*Board of Selectmen*  
**Town of Montague**

1 Avenue A  
Turners Falls, MA 01376

(413) 863-3200 xt. 108  
FAX: (413) 863-3231

February 8, 2016

Mr. Eric Nakajima, Director  
Massachusetts Broadband Institute  
75 North Drive  
Westborough, MA 01581

Dear Eric,

Thank you for meeting with members of the Broadband Committee and town officials in Greenfield last week. The Montague Select Board requests that the MBI approve its choice of Matrix as the vendor for the Montague Broadband extension to the unserved areas of town, with negotiations to begin immediately, in parallel to any other MBI needs.

Sincerely,  
Montague Board of Selectman

Michael Nelson  
Chairman

Chris Boutwell

Rich Kuklewicz



## Ron Cassel

CEO

### SUMMARY

Highly qualified entrepreneurial executive manager with 29+ years of experience in telecommunications systems engineering, construction, finance and operations. Proficient in all aspects of design, building and management of advanced fiber optic-based broadband networks. Tested, effective leader with strong record of establishing goals and motivating staff to accomplish them. Skilled in all aspects of conducting a successful organization, including sales, staffing, budgeting, reporting, expense reduction and profitability.

### Proven Strengths In

- Telecommunications engineering
- Headend engineering, design, construction and operation
- Outside plant design, construction, operations and maintenance
- Financial oversight and planning
- Profit and loss management
- Team leadership and collaboration
- Cost control

### Professional Career

#### Millennium Communications Group Inc. 1995–present

- **Chief Executive Officer: 2005–Present**
- **Chief Financial Officer: 2003–2005**
- **Vice President Engineering: 1995–2003**

As CEO of Millennium Communications Group Inc., Ron leads a \$20 million per year telecommunications design, engineering and construction company, whose focus is bringing advanced carrier-class communications systems to public- and private-sector clients. Through Millennium's technology offerings, clients free themselves from expensive, and often restrictive, services provided by the incumbent cable and telephone carriers.

He is responsible for the overall health and well-being of the organization, providing leadership to some 70+ employees, as well as for devising forward-looking strategic planning that ensures continued success in the markets served. He is

## EXHIBIT 2

responsible for setting and monitoring job cost and performance, budgeting, profitability and growth, in addition to promoting a safe, respectful and positive workplace that is fully compliant with all laws and regulations. Furthermore he maintains positive relationships with Millennium's Board of Directors, the various industry trade and charitable organizations that the company supports, and the communities it serves.

As CFO, Ron provided direction and leadership, as well as the company's financial oversight, controlling all of the business and accounting functions. His responsibilities included establishing and coordinating every financial program, including general ledger, budgeting, job costing, tax planning and cash flow, enabling the organization to meet its financial needs and goals.

Late 2002 was a trying time for Millennium. The industry on which the company was focused had imploded, leaving more than \$3,000,000 in bad debt on Millennium's books. When the incumbent CFO failed to control the downward spiral of the organization, with bankruptcy imminent, the Board called on Ron, in a final effort to save the company. For the next two years, he worked with our outside accounting firm, as well as banks, investors and creditors, devising a cogent—and ultimately successful—plan, which allowed all company debts to be satisfied. Additionally, Millennium secured the financing needed to guarantee its survival and allow it to continue meeting its customers' requirements. This was accomplished without inviting undue financial risk to the corporation, and Millennium was able to avoid bankruptcy.

A major part of this laborious process was controlling Millennium's expenses, while simultaneously being vigilant about maintaining the service quality and responsiveness for which people recognized the company. Beginning with reducing expenses, developing job costing and profitability objectives, and initiating safeguards against future downturns in the business, Ron directed a change in the company's accounting systems from a rudimentary program to a sophisticated, cost-based system. He also began the process of diversifying the business into new markets to insure a stronger safeguard from economic downturns in any one sector.

Perhaps the most difficult undertaking during this period was assuring Millennium's employees that the business was stable, and their positions secure. While doing this and maintaining morale, during my tenure as CFO, Millennium's revenues more than doubled, and the company went from running at a net loss to a net profit approaching 15%.

As Millennium's Vice President of Engineering, Ron was initially engaged by the startup organization to provide telecommunications engineering expertise, as part of its service offerings. Using the cable television industry knowledge and expertise he had acquired while working with what was one of the largest single system operators in the country, he provided a comprehensive understanding of the design, operation and management of these systems. Utilizing his proficiency in advanced communications networks, he built a highly respected network services division, surpassing \$14 million in sales in three years. His work in this area included providing carrier class fiber optic network engineering, design and installation services, along with developing stringent testing and acceptance procedures to ensure that customers received the highest standard in outside plant network implementation. Along with these outside plant

## EXHIBIT 2

service offerings, he set up and directed a full-scale engineer, furnish and install (E, F & I) services group that is recognized as one of the best service providers in the northeast today. Offerings include headend/data center E, F & I services, private fiber networking for campuses, as well as municipal, county, state and federal government installations. The company also provides services to every major telecommunications and cable television service provider in its region.

### **Suburban Cablevision 1978–1993**

- **Chief Engineer 1990–1993**
- **Engineering Services Technician 1987–1990**
- **Field Engineering Supervisor 1984–1987**
- **Field Engineer 1980–1984**
- **Service Technician 1979–1980**

Ron began his career in this industry with Suburban Cablevision, at that time a fledging cable television provider in northern New Jersey. The company eventually became one of the largest single cable operations in the country, serving over 250,000 subscribers and 2,200 miles of cable plant.

Beginning as a service technician responsible for servicing and troubleshooting customer problems, his ever-inquisitive nature caused him to focus on understanding the engineering and construction of CATV systems, and within a few months, Suburban promoted Ron to a field engineering position. Continuing his quest to gain as much knowledge about the field as was available in order to become a leader in the industry, he attended engineering school full-time during the day while working as a field engineer at night. As a field engineer, he was responsible for the turn up, testing, operation and maintenance of the cable plant.

Suburban recognized his dedication and the level of understanding he had for his craft, and again promoted him—this time to the position of Supervisor of Field Engineering. He now had a staff of 16 employees and was responsible for the operation and maintenance of a, by now, highly successful and well-known operation.

Still yearning to expand his knowledge, but against the advisement of his peers, stepped down from his management position in 1986 to pursue what seemed, to him, the next logical step in his career: the position of Staff Engineer. Being a staff engineer introduced Ron to the technology at the heart of every cable television system, the headend.

This new journey was simultaneously thrilling and rewarding for him. He learned about the systems and technology that drive all telecommunications technology offerings. He advanced his skills in RF systems, satellite technology and microwave radio systems. At that time, having more than 25 microwave hops, and utilizing every frequency available for transmitting services, Suburban was the largest user of microwave in the New York metropolitan area. His education in



## EXHIBIT 2

these and other sophisticated operating systems continued, and, two years later, Suburban named him its Chief Engineer.

The desire for continued learning brought Ron to a pivotal point in his career. Suburban had dabbled in fiber optic technology for video and data backhaul service, but he was now reading about its possible use in the distribution of channelized RF signals, and was intrigued. He began asking some questions, and AT&T Bell Labs (who happened to be in our backyard) soon approached Suburban with a prototype AM laser system capable of delivering Suburban's cable service offering over fiber optic technology. Working with Bell engineers, Ron tested and fielded trials of this new system, and in August of 1989, Suburban installed the first AM laser system used for delivery of cable television service in the U.S. These systems are still in use today, and are the precursors to Fiber-To-The-Home (FTTH) technologies.

Through the implementation of more than 200 miles of fiber, Suburban was able to abandon its microwave network completely, saving millions of dollars in operating expenses due to the reduction in real estate expenditures. The company was also able to consolidate its headend facilities, all while improving its quality of service. This advanced network was an industry showcase, and those wishing to emulate Suburban's success solicited my advice. As a result, in 1990, Ron was a guest speaker at the Society of Cable Television Engineers' annual convention.

Suburban continued to innovate, driving fiber further into the system and finding new and innovative ways to use this new technology. In 1991, the company began providing high-speed network services to businesses within its franchised service area, through a new competitive access division. Experimentation and deployment of narrow casting permitted a localized advertising product that allowed businesses in small towns to access television advertising time at affordable rates to promote their businesses. The result of these two ventures was millions of dollars in additional revenue.

The most personally exciting event to take place during this period was the opportunity for Ron to spend time in Sydney and Melbourne, Australia, helping the employees of Optus Communications to understand and install their own fiber-based delivery systems.

In 1995, the irresistible opportunity to work in the exploding telecommunications market for the fledgling Millennium Communications Group, presented itself. Ron has never looked back!

# EXHIBIT 2

## EDUCATION

- Seton Hall University – Accounting
- DeVry Technical Institute – Electrical Engineering Technology
- Numerous Certifications in Networking Technologies and Business Management

## Professional Memberships

- Northern New Jersey National Electrical Contractors Association – Board of Directors
- Society of Cable Television Engineers
- New Jersey Business and Industry Association
- New Jersey Alliance for Action
- Employers Association of New Jersey
- Morris County Chamber of Commerce

# Robert Ritchie

## President

### SUMMARY

Mr. Ritchie is President and one of the key founding members of Millennium Communications Group, Inc. He has 35 years' experience in designing and building communication and security networks. During his early career, he was responsible for the system design of 2600 miles of distribution plant; in addition to (2) master head-ends and (13) AML hubs serving (42) municipalities in (4) counties. Mr. Ritchie was also responsible for the fiber route design and installation of the first digital video transport system used in the CATV industry. In 1988 he was appointed Vice President of Engineering for Suburban Cablevision and sat on the Board of Directors for the Cable Television Network of New Jersey. After establishing Millennium Communications Group, Mr. Ritchie has continued to develop communications networks and security solutions for Telecommunications Carriers, Federal, State, and Local Government, Educational Institutions, and Utilities.

### SELECTED EXPERIENCE

#### Communications, Security & Emergency Management

Jersey City

Design & build-out of Jersey City's Office of Emergency Management including the Emergency Operations Center (EOC). Within the EOC, Mr. Ritchie developed a 30 foot video wall, paging system, furniture designed for operational functionality, and the core communications systems that enable centralized command and control. Additionally, he implemented the design and build-out of a 12-mile, redundant fiber optic network providing multiple critical infrastructure building connectivity and city-wide surveillance. The surveillance infrastructure includes fifty-six (56) cameras and wireless connectivity for the waterfront. Furthermore, Mr. Ritchie's responsibilities included custom designed wireless antennas for a community safe-boat along the Hudson River.

#### Fiber-To-The-Home

AT&T Research (New Jersey/ California)

Responsible for the design and installation of two experimental communication networks. These networks deliver video, data and voice communications to residential customers over fiber optic cable.

#### Wide Area Networks

Delivered engineering, design, and installation for 85 private fiber optic networks for Federal, State, Municipal, County and Educational facilities in New Jersey for the transport of voice, data, and video.

#### Data Centers

Simultaneously managed, designed and built two 80,000 square foot data centers for ADP. The two data centers were built in the Southeastern and Midwestern States.

#### Homeland Security

Passaic County

Responsible for coordination, design and implementation of a Homeland Security Network for the critical sites throughout Passaic County. Project included installing surveillance throughout the County.

### CERTIFICATIONS

Thomas & Betts – Ortronics-Siecor – AMP Design and Installation

### EDUCATION

Civil Engineering - Newark College of Engineering, Newark, NJ

# Kenneth McLaughlin

## Senior Vice President, Business Development

### SUMMARY

Mr. McLaughlin is Senior Vice President of Business Development and holds over 24 years of experience in construction of communications infrastructure and CATV/ security networks. His experience also includes 10 years within the Competitive Access industry. Mr. McLaughlin's responsibilities have included the installation and maintenance of 2600 miles of distribution plant; in addition to, the construction and maintenance of a 160-mile SONET network in New Jersey. His experience has allowed him to utilize his skills to develop critical networking solutions for clients, focusing on advanced communications, interoperability, security of critical infrastructure and unified communications systems.

### SELECTED EXPERIENCE

#### Rutgers RU-Net

This project involved the design, build, and maintenance of Rutgers' privately owned and advanced voice, data, and video infrastructure. The tasks involved in this project were to integrate the New Brunswick, Camden, and Newark campuses to provide faster internet and to link the classrooms, libraries, and residence halls allowing robust voice and data capabilities.

#### Cablevision Strategic Fiber

Responsible for the design and construction of 500 miles of fiber optic plant in New York and New Jersey. This project linked all of Cablevision's transmit facilities with redundant capabilities.

#### MCI/WorldCom North Jersey Overbuild

This project involved the overbuilding of a 100-mile jointly owned fiber optic system in the North Jersey area. The associated tasks included route feasibility studies, utility relocation engineering and material B.O.M.'s.

#### Madison, New Jersey (AT&T – "RoseNet") Fiber Project

Responsibilities included overseeing the construction of 9 miles of fiber optic plant in the Borough to tie in all public facilities. Complete project management from initial design through project acceptance.

### REGISTRATIONS/MEMBERSHIPS

State member of S.C.T.E.  
National Rights Of Way Association  
BICSI Corporate Member

### EDUCATION

BS, Montclair State University, Montclair, New Jersey  
Certification, CALC  
Certification, Chubb



## Julie Basil

### Chief Financial Officer

#### SUMMARY

Julie Basil is responsible for the overall management of office operations with focus on finances. This includes Accounts Receivable and Payable, Human Resources, payroll, benefits and 401K plan coordination, cash management, EEO/Affirmative Action compliance, Quality Program compliance, Purchasing, and the development and implementation of company policies.

During her more than fifteen years of experience in management, Julie Basil has constructed key company policies that are still implemented today. Ms. Basil's multi-faceted experience has allowed her to excel within her field, going from Office Manager, to Executive Operations Manager, and finally Chief Financial Officer.

Ms. Basil assisted in the development of the company's first EEO/Affirmative Action Plan and Quality Program. She also played a large role in a successful accounting software migration from QuickBooks Enterprise Solutions to Explorer Contract Manager in 2009 and finally to Sage Timberline in 2010.

#### Proven Strengths In

- Telecommunications engineering
- Headend engineering, design, construction and operation
- Outside plant design, construction, operations and maintenance
- Financial oversight and planning
- Profit and loss management
- Team leadership and collaboration
- Cost control

#### Detail of Experience

- Management of Accounts Receivable includes customer service, collections, providing customer credit references, submittal of Certified Payroll and all other state/federal project reporting, processing of customer credit card payments, and daily support to, and overall management of AR staff. Also responsible for the processing of potential customer Credit Applications and performing the credit evaluations to determine credit worthiness.
- Management of Accounts Payable and Purchasing includes vendor telephone support, statement review, vendor payment processing, preparing weekly check runs, daily support to, and overall management of AP and Purchasing staff.

## EXHIBIT 2

- Cash management and Bookkeeping includes monthly bank reconciliation, weekly balance and cash flow reporting to Officers, forecasting of the businesses' cash needs, bank Positive Pay reporting, working with CFO and outside accounting firm to complete quarterly and year-end financials.
- Human Resource Representative includes maintenance of the Employee Handbook, personnel files (electronic and paper), salary change requests, serving as companies' liaison to all employees, completion of the I-9 including entry into E-Verify, job opening postings and interview coordination, and new employee set up.
- Benefits Coordinator includes the enrollment of new employees, overall maintenance of the plan, terminations, Cobra notification to employees, Cobra payment processing, and annual renewals with agent / carriers.
- 401K Plan Coordinator includes setting up enrollment of eligible employees and bi-weekly reporting to TPA, processing of all documents including loan requests and disbursement requests.
- Payroll includes overseeing of the payroll processing on a weekly basis, including all Administrative, Union and Executive payroll and final approval of all payroll. Responsible for management of all labor union related items including; monthly reporting and payments to multiple unions, maintenance and updating of rates, periodic audits with union accounting firms, project specific certified payroll reporting as needed.
- Security Administrator of all accounting related software, responsibilities include user set up and management, security controls, coordination of software updates with IT, monthly / yearly closings, support to users on all applications.
- EEO/Affirmative Action compliance and Quality Program compliance includes the maintenance of plan documents, the implementation of all related policies, review of all company forms and documents to ensure proper compliance statements appear, quarterly employment reporting to the State of NJ, Treasury Department, EEO reporting to customers on State of NJ projects, and reporting to GSA on federal contracts.

### Registrations/Certifications

- Notary Public of NJ, Essex County
- Collecting Accounts Receivable, Certificate of Continuing Education, Rockhurst University CEC
- ADP PC/Payroll 5.0, Certificate of Continuing Professional Education, ADP, Inc.
- Human Resources Labor Law Program, Certificate of Completion, Employers Association of NJ

### Software

- Paychex
- ADP
- Quickbooks Enterprise Solutions
- Explorer Contract Manager
- Sage 300 Construction and Real Estate
- PX Bridge Coastal Software
- Piracle Check Printing
- Microsoft Office; Word, Excel, Outlook, PowerPoint, Publisher



## William Stark

### Vice President of Construction

#### SUMMARY

William Stark has over 25 years of experience in the engineering, design, and construction of communications facilities with an emphasis on outside plant. Recent work history includes project management, fiber optic building lateral engineering, and communications survey with route design. Employment history includes Suburban/Comcast Cablevision, Bell Atlantic, and Millennium Communications Group.

#### Selected Project Experience

##### AT&T I.T.S. Fiber interconnection

Completed survey and design engineering project for AT&T Local Services to design diverse fiber optic lateral feeds to over 75 AT&T/Lucent facilities throughout New Jersey. Responsibilities included survey work, preparation of drawings, construction estimates, B.O.M.'s, and managing construction crews. Similar projects were also completed for Hyperion Telecommunications (Adelphia) and Lightpath (Cablevision).

##### Telecommunications Survey Rutgers University

Managed field survey crews and was responsible for cataloging all existing OSP telecommunications facilities on six campuses of Rutgers University. Project included physical survey of all manholes, handholes, pull boxes and building demarcation points. Responsibilities included compiling all field data (sketches, digital photos, and duct information), preparing as-built plans, and submitting progress reports to University engineers.

##### Private Fiber Networks

Project managed the construction of many miles of aerial & underground fiber optic plants for various municipal entities in New Jersey. Jobs included material procurement, customer interfacing, field crew management, and as-built submittals.

##### CLEC Support

Provide ongoing utility construction services to various communications suppliers in the Northeast region. This includes new capital build-outs, relocation work, daily maintenance and providing 24-7 emergency support.

#### EDUCATION

Cook College, Rutgers University, New Brunswick, New Jersey

# Pragnesh Amin, CCIE

## Chief Technologist

### SUMMARY

Pragnesh Amin has over 12 years of experience in the Information Technology field. During his tenure with Millennium Communications Group Inc., he has been instrumental in the design and installation of extensive voice, data and video networking projects. He is certified in all of the latest networking technologies and continually seeks further certifications as technology advances. Most recently, Mr. Amin has utilized his skills and experience to develop converged networking solutions for our clients, focusing on advanced networking infrastructures and unified communications systems.

Mr. Amin is also skilled in the day to day management of a network engineering team; in addition to, overall project management and supervision. His project efforts are always undertaken with the clients' time frame needs and overall goals being placed foremost. Mr. Amin understands the challenges these types of institutions face. Likewise, he has created and implemented network designs that control costs while maximizing functionality and improves productivity and communication.

### SELECTED PROJECT EXPERIENCE

#### Passaic County/ Homeland Security

Designed & implemented a secure, gigabit, fully redundant network utilizing Cisco 6509E at the core and Cisco 3750 switches at the access and distribution layers to connect various county buildings & facilities, police agencies and critical infrastructure sites. Cisco ASA/IPS was used to protect the network from malicious attacks & Intruders. It enables county to provide secure access to various state applications, interoperability and intelligence information sharing capabilities. Project also included Unified Communications, State-of-the-art surveillance and card access systems, Interview Room Devices, Recording, and Video Conferencing.

#### Newark Housing Authority

Designed & implemented 10Gbps network to connect 31 NHA facilities, replacing a leased frame-relay network, utilizing Cisco 6513 and 6509E with 720 gigabit redundant switch fabric at Core and Cisco 3560E PoE switches with 10 Gigabit X2 modules at the access and distribution layers. After the completion of the switch infrastructure upgrade, NHA realized significant gains in the access speed of server resources and the availability of network bandwidth. Project also included Installation of state-of-the-art video surveillance and card access equipment at all NHA owned facilities. There are currently over 800 IP Cameras running on this network.

#### West Paterson Model Schools

Design/Integration of key services in the building of a district-wide gigabit converged network, including Network Infrastructure, Unified Communications, Unified Messaging and application services, centralized voicemail, video surveillance and card access system. Additional services provided to the district included various Microsoft applications including Exchange, DHCP and DNS

#### County of Essex – Emergency Operations Management

Designed & implemented a secure, gigabit, fully redundant network utilizing Cisco 3750 POE switches and Cisco ASA. It enables OEM to provide secure access to various state applications, interoperability and intelligence information sharing capabilities. Project also included Unified Communications, State-of-the-art cameras and card access systems. Additional services provided to the OEM included various Microsoft applications like Exchange, DHCP and DNS.

### CERTIFICATIONS

CCIE #26151- Cisco Certified Internetwork Expert  
 Cisco Certified Voice Expert- Written  
 Cisco Certified Security Expert- Written  
 CCVP – Cisco Certified Voice Professional  
 CCSP – Cisco Certified Security Professional  
 CCNP – Cisco Certified Network Professional  
 MCSE – Microsoft Certified System Engineer

Cisco Firewall Specialist  
 Cisco ISP Specialist  
 Cisco Information Security Specialist  
 CNSS 4013 System Administrator Recognition  
 CNSS 4011 Information Systems Security Recognition  
 Aimetis Certified Systems Engineer  
 Firetide Certified Mesh Engineer

### EDUCATION

MS in Electrical Engineering (Computer Networking) - New Jersey Institute of Technology, Newark NJ  
 Bachelors of Engineering (Electrical) – India



# Keith Burkhard

## Manager of Security / Surveillance

### SUMMARY

Mr. Burkhard has over 16 years experience in fiber splicing, infrastructure design and installation, CCTV, Video Surveillance, Project Management, and Engineering and Design. He has worked with various manufactures to develop and administer security programs and procedures for Government, Education, Utilities, and Homeland Security initiatives. He develops security architectures, including hardware and software components, definition of the network perimeter and catalog of information resources and assets.

Mr. Burkhard is knowledgeable in federal security regulations and continuously obtains rulings, interpretations, and acceptable deviations for compliance with regulations from government agencies.

Additionally, he is proficient with evaluation, procurement, maintenance, and administration of Access Control, Surveillance, and Intrusion Detection Systems. Mr. Burkhard oversees all aspects of a project's life cycle management from project initiation to closeout.

### SELECTED PROJECT EXPERIENCE

#### RCN Cable

Project manager for installation of copper & fiber for several Cable TV Head Ends and Node facilities in New Jersey, New York, Pennsylvania and California.

#### New Jersey Transit

Project manager for the installation of CCTV security at several platform locations within the state of New Jersey.

#### New Jersey Environmental Protection Agency

Project manager for installation of an IP based security system surrounding the perimeter of the EPA facility in New Jersey

#### Montclair Police Department

Project manager for installation of an IP based security system at the police headquarters in Montclair New Jersey.

#### Passaic County

Project manager for installation of an IP based security system at the new prosecutor's office in Totowa New Jersey.

#### Passaic County/ Homeland Security

Project manager for installation of an IP based security system with in the County of Passaic, New Jersey.

### CERTIFICATIONS

IP Video Corp Certified Installer  
Keri Systems Certificate  
Corning Fiber Certificate

### EDUCATION

Associates Degree - Liberal Arts from County College of Morris, Randolph, New Jersey



# John Keegan

## Network Engineer

### SUMMARY

John Keegan has 5 years of experience in the Information Technology field. He has been responsible for assisting client's with their networks to ensure they are running at maximum performance. His experience includes, but is not limited to, the virtualization production environments with VMware, Microsoft exchange, Cisco voice system development, server administration, and much more. Mr. Keegan has ample experience in configuring and implementing sophisticated and high profile IT networks. In addition to implementation and configuration, Mr. Keegan performs diagnostics to troubleshoot networks to determine the best plan of action to properly fix the issue at hand.

Throughout his time at Millennium he has become a trusted resource among his clients and continues to ensure any issues that present themselves will be resolved efficiently and effectively. With the need to access networks or devices from remote locations, Mr. Keegan has become certified in Firetide Wireless Mesh products to be able to remote in. Mr. Keegan is also skilled in day to day management and a part of our network engineering team here at Millennium. His projects are always completed in a timely fashion and to the satisfactions of his clients and superiors.

### SELECTED EXPERIENCE

#### Newark EOC Wireless Lan Controller 14-W-0549

Configured wireless LAN controller and associated access points with the controller. The teams also installed FatPipe LoadBalancer/Internet Failover device.

#### Passaic County Prosecutor's Office- 15-w-0074

Teams configured and installed Meraki wireless access points.

#### Hoboken BOE- 14-a-0557

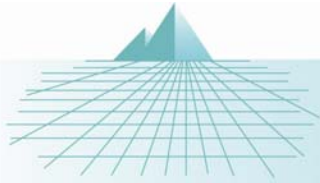
Assisted installing and configuring switches for network upgrade.

### CERTIFICATIONS

- CCNA- Cisco Certified Network Associate
- VMware certified Associate- Data Center Virtualization
- Genetec Certified Professional
- Firetide DFS Certified
- Firetide 10.16.5.0 Mesh Certified
- Fluidmesh Certified

### EDUCATION

University of Phoenix- Bachelor's Degree in Information Technology, Business Systems Analysis



**MILLENNIUM**  
COMMUNICATIONS GROUP INC.

Federal GSA Schedule #70  
Contract # GS-35F-0220R  
NJ State WSCA Contract #73979  
Universal Spin # 143007785

## **Rural FTTH Fiber Business Plan Summary For Newco**

### **I. Introduction**

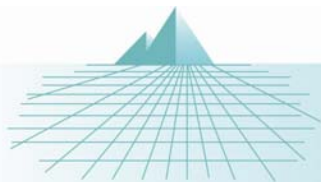
For the past 8 years, Matrix Design Group and Millennium Communications Group Inc., have been actively involved in the planning and implementation of true fiber to the home technologies in the most rural parts of New England. Through our early work with a group of 24 towns in East Central Vermont, who collectively formed a consortium to build and operate a community owned FTTH network, we gained valuable knowledge into the challenges facing rural deployment of Fiber to the Home. Working hand in hand with the Governing Board of EC Fiber, we helped to develop a sustainable business plan that was scalable to even the most remote towns involved in the consortium.

Our ability to recognize and overcome the technical challenges of building a sustainable network at a price point to fit the business model became the largest single hurdle to overcome. The challenge was met and today EC Fiber, largely through private community investment, has built a network serving 1300+ subscribers over 350 miles of network. Through the success of this network, EC Fiber is now close to financing the remainder of their build via traditional financing sources.

### **II. Construction Understanding the Components**

Our model breaks up the construction of the network into three distinct areas. They are, Make Ready, Network Construction, and Subscriber Installation. Each of these components has major implications on the overall success of the business plan and needs careful consideration and oversight to insure a successful outcome.

- A. Make Ready** is the physical activity of making a space on an existing telephone pole line for the placement of a new fiber facility. For this part of the project, the entire fiber network path is determined through field survey. Each pole that will be required to be used for the new fiber attachment is logged to become part of a Make Ready Application. Once enough pole data is collected, the application(s), along with an application(s) fee is sent to the authority in charge of the pole licensing and administration. The utilities then perform field surveys, in some cases with the new attachee present, in some cases without. Once the surveys are complete, detailed estimates are sent to the attaching entity, detailing the cost to make room for the new attachment. The new attachee is responsible for all fees to move existing utilities, replace poles as needed, shore up guying so as to ensure the pole can support the additional cable attachment.

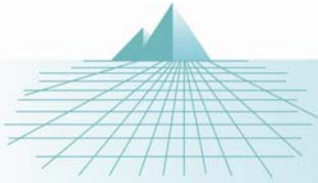


- B. Network Construction** is the actual design and construction of the network. This portion of the project begins when the appropriate pole licenses have been secured from the appropriate utilities. Network Construction consists of all engineering, design and construction of the network pass, that is, the aerial portion of the network passing each home along the existing public right of way.
- C. Customer Installation** is the connection of an individual customer to the network through a drop or service entrance cable. This includes a physical fiber connection from the pole to the subscriber premise, placement of equipment within the premise for receiving service, provisioning equipment to receive service.

While it is easy to measure the need for a broadband deployment in an underserved town, it is more difficult to determine the willingness of the individual residents to subscribe for service. The business plan establishes the three areas above, specifically in order to establish the criteria under which the successful implementation of the plan can occur.

### III. Construction Activities Under Business Model –

- A. Path** – All path and right of way, whether aerial or underground shall be secured by the town. All items covered in Section “A” plus any, permit acquisition, police protection, underground conduit, new pole line or other requirement needed to deliver the complete, unobstructed right of way for the placement of the Fiber Network are needed. Additionally, the town is to provide space to house and power the hubsite equipment, including electronics and termination gear.
- B. Network Construction** – Design, procurement of equipment and materials, and placement of network are the responsibility of Newco. This will include all items under Section “B”, through existing underground facilities or overhead on town licensed poles. Construction will commence when the town reaches a predetermined rate of subscription from its residents, under the terms set forth below.
- C. Customer Installation** – Customer installation as described in Section “C” will be performed for each individual subscriber on the network as per the terms and conditions established. Each subscriber will sign a contract for a two year term and pay a connection fee.



#### IV. Service Offerings

The project will offer a traditional double play, consisting of Phone and Internet Service.

- A. **Phone Service** will be outsourced to a regional white label or other SIP phone service provider such as New River, Core Dial, or Momentum. The service will be delivered through dedicated Ethernet links (redundant) from the service providers soft switch to the POP established by Newco. The service will include unlimited domestic long distance, along with all of the standard features including voicemail, caller ID, call waiting, etc. The service will be fully compliant with E911 requirements.
- B. **Internet Service** will be offered at a standard 50Mbps<sup>1</sup> symmetrical rate with no data rate caps<sup>2</sup>. Additional service offerings will be made available up to 400Mbps symmetrical, at published monthly rates. Bulk Internet service will be provisioned from POP established by Newco to Wholesale ISP such as Axia. A DHCP server will provide dynamic Public IP Addresses to Customers. Optional static Public IP Address will be made available at published monthly rates.

#### V. Operations

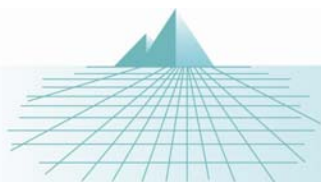
Network Operations will include both a local and remote presence. In large part due to the limited population densities of the service area, it is more cost effective to consolidate back office operations and service from one location. However, there will be a local staff presence to service customer needs.

- A. **Remote Network Operations** will provide all back office operations for the system including, accounting, billing, customer service, technical operations, trouble tickets, and other operational aspects of Newco. This service will be subcontracted to Millennium Communications Group Inc., the main investor in the network. The office hours will be from 9-5 PM Monday-Friday, for general billing and service inquiries, technical support, and scheduling of installations or service. In addition, an after-hours customer service hotline will be available 24 x 7 to assist customers with trouble issues.

Millennium has a full staff of business operations personnel, including customer service representatives, accounts payable and receivable clerks, a payroll clerk, financial controller and CFO. The company also employs 6 certified Cisco IP engineers and a CIO, who holds a Cisco CCIE certification in IP phone and networking applications. The CCIE certification represents the highest level of networking certification in the world. Currently, there are 38,000 Cisco CCIE's worldwide.

<sup>1</sup> Peak data rate, speeds may vary.

<sup>2</sup> Subject to the future policies of wholesale internet service providers.



# MILLENNIUM COMMUNICATIONS GROUP INC.

- B. Local Staffing** will provide all day to day customer and maintenance operations requiring truck rolls. This will include installations, service calls, outages, troubleshooting and routine tasks unable to be performed remotely. The preliminary staffing level will be two full time employees, with additional staff being added as required and based on level of subscribership.
- C. Emergency Services** will employ both our local staff members as well as local sources of contract labor, specializing in the repair of the network. Additionally, remote operations on call staff will be available for troubleshooting network issues not connected to the physical plant.

## VI. Service Fee Schedule (Projected)

### A. Residential Internet Service<sup>3</sup> (Monthly)

Level 1-50Mbps	\$95.00
Level 2 -100Mbps	\$140.00
Level 3 – 400Mbps	\$250.00

### B. Business Internet Service (Monthly)

Level 1-50Mbps	\$110.00
Level 2 -100Mbps	\$160.00
Level 3 – 400Mbps	\$300.00

C. Residential Unlimited Dialing Phone Plan - \$20.00 (Monthly)

D. Nationwide Business Unlimited Dialing Plan - \$35.00 (Monthly)

## VII. Miscellaneous

A. Static IP Address	\$15.00 (Monthly)
B. Voicemail Per Mailbox	\$3.00 (Monthly)
C. Whole House Wireless Router	\$5.00 (Monthly)

<sup>3</sup> Peak data rates, speeds may vary