

January 24, 2013

Ms. Diane Stoddard  
Assistant City Manager  
City of Lawrence  
6 E. 6<sup>th</sup> Street  
Lawrence, KS 66044

Subject: *Proposal in Response to RFP for Technology Consulting Services for Community Networking and Telecommunications Technology Infrastructure Report (No. R1301)*

Dear Ms. Stoddard:

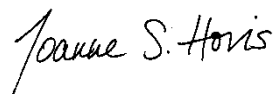
CTC Technology & Energy (CTC) is pleased to provide this proposal in response to your RFP seeking a consultant to evaluate the City's existing telecommunications infrastructure and its opportunities for further technology and infrastructure growth.

As the qualifications we present on the following pages illustrate, CTC offers extensive experience and expertise in all aspects of infrastructure assessment, network engineering, and business planning. We have conducted similar assessments—including market surveys, business plans, engineering analyses, financial considerations, and network impacts—for public sector clients nationwide, including an ongoing project with the cities of Urbana and Champaign and the University of Illinois. Many of our engagements have focused on public sector strategies to enhance economic development and increase broadband competition by lowering barriers to entry for private sector providers.

I also note that we are currently working on behalf of the State of Kansas on a statewide broadband analysis. Our work for the state includes market research and analyses of residential, business, and institutional broadband use and needs.

Please do not hesitate to contact me if I can provide any additional information about our experience or qualifications.

Best Regards,



Joanne S. Hovis  
President

**Columbia Telecommunications Corporation**

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## 1. Consultant Background

### 1.1 Overview

CTC is a woman-owned broadband telecommunications consultancy with a quarter century of expertise in the full lifecycle of broadband network development projects, from network feasibility studies and market analysis to design, engineering, and procurement. Since 1983, we have provided independent technical and financial guidance to hundreds of local and state governments, universities, non-profits, and public power providers. Our list of local government clients includes cities and counties of all sizes, from sparsely populated rural communities to some of the biggest cities in the country.

We specialize in helping clients develop strategies for expanding their fiber networks to meet their needs; we are particularly experienced with helping communities to identify private partners for broadband communications initiatives. Our goal in these engagements is to develop relationships in which the private partner shares the risk of expanding a network to serve the community's broader needs. In these engagements, too, we are vigilant about protecting the community's interests, and managing the community's risk with respect to partner financing and operations.

CTC is a highly respected firm with considerable experience and intellectual resources. Our reputation rests on our track record of providing **independent, objective, and unbiased guidance**. For nearly three decades, we have served the public sector in evaluating its broadband deployment efforts and in bringing an independent, sometimes critical, eye to communications efforts. We are not affiliated with equipment manufacturers, communications carriers, cable operators, or service providers; to ensure that we can provide independent guidance, we have, as a policy, no financial stake in the strategies you choose to adopt.

We also believe that every client project is singular. We do not perform “cookie cutter” work, and do not view the City's goals as a series of cookie cutter needs. Engaging with CTC means receiving customized analysis and the level of time, consideration, and care required to provide you with the answers you need. We pride ourselves, too, on preparing high-quality written deliverables; many samples of our work are available on our website (<http://ctcnet.us/library.html>).

### 1.2 Project Personnel

Our project manager will be **Joanne Hovis**, CTC's president and director of business consulting. Joanne directs all of CTC's business consulting, strategic planning, market assessment, and management consulting work—including our ongoing work with the State of Kansas broadband program. An attorney with a background in communications and commercial litigation, she is a recognized authority on the broadband market and community broadband topics—and on the evolving role of government in the provision of communications services to the public. She has provided strategic, technological, and business planning advice to dozens of cities as they have explored the feasibility of expanding broadband capacity. She also provides guidance on the links between broadband availability and local economic development opportunities.

Our team will also include the following key personnel. (Complete resumes are included in Appendix A, below.)

**Andrew Afflerbach, Ph.D., P.E.**

*Director of Engineering*

Andrew specializes in system-level planning, design, and implementation of wide-area and local-area telecommunications networks. His expertise includes emerging technologies and state-of-the-art networking applications. As Director of Engineering, he oversees all engineering work performed by CTC. He is a licensed Professional Engineer in the Commonwealth of Virginia. Andrew has planned and overseen implementation of a wide variety of data, video, and voice networks, including the infrastructure of metropolitan area governments and multi-campus colleges, and state-wide networks for public safety, government, and educational facilities. He also recently served as a senior adviser to Crown Fibre Holdings, the public entity that is directing New Zealand's national fiber-to-the-home project.

**Sharon Gillett**

*Principal Analyst*

Sharon is a nationally recognized telecommunications policy leader. She is an experienced researcher and broadband consultant, and has advised the chairman of the FCC, the governor of Massachusetts, and numerous elected and appointed officials. She has also successfully secured bond financing for public broadband development.

**Marc Schulhof**

*Senior Analyst and Technical Writer*

Marc has 20 years of experience in technical writing, journalism, and corporate communications. Prior to joining CTC, Marc served as global editor in chief of IBM's Chief Information Officer (CIO) websites. He held a similar role at PricewaterhouseCoopers Consulting, where he wrote and edited white papers, website articles, and other material for a business audience. Marc's experience also includes time spent as a business reporter and editor.

## 2. Project Approach

### 2.1 Project Philosophy

Our philosophy has always been one that emphasizes self-reliance in the public sector, and the potential benefits of partnering with the private sector for the public good. We are keenly aware of the potential that robust broadband infrastructure has to aid local economic development efforts, and believe that the availability of high-speed networks is a win-win for the public and private sectors alike, as it is for the community as a whole.

We have helped cities nationwide to evaluate and implement strategies for encouraging network infrastructure expansion. We have made the business case for many successful municipal networks, but are also adept at helping cities leverage public and private assets to incentivize private investment through mutually beneficial partnerships. .

We have often focused on fiber optics as a state-of-the-art technology that can meet current and future needs in a variety of environments. We are equally skilled at designing wireless networks. Our work takes into account not only benefits and rewards, but also the risks associated with each option available to a community.

### 2.2 Statement of Work

CTC will identify the current state of broadband infrastructure in the City and opportunities for the City to expand infrastructure based on its available assets. We will analyze both publicly and privately held infrastructure serving residential, business, and public sector users. We will propose strategies for expanding network capacity to these user groups, and discuss the opportunities for economic development that these efforts would bring. Specifically, we will perform the following tasks:

#### **Task 1: Facilitate kick-off meeting and discussions with stakeholders**

CTC will facilitate a project kick-off meeting with the City team and other invited stakeholders. We will discuss the project vision, motivations, and objectives; establish and confirm the project parameters; identify the factors to be studied; and gather and discuss all network documentation and materials already in the City's possession.

To define and assess the City's long-term broadband needs, we will interview City staff, local public agency IT professionals, and representatives of educational institutions and key businesses in order to assess their broadband needs and opportunities. These interviews will provide qualitative data that can assist in evaluating the stakeholders' real-world experience, and projecting both their future requirements and their reactions to various "what if" scenarios. We request that the City compile a list of individuals and organizations that it wishes to include in these meetings, schedule the potential participants, and provide sufficient meeting facilities. We will review the list of participants and add our suggestions as to additional individuals or entities to consider including.

During the interviews, we will be asking questions from a short survey instrument to assist in guiding the discussions. The goal of the interactive discussions will be to:

- Elicit and discuss stakeholder needs for services that can be offered over a broadband network
- Solicit feedback from stakeholders on policy, potential business models, and technology
- Receive feedback from stakeholders on any other aspects of the project

Discussion topics will include:

- What types of connectivity and broadband services do the stakeholders currently use?
- What limitations do the stakeholders see in their current situation?
- What are their expectations for current and future high-speed needs?
- How aware are respondents of current high-speed options?
- What applications do the stakeholders currently use and plan to use in the future?

### **Task 2: Identify and analyze stakeholders' resources and technological options**

Through a variety of methods, and underpinned by CTC's extensive experience evaluating communities' broadband assets, CTC will assess the existing network resources within the City. Our report will include analysis of resources held by the public sector, businesses, college campuses, industrial parks, and other organizations.

#### ***Task 2a: Verify inventory of existing fiber-optic and wireless facilities***

Our director of engineering will conduct a thorough review of the City's existing fiber-optic and wireless facilities, as well as stakeholders' fiber-optic and wireless infrastructure throughout the City. To accomplish this analysis, we would request that City staff provide our team with AutoCAD or PDF maps of the known fiber and wireless infrastructure throughout the City; details of existing feeds, splices, and equipment locations; and any other relevant plans, drawings, photos, or GIS data regarding existing fiber and facilities. We would also request that the City help facilitate the delivery of similar maps and data from Douglas County, Unified School District 497, Lawrence Memorial Hospital, and any other stakeholders whose fiber-optic facilities might be included in any future City network planning.

Part of CTC's ongoing work for the State of Kansas includes a survey of connectivity among the state's community anchor institutions, including schools, hospitals, libraries, and higher education institutions. Where possible, we will incorporate our relevant knowledge from this work into our data gathering for the City with the goal of saving time and budget.

#### ***Task 2b: Assess opportunities and obstacles for economic development related to the availability of broadband***

As the U.S. Department of Commerce noted in a recent report on competitiveness, it is difficult to *quantify* the economic effects of broadband, but such effects "are likely to be substantial." CTC has monitored the economic literature, dating back to the earliest studies in the 1990s, to understand the link between economic development and the availability of high-capacity broadband services, such as those provided over fiber-optic networks. And we have recently performed assessments of economic opportunities and obstacles for communities with fiber-optic networks, including Ocala, Fla. and North Kansas City, Mo.

Based on this knowledge, and on our focus group discussions, CTC will assess the City's opportunities for enhanced economic development through broadband infrastructure expansion, both short-term and long-term. We will specifically focus on the complementary issues of attracting new businesses, supporting business expansion, and ensuring business retention.

### **Task 3: Prepare an analysis of options for network expansion**

CTC will prepare analysis that delineates our proposed recommendations for broadband expansion. We will provide the City with explanations for each of our recommendations for both fiber and wireless expansion. Our analysis will include a discussion of how our recommendations would impact residents, businesses, and public agencies.

We will focus on outlining ways for the City to incentivize investment in broadband expansion through private investment, and on specific steps the City can take to increase communications capacity. As we have in other client engagements, we might recommend that the City issue a Request for Information to identify potential private partners—or we may propose arranging preliminary conversations with potential partners to discuss what scenarios might interest them.

We will explain how the City can leverage its existing assets in new ways to achieve economies of scale in the broadband marketplace, and we will discuss the opportunities for economic development associated with each of our recommendations. We will offer insights into the business challenges as well as opportunities associated with our recommendations. Our discussion will include goals and objectives, both in terms of financial outcomes and intangible benefits such as quality of life and business climate, for each of our recommendations. Our recommendations will be accompanied by specific implementation strategies.

**Task 4: Prepare written report**

Based on the tasks above, CTC will prepare a clear and concise written report that documents our research and analysis, and presents our range of recommended strategies. The report will be detailed enough to support the City’s evaluation and decisions about potential next steps.

Joanne Hovis, CTC’s president and director of business consulting, will present the report to the City Commission at a date to be determined by the City. Our presentation will distill our technical findings into succinct testimony for a lay audience, and Ms. Hovis will be prepared to address questions from the City Commissioners.

### **3. Related Projects and References**

As the qualifications below illustrate, we offer demonstrated experience in the assessment of telecommunications systems; recommendations for infrastructure development; and evaluation of economic opportunities and impacts. Our clients range in size from small rural communities to large counties and cities (including New York City, San Francisco, and Seattle), to a number of state governments, the federal government, and international public entities.

The following projects are just a few of the hundreds of client engagements CTC has successfully completed over the past 30 years. Additional details are available on these and other engagements, and additional references are available on request.

#### **Cities of Urbana and Champaign / University of Illinois**

CTC has been the strategic and business planning consultant to Urbana, Champaign, and the University of Illinois for more than five years—since the coalition first conceived of constructing a middle-mile fiber network to connect community anchor institutions. We helped them secure federal funding and assisted with the required environmental assessment for that initial project. Looking forward to the next phase, we wrote a request for information (RFI) to enable the cities and the university to identify a private partner that will finance and operate an expansion of the network to serve 100 percent of the community. In the current stage of the project, we are evaluating the proposals of three viable potential partners; our tasks are to help vet and negotiate with these partners, to reduce the community’s risks, and to ensure that an eventual partnership will achieve the coalition’s policy goals for economic development and digital inclusion.

*Project status:* Ongoing

*Contacts:*

Ms. Teri Legner  
Economic Development Manager/UC2B Consortium Coordinator  
City of Champaign  
(217) 403-8710, [teri.legner@ci.champaign.il.us](mailto:teri.legner@ci.champaign.il.us)

Mr. Mike Smeltzer  
Director, Campus Information Technologies and Educational Services  
University of Illinois at Urbana–Champaign  
(217) 244-3835, [smeltzer@illinois.edu](mailto:smeltzer@illinois.edu)



**City of St. Louis Park, Minnesota**

CTC worked with St. Louis Park in 2012 to determine how to leverage the jointly-owned city–public school district fiber infrastructure to support residents and businesses, enable entrepreneurial service providers, and deliver the best possible government services. We analyzed and provided recommendations—both modest and ambitious—on strategies to maximize the benefits of the city’s network, including options for maximizing the existing fiber infrastructure, expanding the infrastructure, and city actions that could facilitate private construction of infrastructure.

*Project status:* Complete

*Contact:*

Mr. Clint Pires  
Chief Information Officer  
City of St. Louis Park  
(952) 924-2517, [cpires@stlouispark.org](mailto:cpires@stlouispark.org)

**State of Kansas**

We are currently working with the State of Kansas Department of Commerce on a large-scale needs assessment of the state’s network infrastructure. CTC is conducting major market surveys among three core sectors across the state (residents, businesses, and community anchor institutions) to evaluate the current uses and needs of broadband infrastructure. We will also conduct intensive outreach efforts to appropriate representatives of the organizations connected to Kan-ed, the state-created program serving schools, hospitals, libraries, and higher education facilities.

*Project status:* Ongoing

*Contact:*

Mr. Stanley Adams  
Program Director, Kansas Statewide Broadband Initiative  
Kansas Department of Commerce  
(785) 296-3481, [sadams@kansascommerce.com](mailto:sadams@kansascommerce.com)

**City of Ocala, Florida**

CTC prepared a feasibility study of the City of Ocala’s fiber optic enterprise, with a specific focus on economic development and encouraging the development of advanced infrastructure. We explored the potential range of business models and services that the city could implement to leverage its existing fiber optic network. We also evaluated the best solutions, if any, for cost-effective expansion of the network backbone to expand community broadband access.

*Project status:* Complete

*Contact:*

Mr. Alan Phelps  
Telecommunications Manager  
City of Ocala  
(352) 401-6900, [APhelps@Ocalafl.org](mailto:APhelps@Ocalafl.org)

### **Garrett County, Maryland**

CTC developed a broadband feasibility study and candidate network design for Garrett County, with a specific focus on promoting economic development, lowering the barriers to private-sector infrastructure investment, and maximizing the benefits of a federally funded fiber backbone being constructed through the county.<sup>1</sup> As a follow-up to our work on this engagement, we helped the County prepare a successful Appalachian Regional Commission (ARC) grant application to fund construction of fiber optics infrastructure and the electronics necessary to provide broadband service to a range of schools and other important County sites. We are currently supporting the County with engineering and strategic tasks related to this construction.

*Project status:* Ongoing

*Contact:*

Mr. Frank Shap  
Assistant Director, Economic Development Department  
Garrett County, Maryland  
(301) 334-1986, [fshap@garrettcountry.org](mailto:fshap@garrettcountry.org)

### **State of New Mexico**

CTC recently completed writing a guidebook for New Mexico’s local governments to lead them through the business, financial, and strategic planning necessary to implement city- or county-owned broadband networks. The book-length guidebook offers specific instructions for localities to research and document the telecommunications infrastructure in their communities, and discusses strategies for exploring public-private partnerships for broadband expansion.

*Project status:* Ongoing

*Contact:*

Mr. George (Gar) Clarke  
Broadband Program Manager, Department of IT  
State of New Mexico  
(505) 827-1663, [george.clarke@state.nm.us](mailto:george.clarke@state.nm.us)

### **City and County of San Francisco**

As fiber consultant to San Francisco over the past five years, we have completed extensive business planning, market assessment, strategic planning, and network design tasks. We prepared a series of path-breaking analyses of the feasibility of the City building and operating an FTTP network to every home and business in San Francisco—including a system design and detailed analysis of candidate architectures and open access models. The project also included analysis of multiple business models and business recommendations.

We began by outlining the advantages and disadvantages of potential locations and coverage areas, based on engineering considerations such as the relative difficulty and cost of building in particular areas or to certain sites. We then developed a detailed network design for the proposed pilot

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<sup>1</sup> Our final report is available on our website: <http://ctcnet.us/GarrettCountyBroadbandReport.pdf>

locations, both to guide construction and to estimate construction costs. We identified city resources and infrastructure that could be made available for the project; met with Department of Public Works staff to determine permitting and design requirements; and worked with city staff and utility owners in the right-of-way to identify ways to reduce costs and speed construction. Based on the design and resources information collected, we created a comprehensive scope of work for a construction RFP.

*Project status:* Complete

*Contact:*

Mr. Chris Vein

Chief Innovation Officer for Global Information and Communications Technology Development at The World Bank

Formerly Chief Information Officer, City and County of San Francisco

(415) 225-7254 (mobile)

### **City of Seattle/Seattle City Light**

CTC prepared a feasibility study—including technical, business, and strategic plans—for a citywide open-access FTTP network. We examined a range of parameters, including what public subsidies the network would require, and delivered a full assessment of opportunities and risks. Our final reports included internal needs analysis; statistically significant market research; an assessment of competing services and technologies; and an evaluation of the business case and financial risks.

*Project status:* Complete

*Contact:*

Ms. Carol Butler

Director, Corporate Performance Division

Seattle City Light

(206) 615-1249, [carol.butler@seattle.gov](mailto:carol.butler@seattle.gov)

### **Washington, D.C.**

In one of many engagements we have completed for the city government, CTC created a business plan and strategy for building a municipal fiber optic network with a wireless overlay in the least-served wards of the city. We also performed a business case and technology analysis for DC-Net, a fiber optic network that provides voice and data services to more than 400 government buildings. Our independent assessment analyzed public safety, government, and educational uses of the network. The project tasks included asset mapping and network description; cost comparison to leased/managed services; functional and technical comparison between dark fiber and alternatives; identifying support mechanisms; and determining recommended business practices.

*Project status:* Ongoing

*Contact:*

Mr. Tegene Baharu

Deputy Chief Technology Officer

(202) 368-0224, [tegene.baharu@dc.gov](mailto:tegene.baharu@dc.gov)

#### 4. Cost Proposal

CTC proposes to perform the tasks described above for a not-to-exceed cost of \$24,000.

We will bill our work (as well as any additional work requested by the City) at the hourly rates listed below. Because our clients are almost exclusively in the public sector, our rates are extremely competitive relative to many competitors who do business planning, engineering, and other kinds of strategic work on communications projects.

We also note that CTC has business insurance coverage. Our Certificate of Liability Insurance is attached as Appendix B.

<b>Labor Category</b>	<b>Rate</b>
Director of Business Consulting	\$165
Principal Analyst	\$155
Senior Project Analyst	\$145
Senior Analyst	\$135
Staff Analyst	\$125
Communications Aide	\$ 70
Director of Engineering	\$165
Principal Engineer	\$155
Senior Project Engineer	\$145
Senior Engineer	\$135
Staff Engineer	\$125
Engineer Aide	\$ 70

CTC's billing rates are inclusive of all routine expenses including administrative, accounting, and computer support, telephone calls, and photocopying. Non-routine expenses and long-distance travel are recovered at direct cost with no mark-up. Please note that CTC reserves the right to reallocate funds among task and staff categories so long as the total cost is not exceeded. Payment is due within thirty (30) days of invoice.

## 5. Timeline

We have a robust roster of national and international clients, and our workload reflects that success. As we have proven over the past three decades, however, we are adept at managing our clients' needs and our staffing levels. We pride ourselves on our track record of completing projects on time, regardless of the size or complexity of the tasks at hand—or the time zone in which the projects are located.

We understand that the City has a short timeline for this project, and will be prepared to commence work in mid-February, should the City select us as its consultant. **We commit to providing an exceptional level of service and to submitting our final report by March 29, 2013.**

## Appendix A: Team Resumes

### **Joanne S. Hovis, Esq.** **CTC President and Director of Business Consulting**

Joanne Hovis is President of CTC. She is an attorney and business planner with a two-decade background in communications and broadband. Ms. Hovis is a recognized authority on the broadband market and community broadband topics—and on the evolving role of government in the provision of communications services to the public.

Ms. Hovis leads the CTC team that advises the states of New Mexico and Kansas; the cities of San Francisco, Washington, D.C., and Seattle; the American Recovery and Reinvestment Act (ARRA) funded UC2B (Champaign and Urbana, Illinois) and ICBN (Central Maryland) networks; and the statewide broadband networks in Colorado, Maryland, and Pennsylvania. She advises the University of Illinois, Case Western Reserve University, and a number of other institutions regarding broadband planning.

Ms. Hovis also oversees all ongoing CTC research and analysis for local government clients and frequently provides business planning and analysis for communications networking initiatives such as San Francisco's planned fiber network and the public safety communications network currently under development in the Washington, D.C. metropolitan area.

Ms. Hovis serves as President of the National Association of Telecommunications Officers and Advisors (NATOA), which represents local governments and promotes community interests in communications matters. She is also a member of the Benton Foundation's Board of Directors, and is a charter member of the United States Unified Community Anchor Network (U.S. UCAN) project's Task Force on Community Anchor Network Economic Models.

Ms. Hovis previously worked as an attorney with Jenner & Block in Chicago and Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo PC in Washington, D.C. At those firms, she worked on complex communications and litigation projects for such clients as Salomon Brothers and AOL.

#### *Business Planning and Feasibility Analysis*

Ms. Hovis leads all of CTC's business planning efforts. She has spearheaded projects that explore a range of business models by which government clients can leverage their existing assets to build, expand, and incentivize broadband expansion. She is sought nationwide as an expert in municipal ownership and operational broadband business models, fiber and wireless markets, and public-private partnerships. Among the projects she has led are:

- **City of Seattle.** Ms. Hovis advised the new Mayor of Seattle regarding the U.S. communications market and business planning strategies for a citywide enterprise. She reported the public subsidies a network would require, and delivered a full assessment of opportunities and risks. The report included internal needs analysis, statistically significant market research, an assessment of competing services and technologies, and an evaluation of the business case and financial risks. Ms. Hovis led further analysis of the benefits of fiber-to-the-premises (FTTP) beyond the traditional balance sheet, including cost avoidance, monetary savings, and environmental impact. She led and facilitated a business

planning working group comprised of the Mayor’s senior staff, the directors of the city’s two utilities (electric and water/sewer), and the city’s CIO.

- Ms. Hovis advises the **State of New Mexico’s Department of Information Technology** on broadband planning. She led a team of writers and analysts that produced a guidebook for New Mexico’s local governments to guide them through the business, financial, and strategic planning necessary to implement city- or county-owned broadband networks. The book-length guidebook offers specific instructions for localities to research and document the telecommunications infrastructure in their communities, and discusses strategies for exploring public-private partnerships for broadband expansion.
- Ms. Hovis is working with the **State of Kansas Department of Commerce** on a large-scale needs assessment of the state’s network infrastructure. She is conducting major market surveys among three core sectors across the state (residents, businesses, and community anchor institutions) to evaluate the current uses and needs of broadband infrastructure. She is also developing a strategy for the evolution of Kan-ed, the state-created broadband program that serves schools, hospitals, libraries, and higher education institutions.
- Ms. Hovis has advised officials in the **District of Columbia** government on a range of telecommunications and fiber optic projects for almost a decade. She worked with the Office of the Chief Technology Officer (OCTO) to create a business plan and strategy for building a municipal fiber optic network with a wireless overlay in the least-served wards of the city. She performed a business case and technology analysis (including five-year projections) for DC-Net, a fiber optic telecommunications network that provides voice and data services for the District of Columbia. She analyzed governmental, educational, and public safety uses of the network. The project tasks included asset mapping and network description; developing a cost comparison to leased/managed services; identifying opportunities to resell to other entities; identifying support mechanisms; and determining recommended business practices. She performs an ongoing role as strategic fiber adviser to the Chief Technology Officer and the Director of DC-Net, and supports planning for the network’s future—including expanding the network to a broader array of end users.
- Ms. Hovis advises the **Urbana-Champaign Big Broadband (UC2B) Coalition (University of Illinois and the cities of Champaign and Urbana)** on a wide range of business and strategic planning issues. She is currently evaluating the private sector bids to build out last-mile fiber connections in the cities. She took a leading role in preparing UC2B’s successful application for a federal Broadband Technology Opportunities Program (BTOP) stimulus grant to support its proposed FTTP network.
- Ms. Hovis provided extensive business planning, market assessment, and strategic planning for the **City and County of San Francisco**. Ms. Hovis served as a key adviser to the city’s Chief Information Officer. She conducted an independent evaluation of the feasibility of San Francisco constructing and operating a municipal FTTP network to serve businesses and residences. As a first step toward the FTTP network, she worked with the City to plan a migration of the leased telecommunications services connecting 250 government facilities to a City middle-mile fiber optic network; she also supported the city’s application for BTOP funding. She reviewed cost and pricing factors associated with using leased telecommunications services and circuits provided by private vendors, as compared with migration to government-owned fiber optics. She projected the return on investment and total cost of ownership (including a wide range of costs from deployment to staffing to maintenance to financing to cutover expenses). She evaluated potential efficiencies to be realized through in-house rather than outsourced provision of services and circuits.
- Ms. Hovis led a feasibility study of the **City of Ocala, Florida’s** fiber optic enterprise. She explored the potential range of business models and services that the city could implement

to leverage its existing fiber optic network and staff skill sets. She performed a competitive assessment of existing private sector broadband services and conducted market research with statistically significant surveys of the local commercial and residential sectors to assess current and future demand for high-speed connectivity. She proposed logical expansion strategies derived from in-depth analysis of financial costs, business models, and potential benefits to the community of multiple options.

- Ms. Hovis performed an expert assessment of the business and marketing plan for Utah's inter-jurisdictional network, **UTOPIA**. She led a strategy session with key stakeholders, collected relevant background material, performed an analysis of UTOPIA market research and marketing models, and independently evaluated UTOPIA's business plan. At the direction of UTOPIA leadership, her work focused on improving the participating UTOPIA communities' ongoing cash flow.
- Ms. Hovis devised a business strategy and wrote a business plan for **KINBER**, the BTOP-funded statewide backbone and middle-mile fiber infrastructure focused on the higher education and healthcare sectors in Pennsylvania. One highlight of the KINBER strategy was developing an actionable plan to increase early cash flow.
- Ms. Hovis developed a broadband feasibility study for **Garrett County, Maryland** with a specific focus on maximizing the benefits and use of the fiber backbone being built by the BTOP-funded One Maryland Broadband Network (OMBN) project.

#### Grant Planning & Management

Ms. Hovis' expertise includes the many funding opportunities available to local government broadband planners through the federal government and other sources. She has guided clients through each phase of the grant process, from application writing to fund management. Ms. Hovis' grant work has included:

- Supporting more than a dozen clients in securing American Recovery and Reinvestment Act (ARRA) funds through the Broadband Technology Opportunities Program (BTOP). Successful applicants included including the \$22.5 million Urbana-Champaign Big Broadband (UC2B) project, the \$115 million One Maryland Broadband Network (OMBN), the \$32.1 million OpenCape project in Cape Cod, and Washington, D.C.'s \$17.5 million Community Access Network (DC-CAN).
- Securing additional National Telecommunications & Information Administration (NTIA) funds from the **Public Safety Interoperable Communications (PSIC)** grant program on behalf of public health and public safety communications projects in the National Capital Region (NCR), encompassing Washington, D.C. and almost two-dozen surrounding jurisdictions.
- Developing a successful application to the **Appalachian Regional Commission (ARC)**—a partnership among federal, state, and local government—for Garrett County, Maryland.
- Providing business case development and ongoing business planning support to significant **Urban Areas Security Initiative (UASI)** grant-funded projects in the NCR.
- Advising a number of clients on **Rural Utilities Service (RUS)** grant applications, and reviewing business plans and projections that make use of RUS loan funds for entities such as UTOPIA, the regional non-profit open access fiber network in suburban and rural Utah.

#### Speaking and Advocacy

Ms. Hovis is in wide demand as a speaker and expert source on broadband deployment issues. She has testified before the U.S. Congress on matters of broadband deployment and policy; has been interviewed by publications including *Business Week*, the *Washington Post*, and the *Baltimore Sun*;



and has been featured on the C-SPAN show “The Communicators.” She has provided expert presentations to the Federal Communications Commission, National League of Cities, Technology Policy Summit, the University of Illinois, Case Western Reserve University, the New America Foundation, and the Congressional Internet Caucus.

**EDUCATION**

***Juris Doctor, with honors***, University of Chicago Law School, 1994

- Patino Fellow, awarded for academic achievement and community service, 1991–1994

**Bachelor of Arts, with distinction**, University of Wisconsin, Madison, 1990

- General Distinction and Distinction in the Major, 1990
- Dean’s List, 1988–1990
- Weinstein Award, 1990

Hebrew University of Jerusalem, Davis Institute for International Studies, 1989

**PROFESSIONAL CERTIFICATIONS/LICENSES**

Member of Illinois Bar Association

Member of District of Columbia Bar Association

**ORGANIZATIONS**

National Association of Telecommunications Officers and Advisors (NATOA), President

Benton Foundation, Director

United States Unified Community Anchor Network, Task Force on Community Anchor Network  
Economic Models, Charter Member

**PRIOR TO COMING TO CTC IN 1997**

1996–1997     Litigation/Communications Attorney, Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo  
P.C., Washington, D.C.

1994–1996     Litigation Attorney, Jenner & Block, Chicago

**Andrew Afflerbach, P.E., Ph.D.**  
**CEO and Director of Engineering**

Dr. Andrew Afflerbach specializes in system-level planning, design, and implementation of wide-area and local-area telecommunications networks. He is a member of the SAFECOM Emergency Response Council (ERC) and the FirstNet Public Safety Advisory Committee (PSAC) State & Local Government Subcommittee.

Dr. Afflerbach and CTC have assisted numerous governments and non-profit institutions with a wide range of technological projects—from fiber optic to wireless communications networks; from video networking and applications to Homeland Security applications; from communications system performance evaluation to development of targeted emergency override capabilities; from assessment of current needs to development of strategic networking roadmaps; and from negotiations with the telecommunications industry to the technical briefing of Commissioners and staff of the U.S. Federal Communications Commission (FCC).

Dr. Afflerbach has planned and overseen implementation of a variety of data, video, and voice networks utilizing the full range of communications technologies. These networks include national networks, the infrastructure of metropolitan area governments, multi-campus colleges, and state-wide networks for public safety, government, and educational facilities.

He assists officials in planning network requirements; preparing requests for proposals; evaluating potential service providers, equipment vendors, and systems integrators; and overseeing construction and cut-over from existing systems. He has modeled communication networks for system performance, reliability, and potential costs relative to alternative designs.

In addition, Dr. Afflerbach has architected, designed, and overseen implementation of numerous broadband networks for local and state governments, including those of Washington, D.C.; Crown Fibre Holdings (Government of New Zealand); San Francisco; the Delaware Department of Transportation; the Maryland Transportation Authority; and many large counties.

Dr. Afflerbach and the CTC team provided expert testimony and advisory services to the Public Service Commission of Maryland regarding Advanced Metering Infrastructure (AMI). CTC provided objective guidance to the staff as it evaluated AMI applications submitted by three of the state's investor-owned utilities (IOUs). This contract represented the first time the PSC staff had asked a consultant to advise them on technology—a reflection of the lack of standards in the Smart Grid arena, and the magnitude of the investment that the utilities were proposing.

Dr. Afflerbach's expertise includes emerging technologies and state-of-the-art technological applications, as well as public safety networking. Dr. Afflerbach is a licensed Professional Engineer and, as Director of Engineering, he oversees all engineering work performed by CTC.

Advisory Services

Dr. Afflerbach advises a wide range of policy think tanks, U.S. federal agencies, and non-profits regarding the engineering issues underlying key communications issues. For example, he:

- Provided, in August 2009, expert testimony to the U.S. Federal Communications Commission (FCC) in the matter of the preparation of the national broadband plan as a representative of the National Association of Counties (NACo) and the National Association of Telecommunications Officers & Advisors (NATOA).
- Served as expert advisor regarding broadband deployment to the U.S. Conference of Mayors, NACo, National League of Cities, and NATOA in those organizations' filings before the FCC in the matter of determination of the deployment of a national, interoperable wireless network in the 700 MHz spectrum.
- In connection with the FCC's ongoing Open Internet proceeding, advised the New America Foundation regarding the technical pathways by which "any device" and "any application" regimes could be achieved in the wireless broadband arena as they have been in the wireline area.
- Provided expert technical advice on the 700 MHz broadband and AWS-3 proceedings at the FCC for the Public Interest Spectrum Coalition (including Free Press, the New America Foundation, Consumers Union, and the Media Access Project).
- Prepared technical reports and analysis regarding fiber construction for submittal to the FCC, in connection with preparation of the National Broadband Plan, by NATOA, the City and County of San Francisco, and the Schools, Health, and Libraries Coalition.
- Served as technical advisor to the Naval Exchange in its evaluation of vendors' broadband communications services on U.S. Navy bases worldwide.
- Advised the U.S. Internal Revenue Service regarding the history of broadband and cable deployment and related technical issues in that agency's evaluation of appropriate regulations for those industries.
- Advised, during the height of the broadband "open access" debate, a variety of public interest associations and communities, including the City of Los Angeles and Stanford University, regarding the technical means by which cable networks could be opened to competition.
- Advised the Stanford Law School Center for Internet and Society on the technical issues for their briefs in the *Brand X* Supreme Court appeal regarding cable broadband.
- Provided technical advice to numerous non-profits, associations, and agencies as diverse as the Center for Internet and Society at Stanford Law School; the Internal Revenue Service, the Alliance for Community Media, the William Penn Foundation, the Center for Digital Democracy, and the FCC's Local and State Government Advisory Board (LSGAC).
- Has been invited to speak about communications technologies before such organizations as the Public Technology Institute, American Association of Community Colleges, ICMA, ILCMA, and the Practicing Law Institute.
- Developed curricula for a wide variety of organizations, including the University of Maryland, the United States Department of Transportation, and the George Washington University.
- Has taught courses and delivered seminars regarding communications for numerous educational and government institutions.

Public Safety Network Interoperability and Interconnection

Dr. Afflerbach served as lead engineer and technical architect for planning and development of NCRnet, a regional fiber optic and microwave network that links public safety and emergency support users throughout the 19 jurisdictions of the National Capital Region (Washington, D.C. and

surrounding jurisdictions), under a grant from the U.S. Department for Homeland Security’s Urban Areas Safety Initiative. He wrote the initial feasibility studies that led to this project for regional network interconnection.

Instruction/Expertise

Dr. Afflerbach has served as an instructor for the U.S. Federal Highway Association/National Highway Institute, the George Washington University Continuing Education Program, the University of Maryland Instructional TV Program, ITS America, Law Seminars International, and the COMNET Exposition.

He teaches and helped develop an online graduate-level course for the University of Maryland. He developed and taught communications courses and curricula for ITS America, COMNET, and University of Maryland. His analysis of cable open access is used in the curriculum of the International Training Program on Utility Regulation and Strategy at the University of Florida.

Dr. Afflerbach has also prepared client tutorials and presented papers on emerging telecommunications technology to the National Fire Protection Association (NFPA), NATOA, the National League of Cities (NLC), the International City/County Management Association (ICMA), and the American Association of Community Colleges (AACC). He also taught college-level astrophysics at the University of Wisconsin.

**EMPLOYMENT HISTORY**

1995–Present	CEO/Director of Engineering, CTC Previous positions at CTC: Principal Engineer, Senior Scientist
1990–1996	Astronomer/Instructor/Researcher University of Wisconsin–Madison, NASA, and Swarthmore College

**EDUCATION**

**Ph.D.**, Astronomy, University of Wisconsin–Madison, 1996  
**Master of Science**, Astronomy, University of Wisconsin–Madison, 1993  
**Bachelor of Arts**, Physics, Swarthmore College, 1991

**PROFESSIONAL CERTIFICATIONS/LICENSES**

Professional Engineer, Commonwealth of Virginia

**HONORS/ORGANIZATIONS**

- Armed Forces Communications and Electronics Association (AFCEA)
- Society of Cable and Telecommunications Engineers (SCTE)
- National Association of Telecommunications Officers and Advisors (NATOA) Technology and Public Safety Committees
- Institute of Electrical and Electronic Engineers (IEEE)
- Charleston Defense Contractors Association (CDCA)
- NASA Graduate Fellow, 1993-96. Research fellowship in astrophysics
- Elected Member, Sigma Xi Scientific Research Honor Society
- Eugene M. Lang Scholar, 1987-1991, Swarthmore College

**SELECTED PUBLICATIONS, PRESENTATIONS, and COURSES**

- “Cost Estimate for Building Fiber Optics to Key Anchor Institutions,” prepared for submittal to the FCC by the National Association of Telecommunications Officers and Advisors and the

Schools, Health, and Libraries Coalition, September 2009.

- “Efficiencies Available Through Simultaneous Construction and Co-location of Communications Conduit and Fiber,” prepared for submittal to the FCC by the National Association of Telecommunications Officers and Advisors and the City and County of San Francisco, 2009, referenced in the National Broadband Plan.
- “How the National Capital Region Built a 21st Century Regional Communications Network” and “Why City and County Communications are at Risk,” invited presentation at the FCC’s National Broadband Plan workshop, August 25, 2009.
- “Existing and Emerging Broadband Technologies,” presented at the annual NATOA Conference, Orlando FL, October 2007.
- “An Assessment of the Technical Capabilities of the AWS-3 Spectrum,” expert report prepared for Free Press, December 2007.
- “An Engineering Assessment of Select Technical Issues Raised in the 700 MHz Proceeding,” expert report prepared for FCC filing for Free Press and Media Access Project (Public Interest Spectrum Coalition), May 2007.
- “Understanding FiOS and U-Verse Architecture,” presented at NATOA’s Policy and Legal Conference, Washington, D.C., Spring 2007.
- “Fiber to the Premises and Fiber to the Node,” *Journal of Municipal Telecommunications Policy*, Fall 2006.
- “Communications Infrastructure Primer,” presented to the National Fire Protection Association, Miami Beach, FL, 2006.
- Supplemental Report, “Technological Analysis of Open Access and Cable Systems,” <http://www.aclu.org/Privacy/Privacy.cfm?ID=17507>, prepared for the American Civil Liberties Union and the Stanford Law School Center for Internet and Society, 2005.
- *Affordable Telecommunication Networks for Local Government*, International City/County Management Association, November 2004.
- “Telecommunications and ITS: What You Need To Know,” prepared curriculum for two-day training course for the University of Maryland, 2001.
- “Technological Analysis of Open Access and Cable Systems,” [http://archive.aclu.org/issues/cyber/broadband\\_report.pdf](http://archive.aclu.org/issues/cyber/broadband_report.pdf), prepared for the American Civil Liberties Union, 2001.
- “No Pipes: Wireless Broadband,” *Journal of Municipal Telecommunications Policy*, Fall 2001.
- “Interactive PEG: A Technical Strategy for Implementation,” *Community Media Review*, 2000.
- “Telecommunications and Intelligent Transportation Services,” two-day training course, presented in multiple cities for the US Department of Transportation/ITS America, 1999.
- “Building Integrated Voice, Data, and Video Networks for the Local and Wide Area,” two-day training course, presented for the University of Maryland, College Park, MD, April 29-30, 1999.
- “Integrated Data, Video & Voice Broadband Networks,” week-long training course, presented at the COMNET Exposition, Washington, DC, and January, 1999.
- “LANs: Design and Installation of Networks that Support Voice, Data, and Video Applications,” multi-day training course, presented for the George Washington University Continuing Engineering Education Program, July, 1996; July, 1997; February, 1998; July, 1998; May, 1999.
- *Cable Network Technology: A Primer for Local Officials*, International City/County Management Association, September 1998.
- “I-Nets and the Internet,” Infotech Report, August 1998.

## **Sharon E. Gillett Principal Analyst**

Sharon Gillett is a thought leader in the telecommunications and Internet industry, with experience as a senior government executive at the FCC and in Massachusetts, a program manager and researcher at MIT, and a software engineer and manager in technology companies. She has a proven track record of:

- Getting hard things done in complex, multi-stakeholder environments.
- Crafting effective regulatory strategy based on thorough understanding of government.
- Executive decision support integrating business, technology and public policy considerations.

### **EXPERIENCE**

#### **Senior Executive in Federal and State Government**

##### **Chief, Wireline Competition Bureau, Federal Communications Commission Washington, D.C., August 2009 – July 2012**

- Managed 180-person division of FCC responsible for universal broadband and wireline competition policies. Reported directly to agency Chairman Julius Genachowski.
- Led transformation of \$8 billion Universal Service Fund to support high-speed Internet access and ensure affordable broadband connectivity for rural consumers and health care providers, schools and libraries, and low-income consumers. Achieved reform that had been gridlocked for a decade.
- Modernized long-standing rules for competitive access to utility poles, enabling faster and lower-cost access to critical infrastructure for wireless and wired broadband deployments.
- Efficiently reviewed corporate transactions.
- Testified before Congress; keynoted and presented at numerous events; blogged.
- Attracted high-level talent to rebuild bureau and support analytical decision-making. Led cultural shifts to enhance productivity, accountability, and collaboration.
- Held Top Secret security clearance.

##### **Director, Massachusetts Broadband Institute Westborough, MA, 2009**

- Started up new division within quasi-public Massachusetts Technology Collaborative.
- Led intensive effort to apply for multi-million dollar broadband infrastructure and mapping grants from the National Telecommunications and Information Administration.
- Conducted extensive community outreach, including development of new website.

##### **Commissioner, Massachusetts Dept. of Telecommunications and Cable Boston, MA, 2007 – 2009**

- Appointed by Governor Deval Patrick. Started up and headed new state agency responsible for regulatory oversight of telecommunications and cable TV services.
- Secured \$40 million in bond funding for state investments to close broadband gaps.
- Oversaw \$2.4 million budget and established responsive, transparent culture among 30-person staff.
- Met with key Congressional staffers and appeared on C-SPAN (“The Communicators”) to discuss broadband stimulus legislation.
- Served on Advisory Council for federal Telecommunications Relay Service Fund and in other leadership positions for National Association of Regulatory Utility Commissioners.

**Program Manager, Researcher and Consultant**  
**Consultant**

**August 2012 – present**

- Advising clients on strategy related to FCC and state regulatory matters.

**Principal Research Associate (2004 – 2006) and Research Associate (1998 – 2004),  
Massachusetts Institute of Technology (MIT) School of Engineering  
Cambridge, MA, 1998-2006**

- Executive Director of industry-academic consortium. Managed industry sponsor relationships and oversaw research projects, program staff and \$1 million budget.
- Chaired industry-academic Broadband Working Group for Communications Futures Program, producing early report forecasting the shift to usage-based pricing.
- Member of Boston Wireless Task Force advising Mayor Thomas Menino.
- Principal Investigator for grants from U.S. Department of Commerce and National Science Foundation, examining broadband's economic impact and municipal broadband.
- Published numerous articles in trade press and academic journals integrating technology, economic, and public policy perspectives.
- Supervised graduate student research and taught communications policy classes.

**Principal, Victory Research**  
**Lexington, MA, 1995 – 2006**

- Consultant specializing in development of Internet and telecommunications infrastructure.
- Clients included telecommunications operators and vendors, economic development agencies, MIT research centers, and management consulting firms.

**Software Engineer, Manager and Project Leader**

**Thinking Machines Corporation**

**Cambridge, MA, 1987 – 1992**

- Developed document search software and adapted networked operating system for the massively parallel Connection Machine supercomputer.
- Participated in ANSI Task Group X3T9.3 standardizing the High Performance Parallel Interface (HIPPI) for input/output with supercomputer peripherals.

**BBN Communications Corporation**

**Cambridge, MA, 1982 – 1987**

- Developed computer networking software for the ARPANET, precursor to the Internet.
- Managed groups of software engineers.
- Presented to sponsors in the Defense Communications Agency (now the Defense Information Systems Agency).

**EDUCATION**

**MS, Technology and Policy Program and MBA, Sloan School of Management**

Massachusetts Institute of Technology, 1995

- Thesis: "Connecting Homes to the Internet: An Engineering Cost Model of Cable vs. ISDN"
- Student Paper Award for "Technological Change, Market Structure, and Universal Service"

**AB, Physics, *Cum laude***

Harvard-Radcliffe College, 1982

**Marc Schulhof**  
**CTC Senior Analyst and Technical Writer**

Marc Schulhof has 20 years of experience in technical writing, financial journalism, and public and corporate communications. Marc's excellent editorial skills and his extensive experience with analyzing IT and business topics have enabled him to play an integral role in supporting a range of research and writing projects, including:

- Needs assessments
- Feasibility studies
- Master plans (business and engineering)
- Strategic plans
- Expert witness testimony
- Federal grant applications
- Requests for proposal
- Cable system test reports
- Cellular tower siting reports
- Letters, press releases, and website content

Prior to joining CTC, Marc was the worldwide editor-in-chief of CIO program websites at IBM, where he established editorial direction for 36 country-specific CIO websites and worked with local editors to update each site's mix of multimedia content. He also wrote and edited feature articles and white papers on information technology and business topics.

Marc's experience also includes his role as a global editor at PricewaterhouseCoopers Consulting, where he wrote and edited reports on a variety of technology and business topics, and served as editor of the PwC-sponsored *BusinessWeek Online Handheld Edition* daily news summary for mobile device users. As an associate editor at *Kiplinger's Personal Finance Magazine*, he researched, analyzed, and wrote about a range of complex financial issues.

Marc has also written and edited articles on a variety of topics for numerous non-profit organizations and associations, including the National Coalition for Cancer Survivorship and the American Society of Clinical Oncology.

**EDUCATION**

**Bachelor of Science**, Journalism, Northwestern University

**Master of Science**, Journalism, Northwestern University

**HONORS/ORGANIZATIONS**

In 2010, Marc was appointed by the U.S. Secretary of Health and Human Services to serve on the federal Advisory Council on Blood Stem Cell Transplantation.



## **Appendix B: Certificate of Liability Insurance**



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
1/11/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> <b>Herman E. Wealcatch, Inc.</b> 37 Walker Avenue Suite 200 Pikesville MD 21208	<b>CONTACT NAME:</b> <b>PHONE (A/C No. Ext): (410) 653-3053</b>		<b>FAX (A/C No): (410) 653-5116</b>
	<b>E-MAIL ADDRESS:</b> _____		
<b>INSURED</b> <b>COLUMBIA TELECOMMUNICATIONS CORP.</b> 10613 CONCORD ST KENSINGTON MD 20895	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
	<b>INSURER A: TRAVELERS INSURANCE COMPANY</b>		
	<b>INSURER B:</b>		
	<b>INSURER C:</b>		
	<b>INSURER D:</b>		
	<b>INSURER E:</b>		

**COVERAGES** **CERTIFICATE NUMBER: CL131110600** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<b>GENERAL LIABILITY</b>			ZLP-14T8491-13	1/1/2013	1/1/2014	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 300,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ 2,000,000
							PRODUCTS - COMP/OP AGG	\$ 2,000,000
								\$
A	<b>AUTOMOBILE LIABILITY</b>			BA-6C198370-13	1/1/2013	1/1/2014	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS	<input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						BODILY INJURY (Per person)
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
							Terrorism Accepted	\$
A	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> <b>EXCESS LIAB</b>	<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS-MADE		ZUP-14T84953-13	1/1/2013	1/1/2014	EACH OCCURRENCE	\$ 7,000,000
	<input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						AGGREGATE	\$ 7,000,000
								\$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>			UB-6C202037-13	1/1/2013	1/1/2014	<input type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/> Y/N	N/A					E.L. EACH ACCIDENT
							E.L. DISEASE - EA EMPLOYEE	\$ 500,000
							E.L. DISEASE - POLICY LIMIT	\$ 500,000
A	<b>Professional Liability</b>			ZPL-14T84965-13	1/1/2013	1/1/2014	Per claim aggregate	5,000,000
							Annual Aggregate	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

## CERTIFICATE HOLDER

## CANCELLATION

_____ _____ _____	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  C Wealcatch/MICHAEL 