

# MEMORANDUM

CITY OF GRAND RAPIDS

**Date:** November 30, 2006

**To:** Kurt F. Kimball, City Manager

**From:** Gregory Sundstrom, Chief Services Officer  
Scott D. Buhner, Chief Financial Officer  
Thomas A. McQuillan, Information Technology Director  
Sally Wesorick, Wireless Broadband Project Manager  
Stanley Bakita, Assistant City Attorney  
Ralph H. Gould Jr., Communications Manager  
Greg Kneibel, Administrative Analyst  
Jon C. Koeze, Cable Television Administrator

**Subject: Wireless Broadband Contract Award Recommendation**

Wireless broadband has fast become a business necessity. A wireless broadband network covering our entire City could provide an economic development tool to attract and retain businesses. A wireless broadband network can provide mobile police officers and firefighters with live video, floor plans, and pictures. With a wireless broadband network covering our City, people could work in their office, in a park, or in their homes. This is the type of technology infrastructure that today's young professionals demand.

Grand Rapids is fast becoming a high-tech city. Grand Rapids' wireless project has been referenced in the *Washington Post*, *The Detroit Free Press*, *Western Michigan Business Review*, *Grand Rapids Business Journal*, *The Grand Rapids Press*, and two internationally distributed wireless newsletters. Wireless technology holds great promise for our City. This technology can be used to empower our citizens, assist students, empower businesses, and bridge the digital divide with affordable technology.

The City's purpose of developing a wireless broadband network is to leverage the City's infrastructure, regulatory authority, and leadership to partner with a private provider to:

- Enhance public safety by providing mobile police officers and firefighters with high-speed wireless broadband service,
- Provide an economic development tool to attract and retain businesses,
- Bridge the digital divide with affordable wireless broadband service,
- Improve service delivery to residents and reduce the cost of government,
- Facilitate wireless technology use for citizens and visitors,
- Provide wireless broadband to attract and retain young professionals, and
- Establish a wireless broadband network without a burden on taxpayers.

The City's primary interest in a wireless broadband network is to enhance public safety. A citywide wireless broadband network would provide police officers with immediate access to criminal photographs, Amber Alerts, and live video from the field. Firefighters would be able to access floor plans and hazardous material plans en-route to structure fires, and with a miniature wireless camera installed on their helmets, they could improve firefighter safety with a live video feed to the fire command post. Wireless broadband could also empower City employees with a virtual office on the road and enable field inspections, field reporting, and wireless meter reading.

### **History of the Wireless Broadband Project**

In late 2004, Mayor George K. Heartwell outlined his vision for bringing a wireless broadband network to our community. City Manager Kurt F. Kimball assigned a Wireless Broadband Team to research wireless technologies, best practices, funding models, and wireless broadband applications. He appointed Greg Sundstrom to lead the Wireless Broadband Team and Sally Wesorick as Project Manager. The Wireless Broadband Team included Scott Buhner, Tom McQuillan, Stan Bakita, Ralph Gould, Greg Kneibel, and Jon Koeze. The Team was aided by Pat Bush, Jay Fowler, Joellen Thompson, and Don Endres.

The City entered into a contract with Dirk Koning of the Community Media Center to provide the City with technical guidance. On November 17, 2004, a kick-off meeting of the Mayor's Wireless Broadband Advisory Committee was held at VanAndel Institute, where dozens of community leaders discussed the viability of a wireless broadband network. This was followed by several months of research into available technologies, best practices, and service providers by Sally Wesorick and the Wireless Broadband Team. To understand the available technologies and services, the Team met with over thirty technology and service providers, including some of the country's largest technology and communications companies. The City Commission and Downtown Development Authority approved appropriations totaling \$150,000 to fund the City's research and due diligence efforts.

In February 2005, the City issued a Request for Proposals for a wireless broadband demonstration network to be installed and operated at the vendor's expense. During the "Summer of Wi-Fi", eight cutting-edge innovative companies participated in a demonstration project. The demonstration sites were at least ¼ square mile in size and free to the public for at least eight weeks. Several organizations worked collaboratively to support the wireless broadband demonstration projects, including: Community Media Center, County of Kent, City of Kentwood, City of Walker, City of Wyoming, State of Michigan, County of Ottawa, County of Washtenaw, Grand Rapids Community College, Grand Rapids Public Library, Grand Rapids Public Schools, Spectrum Health, VanAndel Institute, SBC Michigan, Freedom Net Solutions, Sprint, Tropos, BIG, Arialink Broadband, ADC, Proxim Corporation, Vivato, TV-13, and M Live.

After the passing of Mr. Koning, the Community Media Center issued a Request for Proposals to hire a consultant to continue providing assistance to the wireless broadband project. They hired Bill Stark and Karl Edwards from Excelsio Communications of Atlanta, Georgia, to evaluate the networks and report their findings.

In the fall of 2005, Excelsio Communications issued a report on each demonstration network. On November 1, 2005, a public hearing was held in the City Commission Chambers on the City's proposal to provide wireless broadband services. Karl Edwards from Excelsio

Communications was further commissioned to help the City define potential wireless applications, design a preferred business or partnership model, and draft a Request for Proposals. The City issued a Request for Proposals in January 2006. Forty-seven companies participated in the City's pre-bid conference, twenty-one companies submitted a Letter of Intent to Bid on the project, and nine companies submitted wireless broadband proposals by the April 25, 2006, deadline.

The Wireless Broadband Team and Karl Edwards engaged in a lengthy and comprehensive review and evaluation of the nine proposals. No companies were eliminated from the process nor were finalists announced. Site visits by Sally Wesorick, Ralph Gould, and Karl Edwards to cities hosting wireless broadband networks proved to be invaluable in providing the tangible evidence of the various technologies at work.

### **Wireless Broadband Contract Award Recommendation**

The Wireless Broadband Team, Karl Edward from Excelsio Communications, and our community partners, jointly recommend that the City enter into an agreement with Clearwire LLC to provide the City with WIMAX services through the construction of their privately owned and operated wireless broadband network. Clearwire possesses the expertise and verifiable experience in the design, development, and implementation of wireless broadband networks to meet the City's requirements. Clearwire intends to provide coverage quickly throughout the City with competitively priced services using the latest technologies.

Clearwire uses a state-of-the-art wireless technology that works by transmitting signals to and from nearby cellular towers instead of using a traditional phone or cable line. Users have the flexibility to use their computer anywhere, in their home or office, inside or outside. Clearwire's service is simple, reliable, and secure. Clearwire is led by Craig McCaw, one of the pioneers in providing cellular phone service in the United States. In the early 1980s, his company, McCaw Cellular, grew to be the largest cellular service provider in the United States and was later acquired by AT&T. Mr. McCaw was the director of Nextel Communications Inc. Clearwire's leadership team has over 60 years of combined experience in the design, deployment, operation, and maintenance of large-scale, urban wireless networks nationwide.

This agreement between the City and Clearwire is the first of its kind in the company's history. Although Clearwire has over thirty wireless broadband networks across the country, they have not previously partnered with local governments. Additionally, this agreement will provide the country's first citywide WIMAX network to be built in Grand Rapids. Together, the City and Clearwire are looking forward to a state-of-the-art wireless broadband network that can serve our community's businesses, residents, students, and visitors.

### **Significant Elements of the Agreement with Clearwire LLC**

In a program designed to provide digital inclusion, Clearwire will provide discounted service to qualifying low-income citizens at \$9.95 per month for up to 5% of the total households in Grand Rapids. This program will be administered by a local non-profit agency yet to be selected. Additionally, Clearwire has expressed a desire to donate free computers to aid disadvantaged persons. Finally, Clearwire will offer free Wi-Fi hot spots throughout the City to serve occasional users and visitors and offer a venue to introduce their services to citizens.

In keeping with the City's commitment to complete this project "at no burden to the taxpayer", Clearwire has agreed to immediately reimburse City the \$100,000 it has expended to date to perform its due diligence. Additionally, Clearwire will pay established asset lease fees for use of City water towers, antennas, fiber network, and ducts. They have also provided a cost-neutral arrangement, whereby Clearwire will assure the City that the cost of public safety and other municipal use of their wireless broadband services will be fully offset by Clearwire's asset lease payments and partnership fee granted by the company to the City.

### **Conclusion**

This recommendation is the result of hundreds of hours of staff time over the past two years. The Mayor challenged this community and City staff with a visionary task. The City Commission set parameters to develop a network that met extremely high public safety standards without a financial burden on our taxpayers. The City Manager prioritized this project to permit his staff to dedicate the resources necessary to ensure that this project succeeds.

The Wireless Broadband Team was blessed to have worked with a tireless Project Manager—Sally Wesorick, an outstanding consultant—Karl Edwards, and several committed community partners on this project, including Laurie Cirivello and Chuck Peterson from the Community Media Center, Dave Drolette from the VanAndel Institute, Craig Paull from the County of Kent, Keith Van Beek from the City of Kentwood, Cathy Vander Meulen from the City of Walker, Larry Walters from Spectrum Health, and Rex Thelen from the Grand Rapids Public Schools.

The Wireless Broadband Team is pleased and proud to recommend this contract with the industry leader in wireless broadband technology. Clearwire was selected as the company best suited to meet Grand Rapids requirements. Clearwire's wireless broadband solution uses proven technology that is state-of-the-art, cost-effective, sustainable, and self-funded to serve the City, its businesses, residents, and visitors.

attachments

Your Committee of the Whole recommends adoption of the following resolution to enter into an agreement with Clearwire LLC to provide the City with WIMAX services through the construction of their privately owned and operated wireless broadband network and lease of City facilities.

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Committee of the Whole

Commissioner \_\_\_\_\_, supported by Commissioner \_\_\_\_\_ moved the adoption of the following resolution:

RESOLVED, that a contract between the City of Grand Rapids and Clearwire LLC to provide the City with WIMAX services through the construction of their privately owned and operated wireless broadband network and lease of City facilities is hereby approved and as the Mayor is authorized to execute the Contract in a form to be approved by the City Attorney.

	Yeas		Nays
	_____	Bliss	_____
	_____	Jendrasiak	_____
	_____	Lumpkins	_____
	_____	Schmidt	_____
	_____	Tormala	_____
	_____	White	_____
	_____	Mayor Heartwell	_____
Yeas:	_____	Nays:	_____
Adopted:	_____	Failed:	_____

This resolution was written by Gregory Sundstrom, Chief Services Officer.

# **Agreement Summary between the City of Grand Rapids and Clearwire LLC**

## **Clearwire's Experience**

- Clearwire possesses the expertise and verifiable experience in the design, development, and implementation of a wireless broadband network that will meet the City's requirements.
- Clearwire has developed over thirty wireless broadband networks across the country.

## **Mobile WiMAX**

- Clearwire will provide citywide mobile WiMAX wireless broadband services that are capable of being routed within a building to serve Wi-Fi devices.

## **Robust Wireless Broadband Network and Customer Service**

- Clearwire's wireless broadband network will cover the City's entire 45 square mile corporate limits, with 95% outdoor coverage and 90% coverage of interior rooms in residential, municipal, commercial and other buildings.
- Clearwire will have Customer Service Representatives available for calls and email communication 24 hours a day, 7 days per week and 365 days per year.
- Clearwire will construct its system within the City using a diverse ring architecture.
- Clearwire will provide redundant backbone fiber ring and overlapping coverage.
- Clearwire's wireless broadband network will be suitable for VOIP telephone service.
- Clearwire's average transmission speeds will be 1.3 Mbps downstream and 256 Kbps upstream
- Clearwire will have a local retail presence in Grand Rapids.

## **Public Safety**

- Clearwire will carry wireless broadband signals to mobile police and fire vehicles without degradation or alteration. Clearwire's wireless network will provide real-time video streaming.
- Clearwire's wireless network will permit the highest levels of encryption to assure that police and fire communications are secure.
- Clearwire's wireless network will permit continuous service to public safety vehicles traveling up to 70 miles per hour.
- Clearwire's wireless network will be 99.9% reliable and available. Clearwire will provide at least six-hour battery back-up for the system to enhance the reliability of the system.

## **Digital Inclusion**

- Discounted service of \$9.95 per month will be provided to up to 5% of City households for qualifying low income citizens.
- Clearwire will set up several Hot Zones with free Wi-Fi service providing a walled garden to the Internet in sites selected by the City.
- Clearwire is interested in providing computers to aid disadvantaged citizens.

### **No Burden to the Taxpayer**

- Clearwire will reimburse City for \$100,000 for spent for due diligence researching and bidding project.
- Clearwire will pay established tower lease fees.
- Clearwire will assure that any use of the wireless broadband network is cost neutral to the City. Asset lease payments plus additional revenue to City will offset 100% of all public safety and municipal employee broadband service use.

### **PCMCIA Card Availability**

- PCMCIA cards will be available in Grand Rapids as soon as they are certified and commercially available.

### **Open Access**

- Clearwire will provide wholesale Internet access to permit other service providers to resell the wireless broadband services.

### **Illegal Activity**

- Clearwire will block FBI banned sites and maintain the ability to identify and shut down malicious users.
- Clearwire will require users to logon for access outside of a hot spot walled garden.

### **Agreement**

- The term of the agreement between the City and Clearwire for mobile WIMAX services component is for an initial term of three years with potential renewals for succeeding three-year terms.
- This agreement between the City and Clearwire is the first between Clearwire and a local government.
- This agreement will provide the country's first citywide WIMAX network.

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