

**Executive Summary of Project for BIP and BTOP:
Infrastructure Projects Executive Summary**

a) Opportunity: Detroit is facing an unprecedented economic and social crisis. In June 2009, the City of Detroit's unemployment rate hit 28%, a national high among large cities. The city is suffering from high foreclosure rates, falling home prices, significant population loss and potential bankruptcy of its public schools. Experts agree that to recover, Detroit's industrial workforce must reinvent itself. Key to this transformation is the extension of technology-based education, training and productivity advances to Detroit's most hard pressed neighborhoods. But Detroit's population in the 112 square mile PFSA lags well behind the national average in adoption of broadband services with less than 40% of households subscribing to broadband. To address this problem, Applicant is proposing a fully "shovel ready" infrastructure project that efficiently leverages a modest BTOP grant of \$19.415 million to support an economic stimulus project that provides affordable, 4G wireless broadband and generates immediate jobs, provides enhanced public safety, education, health care and e-government capabilities, and creates new economic development opportunities within the PFSA and the entire Detroit metropolitan area. Without funding, the proposed project would not be constructed. With funding, the project's impact will reach well beyond the PFSA and its 803,541 people.

This Detroit metro-wide 4G wireless broadband network will be capable of providing integrated access to high-speed data, voice, video on demand, and interactive delivery services via the Internet at speeds that rival wireline broadband. It will also offer the benefit of mobility, a capability that a recent Pew Research Center study confirms is essential to adoption by African Americans who constitute 83% of the PFSA's population. In a related application, Knight Center of Digital Excellence, a project of OneCommunity and John S. and James L Knight Foundation (the "Knight Center") has proposed a well-tested broadband adoption and sustainability program to ensure that the benefits of Applicant's project reaches Detroit's most vulnerable populations. As described below, this application has widespread community support and represents the type of initiative envisioned by Congress when it enacted the ARRA because it will spur job creation and stimulate long-term economic growth and opportunity in a distressed community.

b) Description of PFSA: PFSA is 112 square miles of Detroit located in Wayne County, MI.

c) Households/businesses passed: 322,462 households and 36,011 businesses serving a collective population of 803,541.

d) Number of community anchor institutions and critical community organizations: Applicant is working closely with the Knight Center and multiple Detroit organizations that have separately applied for a broadband sustainable adoption project named "Connect Your Community." Supporting organizations for both projects include: City of Detroit, U.S. Rep. John Conyers, Jr., Detroit Public Schools, Focus: Hope, Archdiocese of Detroit, Child Care Coordinating Council of Detroit/Wayne County, Inc., Detroit Public TV, LaDonna Walker-Little (Resident), The Wayne County Regional Educ. Serv. Agency, Wayne State Univ. Office of Government And Community Affairs, Community Telecommunications Network, Macomb Intermediate School District, Oakland Schools, Wayne State Univer. Computer Science Department, Model T Automotive Heritage Complex, Inc., and Vanguard Community Devel. Corp.

e) Proposed services/applications: Applicant utilizes mobile WiMAX technology that enables mobile and fixed communications over a single wireless network at speeds that are multiple times faster than today's 3G wireless networks. With embedded WiMAX chipsets in laptops, phones, PDAs, mobile Internet devices and consumer electronic equipment, mobile WiMAX technology will allow Detroit citizenry to wirelessly access a range of multimedia applications, such as live videoconferencing and large data files, anywhere in the network coverage area. WiMAX Mobility and high-speed Internet access promise to offer cost-efficient and effective solutions for consumers and community institutions that desire or require untethered Internet connections, therefore providing a connection that wired technologies or earlier generations of mobile broadband cannot deliver. In addition, [REDACTED], subscribers will enjoy wide-area coverage throughout Detroit and when they travel to more than 50 U.S. and foreign markets operated by Applicant's parent, Clearwire Corporation ("Clearwire").

In addition to commercial services, Applicant, through the Knight Center's "Connect Your Community" project, will provide discounted service to qualified users. As the Knight Center explains more fully in its application, the availability of mobile wireless should be particularly effective in shrinking Detroit's digital divide, especially among minority end users.

f) Non-discrimination/interconnection: Applicant's WiMAX network is based upon an open standard technology platform that encourages innovation by equipment and application developers because there is no barrier to entering the marketplace. Before it initiates service in Detroit, Applicant will publicly post on its website terms of service that adhere to the four principles set forth in the FCC's Internet Policy Statement. All Detroit subscribers, [REDACTED]; will be able to download and use any device or application, content or service they desire, subject to reasonable network management practices and law enforcement and public safety considerations. And, Applicant will comply with its network interconnection obligations under the NOFA by negotiating in good faith with all bona fide requesting parties necessary terms to establish a direct or indirect connection to the public Internet. In short, Applicant is fully prepared to implement the non-discrimination and interconnection obligations of the BTOP program as part of its standard business practices in the PFSA [REDACTED].

g) Broadband system type: Applicant's proposed network is based on the mobile WiMAX standard that supports wireless fixed, portable and mobile service offerings using a single network architecture. Applicant will be using WiMAX in conjunction with licensed and leased BRS/EBS spectrum in the 2.5 GHz band. Applicant's network will combine some of the best features of cellular, cable modem, DSL and Wi-Fi networks, without the inherent limitations associated with these legacy systems. WiMAX is the first widely deployed network designed and built from inception to deliver a full range of broadband content and applications.

h) Qualifications of Applicant: Applicant is a wholly-owned subsidiary of Clearwire, an experienced broadband service provider that builds and operates next generation wireless broadband networks that provide entire communities with high-speed residential and mobile Internet access services and voice services. Clearwire currently provides 4G service, utilizing WiMAX technology, in three markets and provides pre-WiMAX communications services in 50 markets across the U.S. and Europe covering approximately 18.2 million people. Applicant has entered into a Memorandum of Understanding ("MOU") with Clearwire that will permit Applicant to rapidly and affordably bring WiMAX broadband services to Detroit by giving Applicant access to all necessary licenses, vendor contracts and management support to expeditiously complete the project.

i) Infrastructure cost: \$ 24,269,000.

j) Subscriber projections: Attachment H of this application contains Applicant's overall expected subscriber projections for the Project.

k) Jobs estimated to be created or saved: Through funding the PFSA, Applicant's analysis shows that approximately 1,020 US jobs will be created or saved through the end of 2018. Approximately 587 jobs will result directly from network deployment and operations within the PFSA ~~_____~~
~~_____~~
Network deployment in the PFSA will immediately create 134 "shovel ready" jobs: 53 of those jobs are a result of direct capital investment and another 81 jobs are estimated to be the ripple effects from Applicant's contractors' spending on suppliers and the increased local spending from those new employees. These "ripple effect jobs" are estimated using US Bureau of Economic Analysis' (BEA) Industry-based Employment Multipliers (Type II). Applicant's ongoing broadband service will create approximately 20.5 new jobs in the PFSA and 53.5 additional annually recurring indirect and induced jobs based on BEA Multipliers. ~~_____~~
~~_____~~ Finally, several leading economic studies on broadband adoption demonstrate that increased access to information and adoption of broadband and online services drives productivity gains, stimulates innovation and creates new jobs. Applicant's impact on broadband adoption within the PFSA could add another 379 jobs to the US economy by 2018. ~~_____~~
~~_____~~ This analysis is based primarily on the baseline results of leading economic studies and Applicant's estimation of "new to broadband" users that will sign up for its services.