

## Broadband USA Applications Database

**Applicant Name:** Lawrence Freenet, Inc.

**Project Title:** Freenet Underserved & Rural Broadband Initiative

**Project Type:** Last Mile Non-Remote

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### Executive Summary

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a. Opportunity the proposed system seeks to address. Despite their proximity to the Lawrence, Kansas metropolitan area, the 12, 071 residents who live in rural Douglas County have little or no access to broadband services. Many of these residents use dial-up services or do without. Lawrence Freenet, Inc. a 501c(4) non-profit proposes to expand its existing wireless network coverage by installing forty (40) rural towers sites. These sites will use state of the art WiMAX technologies to provide high speed services to all of the rural residents of Douglas County. b. A general description of the proposed funded service areas (location, etc.) The proposed funded service area includes Douglas County, Kansas, excluding the cities of Lawrence, Baldwin City and Eudora, and the town of Lecompton. The service area includes over 12,000 residents and 436 square miles in northeastern Kansas. Big Springs, Black Jack, Clearfield, Clinton, Globe, Grover, Lone Star, Midland, Noria, Pleasant Grove, Stull, Vinland, and Worden are communities within the service area. c. Number of households and businesses passed. The service area includes 4,653 households and 198 businesses. d. Number of community anchor institutions, public safety entities, etc. Sixteen community anchor institutions, public safety entities and critical community organizations are included in the service area of this project. All of these anchor institutions will have the opportunity to use the network at no charge. e. Proposed services and applications for the proposed funded service areas and users. Lawrence Freenet, Inc. will provide three tiers of residential and two tiers of business service to rural customers. Residential entry level service will provide 5Mbps downstream and 1Mbps upstream average speeds for a monthly fee of \$24.98. Mid-level residential service will maintain average speeds of 10Mbps downstream and 2Mbps upstream for \$34.98 per month. The premium service will provide average speeds of 19Mbps downstream and 4Mbps upstream for \$44.98 per month. Entry level business service will provide 10Mbps downstream and 2Mbps upstream average speeds for \$49.98 per month. Premium business service will include average speeds of 19Mbps downstream and 4Mbps upstream for \$99.98 per month. Implementation of this project will enable the estimated 59.7% of rural Douglas County residents with no access to broadband service, and offer a choice of Internet service providers to the 40.3% of rural residents with access to broadband service. f. Approach to addressing the non-discrimination and interconnection obligations. Lawrence Freenet, Inc. has always operated under the principle that the Internet should be available to everyone, everywhere, all the time, regardless of income. The founding principle of the non-profit is that the Internet is a community resource and that its use should not be restricted due to income or location. With these founding principles in mind, the technical and business staffs have worked in tandem to develop pricing and network management policies that inure the most benefit to the community. For the past year, Lawrence Freenet has offered bulk pricing to businesses in the community. The Lawrence

Freenet network is designed to transport Internet traffic for the project's membership. The company does not artificially alter this traffic, restrict access to websites or otherwise engage in activities that are contrary to the ideology of network neutrality. The company's network connects to the public Internet and allows members to connect to any public Internet resource at any time. The company does engage in traffic shaping to ensure that traffic is available to members when and where they need it. This policy gives preference to interactive traffic such as web surfing, video and audio streaming. Traffic that is not generally interactive such as "set and forget" applications (i.e., FTP and Peer-2-Peer file sharing software) are given a lower priority. Under normal circumstances, all traffic is treated equally. Only when the network is at capacity is interactive traffic given priority. g. Type of broadband system that will be deployed (network type and technology standard). High speed broadband Internet service will be delivered to the end user through a number of technologies. At the network core, the organization's existing urban tower sites will be interconnected via underground fiber-optic cable. This cable will provide a backbone for the network and will replace the company's existing wireless OFDM backbone. Sections of this fiber are already in place and connect one of the company's tower sites to the Lightcore fiber-optic network. Rural tower sites will be connected back to urban areas via high capacity OFDM wireless links. Each site will have a minimum of two of these links operating on separate frequencies. Rural members will connect to rural tower sites using fixed wireless receivers. Members within 1 mile can likely use indoor receivers operating at 3.65GHz. Users more than 1 mile away will likely use outdoor units mounted on the outside of their homes. These units will operate at 900MHz, 5.7GHz or 3.65GHz depending on line-of-site and local wireless conditions. The network is being designed to ensure that all county residents are within 2 miles of a tower site, meaning that even residents with poor line of site should be able to receive reliable high speed service. h. Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband service provider. Lawrence Freenet, Inc., a 501-c(4) non-profit corporation, was established in April, 2005, in response to a need for affordable, reliable Internet access in the Lawrence community. Lawrence Freenet has been providing continuous Internet service to the Lawrence community since its inception. Lawrence Freenet's Internet network manages over 10 terabits of traffic every month. Lawrence Freenet maintains monthly subscriptions for over 1,500 paying customers and 300 indigent customers, who receive the service free. In addition, approximately 1,500 day passes (24 hour unlimited access) are purchased each month and 6,000 people access Lawrence Freenet's free 30-minute service each month. Lawrence Freenet's management staff has an accumulated 22 years of experience in administration, accounting and billing, and technological expertise, as demonstrated in the résumés attached to this application. Lawrence Freenet, Inc. maintains a contractual partnership with Community Wireless Communications. This partnership was established in January, 2006, and continues to be a mutually beneficial relationship for both businesses. Community Wireless Communications designs, deploys and maintains the network, providing wholesale Internet service to Lawrence Freenet. Community Wireless also provides Internet support services to Lawrence Freenet customers. Community Wireless Communications' management staff has an accumulated 64 years of experience in administration, accounting, billing, and technological expertise. The knowledgeable, experienced staff currently employed at both businesses ensures project readiness. Maintaining staff with these qualifications will enhance the long-term feasibility of the project. i. Overall infrastructure cost of the broadband system. The overall infrastructure cost of the broadband Internet system is estimated at

\$8,321,936. This includes federal grant (BTOP) or grant/loan (BIP) support in the amount of \$6,574,329 (79% of the overall project cost) and local matching funds in the amount of up to \$1,750,000 (21% of the overall project cost). j. Overall expected subscriber projections for the project. Lawrence Freenet, Inc. expects to receive 1,330 residential, 54 business, and 16 strategic institution subscriberships by the end of Year 3 of the project. k. Number of jobs estimated to be created or saved as a result of this project. Overall, thirteen positions (13 FTE) will be created or saved as a result of this project. Lawrence Freenet, Inc. and its partner, Community Wireless Communications, expect to retain three (3 FTE) positions. [These are operational positions, and are not included in the budget information for the project.] In addition, approximately eight (8 FTE) positions will be created during the process of implementing the broadband infrastructure. This phase of the project is expected to take two years. Upon receipt of this grant award, Lawrence Freenet, Inc. will hire two additional staff (2 FTE) for operational purposes. These positions are expected to be ongoing. [The additional operational staff is not included in the budget information for the project.] Please note: This estimate includes direct man hours as a result of this project. Any jobs saved or created that are external to this project (i.e.: government, manufacturing, etc.) are not included in this estimate.