

Infrastructure Category

CT-Muni-Net

C. Executive Summary

Executive Summary of Project for BIP and BTOP:

8. Infrastructure Projects Executive Summary

The CT-Muni-Net is a state-wide broadband project inter-connecting 17 municipalities in Connecticut. This will provide the ability for its members to share expertise and resources not found in any one town. This fiber infrastructure will then be a vehicle by which underserved populations can be better supported with resources that may not be found locally. For example; the Regional Adult Education center housed in Town of Vernon has a private grant from the Puerto Rican Forum to provide distance learning to the Spanish speaking population in

Hartford, but does not have the high speed connection necessary to successfully deliver distance to this underserved student population. The BTOP grant will make it possible to deliver these and other critical services throughout the state once the broadband inter-connectivity project has been implemented.

Additionally, as per the project summary list, the overall infrastructure will target underserved areas, education and distance learning centers, public safety (police, fire and EMS), medical and health services, profit and non-profit agencies, library & learning/research centers and Adult education which in turn will spur economic development on a state-wide nondiscriminatory access basis in Connecticut.

10. Description of BTOP Project Purpose:

The purpose of the CT-Muni-Net project is to share services, share expertise, provide distance learning, provide regional emergency management, support public safety, provide regional computer research centers and provide state-wide access to technology resources by underserved populations via state-wide broadband inter-connectivity

F. Technology Strategy

29. System Design

The CT-Muni-Net is designed to take advantage of the Connecticut Municipal Gain law which provides each municipality with a position (gain) on each utility pole that is standing on a municipal right of way. The broadband fiber will be attached to the gain on each pole and strung from one town to another inter-connecting those towns and ultimately all the members of the CT-Muni-Net. There will be at least two entry/exit points at each inter-connect between towns thus providing alternate paths (see Manchester Ct. Municipal FiberNet in place and operating for past 5 years. 10 Gbps switches will be used to inter-connect the towns. 48 strand single-mode fiber cables will be strung for all the inter-connected links between towns. The architecture will consist of bi-directional, dual entry point cabling which will minimize the risk of a single point of failure and provide for future expansion. The initial speed will be 10GB, but as the new IEEE standards are tested, the CT-Muni-Net broadband will be positioned (22 dedicated strands required) to achieve even greater bandwidth as the new standards move toward the future target of 40GBps and 100Gbps Ethernet.

38. Organizational Readiness:

Several of the CT-Muni-Net members already have fully deployed optical fiber intra-net infrastructures (up to 66 miles). Six of the towns have major broadband projects that will be deployed with or without the BTOP grant via internal funding which qualify as matching funds. As indicated by the amount of matching funds, the CT-Muni-Net members will be making substantial investments in broadband initiatives on their own. However, BTOP funds will provide the funding for the inter-connectivity between municipalities and thus the leverage of sharing services and enhancing communications on a state-wide basis. As an organization, the Ct-Muni-Net members have already demonstrated the expertise to plan and implement large broadband infrastructures and the applications running over them. As per the project plans, the CT-Muni-Net is ready to begin implementing the projects.

41. Government and other Key Partnerships:

The CT-Muni-Net members will be open to current and new partners interested in sharing broadband communications and also sharing the costs to ensure the sustainability of the optical fiber highway.

17 CT-MUNI-NET MEMBERS – (Manchester, Vernon, Glastonbury, South Windsor, Hartford, E. Hartford, W. Hartford, Norwalk, Stamford, Wilton, New Canaan, Clinton, New London, West Brook, Old Lyme, East Lyme and Waterford)
CCM – Connecticut Council of Government
CRCOG – Capital Region Council of Governments
Local Chamber of Commerce's
ECHN – Eastern Connecticut Health Network

Public Computing Centers Category CT-Muni-Net

C. Executive Summary

7. Executive Summary of Overall Proposal:

With regard to improving broadband service adoption rates:

- a. The overall approach to addressing the need, for Sustainable Adoption projects is through the innovative provision of ultra highspeed connections to "backhauled" wireless coverage to Students from Title I schools with "loaner" ultra mobile PCs who are through survey underserved populations (Nathan Hale School 40% of families w/o home internet access).
- b. Areas to be served consist of underserved K-8 Title I school family population identified as not subscribing to an internet service(40%).
and
- c. Qualifications of the applicant that demonstrate the ability to implement the project and achieve its intended results are proved by the existence of a participating member of the cities that has successfully implemented a Municipal Gain Fiber Optic Network
- d. Jobs to be created are represented through enablement by the Ultra-highspeed nondiscriminatory interconnected cities FiberNet paths in the form of for example Doctors-Net creation by private sector entrepreneurs across 10Gbps-40Gpbs-100Gbps growth paths open to the cities and Internet.
- e. The city-clusters connected network ties underserved digital divide students and their families to the city's fibernet connected schools, ties regional emergency operations centers to the the cities to whom they provide public safety and community hospitals and physicians to the massive data developing from multimedia diagnostics - all over the common municipal networks.

8. Project Purpose

Q8 - Overview of Project for Public Computer Centers

The goal for the Connecticut Municipal Network Public Computer Centers is to dissolve geographic boundaries and allow the public access to information, training and resources where and when they want it. Our vision is to offer distance learning at all public computer centers providing class offerings while reducing travel and obstacles to the population of our communities. In addition we desire to make government information transparent/available at locations that are non-traditional such as lifestyle centers so that it is less of a burden to citizens to obtain when they need it. By partnering with of Chamber of Commerce's we are creating Public Computer Centers that offer tools and research sources to our small businesses that could not obtain them otherwise. These resources are anticipated to expand business opportunities and spur local economic development in our municipalities. As an additional benefit these public computers in the Chamber's will promote additional resources and assets of our communities to the public as they visit. To reduce the digital divide in an underserved area (40% by survey) we are providing laptop to elementary children and the ability to gain access to the internet to remove the disadvantages they suffer currently.

12. Public Computer Centers Availability

The goal of our public computer centers are to serve a population with tool, research ability and distance learning in their respective communities that are not available at this time. We have four projects planned as part of this grant and they serve school children, adults, low income households and the business community. The Children project involves providing students with laptops so they will be available to the children as loaner laptops and would be with the student until the duration of the program. The Adult Education center will have labs configured to allow students to access curriculum information take part in distance learning classes and improve their job skills thru the use of online tools.

The low income center will provide wireless broadband service to resident homes to allow them access to search tools and materials. The business center is geared to provide small businesses access to the internet, research and tools to expand their organizations by leveraging assets the group can provide that would be beyond their individual business capabilities.

13. Restrictions on Public Computer Center Use

The nature of our public computer centers will be open to anyone that wants to belong to that particular group of individuals. Now that being said some projects are related to a school district or regional area so it would be difficult for an individual with no ties to the community to use the system. It is our intent that if the individual joins the group there would be no restrictions if the equipment is available.

17. Public Computer Centers Outreach

The outreach of our centers will be in the communities that they serve with the exception of the regional adult distance learning as that center will be able to reach all communities that subscribe to the service. Our goal is to make sure everyone in the community that can benefit from these resources are aware by targeting the community school systems, civic organizations, human service organizations, chambers of commerce and any other organization we can connect with.

Public Computing Centers Category CT-Muni-Net

2-A. Project Title : Connecticut Municipal Net

2-B. Project Description: Broadband “Sustainable Broadband Adoption”

Makes use of Connecticut’s Municipal Broadband Network architecture and associated "Public Computer Center" initiatives to enable programs serving UNDERSERVED populations, support Broadband education technology, regional public safety and economic and Jobs development.

C. Executive Summary

7. Executive Summary of Overall Proposal:

SUSTAINABLE BROADBAND ADOPTION

The CT-Muni-Net is a state-wide effort to create clusters of 17 Inter-connected Municipalities which in turn are also inter-connected with high speed broadband connections. Currently there is very limited or no connectivity between the CT-Muni-Net Towns which prevents the sharing and delivery of critical regional/state-wide educational, public safety, computer center and library services to underserved populations throughout Connecticut. While there are many innovative CT-Muni-Net projects detailed in the last mile section, which support and promote broadband demand and affordability, there are several key regional projects worth highlighting:

1. Regional Adult Education Center – This regional education center currently supports 13 towns, but does not have broadband connectivity to underserved populations such as Hartford. The Puerto Rican Forum of Hartford has partnered with the Regional Adult Education Center to educate a large underserved Spanish Speaking population. To facilitate distance learning to this underserved group, a private grant for \$630,000 has been obtained to support the educational component of distance learning, but will require the complimentary broadband element to promote and sustain these educational services.

A second important partner of the Regional Adult Education Center is Eastern Connecticut State University which provides college credit courses at the Adult Education’s Computer Center. With broadband connectivity, college credit courses will also be available to the underserved populations throughout Connecticut via the CT-Muni-Net.

2. Regional Emergency Management Center – This regional emergency management center, while funded both locally and on a state basis, it is not currently connected to the regional towns that it is supporting. The Municipal broadband inter-connectivity provided by this project will promote safety awareness, sharing of regional emergency services and the coordination of first responder services as demanded by major emergency/catastrophic events.

3. Regional Medical/Health Communications - The CT-Muni-Net has established relationships with the medical industry, such as ECHN (Eastern Connecticut Health Network), and will provide high speed inter-connectivity to the regional hospitals, associated doctors, medical staff and real-time transmissions to the First Responder mobile units.

With the preceding and many other critical services made available by the CT-Muni-Net on a regional/state-wide basis, future growth and sustainable adoption of broadband services throughout Connecticut are inevitable.

Manchester, the applicant / lead municipality has successfully deployed and maintained 44 miles of high-speed broadband fiber connecting 37 buildings and 17 schools for 7+ years. A state-wide precedent was established by Manchester when the DPUC ruled that under the municipal gain statute, all Connecticut Towns have the right to put up dark fiber on utility poles in the space referred to as “municipal gain”. Manchester’s model will be emulated by the other 16 members of the CT-Muni-Net.

The population of the target areas is 370,102.

The overall cost for the CT-Muni-Net is \$20,937,161.10.

D. Project Purpose

Project Purpose: Recovery Act & BTOP

Objectives

8. Project Purpose

The goal for the Connecticut Municipal Network infrastructure is to

dissolve geographic boundaries and allow everyone unrestricted access to transport information, training materials and consume resources over our digital super highway. History has proven itself time and time again with the statement if you build it they will come. Every major transportation project has resulted in economic growth to the region in which it was built. The broadband super highway will be nothing different. In fact it will expand exponentially due to speeds, availability and time frame. Once students, educators, businesses and government agencies can connect the explosion of creative and innovation uses will begin. We can just look back 5 years creative examples of broadband like, MySpace, FaceBook and now Twitter. These uses of broadband we not even thought of five years back. Our project includes providing disadvantaged and unserved school children loaner laptop computers and access to the internet and online learning tool right from this neighborhood, creating a regional distance learning center connection ethnic populations within two cities, providing broadband access to several senior and low income housing projects and leveraging video analytic technology expertise in one community by sharing it with others where the effort would be too costly and overwhelming to consider.

9. Recovery Act and Other Governmental Collaboration.

By creating a regional cluster of municipalities with similar vision and needs we are leveraging our local funding sources with the federal funds requested within this grant. Many projects have been planned and shelved due to the lack of complete funding. By combining our project's local funding with the federal funding requested we will be able to complete our planned projects. Based on the 20% match requirement will be also have funding to move forward with inter-municipal fiber connections which have also be desired but difficult to fund. This interconnection will expand share broadband and others services between municipalities, non-profits, educators and private civic groups who could not fund projects on their own.