Broadband USA

Broadband Infrastructure Application
Submission to NTIA – Broadband Technology Opportunities Program

Submitted Date: 3/26/2010 7:34:25 PM	**Easygrants ID: 7254**
Funding Opportunity: Broadband Technology Opportunities Program	**Applicant Organization:** TREASURY, NEW JERSEY DEPARTMENT OF
Task: Submit Application - BTOP	**Applicant Name:** Mr. Adel Ebeid

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A. General Application Information

Applicant Information	
Name and Federal ID for Applicant	
DUNS Number	▮▮▮▮▮
CCR # (CAGE)	▮▮▮▮
Legal Business Name	TREASURY, NEW JERSEY DEPARTMENT OF
Point of Contact (POC)	WILLIAM MAUGHAN 6092925004 Ext. William.Maughan@treas.state nj.us
Alternate POC	PATRICIA LEAHEY 6092928938 Ext. Patricia.Leahey@treas.state.nj.us
Electronic Business POC	WILLIAM MAUGHAN 6092925004 Ext. William.Maughan@treas.state nj.us
Alternate Electronic Business POC	PATRICIA LEAHEY 6092928938 Ext. Patricia.Leahey@treas.state.nj.us

Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
Prefix	Mr.
First Name	Adel
Middle Name	
Last Name	Ebeid
Suffix	
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Fax Number	
Email	adel.ebeid@oit.state.nj.us
Title	CIO/CTO

Additional Contact Information of Person to be Contacted on Matters Involving this Application:

Project Role	Name	Phone	Email
Secondary Point of Contact	Ms. Shelley , Bates	6096339605	shelley.bates@oit.state nj.us
Other Contact	███████████	██████	██████████ ██████████

Environmental Point of Contact

Prefix: Ms.
Name: Bates, Shelley
Suffix:
Telephone Number: 609-633-9605
Title: PIO

Organization Classification	
Type of Organization	State or State Agency
Is the organization a small business?	No
Does the organization meet the definition of a socially and economically disadvantaged small business concern?	No

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Authorized Organizational Representative	
AOR Name	MAUGHAN, WILLIAM
Result	Applicant Authorized

Project Title and Project Description

Project Title: The State of New Jersey Broadband Network

Project Description: There is a lack of and need for affordable high speed broadband service in NJ. The State of NJ and partners NJEDge.net and Verizon propose construct a high speed IP broadband (1GBps+) network to provide broadband access, statewide, to community anchor institutions, colleges, universities, and government agencies, while also providing points of presence to Last Mile ISPs on a shared-cost basis.

CCI Priority Checklist

The following items were selected from the CCI Priority Checklist:

1. This project will deploy Middle Mile broadband infrastructure to community anchor institutions.

2. The project will deploy Middle Mile broadband infrastructure and has incorporated a public-private partnership among government, non-profit and for-profits entities, and other key community stakeholders.

3. This project will deploy Middle Mile broadband infrastructure in economically distressed areas.

4. This project will deploy Middle Mile broadband infrastructure to community colleges.

5. This project will deploy Middle Mile broadband infrastructure to public safety entities.

Comprehensive Community Infrastructure Components

The following items were selected from the Comprehensive Community Infrastructure Components:

Middle Mile

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BIP Applicants

Have you also applied to BIP for funding in the sample proposed funded service area?
 ➤ No

If Yes, please provide the project title and Easygrants ID number:
Title of Joint BIP Application:
Easygrants ID:

Other Applications

Is this application being submitted in coordination with any other application being submitted during this round of funding?

 ➤ No

Easygrants ID	Project Title

If YES, please explain any synergies and/or dependencies between this project and any other applications.

Individual Background Screening

Is the Applicant exempt from the Department of Commerce requirements regarding individual background screening in connection with any award resulting from this Application?

 ➤ Yes, Applicant is exempt because it is a unit of a state or local government

If the answer to the above question is "No," please identify each key individual associated with the Applicant who would be required to complete Form CD-346, "Applicant for Funding Assistance," in connection with any award resulting from this Application:

Name	Title	Employer

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B. Executive Summary, Project Purpose and Benefits

Essay Question

Executive Summary of the proposed project:

New Jersey requests BTOP funds to build a statewide, high speed Middle Mile fiber optic and wireless CCI network to serve community anchor institutions (CAIs) and provide points of interconnection with state and municipal networks and third party providers.

The network meets the goals of the FCC National Broadband Plan within 3 years via: affordable access to broadband service, 1GBPS connections to anchor institutions, the latest wireless system, and First Responder access to interoperable broadband.

NJ is comprised of 21 counties and 566 municipalities. The landscape ranges from traditional urban cities to rural farmlands.

The Partners
The public/non-profit/private partnership includes State of New Jersey, NJEDge.net, and Verizon Business, Inc.

NJ Office of information Technology (OIT) formed a Statewide Broadband Planning and Coordination Committee representing health care, technology, education, transportation, banking, homeland security, local government and economic development. The Committee developed the statewide broadband strategy.

NJEDge.net, a not for profit 501(c)3, operating one of the 37 national Statenets, is a member-driven organization connecting NJ educational, research and health institutions. Their broadband infrastructure reflects an advanced network platform while achieving lower costs through collective buying power. Members collaborate via web conferencing and face-to-face on issues including network security, identity management, e-learning and web 2.0 tools.

Verizon Business brings the construction expertise and capabilities to install the network. The state will own the network outright under a contract to be finalized with Verizon.

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Problem
High-speed broadband affordability is a major problem in NJ particularly in the state's inner cities. Gigabit connections typical start at $5k+/month. This limits broadband usage by CAIs, commercial and residential users. There are a few local areas in the state with no broadband access, but the majority of the state has broadband access at some speed.

Solution
Our design, a collaborative effort of OIT, NJEDge and Verizon, connects CAIs for a more reasonable than current NJ market conditions. Its shared cost model leverages an economy of scales not achievable by an individual institution. NJ is comprised of 3,064,645 households, 790,807 businesses and 4886 CAIs. 52% of households are not connected to broadband. With a presence in every county, our network is within build-able range of ALL households, business and CAIs.

Outcomes
This BTOP-funded, high capacity, statewide, multi-use network delivers
•   Low cost, improved, 1GB broadband service to CAIs
•   Reliable, survivable, high bandwidth, interoperable wireless broadband for public safety agencies and first responders
•   Broadband connections for all residents, CAIs and businesses via dozens of interconnect points for third parties
•   Access to Internet2 to all eligible institutions from NJEDge.net.

But for the availability of BTOP funding, this network could not be built due to the current budgetary conditions.

System Description
We are offering a blend of services such as 1GB port connectivity and dual -homed Internet access plus dark fiber services for 3rd party last-mile providers. Our network uses a 48-strand fiber bundle creating a ring of connectivity. We will provision 40+ laterals of 12 strands to CAIs. We have pricing for any last—mile provider wishing to lease capacity.

Our network is based on a 40GB primary fiber optic backbone, 1GB fiber user connections, and 155Mbps connectivity to wireless towers. The network is logically connected as rings to provide

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redundancy. The network will leverage the existing NJEDge fiber network, expanding to new interconnection points at CAIs and wireless towers supporting a 700 MHz LTE 4G wireless network for Public Safety responders.

The first phase of the project provides 149+ connection points distributed across all counties, building a foundation from which to grow and connect deeper into user communities.

NJEDge offers a suite of applications to be available across the network. NJEDge co-located in two Carrier Hotels providing easy access for service providers. Applications are: Video Conferencing, Telemedicine, Health Information Exchange, increased community internet services by libraries, eLearning and Distance Learning, Public Safety interoperability, cooperative information exchange between institutions and government, NG 911, improved research and development tools, and Internet2 access.

Users
This network follows the State's strategy to make broadband more available, affordable, and to close the broadband access gap.

The network facilitates CCI priorities with multiple interconnection points in each county. These points will interconnect with various state and municipal networks.

The initial network serves 19 schools and districts, 20 colleges and universities, 3 libraries, 10 hospitals, trauma centers, and health care facilities, 21 911-answering points and 77 public safety facilities. We will serve all anchor and critical infrastructure locations: 2500+ schools, 300+ libraries, 100+ medical and healthcare facilities, approximately 70 colleges and universities, 2072 public safety agencies and scores of local municipalities.

A key interconnection point is the 1GB handoff to the Jersey Connect broadband library network that aggregates the traffic for 300+ municipal libraries. Equally important is our interconnection with the statewide Garden State Network (GSN) which supports 16 State agencies. Our deployment leverages existing dark fiber municipal networks in Monmouth, Morris, Gloucester, Union and Passaic counties and supports cost-effective interconnection to 3rd party providers.

Un/Underserved areas

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Our real underserved areas are economically distressed. The project addresses affordability with lower service rates based upon cost sharing.

Several unserved or underserved communities are identified. Each of these is provided with an interconnection point to the network for third party provider access on a shared cost basis.

Open Access
OIT and NJEDge are committed to support and enforce the requirements for non-discrimination of access, content and fully open connection.

CCI Criteria Compliance
The network
1.   Provides new or upgraded middle mile service to CAIs at speeds of 1 Gbps or greater.
2.   Is a public/private partnership between OIT, NJEDge and Verizon.
3.   Will serve the entire state, focusing on colleges, schools and CAIs that serve economically distressed communities.
4.   Provides high speed Middle Mile broadband infrastructure to serve Community Colleges.
5.   Provides Public Safety the bandwidth needed to implement Next Generation 911 services and wireless infrastructure for 700 MHz Public Safety broadband. The network will have presence in each county PSAP.
6.   Interconnection is available to third party providers and we have an LOI from Zayo Broadband, LLC.

Jobs
The 2003 report "State Economies Can Benefit from Broadband Deployment" documents that widespread broadband deployment will drive a net increase of over 47,000 new jobs in NJ. This project increases broadband availability, creating employment opportunity and economic benefit in health care, education, governmental services, retail sales, telecommuting, small and home-based business.

30-40 full-time jobs will be created in manufacturing fiber and thigh technology switching and network gear, industries supporting the installation, testing, and project management as the network is built. Long-term 4-6 jobs will be directly created in managing and maintaining the network.

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Cost

The cost to acquire and implement the network is $135,872,204. The assets and connectivity of the existing GSN and NJEDge networks is the in-kind match with a value of $39,539,681.

Close

OIT, NJEDge, and Verizon, will provide an affordable CCI, delivering gigabit bandwidth to CAIs, meeting and exceeding FCC goals in just 3 years with a proven, sustainable, business plan via NJEDge. The project meets BTOP CCI criteria, provides network neutrality, and has a proven, sustainable, business plan.

Project purpose:

An extreme and unique technological divide exists within NJ's borders due to the diverse geography and populations. The mountains in the Northwest, farmlands in the center, and pinelands and forests in the south fit the "Garden State" image. Alternatively, NJ is known for urban areas surrounding NYC and Philadelphia, as well as large shoreline tourist areas. NJ's varied landscapes, and the extreme differences in the socioeconomic status of its citizens, pose compelling problems that feed the State's technological divide.

The most severe problem is a lack of affordable service and access to broadband in urban areas. In areas appearing to have broadband penetration, particularly in the Urban 15, there are significant blocks of underserved population. The Urban 15 are 15 NJ cities that represent 19% of the population and are categorized as urban municipalities i.e., densely populated with extensive development. While broadband is available, it is not accessible or affordable for low-income residents. Much of the urban population cannot afford to take advantage of broadband in their homes and don't have adequate public access to it. Our first responder community does not have affordable bandwidth to adequately protect and serve.

The affordability issue affects Community Anchor Institutions, healthcare facilities and public safety facilities that need improved broadband service to effectively serve communities. Local libraries need expanded capacity to serve more users, including those involved in job searches and students in the library after school to complete homework using online resources. This bottleneck is due to limited bandwidth and the inability of community institutions to afford upgrades. NJ's regional hospital systems require enhanced data and records sharing systems to support patient tracking. Schools and colleges need faster service to develop and expand the use of virtual resources to provide educational opportunities. Full-time enrollment at NJ community

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colleges spiked a record 12 % creating an even greater need for more bandwidth. Public Safety needs an interoperable and robust network that can support new applications.

The proposed project addresses all of the BTOP statutory goals and will bridge the technological divide. The project will upgrade and improve existing broadband systems with 1 GB circuit connections including 150 megabits of Internet access across 739 miles of fiber. In our most populated urban UASI area, this project will cover 253 wireless route miles extending out to 77 additional tower locations where carriers and anchor tenants can connect. With bandwidth starting at 155Mbit/s and scaling to 622Mbit/s per site, these wireless capillaries cover close to 2/3 of the population providing immediate broadband access to our most environmentally and economically challenged areas. This means 20x the bandwidth and 200% greater access to the Internet. Expanding access to critical high-speed Internet service to inner city residents most in need, helping to make them full participants in the 21st century's e-commerce environment. Improved access will give NJ residents tools to educate themselves, to promote their businesses and to create more opportunities for their families and communities while fostering a safe environment. The upgraded service to community access centers will boost economic growth through abundant access to online workforce development programs.

The interconnection points throughout NJ will be made available to NJ's 160 commercial Last Mile ISPs at the same-shared cost-basis as the community agencies - half the current cost of existing 51 megabit connections. These costs will increase competition, driving down pricing and making broadband more affordable to more people and will ensure the availability and affordability of high speed broadband required to access advanced technologies and tools. The project will open the door for collaboration and research between academia, government and industry. It brings all of NJ's higher education institutions and K-12 Schools affordable access to Internet 2, a national advanced research and education focused service. Libraries with improved and affordable access will play a major role in bridging the Digital Divide by directly increasing the availability of broadband access to low income, aged and disadvantaged members of the community who lack Internet access at home. The expanded broadband service will provide a public safety backbone for 9-1-1 centers to implement Next Generation applications that will enable calls from text messages, emails and other sources like OnStar. This project also includes a component to deploy high speed wireless data communications network for public safety covering 1,487 square miles in the Northern NJ UASI region using LTE Broadband Technology. This provides interoperability between police, fire, EMS, and other public safety entities.

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This proposed network demonstrates broad significance because it lays the groundwork to ultimately connect all of NJ using the interconnection points in each county. Thousands of NJ's community anchor institutions will have connection opportunities including 3000+ schools, 400+ libraries, 100+ medical and health-care facilities, approximately 70 colleges and universities, and hundreds of local municipalities and Public Safety facilities. This solution uses proven, existing technology and will allow for expanded broadband access to share currently available right-of-ways and delivery methods.

In addition to the severe need of the economically distressed inner cities, NJ has remote and underdeveloped areas that don't have access to broadband coverage. Four municipalities are unserved: Wallpack Township, Stowcreek Township, Greenwich Township and Estel Manor. These unserved municipalities account for 1,401 households and 3,846 residents. The project brings points of interconnection for broadband access to each unserved area.

Recovery Act and Other Governmental Collaboration:

One of the most significant initiatives underway in the health care community is the conversion of medical records to electronic format, and the development of standards to allow "interoperability," or rapid, accurate and secure patient information exchange between practitioners and medical facilities. Known as Health Information Exchange (HIE), the program was appropriated $2B in the American Recovery and Reinvestment Act (ARRA). A target date of 2015 was established to develop a nationwide Health Information Technology (HIT) infrastructure and transfer all health records to electronic format.

The NJ Office of Electronic Health Information Technology and the NJ Health Information Technology Commission are statutorily mandated to jointly develop a statewide HIT plan to assure this goal is pursued. Under the initiative, several Regional Health Information Organizations (RHIO's) have been formed and/or proposed to coordinate information-exchange program efforts at a regionalized level. These RHIOs convene hospitals in each region to facilitate the development of the means and mechanisms required to implement a successful HIE program.

When combined, RHIOs will cover a majority of counties in the state, and with the availability of the HIE funding in the ARRA, the state has received additional funds to complete the efforts started. The ability to provide reliable, high speed connectivity to the hospitals is an enabling requirement to transfer this information. Utilizing the funds under the BTOP program to provide connectivity for the hospitals' internet and other connectivity requirements, as well as supporting HIE, means we will not have to seek connectivity funding from the HIE program or from

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strained local budgets. This leveraged approach to the use of broadband communications in NJ will thus result in a more efficient use of federal funds, and, in short, save taxpayer dollars. Each RHIO is headquartered at a lead hospital, and each of these RHIO hospitals is included on the proposed fiber backbone. This proposed high speed data backbone connecting New Jersey's hospitals will provide the enabling link needed to support the rapid, accurate, and secure exchange of Health information between facilities, enabled physician offices, and Federally Qualified Health Centers. Fast access to information between locations will ensure faster and better patient care and response, and lower costs by supporting the most efficient means of transferring the information.

The Public Safety Interoperable Communications (PSIC) grant and projects will also leverage this proposed project. New Jersey's approved PSIC projects include a statewide mutual aid repeater station and gateway network. This critical public safety interoperable communications network can utilize the connectivity provided by the proposed broadband backbone to provide access at each County's primary Public Safety Dispatch Center. The approximate value of these projects is $7.6M.

Fit with BTOP CCI Priorities:

The State of NJ is partnering with NJEDge.Net to operate the new BTOP network. NJEDge presently operates NJ's statewide Higher Education Network consisting of 3 research universities, 14 community colleges, 10 state universities, 9 independent colleges, six k-12 schools, 2 hospitals, and 1 research institution.

In the proposed Service Area, 24 of these institutions will become backbone service nodes or lateral points of inter-connection for additional healthcare, libraries, public safety, government, additional k-12 organizations, and additional higher learning institutions, reaching all corners of the state. There will be interconnection points in all of NJ's 21 counties with the potential to reach all of the community anchor institutions in the entire state with more robust and affordable access. The initial interconnections will provide points of access that service providers can connect to and provide connections to service areas across the state.

From this base, NJEDge will promote the use of the Middle Mile infrastructure to all last Mile providers to encourage competition especially in the state's under-served, economically distressed urban areas. Of critical significance is the network presence at 24 locations in NJ's "Urban 15". The "Urban 15" areas are all economically distressed. These cities have 19% of the population and historically account for 33% of the reported Crime Index for the state.

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Additionally, this network will provide lower costs per connection, with double the bandwidth to all anchor institutions, including Community Colleges, which provide educational and workforce development programs, an area critical to the "Urban 15".

The state has established 2 key partnerships critical to the successful implementation and ongoing operation of the network. First, the state has partnered with NJ EDge.net - a non-profit consortium already experienced in supporting a high speed broadband shared-use network for a number of Colleges and Universities in NJ. This key partner brings substantial network development and operation experience as well as the participation of their member institutions of higher education and the very substantial investments already made in their existing network.

Second, the state has partnered with Verizon NJ in an unprecedented approach to construction of the fiber backbone. In this partnership, Verizon has agreed to apply their substantial expertise and knowledge of NJ to provide and install the fiber backbone – and fully convey ownership of this infrastructure to the state of NJ. Verizon NJ's role as a partner in the project is that of a contractor. They will receive financial remuneration in exchange for the work they perform and the equipment they provide supporting the construction of the fiber network.

NJ's population encompasses opposite ends of the economic spectrum. While there is an affluent population in the state, 19% of the population makes up the "Urban 15" municipalities that account for 33 % of NJ's total Crime Index. Additionally, unemployment rates are well above the national average. The average unemployment rate for the "Urban 15" in December 2009 was 13.4%. The national average was 10%.

The stimulus network will provide 24 sites across the state, encompassing the "Urban 15" areas. Hospitals, libraries, Community Colleges, and Public Safety entities represented in these areas will have significantly improved access to broadband.

In addition to the "Urban 15", there are five counties that are economically distressed: Atlantic, Bergen, Cape May, Cumberland and Passaic. The network the state is proposing will provide significant broadband access to these counties. Inner city residents will experience improved access at lower prices, while unserved and underserved areas in the southern part of the state will be provided with points of interconnection, which will allow for fast, reliable service at affordable prices.

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There are 14 community colleges identified in the state of NJ. These colleges are pivotal in education as well as workforce development. Five of the 14 colleges are located in "Urban 15" areas.

NJEDge.Net presently operates a Statewide Higher Education network with an internet connection of 95 megabits per site. Across the community colleges, it dips to 51 megabits due to costs and budgets.

With the new network, NJ will be moving a majority of the community colleges to the Stimulus network where they will have 1 Gigabit circuit connections including 150 megabits of Internet access for half the current cost of the existing 51 megabit connections. This means 20 times the bandwidth and 200% greater access to the Internet.

With this additional bandwidth, they will affordably have the resources they need to support their missions of job training, community out-reach, continuing education, GED, cultural affairs, and public safety training.

There are two ways in which public safety will benefit from this network. First, there will be fiber run to every county in the state that will benefit public safety personnel in emergency communications. The fiber will provide ten times the current bandwidth at a significantly lower price. Second, the state plans to deploy a high speed wireless data communications network for public safety first responders in the Northern NJ UASI region. The network will utilize LTE technology and will provide a means of interoperability between police, fire, EMS, and other public safety entities.

Zayo Enterprise Networks and AboveNet have provided a non-binding letter of intent to provide Last Mile service in the State of New Jersey.

Is the applicant seeking a waiver of the Buy American provision pursuant to section x.Q of the NOFA?

➢ No

Is the applicant deliquent on any federal debt?

➢ No

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If Yes, justification for deliquency:

Are you seeking a waiver of any requirement set forth in the NOFA that is not mandated by statute or applicable law?

➢ No

Is the applicant a current recipient of a grant or loan from RUS?

➢ No

C. Partners

Are you partnering with any other key institutions, organizations, or other entities for this project?
➢ Yes

If YES, key partners are listed below:

Project Role: Contractor
Name: Vignola, Anthony
Phone: 7328852270
Email: anthony.j.vignola@verizonbusiness.com
Address 1: 201 Centennial Ave
Address 2:
Address 3:
City: Piscataway
State: New Jersey
Zip Code: 08854
Organization: Verizon Business
Organization Type: For-profit Entity
Small business: No
Socially and economically disadvantaged small business concern: No

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Project Role: Sub-recipient
Name: Laskaris, George
Phone: 9735965490
Email: laskaris@njedge.net
Address 1: 218 Central Avenue, Suite #3902
Address 2:
Address 3:
City: Newark
State: New Jersey

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Zip Code: 07102
Organization: NJEDge.net
Organization Type: Non-profit Corporation
Small business: No
Socially and economically disadvantaged small business concern: No

Description of the involvement of the partners listed above in the project.

The State of New Jersey established two key partnerships critical to the successful implementation and ongoing operation of the proposed network. First, a public/private partnership was created with NJ EDge.net - a non-profit consortium already experienced in supporting a high speed broadband shared-use network for a number of colleges and universities in New Jersey. NJEDge has a vast knowledge of the needs of hospitals and higher education institutions. This knowledge coupled with their operational skills is a winning combination that is invaluable to the proposed network. This key partner brings substantial network development and operational experience to the table. Additionally, they also bring the substantial investments already made in the existing network, as well as the participation of the member institutions of higher education that already benefit from the network.

NJEDge.Net, a not for profit 501 (c) 3 is a member-driven organization of educational, research and health institutions throughout the state. The consortium operates a shared broadband infrastructure for its members across the State that leverages its technical know-how to deliver an advanced network platform while lowering costs through its collective buying power. Members collaborate via web conferencing and face-to-face workshops on a range of issues including network security, identity management, E-learning and web 2.0 tools.

NJ EDge.net is contributing substantial resources and assets to the proposed project including personnel time, the value of their existing network, and existing shared-cost operations model. As a major contributor and partner to the overall project, NJ EDge.net is identified as a sub-recipient to the grant. Consistent with their charter as a 501(c) 3 not-for-profit consortium, NJ Edge.net does not receive any additional financial benefit or profit potential as a result of the project and grant.

In addition to significant input guiding the design and development of the proposed network, NJ EDge.net will provide the ongoing operations management, oversight and billing for the

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proposed network. As demonstrated in the operational readiness section of this application, NJ EDge.net has considerable technical and management expertise gained from operating and managing their existing network. NJ Edge.net also has in-place the administrative, accounting and billing systems necessary to collect the fees and pay the costs associated with system operation and maintenance.

The State has also partnered with Verizon-Business in an unprecedented approach to the construction of the fiber backbone. In this partnership, Verizon has agreed to combine their substantial experience laying fiber with their expertise and knowledge of New Jersey dynamic to provide and install the fiber backbone. Verizon will fully convey ownership of this infrastructure to the State of New Jersey once the project is complete. Verizon's role as a partner in the project is that of a contractor. They will receive financial remuneration in exchange for the work they perform and the equipment they provide supporting the construction of the fiber network.

In preparation of this grant opportunity the State formed a Statewide Broadband Planning and Coordination Committee. This committee includes members from the Dept. of Community Affairs, Board of Public Utilities, Office of Economic Growth, NJ State Library, Dept of Education, Office of Information Technology, Dept of Health and Senior Services, NJEDge.Net, NJ Turnpike Authority, Dept of Banking and Insurance, Office of Homeland Security, and Public Advocate. Essentially, this committee represents in total all of the more than 4,800 Community Anchor Institutions and Public Safety locations in the state.

These organizations and agencies and the membership they represent are our partners in developing a logical and beneficial strategy for pursuing funding from the Broadband Stimulus programs. The State formed this consortium in order to ensure that the needs of the population are met in this application and that it is a true statewide effort. In addition, these state agencies, county and local governments, non-profit organizations and Public Safety providers represent the ultimate users and beneficiaries of the proposed Middle Mile fiber backbone and associated 700 MHz wireless Public Safety system. These organizations and the locations and users they represent will contribute to the success of the project by their participation and payment of connection fees on the shared cost basis explained in other sections of this application. The interest, need and commitment to use the proposed network by these partners are affirmed in the letters of support included in this application.

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The proposed project concept supported in this application has been developed with the inputs and participation of the committee partners and the substantial support of NJ EDge.net and Verizon in developing the network design and the associated financial information and sustainability business plan.

Letters of support from these organizations are included in the supporting material.

D. Congressional Districts

Applicant Headquarters

- ➢ New Jersey

Project Service States

New Jersey

Project Service Areas

New Jersey - 1

New Jersey - 2

New Jersey - 3

New Jersey - 4

New Jersey - 5

New Jersey - 6

New Jersey - 7

New Jersey - 8

New Jersey - 9

New Jersey - 10

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New Jersey - 11

New Jersey - 12

New Jersey - 13

Will any portion of your proposed project serve federally recognized tribal entities?

➢ No

Indicate each federally recognized tribal entity your proposed project will serve.

Have you consulted with each of the federally recognized tribal entities identified above?

➢ No

E. Service Area Details

Is the applicant seeking a waiver for providing less than 100% coverage of a service area?

➢ No

Project Details

Service Area Type: Middle Mile
Service Area Name: State of New Jersey
Rural Classification of the Last Mile Service Area: Non-Rural
Service Status of the Last Mile Service Area: Served

If Service Status is "Underserved" please select at least one applicable option from this list.

Total Square Miles in Service Area: 7,417
Total Population in Proposed Service Area: 8,682,661

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Total Number of Households in Service Area: **3,064,645**
Total Number of Businesses in Service Area: **790,807**
Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area: **4,886**
 Unemployment Rate in the Service Area: **10**
 Median Income in the Service Area: **70,374**
Estimated Percentage of Households with Access to Broadband: **52**
Estimated Percentage of Households Subscribing to Broadband: **48**

F. Community Anchor Summary

Community Anchor Summary	
Schools (k-12)	19
Libraries	3
Medical and Healthcare Providers	10
Public Safety Entities	93
Community Colleges	14
Public Housing	0
Other Institutions of Higher Education	5
Other Community Support Organization	2
Other Government Facilities	3
TOTAL COMMUNITY ANCHOR INSTITUTIONS	**149**
Historically Black colleges and Universities	0

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Tribal Colleges and Universities	0
Alaska Native Serving Institutions	0
Hispanic Serving Institutions	0
Native Hawaiian Serving Institutions	0
TOTAL MINORITY SERVING INSTITUTIONS	0

G. Project Benefits

Demographics

Jobs	
How many direct jobs-years will be created from this project?	522
How many indirect jobs will be created from this project?	521
How many jobs will be induced from this project?	587

Methodology used to estimate jobs:
In estimating the Job-Years created by our program, we used the Council of Economic Advisor's Methodology, where the assumption is made that $92,000 of government spending creates 1 Job-Year, with 64% of the Job-Years representing direct and indirect effects, and 36% of the Job-Years representing induced effects. We have made the very reasonable assumption that there is an even split between direct and indirect effects, per the Methodology: "To do this, we assume that the direct and indirect output effects of government spending move one-for-one with spending." (5th paragraph after Table 4). This means 32% of the Job-Years represents each of the two categories of indirect and direct effects of government spending (64%/2 = 32% each).

To determine the amount of government spending that should be used for calculating the resulting Job-Years of our project, we have take the very conservative approach of summing only the Total Federal Grant Request ($135,872,204) plus Total Matching Funds in Cash ($14,150,00), giving a total of $150,022,204. Dividing this by $92,000/Job-Year equals a total

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of 1,630.68, or a truncated total of 1,630 Job-Years. Multiplying 1,630 by 32% gives 522 "Direct" Job-Years and 521 "Indirect" (difference due to rounding). Similarly, multiplying by 36% gives 587 "Induced" Job-Years (and 522+521+587=1,630).

Project Impact:

The primary impact on NJ citizenry is for the first time, anchor institutions, community colleges, libraries, schools and public safety entities will have adequate, affordable broadband access. By sharing the core network costs across anchor tenants, the ability to attract third party providers improves. This in turn bodes well for our residents and businesses. NJ is unique in that underserved areas are economically distressed, rather than rural or distant, and are often nestled among affluent communities, distorting the picture for that county, and the state as a whole. Affordability is the primary cause of under service rather than service availability.

Bringing affordable high speed connectivity to anchor institutions and the communities will enable applications and services such as Telemedicine, Health Information Exchange, increased community internet services via our libraries, eLearning and Distance learning, Public Safety interoperability, information exchange between institutions and government, Next Generation 911, improved research and development tools, and Internet2 access.

The funded service area of the project is the entire State of New Jersey. While much of New Jersey is served by broadband, most of the service is comparatively slow. High speed broadband is extremely expensive, as the exhibits in this application show.

The impact this program will have is providing anchor institutions access to significantly higher broadband bandwidth. The impact also has a pull-through effect hundreds of institutions through their own networks that are interconnected or will interconnect to this Broadband network.

The Jersey Connect network, serving the state's 300 libraries, and the Garden State Network, serving 16 State agencies, will interconnect with this network, as will multiple county governmental and municipally owned networks such as Gloucester, Monmouth, Morris, Passaic and Union Counties and the City of Paterson.

Public Safety agencies in the North Jersey's Urban Area Strategic Initiative (UASI) Counties will have mobile access to high speed broadband from a 700 MHz LTE 4G wireless network constructed to serve that critical region. This wireless system provides networked 155 Mbps

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broadband interconnection points at 77 locations throughout the UASI and will serve first responders with 4th Generation Mobile Broadband speeds.

The primary 911 Public Safety Answering Points (PSAP) in each county will have a connection to the network as will each NJ State police dispatch center. These interconnections will enable the rollout of Next Generation 911 systems, and further interoperability between multiple public safety jurisdictions and disciplines.

Anchor institutions Directly Connected

This network will directly connect to and serve 149 anchor institution interconnection points throughout the state, with more to follow as the network is expanded in future phases.

Current anchor institutions which will be served are:
• 95 Public Safety locations
• 20 Community Colleges and Universities
• 3 New Jersey State Library interconnections which will serve 300 libraries in NJ though interconnection with the New Jersey Connect network.
• PCCs proposed and expanded by the NJ State Library through a BTOP PCC application.
• 10 Medical Centers and Hospitals
• 19 K-12 schools and interconnections to school district networks.
• Available interconnection points to last mile providers and third party service providers.
• Interface with the Garden State Network, the state's current wide area network, to provide high speed broadband access to state agencies and improved high speed public access to these agencies.

Potential Anchor Institution Clients

We believe that every community college, university, anchor institution, school district, health care facility and public safety agency in the state is a potential client user of this network. Marketing and awareness campaigns are anticipated to attract additional community colleges and anchor institutions to the network and will be ramped up upon receipt of funding. These efforts will continue through network construction with the goal of consistent growth as the network is implemented and becomes operational.

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The network provides high bandwidth points of presence at every designated anchor facility and public safety location. The fiber interconnection points will provide 1 Gb speeds while wirelesses interconnect points will provide 155Mbps speeds.

The potential anchor institution market for this network includes;
•   66 Community Colleges, Universities and Institutions of Higher Learning
•   2500+ K-12 Schools and school districts.
•   100+ Hospitals, Trauma Centers and Health Care Facilities
•   291 Public Safety Communications Facilities
•   County and Municipal Emergency Operations Centers
•   2072 Law Enforcement, Fire and EMS First Responder agencies.
•   County and Local Municipal governments

Unserved areas

Several unserved areas of the state have been discovered through comparison of service maps provided by commercial wireless and wireline providers. There are four municipalities that are identified as unserved: Wallpack Township, Stow Creek Township, Greenwich Township and Estell Manor. Wallpack is located in northwest New Jersey, in Sussex County. The remaining municipalities are located in the southern part of the state, in Cumberland and Ocean Counties. These communities include 1,401 households and 3,846 residents.

The project will provide 1GBps middle mile points of presence in each community for use by third party last mile service providers to distribute broadband service to these residents and businesses. A concerted effort will be made to make local providers aware of these broadband access points and encouraged them to utilize this network.

In addition to these four unserved communities, other pockets of New Jersey are underserved by broadband capabilities.   This network will be available to anchor institutions providing Public Computer Centers and will support Sustainable Adoption programs designed to increase broadband use by disadvantaged populations throughout the state.

Potential Last Mile Providers

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ZAYO Broadband, LLC, has provided letters of intent to purchase use of our available dark fiber in our conduits throughout the state, which will help stabilize revenues and reduce costs to individual network users.

As stated above a concerted marketing effort will be made to third party last mile providers throughout the state. Initial research indicates the best potential is with the smaller wireless and independent Internet Service Providers, who are being charged extremely high rates by the major carriers for middle mile connectivity. Please refer to the application section on competition for competitive pricing.

Network Benefits
Our network will benefit every county. NJ's Community Colleges are community anchor tenants in the truest sense of the word. Our colleges are about high quality, accessible academic programs. The County College of Morris mission states that these academic programs are for lifelong learning and professional development. These programs depend upon broadband. Every academic program requires access to the internet for materials, instruction, simulations, communication and so much more. The strategic imperatives of the community colleges show a close relationship between the county economy and the county college. Mercer College prides itself on fostering community connections that enhance the economic vitality of Mercer County. Middlesex County College is dedicated to advancing economic development in the region. Gloucester County College supports the economic development of the community and seeks to enhance the community's quality of life.
Passaic County Community College exemplifies what this network will accomplish. It has one of the best community initiatives that bring seniors, K-12 after-school students, potential workers and business employees together at its Community Technology Center. Through its Paterson Community Technology Center Initiative, Passaic County College has been involved in a wide range of activities designed to bridge the digital divide in their surrounding urban community. These activities include providing professional and staff development for local educators and non-profit organizations in how to integrate technology into their educational (after school, regular school, ESL, job training) programs; facilitating technology training for businesses in Passaic County; providing access to I-technology and technology training to local residents, serving as the hub of a proposed cyber district in Paterson; and implementing an AmeriCorps bridging the digital divide program as part of a national model with eight other college across the country.

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Our proposed NTIA funded network will allow the growth of similar programs in every county in

Vulnerable Populations:
NJ's population encompasses the polar ends of the economic spectrum. While NJ is home to some of the US's most affluent communities, it's also home to inner cities known as the "Urban 15." These cities represent 19% of the state's population and have a population of 50,000 or more per city. A subset of the "Urban 15" are NJ's six largest urban centers with populations of 80,000 – Camden, Elizabeth, Jersey City, Newark, Paterson and Trenton – aka the "Major Urban" cities.

The "Urban 15" and "Major Urban" cities have inflated unemployment rates due to the recession's effect on dense inner city populations. According to the statistics from the Bureau of Labor Statistics (Dec. 2009) the national unemployment rate last December was 10%; however the average unemployment rate for the "Urban 15" cities for the same period was 13.4%. Of note, the "Major Urban" city of Camden had an unemployment rate of 19.2%.

Unemployed and impoverished populations are overrepresented in the proposed funded service area which encompasses the entire state with points of interconnection in all 21 counties. This project will bring affordable points of interconnection to all of the "Urban 15" in order to bridge the Digital Divide.

Even though these vulnerable populations may reside in areas with broadband capacity their ability to access the service is hampered by lack of affordability. Poverty, unemployment and high cost of living that plague these inner city citizens prevent the affected population from affording or accessing existing services.

The percentage of people who are impoverished in the "Major Urban" areas is many times than the state average. The latest data from the US Census (2006-2008) shows that the state average for families whose income is below the poverty level is 6.3%. Conversely, the same statistic for four of the "Major Urban" cities tells a much different story. Twenty-five percent of Newark City residents are below the poverty level. Similarly, 40% of Camden's population, 26% of Paterson and 23% of Trenton have incomes below poverty level. It's worth noting that poverty level figures do not reflect regional differences across the US, the higher cost of living in NJ means NJ, particularly the Urban 15, have in reality more people below the poverty level than represented by the currently reported figures.

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In particular, the high cost of housing in NJ is an additional, detrimental burden to low income families. Fifty percent of NJ residents experience an onerous housing cost challenge, they spend 30% or more of their household income on housing. This statistic is also inflated in the "Major Urbans." On average 61.75% of renters in the 4 cities analyzed above experience a housing cost burden.

Even though these vulnerable populations have broadband available to them, the poverty, unemployment and high cost of living that plague these inner city citizens prevents them from affording and thus accessing existing services.

Level of Need:
This Middle Mile network and service offering is designed to address needs in full alignment with the focus of the Round 2 funding for projects that substantially improve CCI relative to broadband availability and affordability. The multi-faceted Middle Mile broadband project addresses lower cost, higher speed broadband and internet access for our community CAIs and public safety. It substantially increases the availability of low cost interconnection points that local service providers and communities can leverage to extend low cost broadband offerings.

Improved Broadband Service for Community Anchor Institutions
Our Community Anchor Institutions all face a similar problem related to broadband services - ever tightening budgets and increased demands for services. NJ community colleges had a 12% increase in full time enrollment. Library networks are stressed by the increasing number of citizens in need of free Internet. Hospitals are more involved in telemedicine locally and abroad. Availability of lower cost higher speed broadband and internet connections would allow these agencies to improve efficiency, offer expanded services and participate in cooperative and coordinated program offerings. The problem each faces however is the current high cost of broadband in general, and in particular the even higher costs for true high speed broadband needed to enable robust applications.

The proposed NJ network leverages and expands the existing state owned Garden State Network (GSN) and the NJEDge network. It will bring much needed higher speed connectivity to strategically located interconnection points in all 21 counties. Most importantly, it will bring enabling connectivity and high speed presence to financially strapped CAI's on a true, shared cost basis. NJEDge is a nonprofit consortium already experienced in management and operation of a broadband network. NJEDge will be the operator of this expanded network offering open

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access connections to all users on a non-profit, shared cost basis. Simply put, the more users that connect to the network, the lower the costs will be for each.

NJEDge operates a regional optical network with statewide broadband access to K-20, medical and research members. NJEDge, co-located in two Carrier Hotels, provides easy access for service providers. The network is multicast and IPV6 enabled and includes video conferencing and distance learning capabilities anywhere in the state and across multiple sites. NJEDge provides a new generation of on-line collaboration tools designed to create optimal environments for teaching and learning as well as community based workforce development initiatives.

As illustrated in the Service Offerings and Competitive data section, it's anticipated that the annual savings to customers will be thousands of dollars per year while providing higher speed connections Some of the specific applications and benefits this network will bring NJ CAIs include:

•Low cost, faster connections for all network users help insure the availability and affordability of high speed broadband required to utilize advanced technologies and tools - allowing CAIs to deliver more services to more constituents.
•Support the use of emerging technologies and state-of-the-art networking to all participants, bringing the opportunity for collaboration and research between academia, government and industry. IE, local schools quickly accessing research information from libraries or universities or First Responders / 911 centers directly communicating and transferring information from hospitals during a major emergency or Pandemic response.

•Provide NJ hospitals with the high speed connectivity needed to support Telemedicine applications, and Health Information Exchange thereby improving patient care and patient access to the best diagnosis and response.

•Increased opportunities for eLearning and Distance Learning between K-12 schools, local community colleges and branch campus locations, as well as independent study at work or home.

•Brings all of NJ's eligible institutions affordable access to Internet 2, a national advanced research and education focused service.

Improved Broadband Availability for Vulnerable and Underserved Populations

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NJ does have significant broadband capacity, however due to economic disparities between many of our citizens and the vulnerabilities this creates – broadband take rate is relatively low in comparison. NJ may not have many underserved areas – but we do have a significant underserved population.

While NJ is home to some of the country's most affluent communities, it is also home to a substantial number of unemployed and impoverished, most of whom reside in the heavier population areas identified as New Jersey's 'Urban 15." These areas have inflated unemployment rates due to the recession's effect on dense inner city populations. The latest data shows that the statewide average for families whose income is below the poverty level is 6.3%. Conversely, the same statistic for four of largest Urban 15 cities tells a different story. Twenty-five percent of Newark's residents are below the poverty level. Similarly, 40% of Camden's population, 26% of Paterson and 23% of Trenton have incomes below poverty level.

Our citizens in these and other economically distressed areas of the state are struggling financially. They are unable to afford broadband connectivity regardless of how many choices might be available. Our proposed Middle Mile network proposes to address the needs of this vulnerable and underserved portion of our population by several different means.

First, as recognized by NTIA, bringing higher capacity broadband connections at lower cost to our schools, libraries and community colleges will allow these locations to expand the internet and computing based services and programs offered at the community level. For many of our unemployed and low income populations, these community CAIs are the only viable means of access to the internet.

Libraries and schools in every community provide a perfect point for supporting efforts to bridging the Digital Divide. Providing these CAIs affordable higher speed connections directly increases the availability of broadband access to the low income, aged and disadvantaged members of the community who lack Internet access. This is backed by our findings that 78% of NJ municipalities have public libraries as their only free internet connection for residents, and these locations saw a 13% increase in library computer use between 2007 and 2008. To support this increased demand and increase public awareness of their capabilities, the State Library Association is seeking grants to fund last mile connections and support the additional computing stations to take advantage of the higher speed lower cost backbone the proposed Middle Mile network will bring.

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The second way the proposed network will make broadband more accessible and affordable to these underserved populations is by offering internet connection points to local service providers at the same shared cost basis as our CAIs will pay; increasing competition, driving down pricing and making broadband more affordable to more people. Just as NJEdge's non-profit shared cost approach to pricing these interconnections will make higher speed connections affordable to our CAIs, extending this same pricing to service providers will also allow for-profit firms to offer far more affordable last mile connections to their customers.

This potential to bring high speed connections far into the community level is further emphasized considering that NJEDge only charges for the primary interconnect point, not for all the locations that may be served behind the network. For example, Monmouth County has an existing 32 mile fiber network connecting 53 government and community anchor locations including schools and libraries. They could connect to our Middle Mile backbone and obtain higher speed internet service (and Internet2) for lower cost than they currently pay their commercial provider. They will only pay for the single network connection, even though 53 locations are on their network. The higher speeds and added services provided by our backbone will allow the County and local institutions to increase their services and availability to their citizens, particularly the vulnerable and lower income residents most in need.

Improved Public Safety Access and Usage of Broadband
The other identified need targeted is improved broadband access for the Public Safety community. The network has been designed to support reliable survivable broadband communications and usage for public safety and emergency responders with several different applications or layers.

The fiber portion of the network connects to the main 911 center in each county, and the two main NJSP dispatch centers in the Trenton area. Linking our county and State Police Dispatch Centers with this IP network will enable the migration to NG 911, as well as support voice and data interoperability and the rapid exchange of information – elements that can save lives when seconds count. Bringing these locations onto the backbone also allows interconnection of the NJSP network, and many of the local County government and law enforcement networks and associated databases and information systems on each, further enhancing the potential for instantly sharing data and supporting the connectivity needed to enable interoperability.

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New Jersey recognizes the importance of making information and access available to our responders in vehicles or anywhere on-scene. True high speed wireless broadband connectivity is needed to enable this access. State Police, local law enforcement and Public Safety agencies have developed a number of applications that will only see maximum benefit when wireless broadband connections are used to extend their reach to the responder. For example, Automated License Plate Readers (ALPR) is only at their most reliable when online updates are constantly provided. Video access to the thousands of camera locations now in place is most effective when brought to the responder – not just to the dispatch center. Conversely, video from a camera and police car on-scene can only be used as a situational awareness tool if a high speed wireless connection is available to bring it back to the command post.

To address these needs and to allow our Public Safety community to further explore the potential uses of true high speed wireless broadband availability, our network includes a 700 MHz wireless broadband network using LTE technology to cover the 7 county's that make up New Jerseys UASI area. The high speed wireless overlay is targeted to the UASI region. The UASI designation is applied to those areas across the country that DHS has determined most at risk for terrorist attacks. The New Jersey UASI region is part of the New York City metropolitan area - one of the most at risk areas in the country and most in need of current tools and technologies to support responding to those risks.

This area is one of the state's most populous and home to a number of the urban populations. This high population, combined with pockets of below poverty level and unemployment tends to have some of the highest numbers of Public Safety calls and responses, and higher crime rates. These factors combine to make this area the best place to bring to bear the applications already developed and to further develop new applications that can take advantage of the high speed wireless capabilities of the 4G LTE technology applied to Public Safety.

H. Technology

Technology Type

Indicate the technology that will be used to deliver last mile services. The following items were selected:

Wireline - Fiber-optic Cable

Wireless - Terrestrial Fixed

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Wireless - Terrestrial Mobile

Other:

Technology Questions

Methodology for Area Status:

New Jersey applied a number of approaches to identify the areas that are unserved or underserved. First, we worked with the NJ Board of Public Utilities to utilize the information they acquired on the service areas from the telephone and cable company service providers in the state. We overlaid that information on an interactive map application allowing us to identify areas in NJ where it appears no one is currently offering broadband.

Second, we sought input from each of NJ's county CIOs to identify unserved or underserved areas based on their local knowledge. The CIOs were provided the program definitions of unserved and underserved and asked to identify those areas or jurisdictions they believe met either definition. The information from those CIOs who responded, identifying their local communities meeting the definition of unserved or underserved, was used to further identify these areas.

Although there may be a number of existing internet service offering in many areas of the state, we also targeted these areas to insure we address the needs of our vulnerable citizens. Many low income and at risk citizens are turning to locations such as libraries, schools and colleges for computer use and internet access. We have emphasized that our design provides high speed low cost connections at community anchor institutions in those areas of the state designated as the Urban 15 and Major Urban cities. These inner city population areas have inflated unemployment rates and high rates of poverty. The latest data from the US Census (2006-2008) shows that the state average for families whose income is below the poverty level is 6.3%. Conversely, the same statistic for four of the "Major Urban" cities tells a much different story. Twenty-five percent of Newark City residents are below the poverty level. Similarly, 40% of Camden's population, 26% of Paterson and 23% of Trenton have incomes below poverty level.

Despite the availability of multiple broadband offerings in these areas, the high unemployment rates and large number of people living under the poverty level clearly leads to the conclusion

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that this vulnerable population does not currently have broadband access in their home. Based on this, we believe these areas and the associated citizens also meet the definition of underserved.

As a Middle Mile project connecting Community Anchor Institutions and Critical Infrastructure with locations and interconnect points in all 21 counties, our design will inherently provide interconnect points within or nearby virtually any area of the state. Therefore, our proposed infrastructure will not only bring affordable high speed broadband to Community anchor institutions throughout the state – it will also offer internet presence and connection for Last Mile providers in virtually every community – negating the need to know beforehand which communities are unserved or underserved.

Description of Network Openness:

NJEdge.Net has operated New Jersey's Higher Education network for the past 6 years. The organization's installed base covers 40 sites including colleges and universities plus hospitals and K-12 schools.
We are prepared to offer interconnection for prices in line with our costs in New Jersey. Due to NJEDge's existing infrastructure, we have network management polices and tools in place to allow the organization to identify and resolve network troubles if they occur.
Consistent with NJEDge's policy for the past 6 years, we do not block or filter traffic utilizing our infrastructure.
NJEDge's point-of-presence (POP) at the carrier hotel in Newark, New Jersey will allow providers currently in that facility to purchase middle-mile bandwidth to reach underserved territories such as Greenwich, Stow Creek and Estelle Manor where they can provide services over their local facilities to users in those communities.

System Design:

The New Jersey Broadband Network is a Middle Mile design aligned with the BTOP CCI program goals and priorities. The network is comprised of 3 major elements - a fiber and microwave based backbone, the state owned Garden State Network and a public safety wireless subsystem. Together these elements touch hundreds of locations, interconnect points and users throughout the state (see network diagrams in uploads section for system architecture).

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The first major element is the primary fiber and microwave backbone which leverages the existing NJEDge.net fiber and leased circuit network. The current network is co-located in two Carrier Hotels, multicast and IPV6 enabled and includes video conferencing and distance learning capabilities anywhere in the state. The new network will feature significantly expanded capacity and coverage area with the addition of a 40GB fiber backbone, supporting 1 GB fiber laterals and high speed microwave links connecting 72 Community Anchor Institution (CAI) locations and touching all NJ's 21 counties. The network is logically designed as connected rings to provide resiliency to meet the high network availability demands of our users.

Exterior fiber for the backbone portion of the network is 48 strand (ADSS) Single Mode (SM), and Interior fiber is 12 strand armored plenum. Cisco 9006 Aggregation Service Routers at layers 3 and 4 with dual-route switch processors and full commons redundancy and Cisco ONS 15454 Multiservice Transport Platform routers for Layer 1 are provided.

The high reliability microwave links from the fiber to 77 tower locations in the 7 county Northern UASI region and to the underserved area of Walpack Township in Sussex County provide initial bandwidth capacity of 155MBit/s to each location, expandable in the future to 622Mbit/s. All microwave links in the network include hot-standby microwave radios, antennas, waveguide, cabling, mounting hardware and accessories, and are designed to meet a minimum of 99.999% (five 9's) availability. FCC licensed frequencies will be used for this application in appropriate frequency bands based on path distance.

Our design includes connections to key State Library point-of-presence locations. These interconnect points will allow the existing Jersey Connect network and its more than 300 participating library locations to benefit from lower cost internet access and connectivity to other locations and participants across the state.

The second major element of the NJ Broadband Network is the integration of the Garden State Network (GSN) operated by the New Jersey Office of Information Technology. The GSN is a multi-agency, multi-protocol network that supports 16 state agencies through dedicated and switched services in support of centralized and distributed data processing applications resident in mainframe, mini-computer, local area network (LAN), and personal computer environments. The GSN is currently being expanded using state funding to a total of 350 overall fiber miles.

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Leveraging our investment in the GSN will further extend the reach and benefits of the other network elements for our Community Anchor Institutions. The GSN carries traffic for all our state agencies and departments, connecting hundreds of state owned facilities. The integration of GSN and the proposed fiber and microwave network will enable broadband level communications and applications across all levels of government and communities throughout the state.

The third element of proposed network is a 700 MHz Public Safety wireless broadband system using 4G LTE technology. The wireless Public Safety broadband system will bring high speed wireless coverage for thousands of Public Safety responders and agencies in a 1487 sq. mi. area, with peak download rates of 30-36 Mbs and upload rates of 9-14 Mbs supporting applications ranging from data access to video. The backhaul connectivity for this 700 MHz Public Safety LTE wireless broadband system is provided by the UASI region microwave network described previously. To minimize new costs and environmental impact, this element of the network is being designed using existing tower sites owned by the state or local government entities.

This high-speed broadband data solution operates in the 10 MHz of the Public Safety 700 MHz broadband block; based on approval of the state's waiver request to the FCC. The elements and design of the Public Safety wireless subsystem include these major components:

LTE Base Stations with support for both the D-block and the public safety broadband block. The base stations will be deployed in a 3-sector mode of operation and support 2x2 MIMO with a single LTE carrier of either 5 or 10 MHz bandwidth. All sites are equipped for AC power and an 8-hour battery backup.

LTE Packet Core which includes all hardware and software to support Mobility Management and session control; Packet Data Network gateway, Policy/Rules management, Home Subscriber Server, Radio Access Network management and associated network routers and supporting elements.

In summary, this combination of existing networks, enhanced by new fiber, microwave and wireless technologies was chosen to achieve the optimum combination of speed and cost, insuring the ability to extend affordable state-of-the-art services and capabilities to our community institutions. It provides plenty of capacity to support further connection to Last Mile providers or other users at a very cost-effective basis. A key concept of the network is the

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distributed design of the backbone and availability of 149 internet connection points throughout the entire state. Access to these interconnect points will be made available to commercial Last Mile internet service providers at the same shared cost-basis as the community anchor locations. The shared cost-basis to access these multiple connection points will provide lower cost connectivity for underserved communities and our CAI's.

Is the applicant seeking a waiver pursuant to section IX.C of the NOFA so as to sell or lease portions of the award-funded broadband facilities during their life?

No

I. Project Budget

Project Budget		
	Federal Grant Request	**Match**
Last Mile	0	0
Middle Mile	135,872,204	39,539,681
Total	135,872,204	39,539,681

Project Budget Total: $175,411,885

Match Percent: 22.5%

Projects Outside Recommended Funding Range:

➢ Not Applicable

Outside Leverage	
Applicant is providing matching funds of at least 20% towards the total eligible project costs?	Yes
Matching cost detail	The applicant match for the New Jersey Broadband Network is $22.5% of the total federal grant request. Match contributors are The State of New Jersey and NJEDge. The State of New Jersey will be providing $35,337,341 in both in-kind and cash match. Following is a

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breakdown of that match:

$11,550,000 In-kind match for state owned towers; 6.58% of grant request
The State of NJ has 172 towers in the UASI region that will be used for the 77 wireless connections in the public safety network. Residual value was used as opposed to replacement cost to determine the tower value. Each tower is valued at $150k which is conservative given the region's high real-estate value.

$281,180 In-kind match for ARRA Broadband Coordinator; 0.16% of grant request
The coordinator will be responsible for any financial reporting and coordination with all government agencies. The match includes 3-year base salary and 32% fringe.

$3,965,957 In-kind match; 2.26% of grant request
NJ is building out its infrastructure concurrently with the Stimulus Project and is offering this fiber network known as the Garden State Network (GSN).

$5,390,224 in-kind; 3.07% of grant request
NJ is building out its infrastructure concurrently with the Stimulus Project and is offering this network operations center and equipment match for the Garden State Network (GSN).

$14,150,000 Cash match; 8.07% of grant request
The cash match from the State of New Jersey will be available in the third year of the build out when the 9-1-1 system is migrated to the Stimulus network. This will enable the state to eliminate a vendor contract and re-direct those funds towards the required match.

NJEDge in-kind match
$502,320 In-kind match; 0.29% of grant request

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	The NJEDge engineer is a Cisco-certified engineer responsible for constructing optical plans to allocate the network resources across the anchor. Match represents 3-year salary.

$3,700,000 match; 2.11% of grant request
NJEDge.Net is providing an equipment match valued at $3,700,000 which represents the network hardware we use to operate our statewide higher education network serving 44 institutions. These components include 3 Cisco 6509 switches, 2 – 6506 switches and 7 – 15454 optical nodes. |
| **Unjust enrichment** | Neither the State or New Jersey or NJEDge.Net are receiving or applied for other federal support in the proposed funded service area submitted in this application. |
| **Disclosure of federal and/or state funding sources** | Neither the State or New Jersey or NJEDge.Net are receiving or applied for other federal support in the proposed funded service area submitted in this application. |
| **Budget reasonableness** | The proposed New Jersey Broadband Network connects 149 locations supporting Public Safety and Government, Healthcare, and Education. The architecture is designed according to network best practices and reviewed by Cisco Corporation for capability and cost-effectiveness.

NJEDge will operate the new network on behalf of the State of New Jersey. NJEDge is leveraging its experience in managing networks to procure the optimal solution for the network. The organization recently issued a number of network RFPs and possesses a real-world sense of what is needed to sustain a service such as the NJ Broadband Network. Similarly, the state is equipped with deep-rooted knowledge of developing and managing a large scale network.

Research shows that fiber installation and optics pricing ranges from $184,800 - $501,600 per mile in NJ. This analysis included all costs related to implementing the network, installing the fiber, securing right-of- way and other approvals, acquiring and provisioning the associated electronics as well as Project Management and documentation.

Verizon, one of the NJEDge's recent RFP winners, provided the best |

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price for the BTOP network. Total cost of the network came in at $152,000 per mile, which was less than expected. Verizon's quote included:

Land, Structure, Rights-of-way, Appraisals
Architectural and engineering fees
Project fees such as municipal construction permits
Site work to construct onsite pathways
All aspects of fiber provisioning and network documentation while complying with our State's laws on Prevailing Wage
Layer 2 and layer 3 network equipment at rates below the WSCA contract (the state uses the Western States Contracting Alliance [WSCA] contract for equipment)

Verizon Business is a major service provider that has not only telecommunications expertise but also a strong familiarity with doing work throughout NJ.

In summary, there are two compelling points to the proposal. First, the state is working with two key partners - Verizon and NJEDge - to develop and operate the network. Verizon quoted the costs for installing all aspects of the fiber network based upon its substantial experience building out thousands of miles of fiber infrastructure. This unprecedented proposal will fully convey ownership of this infrastructure to the state. Second, the costs for the network electronics and switching equipment is proposed via an existing competitively bid contract that our partner NJEDge has in place. The 40% discount on this existing contract is substantial by industry standards and is further evidence that the costs and quotes are reasonable and competitive.

The NJEDge partnership enables the state to leverage NJEDge's existing high capacity fiber network as the cornerstone of the proposed statewide backbone is another significant factor. Plus, NJEDge's in-kind match of equipment and professional services reduces the total cost by over $4 million.

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Demonstration of need	As part of the national downturn of the economy, New Jersey has grappled with a significant fiscal deficit for several years. The projected deficit by the end of 2010 is estimated at approximately $2 billion. The deficit has led to across the board cuts and furloughs of state employees. Currently proposed budget reductions include $830M for K-12 schools and $275M for higher education institutions and the state employee pension system is underfunded by $46B. No state department, including OIT, has received budget increases, and all have experienced spending and personnel reductions.

While historic limited scope broadband projects have been implemented, as evidenced by the matching funds for this project, funding to support a project providing comprehensive broadband services for the multiple service areas proposed in this application is not available. Some progress has been made by the state as evidenced by the buildout of their internal network which is part of our match.

However, without funding from the BTOP program, New Jersey will be unable to implement a statewide network providing broadband access to libraries, community outreach organizations, education (K-12), community colleges, hospitals, local governments and public safety. Federal funding support is the only means in which a project of this magnitude can be accomplished.

This statement of need is validated by the calculation of the proposal's Net Present Value. In evaluating the present value of free cash flows for a period of eight years, it was determined that there would be a negative cash flow of $93 million. When applying the same formula including the requested BTOP funding the outcome results in a positive cash flow of $18.6 million over the same eight year period. The analysis clearly illustrates that the project is not economically viable without federal funding support and that the state's critical needs will go unmet.

The fees established for 1Gigabit access to the network by the |

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	community anchor tenants targeted by the proposal are affordable and provide for long term sustainability of the network Building one multi-use statewide innovation network that supports not just research, education and health care but also potential partnerships with business and industry will position New Jersey to regain a wide variety of economic development opportunities and establish a foundation to secure long-term prosperity. Building out an advanced broadband infrastructure will: create jobs; support sustainable broadband adoption; generate economies of scale; and bolster economic development. The Partners The public/non-profit/private partnership includes NJ State Government, NJEDge.net, and Verizon Business. NJ Office of Information Technology drives our statewide broadband strategy. NJEDge.Net will operate the new network. Verizon brings the construction expertise and capabilities to install the network.

Funds to States/Territories

States	Amount of Federal Grant Request
New Jersey	135,872,204

Funds to States/Territories Total: $135,872,204

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J. Historical Financials

Matching Funds			
	2007	**2008**	**2009**
Revenue	4,909,121	6,410,925	5,980,584
Expenditures	6,204,238	6,301,419	5,434,617
Net Assets	1,065,386	1,174,054	1,720,021
Change in Net Assets from Prior Year	-1,305,522	108,668	545,967
Bond Rating (if applicable)			

K. Project Readiness

BTOP Organizational Readiness

NJEDge.Net (www.njedge.net) is a 501(c)3 not-for-profit consortium of academic and research institutions created by the State of New Jersey's President's Council. It is governed by a Board of Trustees appointed by the Council, which is drawn from the membership. NJEDge is funded through dues and cost recovery network service fees from the membership and operates independently of any state appropriation. In the eight years since its inception NJEDge has fulfilled its primary mission – to provide cost effective statewide technology infrastructure and services to the academic community and is poised to extend these services to additional community anchor institutions in the state. NJEDge has invested in a nationally recognized statewide regional optical backbone and the BTOP stimulus program would provide the funding necessary to extend this backbone network to underserved areas in the state as well as directly to community anchor institutions including Public Safety, K-12 schools, state libraries, and hospital and health care institutions. By building out the branching links from this backbone and collaborating in building one multi-use statewide innovation network, our proposed network would provide the foundation to deliver cost effective broadband anywhere in the state and would fulfill the goals and objectives of the NTIA BTOP program.

NJEDge has a highly effective organizational structure in place and strategically outsources specific functions such as 24x7 monitoring of the optical backbone and electronics. We plan to extend our current contract for the additional network segments and optical electronics if funded.

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To fulfill the additional support requirements of the expanded network and membership, NJEDge plans to add additional staff in order to meet the additional demands placed on current staff. We plan to add one additional network engineer and customer service representative to interface with the expanded membership and provide additional hours of customer support availability. We have in place an efficient Billing Analyst who manages vendor bills and issues invoices to the membership, and who also provides E-rate consulting for K-12 districts and schools.

NJEDge has been extremely successful in leveraging the collective buying power of the membership to achieve economies of scale in areas such as internet rates, long distance telephony, videoconferencing, networking electronics and large scale network attached storage, and we expect to achieve even larger economies with the expanded membership. The funding model currently in place allows the membership to utilize savings to increase service levels or implement new services as needs and requirements evolve. NJEDge is well positioned to scale our staff and services as the membership expands and at the same time reduce cost of services to the membership.

Post-award, we can easily sustain the new network using the existing support systems we've used to manage the NJEDge.

Construction and Vendor Contracts

Upon notice of award, the State of NJ and NJEDge are ready to contract for the services supporting the network electronics and fiber provisioning as described in the application. Verizon has been directly involved in the design and pricing for this element of the proposed network and have indicated that they can and will meet the delivery and implementation requirements of the grant program. Please refer to Supplemental Information in the upload section of this application for a letter from Verizon that demonstrates our preparedness to execute the project in a manner that is consistent with all requirements.

Verizon was selected as our contracting partner for the fiber portion of the network based on existing contracts with both the state and NJEDge and the commitment to construct the proposed fiber network and turn over ownership to the state – an unprecedented show of support outside their normal business approach.

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OIT plans to competitively procure the proposed Public Safety wireless LTE network for the UASI region. Discussions with potential vendors for this infrastructure indicate that the regional wireless network could be constructed within approximately 2 years, allowing the time to quickly release an RFP and competitively procure the required RF infrastructure and supporting subsystems. This also allows us to provide the details on the fiber backbone allowing the wireless vendors to propose a design built on maximizing use of the fiber connectivity.

Customer Base

The State of New Jersey is partnering with NJEDge.Net to operate the new BTOP network. NJEDge presently operates New Jersey's statewide Higher Education Network consisting of 3 Research Universities, 19 Community Colleges, 10 State universities, 9 independent colleges, 6 K-12 schools, 2 hospitals and 1 research institution.

In the proposed Service Area, 24 of these institutions will become backbone service nodes or lateral points of inter-connection for additional healthcare, public safety, government and K-12 organizations, with our expanded Network reaching all corners of the State.

Once constructed, our new base will include:

Public Safety – 18
K-12 schools – 19
Libraries – 3
Community Colleges – 14
Other Higher Ed – 5
Other community support – 1
Medical and hospitals – 10

From this base, NJEDge will promote the use of our Middle Mile infrastructure to all last Mile providers to encourage competition especially in our State's under-served, economically depressed urban areas. Of critical significance is our envisioned presence at 24 locations in New Jersey's "Urban 15". These cities have 19% of our population and historically account for one third of the reported Crime Index for the State.

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Deploying a network such as ours in areas such as the Urban 15 would not be affordable without BTOP funding. This stimulus will result in greater access to key services such as job training and work force development beyond what is realistic today.

Licenses, Regulatory Approvals and Agreements

A significant benefit of selecting Verizon as our partner contractor is their ability to place fiber where they already have existing right-of-way agreements. NJEDge.net will work with Verizon to obtain any required additional agreements as the final design and routing of the fiber is determined. The only additional element required as far as permissions or agreements related to the fiber network is the pole attachment license that will be purchased.

For the 700 MHz LTE wireless Public Safety Broadband network serving the UASI region, FCC licenses for the use of the 700 MHZ frequencies and for the Microwave links providing connectivity from the RF sites to the fiber backbone is required. New Jersey has already filed a waiver request with the FCC for use of the 700 MHZ channels assigned to Public safety for broadband use and this response is pending. Licenses for the Microwave links will be applied for upon completion of final design and are site specific.

Towers and related locations selected for the design of the LTE system are owned or controlled by state agencies or local entities to minimize costs and the need for leasing space from commercial owners. MOU's and agreements with each government entity will be developed upon finalizing the design. Some locations requiring tower modification may require permission from local Zoning boards; these will be sought as needed.

SPIN Number

NJEDge.Net (formal entity name) is a non-profit, 501(c)(3) technology consortium of academic and research institutions in New Jersey. Through its deployment of advanced Internet technologies and digital communication, NJEDge.Net supports its members in their institutional teaching and learning; scholarship; research and development; outreach programs; public service, and economic development.

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L. Environmental Questionnaire

Project Description

The NJ Broadband Network design uses a combination of fiber and microwave (MW) links to establish a total of 149 interconnection points; 71 connections via fiber and 78 connections via MW. A 77 site 700 MHz wireless broadband subsystem will be installed at 77 of the MW tower sites.

In order to minimize both costs and potential environmental impact, the MW design is based on the use of 77 existing tower sites and facilities owned by the state or by local government entities. Two new towers and buildings are needed to support the MW link from Suffolk CO Community College to the unserved Walpack Township.

The installation of the fiber is the largest construction element of the project and will be contracted to Verizon. Verizon is familiar with applicable state and local construction ordinances and permitting requirements, NJ specific environmental conditions and best practices. Similarly, the contractor implementing the MW and the wireless stations will be selected on the basis of their knowledge and ability to comply with these regulations.

Verizon plans to utilize their existing right-of-ways, existing cable/conduit runs, pole lines and other existing cable facilities that can be applied to the build-out, minimizing new construction. For those areas where new construction or fiber installations will be required, Verizon will be applying their established "Best Practices" for minimizing construction impact, and for maximizing the efficiency of implementation.

Property Changes

An integral part of the fiber backbone installation involves the development of a detailed street by street routing design working from the designated interconnection points identified in this submission. Therefore, identifying any detailed specifics or areas that may be disturbed by the project construction is not fully possible until this phase occurs. The preliminary routing of the fiber backbone is designed to avoid the need to intercept any federally owned public lands, and we foresee the actual routing and detailed engineering design maintaining this approach. None of the selected towers for the microwave or RF transmitters are on federal land.

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All identified interconnection points are at buildings or facilities representing CAIs or tower facilities owned by state or local government entities. These buildings and facilities house libraries, schools, colleges, Public Safety Answering Points (PSAP's), hospitals, or existing radio and microwave communications equipment. All these locations and buildings are already in areas approved or zoned for their activities. The construction activities needed to bring connectivity to each of these locations will represent minimal impact to the buildings themselves. We do anticipate some existing towers may need upgrades or similar structural improvements, however we do not anticipate any impact or changes to the current zoning or land use regulations already in place for these locations and facilities.

Buildings

All of the identified interconnection points are at buildings or facilities representing Community Anchor institutions or tower facilities owned by state or local government entities. These buildings and facilities house libraries, schools, colleges, Public Safety Answering Points (PSAP's), hospitals, or existing radio and microwave communications equipment. All these locations and buildings are already in areas approved or zoned for their activities. The construction activities needed to bring connectivity to each of these locations will represent minimal impact to the buildings themselves. We do anticipate some existing towers may need upgrades or similar structural improvements, however we do not anticipate any impact or changes to the current zoning or land use regulations already in place for these locations and facilities.

The proposed network design does include a Microwave radio link between Walpack Township in Sussex County and the Sussex County Community college.. A new 140' antenna tower and associated 12 X 16 building will be installed at each respective end of this link to support the required microwave dish and associated equipment. The tower and equipment in Walpack Township is planned to be located nearby the existing Township municipal building.

Wetlands

The NJ Department of Environmental Protection has produced a detailed statewide land use data set that indicates areas that are likely wetlands. Wetlands are present in areas throughout the state; and to insure we and all contractors are fully aware of the specific locations, we have developed a mapping application showing the wetlands areas. Verizon and all our contractors

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will utilize the mapped information on these locations during the detailed design and routing phase of the project to avoid these areas as much as possible. As described in the same response, where areas such as wetlands cannot be avoided, techniques such as directional boring will be utilized to minimize impact.

None of the potential changes or upgrades to the existing microwave towers and associated equipment buildings are located on wetlands.

Critical Habitats

The state is in the process of identifying all of the locations in New Jersey classified as Critical Habitat. The state and Verizon will utilize mapped information on these locations during the detailed design and routing phase of the project to avoid these areas. At this time we do not anticipate the final design will involve any project sites or routing that will be near enough to Critical Habitat locations or will affect any threatened, endangered, or candidate species.

We have obtained and mapped information identifying National Heritage Priority Sites in the state. The Natural Heritage Priority Sites Coverage was created to identify critically important areas to conserve New Jersey's biological diversity, with particular emphasis on rare plant species and ecological communities. Natural Heritage Priority Sites are based on analysis of information in the New Jersey Natural Heritage Database. However, these sites do not cover the entire known habitat for endangered and threatened species in New Jersey.

Floodplain

The state is in the process of obtaining the information identifying all of the locations classified as Floodplain. Floodplain areas are present to various degrees in areas throughout the state; and to insure we and all contractors are fully aware of the specific locations, we have developed a mapping application showing the areas designated as Floodplain. The state and Verizon will utilize mapped information on these locations during the detailed design and routing phase of the project to avoid these areas as much as possible. As the final design phase of the project is completed, any construction activities that fall within a Floodplain will be identified and the requested map(s) will be submitted.

None of the potential changes or upgrades to the existing microwave towers and associated equipment buildings are expected to be located in a Floodplain.

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Protected Land

As the initial step in investigating the responses to these questions regarding historical impact, we are working with the New Jersey Historic Preservation Office. We have provided them a list of the network interconnection points and locations and are requesting a detailed listing of properties listed in the National Register of Historic Places with addresses suitable for entry into an interactive map. Once entered we will have an efficient means of quickly identifying any interconnect locations that may correspond to the list. In the event any are identified, we will work through this state agency to develop the appropriate SHPO/THPO approvals.

We do anticipate that some of the buildings or locations we have identified as interconnection points in the network are more than 50 years old. However none of the proposed work (bringing fiber connections to the building via overhead or underground cabling) will have any significant impact on the building or its construction and appearance.

No portion of the proposed network is planned to be located on tribal lands.

Coastal Area

The state has added the information identifying Coastal Management Zones to the interactive map referenced in the questions on Wetlands and Floodplains. The state and our contractors will utilize the mapped information on these areas during the detailed design and routing phase of the project to avoid these areas as much as possible. The overlay shows these Coastal management Zones and the preliminary fiber routing line show any areas of overlap.

Brownfield

The state has identified all of the locations classified as brownfields and added this detail to the interactive map referenced in the preceding questions. Brownfields are present in areas throughout the state; however as detailed in our response above, the state and our contractors will utilize the mapped information on these locations during the detailed design and routing phase of the project to avoid these areas as much as possible. Currently we believe that there will be no need to encroach on any of these areas as the final design and routing plan for the network is completed.

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Uploads

The following pages contain the following uploads provided by the applicant:

Upload Name	File Name	Uploaded By	Uploaded Date
Service Offerings and Competitor Data	G75 - NJ Service Offerings and Competitor Data_PS_Wireless.xls	Ebeid, Adel	03/26/2010
Network Diagram	G79 - Wireless Network Diagram 1.JPG	Ebeid, Adel	03/26/2010
Network Diagram	G79 - Wireless Network Diagram 2.JPG	Ebeid, Adel	03/26/2010
Network Diagram	G79 - Wireless Network Diagram 3.JPG	Ebeid, Adel	03/26/2010
Network Diagram	G79 - Wireless Network Diagram 4.JPG	Ebeid, Adel	03/26/2010
Build Out Timeline	Verizon CCI Build-Out Timeline Attachment 032310 r1.doc	Ebeid, Adel	03/26/2010
Build Out Timeline	CCI Build-Out Timeline St NJ 700MHz LTE 3-22-10.doc	Ebeid, Adel	03/26/2010
List of Community Anchors and Points of Interest	G83-NJ CCI Anchor Detail and POI Attachment FINAL.xls	Ebeid, Adel	03/25/2010

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Task: Submit Application - BTOP		Applicant Name: Mr. Adel Ebeid	

Management Team Resumes and Organization Chart	Mngt Team & Org Chart.pdf	Ebeid, Adel	03/24/2010
Management Team Resumes and Organization Chart	G85 - Summary of Management Team.doc	Ebeid, Adel	03/24/2010
Historical Financial Statements	G65 - Historical Financials NJEDge 063008 FINAL.pdf	Ebeid, Adel	03/26/2010
Historical Financial Statements	G65 - Historical Financials NJEDGE Final 6-30-09.pdf	Ebeid, Adel	03/26/2010
Budget Narrative	G87 NJ Round 2 Budget Narrative 3-26-2010.doc	Ebeid, Adel	03/26/2010
Detailed Budget	Copy of G91 CCI Detailed Budget Attachment0325.xls	Ebeid, Adel	03/25/2010
Pro-forma Forecast	G96 Round 2-CCI Pro Forma Financial Projections 3-25-2010(1).xls	Ebeid, Adel	03/26/2010
Subscriber Estimates	NJ Subscriber Estimates.xlsx	Ebeid, Adel	03/25/2010
Dashboard Metrics	G109 CCI Dashboard 20Attachment_03262010[1].doc	Ebeid, Adel	03/26/2010

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Service Area Data	Service Area Data.xlsx	Ebeid, Adel	03/25/2010
Network Maps	G118 - Wireless Network Map 1.JPG	Ebeid, Adel	03/26/2010
Network Maps	G118 - Wireless Network Map 2.JPG	Ebeid, Adel	03/26/2010
BTOP Certifications	aor.pdf	Ebeid, Adel	03/26/2010
SF-424 C and D	NJCCI SF 424 D Forms[1].pdf	Ebeid, Adel	03/25/2010
SF-424 C and D	G119 Stimulus Round 2 Sf424c.xls	Ebeid, Adel	03/25/2010
Supplemental Information	Brookdale Letter of Support 03162010.PDF	Ebeid, Adel	03/25/2010
Supplemental Information	CC Assoc Letter of Support 03-18-2010.pdf	Ebeid, Adel	03/25/2010
Supplemental Information	CINJ-strickling.pdf	Ebeid, Adel	03/25/2010
Supplemental Information	G86 - CCM BTOP Support Letter.pdf	Ebeid, Adel	03/25/2010
Supplemental Information	Letter to Asst Secretary Strickling.doc	Ebeid, Adel	03/25/2010

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Supplemental Information	LOS edje project.PDF	Ebeid, Adel	03/25/2010
Supplemental Information	Rowan OneTouch Mar 17, 2010 (1).pdf	Ebeid, Adel	03/25/2010
Supplemental Information	SBHCS Letter of Support Broadband-1.pdf	Ebeid, Adel	03/25/2010
Supplemental Information	ZAYO Ltr of Intent.pdf	Ebeid, Adel	03/25/2010
Supplemental Information	Strickling Letter March 19.doc	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support - Christie.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support - DOE.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support - Homeland Security.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support - NENA.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support - Public Advocte.pdf	Ebeid, Adel	03/26/2010

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Supplemental Information	Ltr of Support - Turnpike.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support -BPU.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Ltr of Support -Union County.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	Verizon LOI.pdf	Ebeid, Adel	03/26/2010
Supplemental Information	AboveNet LOI.pdf	Ebeid, Adel	03/26/2010