Close Form | Next | Print Page | About

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received: 09/01/2009

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: NY State Office of Cyber Security & Critical Infrastructure

* b. Employer/Taxpayer Identification Number (EIN/TIN): 14-601-3200

* c. Organizational DUNS: 167372437

d. Address:

* Street1: 30 South Pearl Street, P-2
Street2:
* City: Albany
County:
* State: NY: New York
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 12207-3425

e. Organizational Unit:

Department Name:

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr.
* First Name: William
Middle Name:
* Last Name: Johnson
Suffix:

Title: Assistant Deputy Director

Organizational Affiliation:

* Telephone Number: (518)474-4755
Fax Number:

* Email: william.johnson@cscic.state.ny.us

Close Form | Previous | Next | Print Page | About

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Commerce

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

*** 12. Funding Opportunity Number:**

0660-ZA29

* Title:

Recovery Act - State Broadband Data and Development Grant Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

State of New York

*** 15. Descriptive Title of Applicant's Project:**

Broadband Mapping for New York State

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Close Form | Previous | Next | Print Page | About

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: 21 * b. Program/Project: All

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 10/01/2009 * b. End Date: 09/30/2014

18. Estimated Funding ($):

* a. Federal	4,300,000.00
* b. Applicant	1,294,126.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	5,594,126.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

☐ Yes ☒ No Explanation

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mr. * First Name: Thomas

Middle Name:

* Last Name: Duffy

Suffix:

* Title: Deputy Director

* Telephone Number: 1-518-474-4755 Fax Number:

* Email: thomas.duffy@cscic.state.ny.us

* Signature of Authorized Representative: William Johnson * Date Signed: 09/01/2009

Authorized for Local Reproduction

Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

Introduction and Executive Summary

Governor David A. Paterson has designated the Office of Cyber Security & Critical Infrastructure Coordination (CSCIC) as the sole entity eligible to receive the NTIA State Broadband Data and Development Grant for New York. CSCIC is the state agency with overall responsibility for Geographic Information Systems (GIS) coordination and has been preparing the State's broadband mapping since 2008.

CSCIC requests a grant in the amount of $4.3 million which includes $3.8 million for broadband mapping plus an additional $500,000 for statewide broadband planning activities. CSCIC will undertake the program using a combination of in-house capabilities and resources as well as contractual services. A Project Management Professional (PMP) will be dedicated to this project to ensure successful coordination of all activities. State-of-the-art geospatial and database tools and capabilities will be deployed to ensure efficient and quality delivery of data that meets NTIA requirements. CSCIC will be leveraging a wealth of GIS data and expertise to complete this project. Close coordination will be maintained throughout the project with strategic partners including the Governor's Broadband Development and Deployment Council, the State CIO's Office, the State's Public Service Commission, the NYS Foundation for Science, Technology, and Innovation (NYSTAR), local governments, and others.

Concern over protecting provider confidential information from disclosure under New York's Freedom of Information Law presents unique challenges to working with broadband providers. CSCIC, along with the Public Service Commission, the State CIO's Office, and NYSTAR met with key provider representatives on the development of this proposal. As a result of those meetings we have crafted a flexible approach that offers several options for provider participation. We understand provider concerns and have garnered a high level of cooperation from them.

This proposal demonstrates our full understanding of the NOFA requirements and expected deliverables and highlights the GIS capabilities and expertise that will enable CSCIC to successfully complete this important program.

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1. Data

(a) Data Gathering

The NYS Office of Cyber Security & Critical Infrastructure Coordination (CSCIC) is the lead agency in New York State for Geographic Information Systems (GIS) coordination. In 1996 CSCIC started a collaborative approach to GIS data collection and sharing that has led to an extensive current collection of more than 500 layers of GIS data including framework layers and critical infrastructure asset data. CSCIC maintains this comprehensive collection of GIS data for the benefit of State and local agencies and other GIS users. In support of this function, CSCIC hosts and chairs the NYS GIS Coordinating Body; operates a GIS Clearinghouse website; procures digital orthoimagery for the State; manages, updates, and maintains a statewide streets and addresses database; and hosts the NYS GIS Data Sharing Cooperative to make GIS data easily available to State and local agencies.

Since November, 2008, CSCIC has also mapped the State's broadband availability in support of the Governor's Broadband Development and Deployment Council (Executive Order #22, which established the Council and its duties, is available at: http://www.state.ny.us/governor/executive_orders/exeorders/eo_22_print.html). The initial broadband mapping was completed quickly using a predictive model and other non-confidential data, and a subsequent review and validation of the mapping was performed by local officials and some broadband providers. The mapping was prepared at the Census Block Group level of granularity, which has proven adequate for identifying coverage gaps in the State. Broadband availability gaps have been revealed in a few regional clusters around the State. The mapping has been invaluable for focusing the broadband dialog on real conditions rather than myths and misconceptions. Some very rural areas, for example, have broadband available. Producing this mapping provided CSCIC with valuable insights including issues important to the data providers and the role of detailed broadband mapping in support of policy issues. It also fostered an excellent working relationship with key stakeholders including the Public Service Commission, the Broadband Development and Deployment Council, broadband providers, and community leaders advocating for broadband expansion. CSCIC has a solid understanding of the issues involved in carrying out broadband mapping activities. We are very well positioned to leverage our available data, resources and experience for the detailed broadband mapping specified in the NOFA.

Addressing Provider Concerns in New York State

In preparing its application for submission, CSCIC partnered with the Public Service Commission, the State CIO's Office, the NYS Foundation for Science, Technology and Innovation (NYSTAR) and key representatives of broadband providers operating in New York[1]. CSCIC coordinated a series of open forum meetings with providers resulting in

[1] Provider organizations have included Verizon, AT&T, Frontier Communications, the NYS Telecommunications Association, and the Cable Television Association of NY.

candid discussions on issues of concern to all partners and creative thinking on ways to address those concerns while meeting the objectives of the NOFA.

A central issue for providers in sharing confidential data with CSCIC is protecting such data from unauthorized disclosure. The providers articulated strong reservations regarding the State's ability to protect their confidential data in light of New York's Freedom of Information Law (FOIL). These concerns provided the backdrop for our discussions with the providers concerning various proposals for establishing the processes necessary to collect the information required by the NOFA while protecting the confidentiality of the provider's trade secret and critical infrastructure information.

CSCIC, the other State agencies, and the providers considered a number of different scenarios, including the use of contractors, partnering with not-for-profit entities, and the delivery of confidential information to third parties. Although other states appear to have been able to address the concerns of broadband providers through the use of contractors or by partnering with not-for-profit entities, these structures are not effective in New York due to the fact that FOIL will apply to records in the possession of any entity performing work on behalf of the State.

It was therefore necessary to directly address the providers' concerns regarding the disclosure of proprietary information and a key aspect of that effort was the issuance of the clarification to the NOFA on August 7. The clarification revised the scope of the confidential information to be collected from the providers and allowed CSCIC to establish a tiered participation process, outlined below, under which providers will be afforded the opportunity to exercise their discretion in determining the manner in which they will deliver the requisite data to CSCIC.

Strategy

In light of the disclosure issues unique to New York State, a workable approach for implementing a statewide broadband mapping program is provided with the following strategy:

CSCIC proposes to meet the NTIA broadband mapping requirements using a flexible strategy that addresses New York State's FOIL issues with regard to confidential provider data and maximizes the use of non-confidential information.

CSCIC will enter into non-disclosure agreements with all providers. To the extent that providers deliver confidential information to CSCIC, such information will be subject to this non-disclosure agreement, which cites the federal exemption from disclosure under the Broadband Data Improvement Act (BDIA) and, as appropriate, the mandatory, New York-specific process for protecting trade secret and critical infrastructure information

from disclosure under FOIL. A copy of the model NDA, the final terms of which continue to be discussed with the providers, is attached to this proposal (see Section 6). Under the non-disclosure agreement, CSCIC believes it will be able to offer considerable assurance that a provider's confidential information will not be disclosed unless the provider agrees to such disclosure. CSCIC's ability to provide this assurance is based on an examination of the BDIA, FOIL, applicable case law, and advisory opinions issued by New York's Committee on Open Government, the body responsible for overseeing and advising on FOIL issues, as well as discussions with the State's FOIL experts.

For each of the required elements in the Technical Appendix, as modified by the NOFA clarification, CSCIC has identified a primary data source and at least one secondary source and/or validation source. These data sources are summarized in Table 1 and described further below.

Broadband availability at the Census Block level will be determined primarily from provider data. However, the initial data delivery to NTIA will be broadband availability data predicted at the Census Block Group level from CSCIC's existing broadband mapping efforts undertaken earlier in 2009. This mapping can be delivered to NTIA very quickly, albeit not fully compliant with the requirements of the Technical Specifications. Concurrently, CSCIC will be "ramping up" to full-scale provider data collection through the procurement of contracted assistance and creation of tools and applications to facilitate preparation of fully compliant data using provider sources.

CSCIC anticipates tiers of provider participation, ranging from providers that supply CSCIC with all required data; providers willing to cooperate with CSCIC under conditions whereby their confidential data will not be in CSCIC's possession; and providers who choose to work directly with NTIA to supply their data.

CSCIC proposes to use confidential information, as defined by the clarified NOFA, from providers as the primary source for only two of the NTIA requirements: (i) broadband availability at the Census Block level when derived from customer address data provided to CSCIC; and (ii) middle-mile infrastructure (both highlighted in yellow in Table 1).

CSCIC will execute NDAs with all providers consistent with the terms of the NOFA. The NDAs will cite the federal exemption from disclosure under the BDIA and, as appropriate, invoke the mandatory, New York-specific process for protecting trade secret and critical infrastructure information (FOIL, §89[5]). CSCIC further commits that if the NTIA requirements are clarified or modified again in the future, we will not request from providers any data for this program beyond what is needed to meet the NTIA requirements.

Table 1

Item	Use	Source						
		Predictive Model	Provider w/o NDA	Provder w/NDA	FCC form 477	Wiki or survey	CSCIC-created	Licensed Data
Addr level bb avail	Only to compile block level data		*Script against provider websites (validation)*	Obtain from providers, geocode to blocks		*Public wiki map website (validation source)*		
Block level bb avail	Submit to NTIA	Cable-modem and DSL at Block Group level	Providers or CSCIC geocode to blocks via web app	Providers or CSCIC geocode to blocks via web app	*Validation source at tract level*	*Validation source*		
Wireless avail poly	Submit to NTIA	3G wireless coverage polys done	Shapefile or other data from providers	Shapefile from providers	*Validation source*	*Validation source*		
Provider footprint	Reporting unit for wgtd avg speed		From providers or compile from block level data			*Validation source*	Compile from non-provider sources	*TeleAtlas cable & wire ctrs (validation source)*
Weighted avg speed	Submit to NTIA				*Validation source*	Sampling with speed test		
Avail rate	State use, BIP & BTOP eligibility	*Secondary source*			Primary source			
Subscribe rate	State use, BIP & BTOP eligibility				Primary source			
Middle mile connect pts	Submit to NTIA			Obtain from providers, validate & geo-locate			DSL switch locations from parcel data	
Comm anchor inst	Submit to NTIA						Pts from GIS layers, bb info collection	*Dunn & Bradstreet (validation source)*

Confidential Information per the NTIA definition

Non-Confidential Information per the NTIA definition

Broadband Service Availability Mapping

CSCIC anticipates three options for participation by providers for developing data on broadband availability at the Census Block level:

Option 1: ***Share information voluntarily with CSCIC***. Subject to an NDA, as described above, CSCIC will use the information to prepare data for NTIA. For broadband availability, this will generally consist of CSCIC aggregating customer address data supplied by providers to Census Block summaries required by NTIA. CSCIC will share the Block-aggregated data back to the providers. CSCIC will not retain the customer address data after aggregating to Census Blocks.

Option 2: ***Use CSCIC-facilitated processes***. CSCIC will establish processes for the providers to create Census Block aggregated data without delivering confidential information to CSCIC. These processes will allow providers to use tools created by CSCIC to perform the conversion from customer address data to Census Block summaries. Under this option, CSCIC would never possess address-level customer data from providers and such data would, consequently, not be subject to FOIL.

Option 3: ***Provider aggregation of data***. Providers may choose to perform the aggregation of customer address data to Census Blocks without assistance or involvement from CSCIC. CSCIC will receive only the Block-aggregated data from the provider.

For providers willing to supply their customer address data to CSCIC (Option 1), we will use customer data to geocode to the correct Census Block using a custom geocoding application to be created as part of this proposal. CSCIC has extensive experience building and maintaining streets and addresses data and will use a custom "cascading" geocoding method that first looks for an exact match to an address point. If no exact match is found, the geocoder will interpolate the address using the address range for a street segment. Failure to geocode at the street segment will result in placement of the address in a queue for follow-up analysis.

For providers willing to cooperate with us but not allowing CSCIC to possess their customer address data (Option 2), we will make available a web-based version of our custom geocoding application that will read their customer address records and return the Census Block IDs containing those addresses. The application will be adaptable to operate via an application programming interface (API) for use by more sophisticated providers, or via a standalone application CSCIC can make available to providers on request that will invoke our web-based geocoder. CSCIC will receive only the resulting Block-aggregated data from the provider.

Under Option 3, providers can determine Census Blocks on their own without using CSCIC's geocoding tools. CSCIC will receive only the resulting Block-aggregated data from the provider.

This range of potential data collection methods should accommodate varying provider "comfort levels" while consistently yielding the required Census Block data on broadband service availability. CSCIC will be able to combine data from each method into a comprehensive statewide broadband availability database for delivery to NTIA.

Please note that the foregoing discussion has been limited to mapping broadband availability at the Census Block level. CSCIC understands that for Census Blocks greater than 2 square miles in area the broadband availability data will be aggregated to the street segment and address range within the Block. CSCIC has substantial prior experience working with Census data and has, in fact, already integrated the boundaries of Census units (Blocks, Block Groups, and Tracts) with our high-quality streets and addresses data. CSCIC is fully prepared to meet the requirement for determining street segments and address ranges for large Blocks.

Our initial determination of Census Blocks and street segments that represent the universe of unique locations for reporting broadband service availability is summarized below in Table 2. The actual number of data records to be delivered to NTIA will be a far greater number since many reporting units will have data for multiple providers and/or multiple technologies or speeds.

Table 2

Census Blocks 2000

	Total	Blocks with Households	Blocks under 2 sq mi with Households	Blocks over 2 sq mi (all)	Blocks over 2 sq mi with Households
Blocks	298,088	224,511	221,683	3,294	2,828
% Blocks		75.3	74.4	1.1	0.9
% Land Area		85.2	58.8	33.0	26.4
Households	7,057,269	7,057,269	6,969,728	87,541	87,541
% Households		100.0	98.8	1.2	1.2
Street Segments	1,205,243				78,859
% Street Segs					6.5

Universe of reporting units for broadband availability:

Blocks under 2 sq. mi. with Households	221,683
Street segments intersecting Blocks over 2 sq. mi. with Households	78,859
	300,542

When using census geography to display or analyze broadband, it is appropriate to use only the inhabited area of the State and eliminate Census Blocks covering forest preserve lands, lakes, etc. The map in Figure 1 below shows the location of 73,577 Census Blocks in New York that will be excluded since they lack at least one household. These excluded Blocks represent 25% of the total Block count and 15% of the land area of New York.

Figure 1 - Census Blocks without households

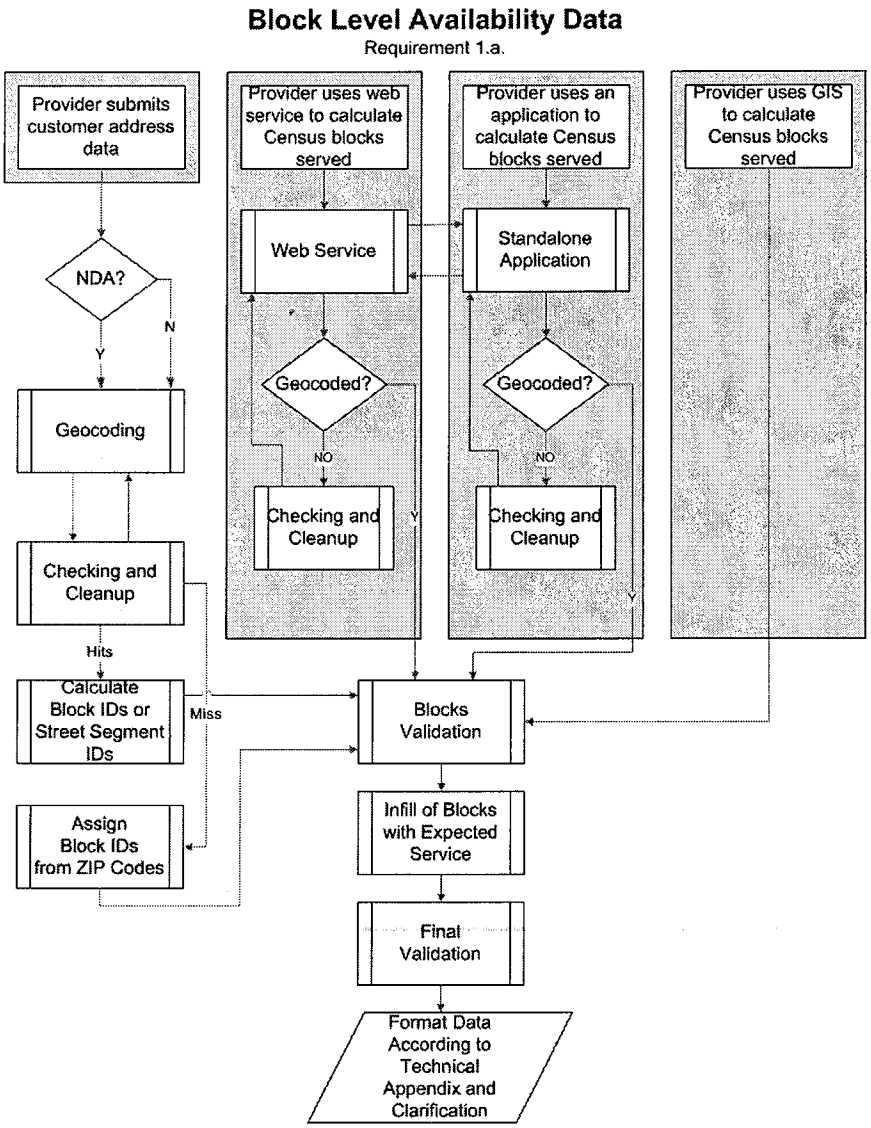
Figure 2 below depicts the 2,828 Census Blocks greater than 2 square miles that contain at least one household. This map shows the areas where broadband availability will be reported using street segments and address ranges within the Blocks.

Figure 2 - Census Blocks over 2 square miles containing households

Once the Census Blocks and Street Segments containing existing customers have been identified, CSCIC will use a variety of "in-fill" processes to determine likely availability of broadband in gaps between the previously identified Census Blocks having broadband service. For example, Blocks within an area otherwise fully served by DSL service and within range of the Central Office switch will be coded as predicted to have DSL service at the same speed as the neighboring Blocks. CSCIC will add a special field to the data indicating that these Blocks are predicted to have broadband availability.

Figure 3 below depicts the workflows for the various options anticipated in developing broadband availability data.

Figure 3



Middle-Mile and Backbone Interconnection Mapping

For producing the data on middle-mile infrastructure, CSCIC anticipates two options for provider participation:

Option 1: ***Share information voluntarily with CSCIC***. Subject to an NDA, as described above, providers will deliver confidential middle-mile information to CSCIC for mapping and validation from secondary sources and submission to NTIA.

Option 2: ***Direct delivery to NTIA***. For providers that choose not to deliver their middle-mile confidential information to CSCIC, we will pursue the establishment of a process under which a provider may prepare the mapping and submit it directly to the NTIA or to a third party entity designated by NTIA.

CSCIC remains hopeful that providers will, under the protections of the NDA, provide their middle-mile infrastructure information directly to CSCIC (Option 1). This will allow CSCIC to use other mapping resources including address points, critical infrastructure layers, digital orthoimagery, parcel data, and other GIS layers to properly locate and validate the provider infrastructure. It is assumed that in many cases the providers have information about the location of their middle-mile infrastructure based on addresses rather than specific latitude/longitude coordinates and CSCIC will perform the necessary geocoding and mapping steps to derive accurate coordinates. CSCIC also agrees that after these mapping steps are performed, we will not retain any confidential provider data beyond what is required for delivery to NTIA.

For providers that do not supply middle-mile infrastructure information to CSCIC, we will be unable to assist in establishing latitude/longitude coordinates or use our expertise and mapping resources to ensure the accuracy of the coordinates. We further understand that under Option 2 the State will not have access to any middle-mile infrastructure information provided directly to NTIA or to a third party entity designated by NTIA. The State considers this an option of last resort to ensure that the mapping requirements of the NTIA are met.

Other Mapping Requirements

Similar workflows will be used to produce the other required data elements (Wireless Services Shapefiles, Weighted Average Speeds, and Community Anchor Institutions). CSCIC has a clear understanding of the requirements and workflows necessary for successful completion of these elements. Workflows for the remaining mapping requirements will adhere to the same high standards as those described in the preceding discussion. All deliverables will be formatted according to the technical specifications provided in the clarified Technical Appendix.

In addition to the data elements required in the NOFA, CSCIC will also map broadband availability rates and subscriber rates using FCC Form 477 data as the primary source and CSCIC's broadband availability predictive model as a secondary source. The differences

in resolution of Form 477 data (Census Tracts) and CSCIC's predictive model (Census Block Groups) with the broadband availability mapping in this project (Census Blocks) will require that we apportion rates indicated at Tracts or Block Groups in the source data to Blocks using ratios of households between the corresponding units. Mapping of availability rates and subscriber rates, while not required by NTIA, is important to the State for policy and priority determinations as well as to support applicants needing availability rate and subscriber rate information at the Block level to determine eligibility for grants in Underserved and Unserved areas under the NTIA's Broadband Technology Opportunities Program. CSCIC is willing to share data on broadband availability rates and subscriber rates with NTIA.

(b) Accuracy and Verification

CSCIC will leverage high-quality GIS data and extensive GIS expertise to validate all data. All address-based information will be mapped using CSCIC's custom geocoder that will attempt to find exact matches to address points before interpolating locations from address ranges on street segments. Geocoding scores indicate the quality and source of the match on each geocoded address. Those addresses that do not geocode correctly to a street segment will be queued for follow-up analysis, which may allow the address to geocode to a ZIP centroid or find the closest match using Soundex comparison to similar street names.

CSCIC has more than six years experience testing and validating contractor-supplied street address edits. We use the authoritative ANSI standard to determine sampling size and acceptance levels (see: ANSI-ASQ Z1.4-2008 *Sampling Procedures and Tables for Inspection by Attributes*). CSCIC will employ these same procedures to sample and test the results of broadband availability geocoding to Census Blocks (or street segments in Blocks over 2 sq. mi.).

Because broadband availability mapping is to Census Blocks, it is essential that Census polygons representing Blocks properly align to streets and addresses data used to geocode addresses. CSCIC has previously performed such integration and can offer highly confident assurance to NTIA that address geocoding will return the proper Census Block ID. It should be noted that during the five year performance period for this project, the US Census Bureau will be releasing updated Census geography and the resulting changes to Blocks will need to be re-integrated and validated with our streets and addresses data. CSCIC has an ongoing streets and addresses maintenance contract with NAVTEQ and is prepared to accomplish this in a timely manner so that broadband data updates to NTIA will incorporate Census Block revisions at the earliest practical opportunity. It should be further noted that Census will be converting from FIPS codes as Block IDs to GNIS codes, and CSCIC will have the code conversion accomplished by NAVTEQ as a contracted deliverable. CSCIC has an MOU in place with the US Census Bureau to share our updated streets and addresses data for incorporation into the TIGER database.

Blocks indicating broadband service can be further validated using other data sources including CSCIC's existing predicted broadband availability which has undergone reviews by counties and providers and is believed to be more than 90% accurate. Additional validation can be obtained from known franchise areas, and to the extent available, last-mile connection point data (CSCIC already has most DSL Central Office switch locations, for example). Other methods will be used to collect information from the public. Planned methods include a web-based speed tester application that asks a user to enter his or her street address and then provides upstream and downstream connection speed information. The application will capture and log the data on speeds, connection type, and IP address. The location of the IP address can be used to validate the reasonableness of the street address entered, which in turn would be used to validate the existence of broadband in a Block or on a street[2]. An excellent example of an online speed test application with these features has been created by the State of Massachusetts and is available at: http://www.massbroadband.org/mapping/survey.html. Other methods such as phone surveys may also be used for validation.

FCC Form 477 data is expected to be very useful as a validation source. CSCIC hopes to have access to the 477 data at the individual provider level, but at the time of the drafting of this proposal no decisions have been announced on whether and how the FCC will allow designated state entities to receive that data and what limitations, if any, will be imposed on its use. If the data is aggregated to include only summary information for all providers offering service within a given Census Tract, its value as a data validation source will be diminished.

Finally, an "in-fill" process will occur after the list of Blocks containing broadband subscribers has been validated. This process is necessary since the NTIA requirement is to map broadband service *availability*, not just subscribers. A variety of data sources and techniques are anticipated to be used and CSCIC proposes to code in-fill Blocks (and in-fill street segments in Blocks over 2 sq. mi.) to indicate that broadband service availability and type are predicted rather than based on subscriber data.

Maximum Advertised Downstream and Maximum Advertised Upstream speeds will be validated using Internet research of advertised offerings on provider websites, wiki mapping, survey methods, and other techniques as needed.

Wireless coverage areas will be validated using a variety of tools which may include Internet research of wireless availability mapping depicted on provider websites, spatial analysis using terrain data, use of an online speed test application (as previously described), phone surveys, and other techniques as needed.

Middle-mile infrastructure data will be validated primarily using CSCIC's high-resolution digital orthoimagery. CSCIC also has prior experience mapping state-provided middle-mile backbone fiber using orthoimagery. Validation will include a completeness test to determine that every broadband service provider has at least one

[2] CSCIC subscribes to an online service http://www.ip2location.com/ that provides lat/long coordinates for IP addresses.

connection to the Internet backbone. Other validation methods will use data such as parcels and address points. The goal will be to ensure that connection points are geo-located on the correct parcel and where appropriate, on the correct building or other visible feature found on the imagery.

Community Anchor Point data is largely available in CSCIC's current GIS data holdings, but efforts will be undertaken to ensure that the layers are up-to-date, complete, and correct. This will be accomplished primarily through outreach to agencies and organizations who maintain the relevant data (for example, the State Education Department for data on libraries). Validation steps will also include comparison of broadband data indicated for each anchor point with the availability offerings in the associated Census Block or street segment.

Because of such a large variety of data sources, CSCIC believes it will encounter a wide range of data quality issues. Our strategy includes flexibility and depth to deal with these issues. However, we anticipate a need to address data quality concerns beyond the planned validation steps and outside of the data structure described in the NOFA. CSCIC looks forward to working with NTIA to identify appropriate solutions to these issues as they arise.

(c) Accessibility

CSCIC has been designated by Governor David A. Paterson as the lead entity for this activity in recognition of CSCIC's ongoing role as the lead mapping/GIS organization for the State as well as its broadband mapping role defined in Executive Order #22, which established New York's Broadband Development and Deployment Council. CSCIC will work to make the broadband mapping as widely accessible as possible. There are several key components for expanding accessibility in this proposal, including the strategy to maximize use of non-confidential information; integration of broadband mapping with a wealth of other GIS data that CSCIC already provides access to; a plan to create an interactive web map where citizens can query broadband information; and distribution of broadband map information in a variety of formats.

CSCIC has been mapping statewide broadband availability since November, 2008 without the use of confidential information from providers. Our methods for predicted availability mapping are described in Section 2(b) of this proposal, but a key element has been the openness with which the mapping can be shared. CSCIC has been able to post the mapping on a public website (see: http://www.nysbroadband.ny.gov/maps/maps.htm) for access and review by those wishing to inform us about corrections or to validate our predicted levels of broadband. The maps were posted, by county, as GIS data (shapefiles), as well as Adobe .pdf format map images with accompanying Excel spreadsheets, and as KML files which open automatically in Google Maps. During the initial review/validation cycle, a total of 7,398 records were provided back to us, with most being confirmations that our predicted mapping was correct. The remaining 328

were corrections which were incorporated into the GIS files. The maps currently on this website reflect these edits.

Executive Order #22 tasked CSCIC with mapping broadband availability for overlay with other layers of mapped data including Distressed Areas and other information in support of the policy objectives of the Council[3]. It is anticipated that the Council will be interested in a number of other map overlays such as information on home availability of broadband for each of more than 700 school districts, analysis of business corridors where broadband capacity may be lacking, fiber "backbone" loops for which the State has ownership or agreements or contracts to provide capacity for the State's enterprise network infrastructure (NYeNet), and much more. It is also expected that the mapping activities to be carried out in support of the Broadband Development and Deployment Council will dovetail with the NTIA mapping requirements. The Council, as a State entity, operates openly and publicly and the results of Council activities are posted on its website (http://www.nysbroadband.ny.gov/).

In addition to Executive Order #22, CSCIC hosts the State's GIS Clearinghouse website (www.nysgis.state.ny.us), where CSCIC's GIS data as well as GIS data hosted on behalf of other agencies and organizations are publicly available. One popular example is CSCIC's orthoimagery viewer where citizens can interactively view and download high-resolution imagery, including earlier versions back to the mid-1990s, for any location in the State (see: http://www.nysgis.state.ny.us/gateway/mg/). These data sources are cited here as evidence of CSCIC's mission to broadly promote access and use of GIS data. We will do the same with all publicly releasable aspects of the broadband mapping.

State Broadband Map

CSCIC will create a separate interactive broadband web map where citizens will be able to search availability by address and learn about available broadband services. For an address search, results will include all providers offering services in the corresponding Census Block (or street segment in Blocks over 2 sq. mi.) along with relevant technology and speed tier information. Links and phone numbers to the providers will be listed to ease the process of subscribing for service. Other layers of information from CSCIC's large collection of GIS data will be included as part of this web map. We anticipate including wiki features to allow citizens to tell us about broadband at their address and to run an online speed test where the results will be captured for use by CSCIC. Provider footprints, types of broadband service, Census demographic details, and other information will also be depicted. CSCIC anticipates creating the broadband web map using web services so that other online mapping applications built by other agencies and

[3] "Distressed Areas" are defined in EO22 [definition abstracted here] as: (a) Census Tracts with 20% poverty rate or 20% rate of public assistance and unemployment rate at least 1.25 times greater than the statewide unemployment rate, or (b) a town, city, or village where either full value property wealth or the ratio of personal income to the statewide average is 55% or less.

organizations can ingest the broadband map layers via a live connection to CSCIC's web services[4].

In addition to the interactive broadband web map and live web services, the GIS layers of broadband map information will be available for download in non-proprietary formats including shapefile and KML.

(d) Security and Confidentiality

As outlined in the section on data gathering, CSCIC engaged broadband service providers in New York to address their concerns relating to CSCIC's ability to protect provider data delivered in support of the mapping required by the NOFA. These discussions served a useful purpose by focusing CSCIC on its internal processes for protecting data and on its legal authority to exempt provider data from public disclosure. One of the tangible results of the discussions was a model non-disclosure agreement under which providers will gain assurance that the information will be adequately secured and will be protected from disclosure to the maximum extent permitted by applicable law. A copy of the model NDA, the final terms of which continue to be discussed with the providers, is attached to this proposal (see Section 6).

With regard to its ability to fulfill the security and confidentiality requirements of the NOFA and its obligations under the model non-disclosure agreement, CSCIC notes the following:

- As the agency established to address New York State's cyber security readiness and critical infrastructure coordination, CSCIC has extensive experience in receiving, evaluating, and securely storing sensitive information supplied by State and federal agencies, including the United States Department of Homeland Security, and by commercial entities.
- CSCIC is also responsible for developing and distributing policies regarding cyber security and has issued a mandatory, Statewide Information Security Policy (http://www.cscic.state.ny.us/lib/policies/) which outlines the minimum requirements, ethics, responsibilities and accepted behaviors required to establish and maintain a secure environment, and achieve the State's information security objectives. This Policy is modeled on ISO 17799/27002.
- CSCIC has issued a Statewide Information Classification and Control Policy and accompanying Information Classification and Control Standard (both available at: http://www.cscic.state.ny.us/lib/policies/) to define a classification scheme for information, provide procedures for classifying information, and supply baseline controls to protect the confidentiality, integrity, and availability of information. The classification scheme was based on the National Institute of Standards and Technology (NIST) Federal Information Processing Standards (FIPS) Publication 199 - Standards for Security Categorization of Federal Information and

[4] Non-proprietary standards developed by the Open Geospatial Consortium (OGC) including Web Mapping Services (WMS), Web Feature Services (WFS), and KML file format will be used to ensure availability of the broadband map information to the widest number of potential users.

Information Systems. NIST 800-53 was used as a reference in identifying controls. The information received from broadband providers will be classified with a confidentiality of high and will be subject to the rigorous controls required by the Standard.

- CSCIC's information technology systems are protected by 24/7 managed security services provided by Symantec Corporation and by CSCIC's own highly skilled cyber incident response team. In addition, CSCIC's web facing systems are scanned for vulnerabilities each month.
- CSCIC employees are subject to a statutory prohibition against disclosing confidential information acquired in the course of their official duties and contractors engaged to support the work required by the NOFA will be subject to CSCIC's standard contractual provision requiring the maintenance of strict confidence with respect to any confidential information to which the contractor, its officers, agents, employees, and subcontractors, if any, have access.

CSCIC will vigorously protect confidential information but will employ the maximum possible transparency with non-confidential data and information.

2. Project Feasibility

(a) Budget

CSCIC seeks $4.3 million in NTIA funding, inclusive of $3.8 million for mapping activities and an additional $500,000 for closely related planning activities. We propose an in-kind match of $1,269,126 or 29.5%, substantially exceeding the 20% State match requirement of the NOFA. A summary budget spreadsheet is shown in Table 3 below.

Project Staffing

A significant portion of the proposed budget is for staff augmentation at CSCIC. We propose to carry out most of the production activities in-house. To do this, we will need to reallocate some existing internal staff, and bring in additional, new staff. A major consideration for CSCIC in making this staffing proposal is to use the NTIA grant as stimulus funding for new jobs in New York. CSCIC will create 7 new, temporary positions to be filled specifically for this project, contingent on control agencies' approvals to establish new positions. These positions will be paid hourly to perform work as GIS and IT technicians. Staffing the project in this manner will provide in-state employment opportunities, keeping New Yorkers here rather than seeking employment out of state, as well as paying State income tax and strengthening our economy by paying rent, shopping, and entertaining locally. This staffing plan is also more cost effective; with a total burdened labor rate at roughly 1/3 the rate for comparable contract employees available on State contracts. Contracted staff may also be used as necessary.

In addition to establishing new positions, CSCIC proposes to fund an existing senior GIS manager to function as Project Director. The Project Director duties will be allocated for 75% of the incumbent's time for the first year of the project and 50% for the remaining four years. The Project Director will work closely with a dedicated Project Manager and will be responsible for allocating resources and overseeing the project. CSCIC proposes to contract for a Project Management Professional (PMP)[5] to work in-house at CSCIC for the first two years of the project. The Project Manager will be responsible for all scheduling, tracking, reporting, and related project management duties and will make recommendations on resource deployments to the CSCIC Project Director. After the second year, PM duties will be transitioned to the Project Director. CSCIC expects the overall level of effort to stabilize at a substantially lower level beginning in the third year.

We anticipate additional CSCIC effort from a variety of other existing staff will be necessary to carry out the project, but these will not be funded directly with the grant. Instead, the standard 10% administrative overhead rate that CSCIC applies to all projects will cover those additional efforts.

[5] The Project Management Institute, Inc. (http://www.pmi.org) has established the most widely recognized certification for project managers. Candidates who successfully complete rigorous qualifications and testing carry the title Project Management Professional, PMP.

Table 3

	Year 1	Fed Q1	Fed Q2	Fed Q3	Fed Q4	Year 2	Year 3	Year 4	Year 5	TOTAL
Personnel										
Project Director	63,295	[illegible]	[illegible]	[illegible]	[illegible]	47,162	47,162	47,162	47,162	$251,943
GIS Techs	290,400	[illegible]	[illegible]	[illegible]	[illegible]	103,665	103,665	103,665	103,665	$705,060
IT Infra. Specialist	57,600	[illegible]	[illegible]	[illegible]	[illegible]	28,800	28,800	28,800	28,800	$172,800
App. Developer	86,400	[illegible]	[illegible]	[illegible]	[illegible]	43,200	43,200	43,200	43,200	$259,200
TOTAL	497,695	[illegible]	[illegible]	[illegible]	[illegible]	222,827	222,827	222,827	222,827	$1,389,003
Fringe Benefits										
Project Director	31,647	[illegible]	[illegible]	[illegible]	[illegible]	23,581	23,581	23,581	23,581	$125,971
Travel	3,000	[illegible]	[illegible]	[illegible]	[illegible]	1,000	1,000	1,000	1,000	$7,000
Equipment										
Servers, desktops, networking	245,000	[illegible]	[illegible]	[illegible]	[illegible]	24,500	24,500	24,500	24,500	$343,000
Software	50,000	[illegible]	[illegible]	[illegible]	[illegible]	10,000	10,000	10,000	10,000	$90,000
TOTAL	295,000	[illegible]	[illegible]	[illegible]	[illegible]	34,500	34,500	34,500	34,500	$433,000
Supplies	0	[illegible]	[illegible]	[illegible]	[illegible]	0	0	0	0	$0
Contractual										
Project Manager	288,000	[illegible]	[illegible]	[illegible]	[illegible]	288,000	0	0	0	$576,000
Public Outreach & Sampling Contract	40,000	[illegible]	[illegible]	[illegible]	[illegible]	15,000	15,000	15,000	15,000	$100,000
Application Dev.	240,000	[illegible]	[illegible]	[illegible]	[illegible]	44,000	44,000	44,000	44,000	$416,000
Space rental for new staff	30,000	[illegible]	[illegible]	[illegible]	[illegible]	15,000	10,000	5,000	0	$60,000
TOTAL	598,000	[illegible]	[illegible]	[illegible]	[illegible]	362,000	69,000	64,000	59,000	$1,152,000
Other										
Data Acquisition	18,000	[illegible]	[illegible]	[illegible]	[illegible]	18,000	18,000	18,000	18,000	$90,000
GIS Data Dev for BB work	36,000	[illegible]	[illegible]	[illegible]	[illegible]	34,256	34,256	34,256	34,256	$173,025
Planning Tasks	100,000	[illegible]	[illegible]	[illegible]	[illegible]	100,000	100,000	100,000	100,000	$500,000
TOTAL	154,000	[illegible]	[illegible]	[illegible]	[illegible]	152,256	152,256	152,256	152,256	$763,025
Total Direct	1,579,342	[illegible]	[illegible]	[illegible]	[illegible]	796,164	503,164	498,164	493,164	$3,869,999
Indirect Charges										
10% Admin. Fee	86,000	[illegible]	[illegible]	[illegible]	[illegible]	86,000	86,000	86,000	86,000	$430,000
TOTALS	$1,665,343	[illegible]	[illegible]	[illegible]	[illegible]	$882,164	$589,164	$584,164	$579,164	**$4,300,000**

Project Contracting

CSCIC will use contractor assistance on several aspects of the project.

In order to support the needs of providers that choose to exercise the option of using a geocoding web service to avoid exposing their confidential customer records, CSCIC will use contractor assistance to develop and support a web service that includes the required functionality to geocode and return customer address records referenced to Census Blocks. This capability will be available to providers via an application programming interface (API). An additional standalone application will be developed to provide similar capabilities to providers without the need to write computer code to integrate with our API. This is likely to be more useful to smaller, less sophisticated providers with smaller numbers of customer records to process.

Contractor assistance will also be used to develop other tools, which may include development/implementation/configuration of the ETL tools, a wiki web map, a broadband speed test tool or other tools for validation checks. Similar assistance from contractors will be used to create the web services architecture needed to support our State broadband web map and data publishing capabilities. The State broadband web map is envisioned to serve as the central State website for access to broadband mapping information. The site will include the public broadband web map which can be searched by address to find broadband service providers, data downloads of relevant broadband map layers, as well as the wiki map functions for the public to tell us about their broadband service and to conduct speed tests. Data captured from the public web map applications will be augmented with additional sample data as needed.

Finally, CSCIC will contract with a firm experienced in outreach and sampling methods to collect an appropriate sample of broadband subscriber information and speed test results for the computation of weighted average speeds.

Equipment and Software

CSCIC's current IT infrastructure is near capacity in terms of server capacity, storage capacity, data center power capacity, and physical space. In order to process the data required to fulfill the requirements of the project, infrastructure updates will be required. The budget proposal includes additional SAN storage to support the data processing, GIS analysis and data storage, and to support the additional server infrastructure required for the project. CSCIC will also require additional power capacity to support the additional servers and storage required. Additional space will be required to accommodate the staff being added to support the project. The current CSCIC network will be extended to the new workspace to be developed for the additional staff. IT resources such as desktop computers will also be required to support the additional staff.

The project will require licenses and hardware for additional software to support the specific data processing requirements of the proposed business process. An additional GIS server will be implemented to handle the many geoprocessing and mapping aspects

of the project. Data integration and data standardization software (Extract, Transform, and Load, ETL) will be used to process the data feeds from the approximately 100 providers in New York State.

The total estimated expense for equipment and capabilities is $535,000 and this equipment must be purchased, installed, and configured as quickly as possible after grant award. Maintenance costs of $78,000 per year for years 2-5 are also included.

Budget Contingencies

CSCIC is proposing the foregoing budget based on preliminary internal estimates of contractual costs and has not been able to obtain contractor quotes for the proposed services. It is likely that adjustments in proposed budget allocations will be needed once actual contract costs are known. CSCIC understands that the budget cannot exceed $3.8 million for mapping activities and $500,000 for planning, and will rigorously maintain a budget cap at those levels. Adjustments may also be needed in the staffing elements of this budget proposal. If processes for creating and filling the proposed temporary new positions are delayed or disapproved, CSCIC is prepared to use standing State contracts to bring in the required staff. Under these circumstances there will be fewer total hours that can be funded towards the temporary State positions since contract staff or use of existing permanent State staff are at higher hourly billable rates.

In-Kind Match

CSCIC will exceed the 20% State match requirement with in-kind services. Assuming that our full grant request of $4.3 million is awarded, the 20% State match requirement is $860,000. We propose an in-kind match of $1,269,126 or 29.5%.

The work carried out on our existing broadband mapping work from February 17, 2009 to present will be applied in full toward the match, as that data will constitute our initial data delivery to NTIA and will also be an important secondary source and data verification source for our subsequent preparation of data under this project. The value of staff time expended on broadband mapping over that six month period was $193,082.

The bulk of CSCIC's proposed in-kind match is a reasonable portion of the value of GIS data being contributed to this project. The largest of these is the contract value of CSCIC's current ongoing contract with NAVTEQ for licensing and maintenance of streets and addresses data. This data will be an essential element of our geocoding capabilities and also contains the Census Block polygons realigned to properly fit our high-quality street alignments. We use the streets and addresses data for other purposes and therefore propose to allocate 50% of the annual base contract value towards our in-kind match. This will total $900,000 over five years.

The value of Tele Atlas wire center data licensed by CSCIC will also be applied towards our in-kind match requirement, again at 50% of the licensing fee incurred by CSCIC,

totaling $14,062 over five years. Similarly, a 50% share of our licensing fee for Dun & Bradstreet employer data will be applied, totaling $86,982 over five years.

Finally, we propose to assign 20% of our Enterprise License Agreement with ESRI towards our in-kind match, totaling $75,000 over five years. We will be making extensive use of ESRI software for this project and all additional staff hired for the project will need ESRI software licenses installed on workstations for their use. In addition, ESRI technology will be used for our custom geocoding tools, interactive State broadband web map, and data management.

Planning

CSCIC and other strategic partners propose to use NTIA planning funds to support several key activities. These activities will leverage the mapping to define and promote broadband priorities in the State and further engage broadband stakeholders in the advancement of the State's broadband strategy. Please see Section 5 for a complete description of proposed planning activities. In brief, they include:

- Additional mapping activities required under NYS Executive Order #22
- Support for activities of the Broadband Stimulus Program Office
- Commission a study and analysis of business needs for industrial-level Internet connectivity
- Commission a study of broadband adoption rates

Please note that we will provide a detailed cost breakdown on the proposed planning activities upon approval of our proposal and after we engage qualified contractors for bids on several of the activities. Contractor bids will assist us in determining the eventual allocations of the planning funds. CSCIC understands that a maximum of $500,000 is available from NTIA to support these activities. A separate budget spreadsheet for proposed planning activities is not provided, but please note that planning funds are included in the budget spreadsheet shown in Table 3, nominally indicating that the funds will be used over the five year performance period of the grant.

(b) Applicant Capacity, Knowledge and Experience

Broadband Experience

New York State began working toward broadband expansion in 2008, which culminated in the creation of the Broadband Development and Deployment Council through Governor Paterson's Executive Order #22. The Council has articulated policy for the State through the New York State Broadband Strategy (see: http://www.cio.state.ny.us/assets/documents/Final_Broadband_Strategy_June2009.pdf). The strategy is a comprehensive and balanced mix of broadband infrastructure expansion and effective community outreach programs to stimulate demand, promote digital literacy, and educate disadvantaged, disenfranchised, and uninformed populations for sustainable adoption. Additionally, the strategy aligns with broadband grant provisions of

the American Recovery and Reinvestment Act (ARRA) of 2009, (Broadband Stimulus Provisions) which provides national funding to expand broadband access to underserved and unserved, urban and rural areas.

Executive Order #22 also tasks CSCIC with providing the Council with GIS support and broadband mapping.

Existing Broadband Mapping Efforts

Current mapping effort has been primarily focused on *availability*, as opposed to subscriber rates, of wired broadband service (cable-modem and DSL) to residential households across the State. In addition, availability of 3G wireless broadband service has been mapped statewide. Some Fiber backbone and other infrastructure have previously been mapped.

Because of the difficulties with the timeliness, availability, and restrictions associated with proprietary data from the provider companies, New York's approach was to use only publicly available data. Our method entailed creating predictive availability layers (described below); validation of those layers through a process involving community review and provider review; and map layer revisions based on that validation prior to online publication by the State.

For the predicted cable-modem broadband availability, our method involved creation of a GIS predictive model of likely cable-modem build-out based on a two-tier cluster analysis of housing address densities. The model was calibrated and validated for one county through an on-site review of the maps by a cable provider company. See Figure 4 below showing address points predicted to have cable-modem broadband availability for Schoharie County.

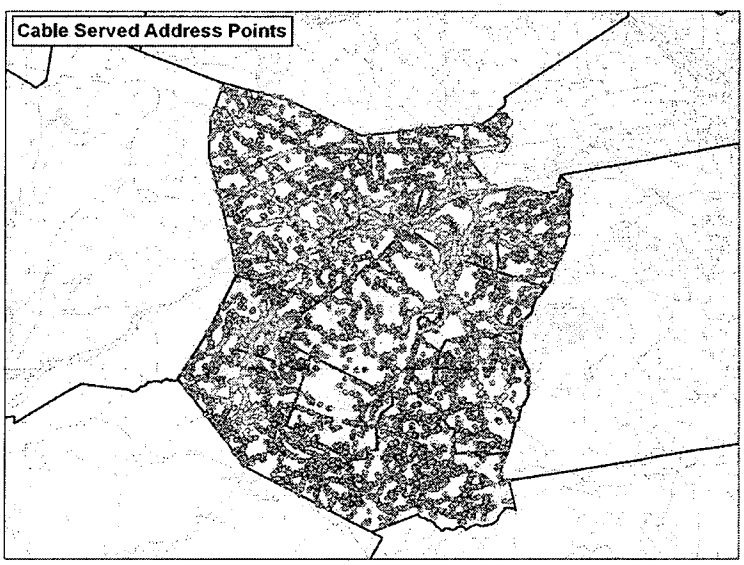
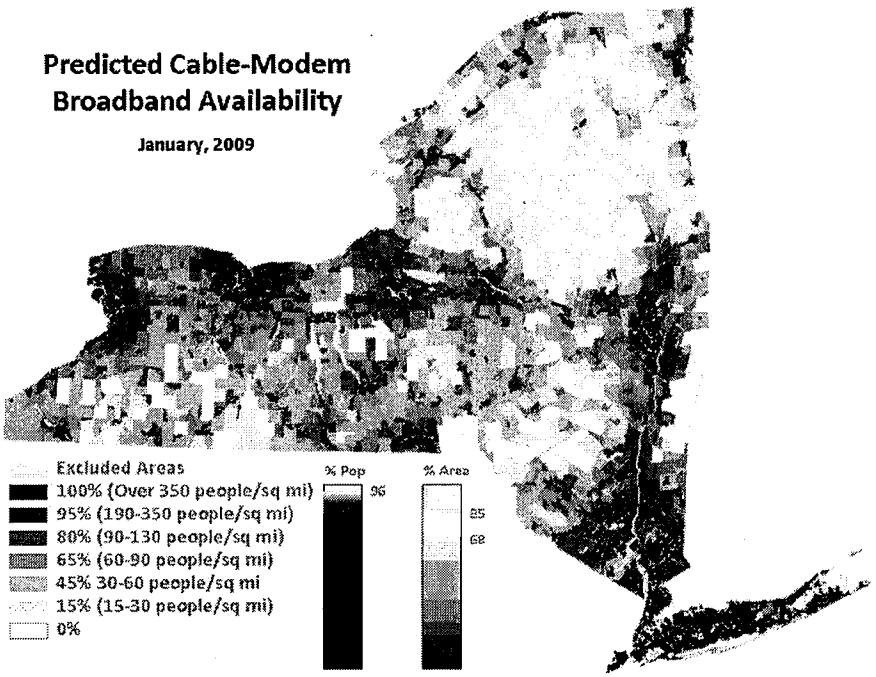


Figure 4. Schoharie County predicted cable address points

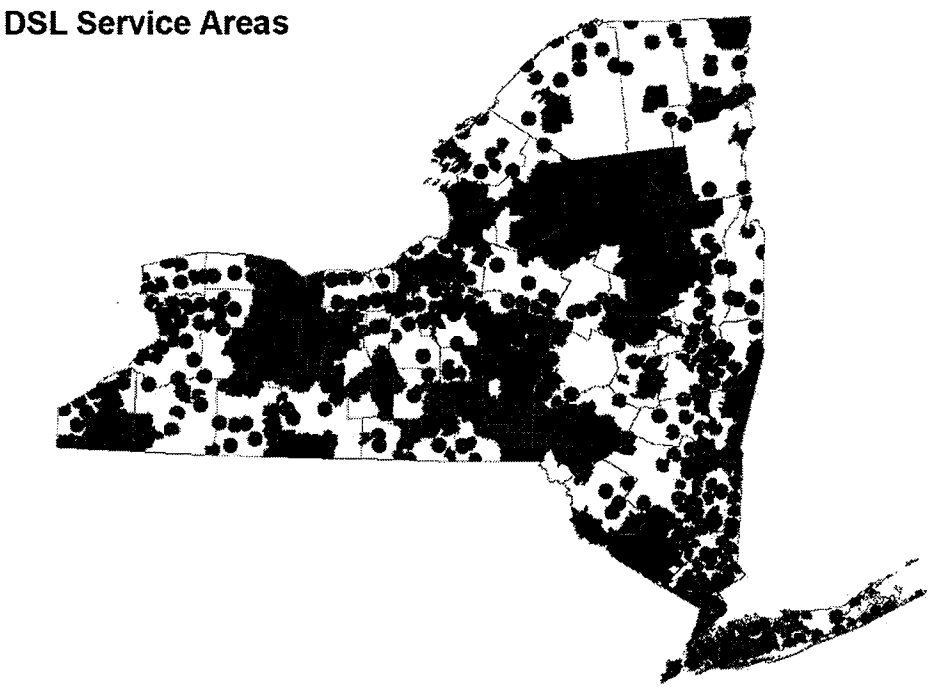
The lack of quality address points in most other counties required that we correlate to other data for use statewide. We obtained a high correlation with population density data at the Census Block Group level and extrapolated statewide to create a statewide map of predicted cable-modem availability, shown below in Figure 5.

Figure 5



A similar coverage map of DSL availability was created by determining where telephone exchange switches offer DSL service. Some of this information was collected from FCC filings, but much of it was obtained through an automated script which interrogated the website of the dominant DSL provider to determine where DSL is available. Permission was granted by the company for us to run this script against their website and we shared our results with them afterwards. Further research for the small independent telephone companies generally involved phone calls to inquire about DSL availability in their operating footprint. When it was determined that a company provided DSL throughout an exchange area, a GIS polygon representation of the exchange was coded to indicate that the entire exchange was served. Once the DSL switches and exchange area research was complete, a buffer of 3.4 miles was applied to the switch locations and these buffer areas were combined with DSL coverage from the independent telephone companies to yield a statewide map of predicted DSL availability, shown in Figure 6 below.

Figure 6

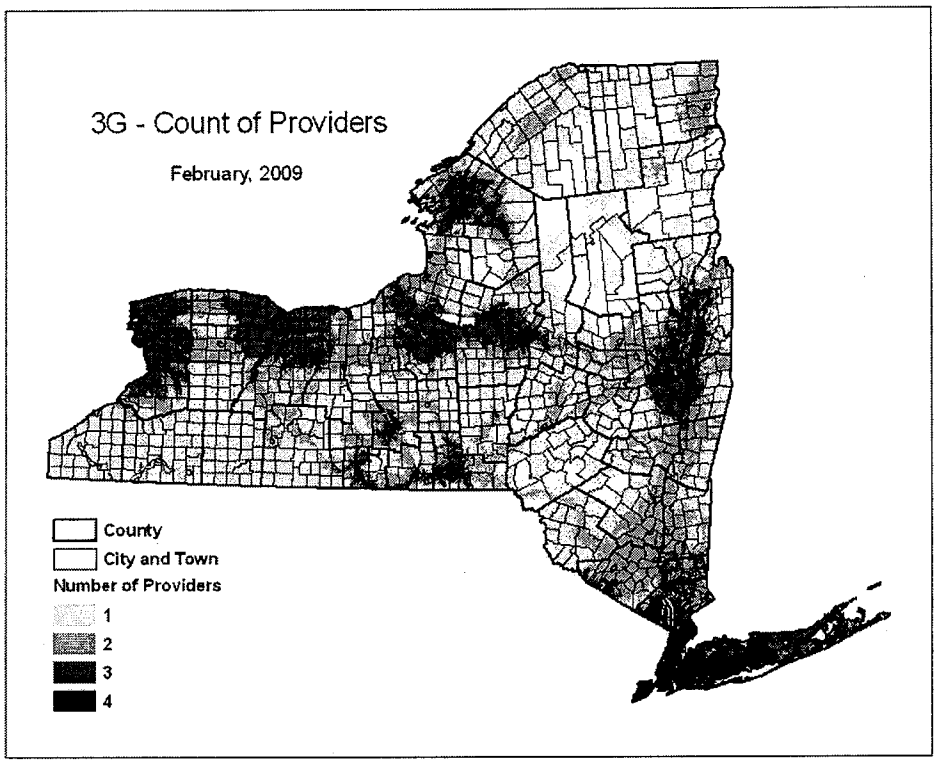


Mapping of 3G wireless service was straightforward and involved "scraping" information from online coverage maps provided on the websites of the four companies offering 3G wireless broadband service in the State. Images (screen captures) of the coverage maps were registered and mosaiced in GIS and the edges of the coverage areas were digitized to create a statewide layer for each of the provider companies. The resulting 3G availability mapping is thus a re-creation of the layers shown on the company websites for public consumption. A composite map showing coverage of all four 3G providers is shown below in Figure 7.

CSCIC then conducted a review and validation process to transition from 'predicted' to 'validated'. Instructions and review materials for each of the State's counties were provided on a public website. In the 5 counties comprising New York City, results of a comprehensive broadband study completed in 2008 by New York City[6] were incorporated into the statewide map. Targeted outreach for community review took place with Chief Information Officers (CIOs) in each county, who coordinated community review within their respective counties. Review was also targeted to provider companies through their respective statewide industry associations for cable television providers and telecommunications providers. The map is coded to indicate all areas that have been validated. Participants in the review and validation process were asked to provide contact

[6] The NYC Department of Information Technology and Telecommunications hired Diamond Management and Technology Consultants to study broadband issues. See their July 2008 summary report at: http://www.nyc.gov/html/doitt/downloads/pdf/bac_presentation_7_30_2008.pdf

Figure 7

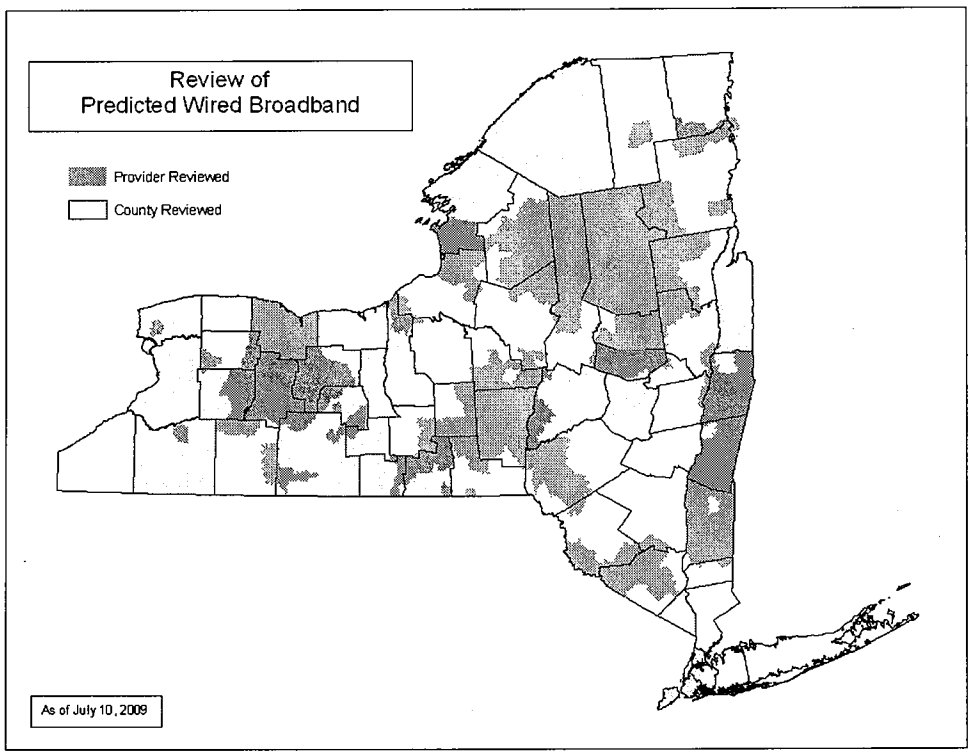


information and to identify sources used to validate the maps as well as provide a confidence score (on a 1-5 scale) on any corrections they provide back to us. During the initial review/validation cycle, 27 counties and 8 providers sent us feedback. A total of 7,398 records were provided back to us, with most being confirmations that our predicted mapping was correct. The remaining 328 were corrections which were incorporated into the GIS files. The map below in Figure 8 shows areas where reviews were conducted. County broadband availability maps which reflect all edits received are available at (http://www.nysbroadband.ny.gov/maps/maps.htm)

Some key points concerning our process:

- Our process has been transparent with regular reporting to the Broadband Council and its Action Teams, which include the stakeholders. This high level of transparency is consistent with the objectives of the ARRA.
- Since no proprietary data was used, there are no limitations on how the resulting map can be released or shared.
- The provider companies have been willing to participate in our process; they understand the need and value of the State having an accurate broadband map; and we understand and respect their concerns regarding proprietary data.

Figure 8



- There have been scattered local efforts to assess, inventory and/or map broadband availability in parts of our State and those efforts are being incorporated into our statewide project.
- The overall level of effort on this project has been modest, with much of the work carried out part-time by a team of five GIS staff at CSCIC over a period of four months.

A presentation file containing many graphical samples to illustrate our process as well as potential uses of the map is available at:
http://www.nysgis.state.ny.us/events/documents/broadband_mapping.pdf.

Other Relevant Experience

CSCIC is the lead agency for GIS coordination in New York State government. Through its various programs, a significant amount of valuable GIS data is made available to other State agencies, local governments and the public. Many of these datasets, especially orthoimagery and address data, are used statewide for mapping existing infrastructure and planning new infrastructure projects including broadband build-out. The major programs include:

- *Statewide Digital Orthoimagery Program*
  CSCIC contracts with an orthoimagery vendor to produce high-resolution, high-accuracy orthoimages for 25-30% of the State every year. This $2 million per year

program offers cost-share options for counties to upgrade their imagery to higher resolutions or band types. The resulting data is rigorously checked and then made available to the public for viewing and download through an online web application (http://www.nysgis.state.ny.us/gateway/mg/).

- *Streets and Addressing Program*
  CSCIC is responsible for mapping the State's 140,000 mile road network. CSCIC coordinates edits from local government partners and contracts with a vendor to produce updates to roads and streets throughout the State, including changes in addressing. The $500,000 per year program will deliver, for the first time, complete statewide coverage of address points by early 2010.
- *Critical Infrastructure Response Information System (CIRIS)*
  CIRIS is the result of a $4 million project to develop a highly secure, web-based application for the housing, maintenance and availability of critical infrastructure data statewide. It features a GIS-based user interface that allows the data to be combined, viewed and analyzed. It was originally developed to support emergency response, but has recently been extensively used by the State's law enforcement community.
- *GIS Clearinghouse*
  CSCIC provides an online application for the housing and sharing of GIS data among members of the statewide GIS Data Sharing Cooperative. Membership in the Cooperative is free to any government or non-profit organization.

CSCIC staff has extensive experience in mapping and GIS. As the mapping arm supporting the Governor's Office, we produce a wide variety of maps and GIS-derived data as required. Most recently, CSCIC has been providing statewide mapping of the projects being funded by the American Recovery and Reinvestment Act (see web map at: http://www.recovery.ny.gov/maps/arracertifiedprojectsmap.cfm).

The CSCIC Team

CSCIC as a State agency has a total staff of 49 State employees, augmented by additional in-house contract staff. The organization consists of a Cyber Security team responsible for statewide cyber security policies and managed security services; a GIS team providing statewide GIS coordination and mapping of critical infrastructure; an Administrative Services group handling budgets, contracts, and coordination with control agencies; an Information Technology team providing full IT support to the agency, and an Executive leadership team. The agency is led by Director William F. Pelgrin, who was Director of the NYS Office for Technology prior to establishing CSCIC in 2002. Mr. Pelgrin is recognized nationally and internationally for his leadership and expertise in cyber security, critical infrastructure protection, GIS, and related technology and policy issues.

CSCIC has a highly capable and experienced team of professionals. Key personnel available to support this project in various capacities include:

William F. Johnson, *Assistant Deputy Director*

Mr. Johnson functions as Operations Manager on CSCIC's Executive team and has 24 years of experience managing GIS activities for the State. He is Chair of the GIS Coordinating Body and provides strategic direction and oversight for all GIS activities at CSCIC. He is Past President of the National States Geographic Information Council (NSGIC, 2003-4). He was previously Director of Mapping & GIS at the NYS Dept. of Transportation.

Frank Winters, *GIS Manager*

Mr. Winters is responsible for all GIS activities at CSCIC, with management responsibilities for the full GIS team and various contracted services. He has 20 years of GIS experience and was previously GIS Manager at the NYS Dept. of Transportation.

Thomas Henderson, *GIS Data Manager*

Mr. Henderson is responsible for the management of CSCIC's extensive catalog of GIS data, including partnerships with many other agencies and organizations that regularly provide updates to CSCIC. He has 32 years of mapping and GIS experience including previous positions as GIS Manager at the New Mexico Dept. of Transportation and as a Cartographer at the US Geological Survey.

Cheryl Benjamin, *Streets & Addresses Data Manager*

Ms. Benjamin has been responsible for the production and maintenance of New York's statewide Streets & Addresses database since its inception in 2001. She has 21 years of GIS and mapping experience and was previously a GIS Project Manager at the NYS Dept. of Transportation.

Tim Ruhren, *Digital Orthoimagery Program Manager*

Mr. Ruhren is responsible for the statewide Digital Orthoimagery Program which procures new, high-resolution imagery for a portion of the State every year. He is also responsible for providing GIS support to the State Emergency Management Office during emergency activations. He has 19 years of mapping, photogrammetry, and GIS experience and was previously a Photogrammetry Manager at the NYS Dept. of Transportation.

Robert Gehrer, *Critical Infrastructure Response Information System (CIRIS) Manager*

Mr. Gehrer is responsible for the development and operation of CIRIS, which was created under Mr. Gehrer's oversight as a web-based GIS tool for emergency preparedness and public safety applications. He has 17 years of GIS experience and previously managed the GIS division for a private sector engineering firm.

Don Welsh, *Spatial Database Administrator*

Mr. Welsh is responsible for technical administration of CSCIC's extensive spatial databases, currently managed with Oracle and ESRI technologies. He has 16 years of GIS experience and previously was a Senior GIS Analyst at the NYS Public Service Commission.

Marty Goldblatt, *IT Director and Chief Information Officer*

Mr. Goldblatt manages the CSCIC Information Technology Unit, with overall responsibility for servers, networks, desktop support, application development, web support, and help desk. He has 25 years of IT and GIS experience and previously was GIS Manager at the NYS Office of Real Property Services.

Thomas D. Smith, *Chief Counsel*

Mr. Smith leads the CSCIC Counsel's Office with responsibility for legislation, contracts, and other legal matters. He will have the lead responsibility for NDAs, FOIL issues, and procurements for this project. He has 26 years of experience practicing law for the State and was previously in the Counsel's Offices at the NYS Office for Technology, the Office of State Comptroller, and the Dept. of State.

In addition to these key personnel, CSCIC has a highly experienced and capable staff of GIS professionals and technicians who support all of the agency's GIS activities. Several of these personnel have participated in the broadband mapping efforts described earlier in this narrative.

CSCIC works in partnership with many other organizations and is fully prepared to employ its standard collaborative approach to this broadband mapping project. Further, CSCIC routinely contracts for outside services to augment in-house capabilities and is experienced in contract management and review/acceptance of contractor-prepared deliverables.

3. Expedient Data Delivery

CSCIC has identified several major challenges to meeting the data delivery schedule set forth in the NOFA. Instead, CSCIC proposes an initial delivery of existing broadband availability data, and full delivery of data meeting the clarified requirements listed in the Technical Appendix by September 1, 2010 with semi-annual updates through September 1, 2014.

Issues Pertaining to the NTIA Schedule

On August 7, New York was granted a waiver under Article K of the NOFA, extending the original August 14 application deadline until September 1, 2009. The waiver will necessarily result in a corresponding deferment of the grant application review and acceptance process by the NTIA, with notification of grant award expected no sooner than October 1, 2009. The schedule of deliverables in the NOFA asks for substantial completion of broadband availability data by November 1, 2009, with substantial completion of all data by February 1, 2010 and full completion of all data by March 1, 2010. This schedule allows for an anticipated data delivery window of no more than 4 weeks, 16 weeks, and 20 weeks, respectively.

The scale of broadband data delivery in New York is likely to be among the largest in the US. We expect to be gathering data from more than 100 broadband providers, in a State with nearly 300,000 Census Blocks and a current population of approximately 19,500,000. Our predictive broadband mapping efforts show availability to more than 90% of the State's 7.1 million households. While the ultimate data volume for New York is unknown, it is clear that the amount of data needed to meet the requirements in the clarified Technical Appendix will be very high. We do not foresee any possibility of collecting, processing, validating, and delivering this much data by March 1, 2010, as specified in the NOFA.

Although CSCIC has been actively engaged in broadband mapping since November, 2008 (as described in Section 2(b)), those efforts have not involved use of provider data and consequently none of the groundwork necessary to obtain provider data is currently in place. Discussions with key provider representatives have taken place over the past several weeks (see Section 1(a)) and we are pleased that we have reached conceptual agreement on an acceptable approach. The first step in the process is to execute NDAs with all providers. CSCIC will begin collecting provider data as quickly as possible after NDAs are in place.

One additional challenge is that the hiring, contracting, and procurement processes (including review/approval by control agencies) in New York are by their nature time consuming. Procurements from standing State contracts can occur in 1-2 months under expedited procedures, while RFP procurements take at least 4-6 months. CSCIC will be making use of contracted resources to carry out several aspects of this project, as described in Section 2(a). In addition, CSCIC will be procuring and installing IT hardware in support of this project.

Initial Delivery to NTIA

CSCIC proposes to deliver predicted broadband availability data for wired broadband (cable-modem and DSL) and 3G wireless, at the Census Block Group level, to NTIA within six weeks of grant award. The methods used to create and validate this data are described in Section 2(b). CSCIC recognizes that this data does not meet the clarified requirements in the Technical Appendix, but believes that it will provide a valuable initial submission to NTIA while we "ramp up" for fully compliant data deliveries. In addition to the difference in granularity (Block Groups rather than Blocks), CSCIC's predicted availability data is for a subset of the broadband technology offerings and does not specifically identify providers or speeds. It may be possible, through the use of FCC Form 477 data, to substantially upgrade this data and create an initial delivery that more closely adheres to the NTIA Technical Appendix. CSCIC invites discussion with NTIA on this possibility.

Alternative Delivery Schedule

CSCIC has given careful consideration to offering a reasonable and achievable timeline for delivery to NTIA of fully compliant data. We will be working as aggressively as possible to build the tools and capabilities necessary to provide a range of participatory options to providers (see Section 1(a) Data Gathering). We will be adding staff for this project through a combination of contracted staff resources (most particularly for a certified Project Manager) and temporary State positions. Procurement procedures and normal staffing procedures will prevent certain significant work activities from starting immediately after grant award. We also anticipate that it will take as much as six months to have NDAs in place with all broadband providers. Additionally, the initial deliveries of provider data are likely to introduce the greatest technical challenges, which are expected to diminish rapidly with additional provider data updates thereafter. We will begin collecting provider data with each of the respective providers as soon as each NDA is in place. We will also be gathering and processing the other data identified in Section 1(a) during this period.

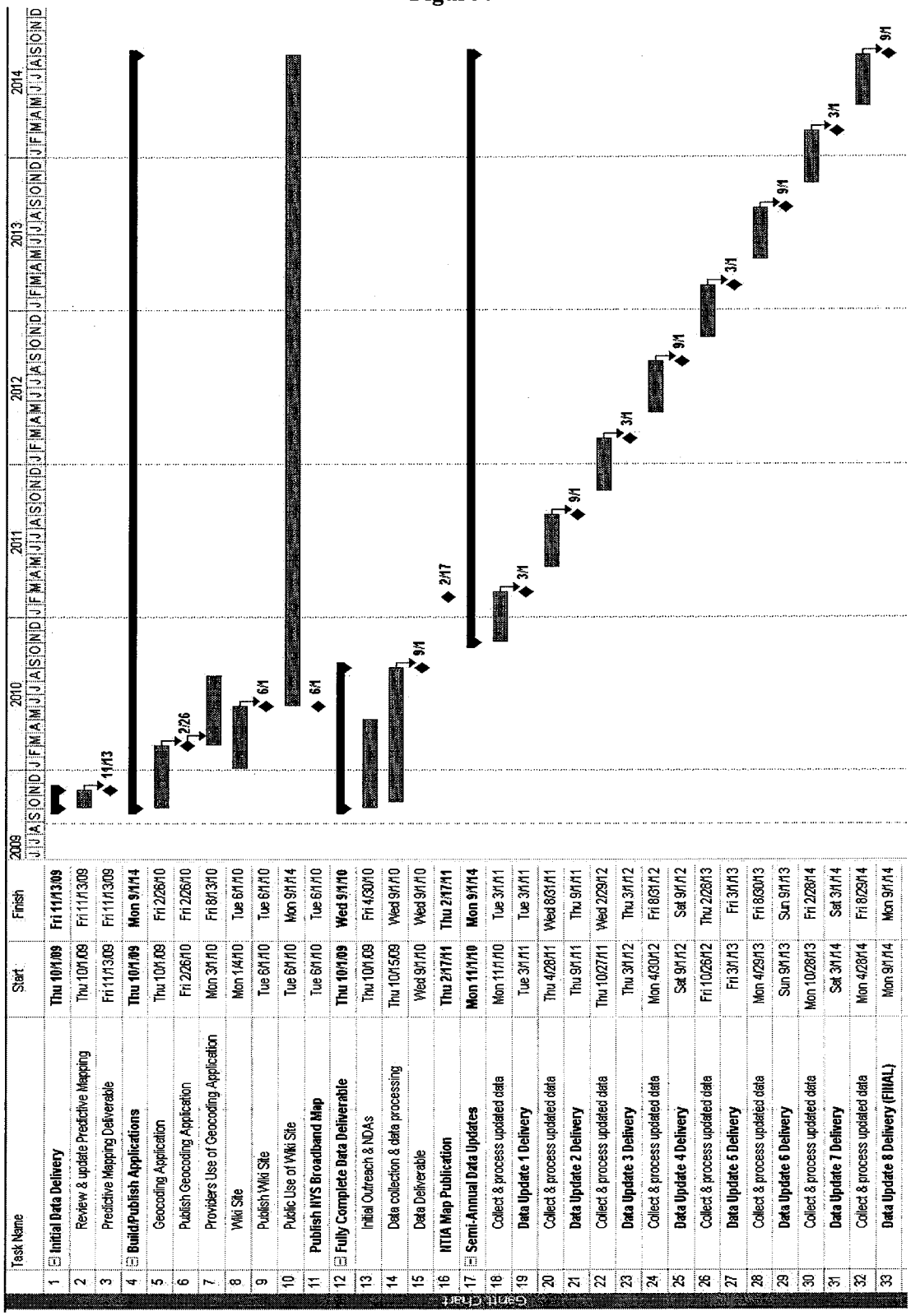
As the schedule below shows, CSCIC proposes a September 1, 2010 complete data delivery to NTIA instead of the March 1, 2010 date specified in the NOFA. This first complete delivery will occur on the date when the first update would otherwise be due and will reflect data currency as of June 30, 2010. Our proposed schedule will provide for all data deliveries to occur on NTIA's specified update cycles of September 1 and March 1 for each of the remaining years of the project, ending on September 1, 2014. In proposing this schedule, we recognize that our data collection for the first fully complete delivery is likely to include some provider data received by CSCIC prior to the FCC Form 477 update cycle and therefore we will need a subsequent update from those providers to reflect updates as of June 30, 2010 to finalize the initial data delivery. We see advantages to this as we will have the opportunity to work with provider data and refine our processes to ensure a successful data delivery on September 1, 2010.

CSCIC understands that NTIA is required to establish a national broadband map on the website of the Commerce Department by February 17, 2011 and that data from all states must be received by NTIA well enough in advance of that date to allow for creation of a seamless national broadband map. We believe that our proposed schedule, with complete delivery five and a half months ahead of that date, will meet this requirement.

This proposed delivery schedule is contingent on timely notification of grant award as well as procurements and other processes for which CSCIC must depend on the timely participation and cooperation of control agencies. Delays in any of the above may result in schedule impacts, though CSCIC will make all reasonable efforts to achieve the proposed schedule.

A summary level project schedule Gantt chart is shown below in Figure 9.

Figure 9



	Task Name	Start	Finish
1	**Initial Data Delivery**	**Thu 10/1/09**	**Fri 11/13/09**
2	Review & update Predictive Mapping	Thu 10/1/09	Fri 11/13/09
3	Predictive Mapping Deliverable	Fri 11/13/09	Fri 11/13/09
4	**Build/Publish Applications**	**Thu 10/1/09**	**Mon 9/1/14**
5	Geocoding Application	Thu 10/1/09	Fri 2/26/10
6	Publish Geocoding Application	Fri 2/26/10	Fri 2/26/10
7	Providers Use of Geocoding Application	Mon 3/1/10	Fri 8/13/10
8	Wiki Site	Mon 1/4/10	Tue 6/1/10
9	Publish Wiki Site	Tue 6/1/10	Tue 6/1/10
10	Public Use of Wiki Site	Tue 6/1/10	Mon 9/1/14
11	**Publish IUYS Broadband Map**	Tue 6/1/10	Tue 6/1/10
12	**Fully Complete Data Deliverable**	**Thu 10/1/09**	**Wed 9/1/10**
13	Initial Outreach & NDAs	Thu 10/1/09	Fri 4/30/10
14	Data collection & data processing	Thu 10/15/09	Wed 9/1/10
15	Data Deliverable	Wed 9/1/10	Wed 9/1/10
16	**NTIA Map Publication**	**Thu 2/17/11**	**Thu 2/17/11**
17	**Semi-Annual Data Updates**	**Mon 11/1/10**	**Mon 9/1/14**
18	Collect & process updated data	Mon 11/1/10	Tue 3/1/11
19	**Data Update 1 Delivery**	Tue 3/1/11	Tue 3/1/11
20	Collect & process updated data	Thu 4/28/11	Wed 8/31/11
21	**Data Update 2 Delivery**	Thu 9/1/11	Thu 9/1/11
22	Collect & process updated data	Thu 10/27/11	Wed 2/29/12
23	**Data Update 3 Delivery**	Thu 3/1/12	Thu 3/1/12
24	Collect & process updated data	Mon 4/30/12	Fri 8/31/12
25	**Data Update 4 Delivery**	Sat 9/1/12	Sat 9/1/12
26	Collect & process updated data	Fri 10/26/12	Thu 2/28/13
27	**Data Update 5 Delivery**	Fri 3/1/13	Fri 3/1/13
28	Collect & process updated data	Mon 4/29/13	Fri 8/30/13
29	**Data Update 6 Delivery**	Sun 9/1/13	Sun 9/1/13
30	Collect & process updated data	Mon 10/28/13	Fri 2/28/14
31	**Data Update 7 Delivery**	Sat 3/1/14	Sat 3/1/14
32	Collect & process updated data	Mon 4/28/14	Fri 8/29/14
33	**Data Update 8 Delivery (FINAL)**	Mon 9/1/14	Mon 9/1/14

4. Process for Repeated Data Updating

After the initial full delivery of data compliant with the clarified Technical Appendix, CSCIC will deliver updates to NTIA at six month intervals timed to coincide with FCC Form 477 data collection, with deliveries of updated data to NTIA by September 1 and March 1 of each year, ending with the September 1, 2014 delivery. CSCIC will entertain continued data updates to NTIA after that date with appropriate funding support.

Process for Data Updates

CSCIC understands the importance of data updates and will establish procedures to make the process as efficient as possible. Data updates are needed not only for NTIA, but also to support State policy, decisions, and actions of the Broadband Development and Deployment Council. The need for data updates will be especially acute due, in part, to grants from the NTIA's Broadband Technology Opportunities Program that will fund broadband projects in the State and thus will likely alter broadband availability, speeds, middle-mile infrastructure, etc. Failure to quickly reflect the changes taking place on the ground in CSCIC's broadband mapping efforts could result in our Broadband Development and Deployment Council making decisions based on obsolete or incomplete reference data. In addition to infrastructure changes, other broadband promotion activities on digital literacy and sustainable broadband adoption are likely to increase the number of subscribers. This will be reflected in CSCIC's updates to subscriber rates, even though that information is not required by the NTIA. Subscriber volumes can also impact weighted average speeds as broadband traffic over existing infrastructure increases.

The data update process will essentially repeat the steps used to create the initial data delivery to NTIA, though the effort should be substantially smoother and more streamlined once the initial processes have been completed. Several things will be done on the initial data build in preparation for the subsequent update process. First, the NDAs that CSCIC will execute with the providers will cover the entire 5-year performance period of the grant, with certain protections for confidential information surviving expiration of the NDAs. Second, CSCIC will be using Extract, Transform, and Load (ETL) tools to process the wide variety of provider data formats anticipated. The ETL tools will create profiles for each of the unique provider formats so that subsequent data updates can be loaded easily and efficiently. Third, CSCIC will use sound project management practices and tracking tools to maintain an accurate accounting of provider data and updates, as well as the steps necessary for processing and validating the data in preparation for submittal to NTIA.

Geocoding of street address data is perhaps the most critical element of the data processing to convert provider customer information into aggregations at the Census Block level. It is essential that the geocoding be performed with an actively maintained database of address points, street segments, address ranges, and Census Blocks. It is expected that some of the new subscriber records received from providers at each update interval will represent new housing units (addresses) that did not exist previously. Unless

those addresses have been added to the address data referenced by the geocoding engine, they will fail to geocode. Fortunately, CSCIC is actively maintaining the streets and addresses database that will be used by our custom geocoding tools. We have an ongoing contract with NAVTEQ for maintenance and we have partnerships with most counties across the State to regularly provide new addresses for inclusion in the database. NAVTEQ will also be incorporating the changes in Census Blocks that are expected following the 2010 Decennial Census. While the Census Bureau does not normally alter the boundaries of existing Blocks, they do create new Blocks wherever new streets or other natural Block boundaries appear. This typically splits existing Blocks, though there still may be other adjustments to Block boundaries. Based on past Census updates, we anticipate several thousand new Blocks in New York as a result of the 2010 Decennial Census.

Additional Quality Assurance (QA) tests of data updates will be made against prior data from each provider. All Census Blocks previously identified as served with a particular technology and speed will be expected to be found in subsequent provider data, for example. FCC Form 477 data and sampling data from a wiki mapping website and other sampling sources will also be used for QA testing. As with initial data QA tests, CSCIC will use ANSI-ASQ Z1.4-2008 *Sampling Procedures and Tables for Inspection by Attributes* to determine sample sizes and acceptance thresholds.

Updates on State Broadband Web Map

In addition to providing semi-annual data updates to NTIA, CSCIC will post all data updates on our State Broadband Web Map. Since the data will be fed to the State Broadband Web Map using live web services, all users of these open, non-proprietary web services will be accessing the most up-to-date content. Broadband map data in KML and shapefile formats will also be generated and made available for download. CSCIC suggests that NTIA consider linking the national broadband map to the CSCIC web services and to similar web services in other states as an efficient method of maintaining the national broadband map.

5. Planning and Collaboration

CSCIC and other strategic partners propose to use NTIA planning funds to support several key activities. These activities will leverage the mapping to define and promote broadband priorities in the State and further engage broadband stakeholders in the advancement of the State's broadband strategy. The Governor's Broadband Development and Deployment Council published its broadband strategy in June, 2009 (http://www.cio.state.ny.us/assets/documents/Final_Broadband_Strategy_June2009.pdf). New York's comprehensive broadband strategy includes infrastructure build-out, digital literacy expansion, economic and workforce development growth, and expanded use of online government services (e-government). This holistic approach emphasizes innovative solutions to provide high speed, affordable broadband access to all New Yorkers. The strategy is directly aligned with the objectives of the NTIA's Broadband Technology Opportunities Program. Planning activities detailed below will support the work of the Council in achieving these goals.

Additional Mapping Activities Required Under NYS Executive Order #22

Executive Order 22, signed by Governor David A. Paterson on June 8, 2009, establishes the Broadband Development and Deployment Council that will articulate and execute a broadband policy for New York and guide the State as it invests funds received through ARRA. Among the duties are several specific mapping tasks. First, mapping is to be prepared to show the State's Underserved and Unserved Areas, with those areas defined differently from NTIA's definitions. In particular, Underserved Areas for purposes of EO22 are those areas lacking competition from at least two broadband providers[7]. These definitions will require the preparation of different mapping than the mapping required to meet NTIA specifications. In addition, EO22 requires mapping of Distressed Areas, based on economic factors[8]. It is anticipated that the Council will be interested in a number of other mapping activities and we propose to use a portion of the requested planning funds to conduct mapping tasks beyond the scope of NTIA's State Broadband Data and Development Program.

Broadband Stimulus Program Office

The NYS Broadband Stimulus Program Office is a subgroup of the Governor's Economic Recovery and Reinvestment Cabinet, functioning as a support and planning group for the broadband stimulus programs of the State. The Broadband Stimulus Program Office is accountable to the Governor's Recovery Cabinet for broadband project results and

[7] "Underserved Area" in EO22 means [definition abstracted here] any part of a municipality without retail consumer access to at least two or more broadband providers. "Unserved Area" means any part of a municipality without readily and generally available retail consumer access to broadband service.
[8] "Distressed Areas" are defined in EO22 [definition abstracted here] as: (a) Census Tracts with 20% poverty rate or 20% rate of public assistance and unemployment rate at least 1.25 times greater than the statewide unemployment rate, or (b) a town, city, or village where either full value property wealth or the ratio of personal income to the statewide average is 55% or less.

progress monitoring with oversight by the Broadband Development and Deployment Council.

Major activities which must be implemented to effectively govern and oversee broadband stimulus projects include:

- Governance & Program Office Management
- Identify Funding Sources
- Public Outreach
- Maintain Project Inventory
- Deploy & Monitor Projects
- Stimulate Demand
- Oversee Digital Literacy Education Programs
- Measure Impact of Broadband Projects

Planning funds will support activities of the Office, including project planning and reporting, ensuring projects are aligned with the State's Broadband Strategy, planning and monitoring digital literacy efforts, and for travel and public outreach events across the state to increase awareness.

Analysis of Business Needs for Industrial-Level Internet Connectivity

Funds would be used to commission a detailed study and analysis to identify data intensive business sectors and industrial areas in the State that need industrial-level Internet connectivity (equal to or greater than 100 Mb/s) for their needs. These areas could include economic development zones, labs, industries, and regions where there is adequate residential broadband capacity but where industrial-level Internet connectivity is lacking. The results of the study will support planning purposes of the Council as well as business siting needs of the Empire State Development Corporation for data centers and other data intensive industries.

Adoption Rate Study

Part of these funds would also be used to study household broadband adoption rates in the State. The oversight for the adoption rate surveys and reporting of the adoption rates across the State will be conducted by the Broadband Development and Deployment Council. Elements of the study will include a survey to measure adoption rates and adoption rate indicators across the State, and to identify demographic factors to create a household profile that predicts subscriber rates. The latter will allow the State to predict the likelihood of improving household broadband subscription rates at the Census Block level based on demographic data tracked in the Decennial Census. NYS can then ascertain if low broadband subscription rates are probable because of social, cultural, income or demographic issues rather than broadband infrastructure issues and target programs accordingly. Areas in need of digital literacy programs and other specific programs can then be targeted appropriately to reduce the digital divide.

Budget Estimate

Please note that we will provide a detailed cost breakdown on the proposed planning activities upon approval of our proposal and after we engage qualified contractors for bids on several of the activities. Contractor bids will assist us in determining the eventual allocations of the planning funds. CSCIC understands that a maximum of $500,000 is available from NTIA to support these activities.

6. Attachments

The following attachments are provided:

- Letter of designation from Governor Paterson
- New York's letter requesting a waiver
- Letter from NTIA granting New York's waiver request
- New York's model NDA

STATE OF NEW YORK
EXECUTIVE CHAMBER
ALBANY 12224

DAVID A. PATERSON
GOVERNOR

August 13, 2009

Lawrence F. Strickling
Assistant Secretary for Communications and Information
National Telecommunications and Information Administration
United States Department of Commerce
Herbert C. Hoover Building
1401 Constitution Avenue NW
Washington, D.C. 20230

Dear Mr. Strickling:

Under the provisions of the Notice of Funds Availability and Solicitation of Applications for the State Broadband Data And Development Grant Program (Program) dated July 2, 2009, and published in the Federal Register on July 8, 2009, I hereby affirm that the New York State Office of Cyber Security and Critical Infrastructure Coordination is the single eligible entity in the State of New York designated by the State to receive a grant under the Program.

The State of New York recognizes and appreciates the efforts of the National Telecommunications and Information Administration to make funds and other resources available under the Program to advance the mapping process in support of deploying broadband service to all New Yorkers.

Sincerely,

David A. Paterson

David A. Paterson

cc: William F. Pelgrin, Director
Office of Cyber Security and Critical Infrastructure Coordination

www.ny.gov

New York State
Office of Cyber Security & Critical Infrastructure Coordination

David A. Paterson
Governor

30 South Pearl Street
Albany, NY 12207-3425

William F. Pelgrin
Director

August 10, 2009

Ms. Anne W. Neville
Program Director
State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW, Room 4716
Washington, D.C. 20230.

Re: Waiver Request

Dear Ms. Neville:

Pursuant to the provisions of the Clarification to the Notice of Funds Availability (NOFA), issued on August 7, 2009 (Docket No. 0908061222-91222-02), the New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) hereby requests a waiver of the application deadline for the State Broadband Data and Development Grant Program, Docket No. 0660-ZA29. This waiver request is being made pursuant to Section K., Waiver Authority, of the original NOFA. The issuance of the Clarification on August 7, 2009, one week before the August 14, 2009 application deadline, presents CSCIC with extraordinary circumstances that prevent the completion of our application by that deadline.

Specifically, CSCIC has engaged in ongoing discussions with representative broadband providers regarding gathering the Confidential Information necessary to comply with the requirements of the NOFA and the impact of New York's permissive Freedom of Information Law on that Confidential Information. Notwithstanding the Confidentiality Requirements outlined in the NOFA, the broadband providers have expressed concerns relating to the potential disclosure of Confidential Information gathered and maintained by CSCIC. Based on the changes in the definition of Confidential Information effected by the Clarification, we believe that our suggested strategies for handling Confidential Information, discussed with providers prior to the issuance of the Clarification, may need to be revised. At a minimum, we need to reconvene the providers, review the impact of the Clarification, and discuss revised solutions for gathering and maintaining Confidential Information. Consequently, we will be unable to develop our full proposal and complete our application by August 14, 2009.

We request a waiver of the application deadline until September 1, 2009, 11:59 PM, ET.

Sincerely,

William F. Pelgrin
Director

UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Washington, D.C. 20230

August 14, 2009

Mr. William F. Pelgrin
Director
New York State
Office of Cyber Security & Critical
Infrastructure Coordination
30 South Pearl Street
Albany, NY 12207

Anne W. Neville
State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Avenue, NW, Room 4716
Washington, D.C. 20230

Dear Mr. Pelgrin,

This is to acknowledge receipt of your waiver request for the State Broadband Data and Development Program, received on August 10, 2009 by the National Telecommunications & Information Administration.

I am please to inform you that Lawrence E. Strickling, Assistant Secretary for Communications and Information, has approved your request for a waiver of the application due date. You may submit your completed grant application no later than September 1, 2009.

Best Regards,

Anne Neville

[*DRAFT*]

NEW YORK STATE
NON-DISCLOSURE AGREEMENT

NON-DISCLOSURE AGREEMENT

THIS NON-DISCLOSURE AGREEMENT (Agreement) is hereby executed between the State of New York, acting by and through the New York State Office of Cyber Security and Critical Infrastructure Coordination (CSCIC) having its principal place of business at 30 South Pearl Street, Albany, New York 12207, and _____ _____ (Provider), having a principal place of business at

_____ _____,
_____ (City) _____ (State) _____ (Zip Code), collectively referred to as the Parties.

WHEREAS, CSCIC has been designated by Governor David A. Paterson as the single eligible entity in the State of New York to receive a grant under the State Broadband Data and Development Grant Program (Program) being administered by the National Telecommunications and Information Administration (NTIA); and

WHEREAS, the Program requires that CSCIC: (a) provide NTIA with broadband data from all commercial or public providers of broadband service in New York State; and (b) agree to treat any matter that is a trade secret, commercial or financial information, or privileged or confidential, as a record not subject to public disclosure except as otherwise agreed to by the broadband service provider and CSCIC; and

WHEREAS, Provider is a provider of broadband service in New York State and is willing to deliver broadband data necessary for the Program to CSCIC.

NOW, THEREFORE, in furtherance of the Program and in consideration of the mutual covenants and conditions herein set forth the Parties hereto agree as follows:

PART 1. DEFINITIONS

A. <u>Confidential Information</u>
Confidential Information shall have the same definition as that found in the NTIA's Notice of Funds Availability and Solicitation of Applications for the Program (74 FR 32545 [July 8,
2009]) and the Clarification published August 12, 2009 (74 CFR 40569 [August 12, 2009]). Notwithstanding the foregoing, information that falls into any of the following categories shall not be considered Confidential Information:

(a) information that is previously rightfully known to the receiving party without restriction on disclosure;

(b) information that becomes, from no act or failure to act on the part of CSCIC, generally known in the relevant industry or is in the public domain; and
(c) information that is independently developed wi thout use of Confidential Information.

Except as provided by the Program, CSCIC will obtain no right, title or interest in the Confidential Information and the Confidential Information shall at all times remain the sole property of the Provider.

B. Authorized Use

Authorized Use shall be defined as the use of Confidential Information by the CSCIC, its employees, consultants and subcontractors, or agents solely for lawful uses consistent with the requirements of the Program. Disclosure, display, use, duplication, storage or transmittal of Confidential Information, in any form, for any purpose other than that set forth in this Agreement, including extrapolation or retention of summary information, data or business processes, even if without specific identifiers, shall not constitute Authorized Use.

PART 2. CONFIDENTIALITY AND NON-DISCLOSURE REQUIREMENTS

A. Duty to Protect Confidential Information

With regard to Confidential Information received from Provider, CSCIC, its officers, agents, employees, and subcontractors, if any, shall maintain strict confidence with respect to any Confidential Information to which CSCIC, its officers, employees, agents, and subcontractors, if any, have access.

CSCIC represents that: (a) its officers and employees are prohibited by statute from disclosing confidential information acquired in the course of their official duties (Public Officers Law, §74[3][c]); and (b) all agents, and subcontractors of CSCIC who are provided access to the Confidential Information will be subject to strict confidentiality and non-disclosure agreements.

In furtherance of the foregoing, CSCIC agrees that it will: (a) treat all Confidential Information confidentially and will not disclose such information to any other person, corporation, or entity except as permitted in writing by Provider or as expressly permitted by the terms of this Agreement; (b) protect all Confidential Information with at least the same degree of care it uses to protect its own highly confidential or proprietary information, but no less than a reasonable standard of care; (c) disclose the Confidential Information only to those within its organization who have a need to know the information in order to meet the requirements of the Program; (d) advise officers, employees, agents, and subcontractors who are provided access to the Confidential Information of the existence and terms of this Agreement and of the obligations of confidentiality contained herein; and (e) use the Confidential Information only for the purposes of the Program.

B. Measures to Protect Confidential Information

Consistent with the intent of this Agreement, Confidential Information shall be deemed to be Personal, Private, or Sensitive Information (PPSI) for purposes of New York State's

Information Classification and Control Policy and the Information Classification and Control Standard (Cyber Security Policy & Standard PS08-001; http://www.cscic.state.ny.us/lib/policies/documents/PS08-001-V1.1-December4,2008.pdf; Policy & Standard) and, consequently, shall be classified with a confidentiality of high.

Based on this classification, the controls required by the Policy & Standard will be implemented. These controls, which are detailed in the Policy & Standard, include:

1 R Access approval/removal process (audit)
5 R Access authorized by information owner (written & cc: exec)
9 R Approved electronic storage media and devices
10 R Approved storage facility
13 R Chain of custody for physical media
18 R Encryption for Transmission/ Transportation/ Storage (TTS) Outside the SE
19 R Encryption/hashing of electronic authentication information
27 R IAM Trust Level 3 for information systems
33 R Limit access to secure areas
35 R No confidential information in e-mail subject line
36 R Non-Disclosure Agreement (NDA), Acceptable Use Policy, Memorandum of Understanding (MOU) or similar device for third-parties
40 R Reproduction authorized by information owner
41 R Retrieval when printing/faxing (immediate)
44 R Review access lists (annually)
47 R Review security procedures and controls (annually)
48 R Review system and application security logs
50 R Secure physical media when unattended
51 R Situational awareness during verbal communications
53 R Transportation handling controls for paper
56 R Written approval for Transmission, Transportation and Storage (TTS)

C. Non-Disclosure

As required by the Program and the provisions of the Broadband Data Improvement Act (Title I of
Public Law 110–385, 122 Stat. 4096[Oct. 10, 2008]; BDIA), CSCIC agrees to treat Confidential Information as records not subject to public disclosure except where mutually agreed upon by Provider and CSCIC, provided, however, that any such nondisclosure restriction (a) will not restrict the providing of all data collected under the Program to NTIA, nor (b) restrict NTIA's use of such data as contemplated under the Program.

To effectuate this requirement to the maximum extent permitted by applicable law, the Parties agree that:

1. Confidential Information delivered by the Provider will be clearly identified as being subject to the confidentiality requirements of the BDIA (BDIA § 106[h], 122 Stat. at 4101).

2. As appropriate, Confidential Information constituting trade secrets or critical infrastructure information, for purposes of the New York State Freedom of Information Law (Public Officers Law, Article 6; FOIL), shall be clearly marked and identified as such by the Provider upon delivery to CSCIC. Such

Confidential Information shall be accompanied by a written request that the Confidential Information be exempted from disclosure and a written explanation of: (i) why the disclosure of the identified information would cause substantial injury to the competitive position of the Provider, or (ii) why the information constitutes critical infrastructure information which should be exempted from disclosure pursuant to subdivision 2 of section 87 of FOIL. Given the volume and frequency of the Confidential Information to be delivered under the Program, CSCIC agrees that the Provider may submit an initial written request for exemption and explanation(s) regarding categories of Confidential Information and such request and explanation(s) shall be deemed to be effective for the duration of the Program.

3. In the event that CSCIC receives a request for Confidential Information under FOIL, CSCIC intends to respond as follows:

    a. that any matter that is a trade secret, commercial or financial information, or privileged or confidential is exempted from disclosure by section 106(h) of the BDIA and is, therefore, exempted from disclosure under section 87(2)(a) of FOIL.
    b. that any Confidential Information identified as a trade secret by the Provider shall be exempted from disclosure pursuant to the process established under section 89(5) of FOIL.
    c. that any Confidential Information identified as critical infrastructure information by the Provider shall be exempted from disclosure pursuant to the process established under section 89(5) of FOIL.

4. In the event that CSCIC receives a request for Confidential Information that falls outside the scope of FOIL, such request shall be denied unless the Provider instructs otherwise in writing.

PART 3. GENERAL

A Term and Termination

The term of this Agreement and CSCIC's obligations hereunder commence on the date the Agreement has been executed by both Parties and shall end upon the completion of the requirements of the Program.

The Agreement may be terminated upon the breach of this Agreement.

Upon completion of the requirements of Program or termination of the Agreement, the Provider may submit a written request that CSCIC: (a) at its discretion, destroy or promptly return to Provider all documents and other tangible materials including Confidential Information and all copies thereof; and (b) certify its compliance with such request. Notwithstanding the foregoing, C SCIC may retain copies of any Confidential Information reasonably necessary to comply with the requirements of the Program and the records retention requirements of the New York State Arts and Cultural Affairs Law. Any such copies shall remain subject to the confidentiality and non-disclosure provisions of this Agreement until Provider sends CSCIC written notice releasing CSCIC from this Agreement.

B. NTIA Data requirements under the Program

It is agreed between the parties that with regard to the Program, CSCIC will only request from the Provider such data as is required to meet the broadband data requirements of the Program. It is further agreed between the Parties that if the NTIA changes the Program requirements all modifications, clarifications and amendments with regard to the broadband data requirements will be addressed accordingly in the CSCIC Program plan.

B. Governing Laws

This Agreement shall be governed by and construed in accordance with the laws of the State of New York. If any provision of Agreement is declared by a court of competent jurisdiction to be invalid, illegal, or unenforceable, the other provisions shall remain in full force and effect.

C. Amendments

Either party may request that amendments to the Agreement be considered at any time. All amendments to this Agreement must be in writing and must be executed in the same manner as the original Agreement.

D. Entire Agreement

This Agreement is the entire agreement between the Parties, superseding any other agreement or discussions, oral or written, and may not be amended except as provided in Part 3 (C), above.

IN WITNESS WHEREOF, each of the Parties has caused this Agreement to be executed in its name and behalf by its duly authorized representative as of the date appearing below.

_____	**CSCIC**
By: _____	**By:** _____
Name:	**Name:** Thomas F. Duffy
Title:	**Title:** Deputy Director
Address: Street, Suite P2	**Address:** 30 South Pearl Albany, NY 12207
Date: _____ _____	**Date:**

CORPORATE ACKNOWLEDGMENT

STATE OF }
: **ss.:**
COUNTY OF }

On the _____ day of _____ _____in the year 2009 , before me personally came:

_____ _____ , to me known, who, being by me duly sworn, did depose and say that he/she/they res ide(s) in _____ _____; that he/she/they is (are) _____ ___ (the President or other officer or director or attorney in fact duly appointed) of _____ _____ __, the corporation described in and which executed the above instrument; and that he/she/they signed his/her/their name(s) thereto by authority of the board of directors of said corporation.

_____
Signature and Office of Person Taking Acknowledgment

OMB Approval No. 4040-0006
Expiration Date 07/30/2010

BUDGET INFORMATION - Non-Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Broadband Mapping for New York State	11.558	$	$	$ 3,800,000.00	$	$ 3,800,000.00
2. Planning in Support of Broadband Mapping	11.558			500,000.00		500,000.00
3.						
4.						
5. Totals		$	$	$ 4,300,000.00	$	$ 4,300,000.00

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Prescribed by OMB (Circular A -102) Page 1

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total
	(1) Broadband Mapping for New York State	(2) Planning in Support of Broadband Mapping	(3)	(4)	(5)
a. Personnel	$ 1,389,003.00	$	$	$	$ 1,389,003.00
b. Fringe Benefits	125,971.00				125,971.00
c. Travel	7,000.00	7,000.00			14,000.00
d. Equipment	433,000.00				433,000.00
e. Supplies	0.00				
f. Contractual	1,152,000.00				1,152,000.00
g. Construction	0.00				
h. Other	263,026.00	493,000.00			756,026.00
i. Total Direct Charges (sum of 6a-6h)	3,370,000.00	500,000.00			$ 3,870,000.00
j. Indirect Charges	430,000.00				$ 430,000.00
k. TOTALS (sum of 6i and 6j)	$ 3,800,000.00	$ 500,000.00	$	$	$ 4,300,000.00
7. Program Income	$ 0.00	$	$	$	$

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Broadband Mapping for New York State	$ 1,143,646.00	$	$	$ 1,143,646.00
9. Planning in Support of Broadband Mapping	150,480.00			150,480.00
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 1,294,126.00	$	$	$ 1,294,126.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 1,665,344.00	$ 637,586.00	$ 342,586.00	$ 342,586.00	$ 342,586.00
14. Non-Federal	$				
15. TOTAL (sum of lines 13 and 14)	$ 1,665,344.00	$ 637,586.00	$ 342,586.00	$ 342,586.00	$ 342,586.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. Broadband Mapping for New York State	$ 882,164.00	$ 589,164.00	$ 584,164.00	$ 579,164.00
17. Planning in Support of Broadband Mapping	100,000.00	100,000.00	100,000.00	100,000.00
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 982,164.00	$ 689,164.00	$ 684,164.00	$ 679,164.00

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

2. Project Feasibility

(a) Budget

CSCIC seeks $4.3 million in NTIA funding, inclusive of $3.8 million for mapping activities and an additional $500,000 for closely related planning activities. We propose an in-kind match of $1,269,126 or 29.5%, substantially exceeding the 20% State match requirement of the NOFA. A summary budget spreadsheet is shown in Table 3 below.

Project Staffing

A significant portion of the proposed budget is for staff augmentation at CSCIC. We propose to carry out most of the production activities in-house. To do this, we will need to reallocate some existing internal staff, and bring in additional, new staff. A major consideration for CSCIC in making this staffing proposal is to use the NTIA grant as stimulus funding for new jobs in New York. CSCIC will create 7 new, temporary positions to be filled specifically for this project, contingent on control agencies' approvals to establish new positions. These positions will be paid hourly to perform work as GIS and IT technicians. Staffing the project in this manner will provide in-state employment opportunities, keeping New Yorkers here rather than seeking employment out of state, as well as paying State income tax and strengthening our economy by paying rent, shopping, and entertaining locally. This staffing plan is also more cost effective; with a total burdened labor rate at roughly 1/3 the rate for comparable contract employees available on State contracts. Contracted staff may also be used as necessary.

In addition to establishing new positions, CSCIC proposes to fund an existing senior GIS manager to function as Project Director. The Project Director duties will be allocated for 75% of the incumbent's time for the first year of the project and 50% for the remaining four years. The Project Director will work closely with a dedicated Project Manager and will be responsible for allocating resources and overseeing the project. CSCIC proposes to contract for a Project Management Professional (PMP)[1] to work in-house at CSCIC for the first two years of the project. The Project Manager will be responsible for all scheduling, tracking, reporting, and related project management duties and will make recommendations on resource deployments to the CSCIC Project Director. After the second year, PM duties will be transitioned to the Project Director. CSCIC expects the overall level of effort to stabilize at a substantially lower level beginning in the third year.

We anticipate additional CSCIC effort from a variety of other existing staff will be necessary to carry out the project, but these will not be funded directly with the grant. Instead, the standard 10% administrative overhead rate that CSCIC applies to all projects will cover those additional efforts.

[1] The Project Management Institute, Inc. (http://www.pmi.org) has established the most widely recognized certification for project managers. Candidates who successfully complete rigorous qualifications and testing carry the title Project Management Professional, PMP.

Table 3

	Year 1	Fed Q1	Fed Q2	Fed Q3	Fed Q4	Year 2	Year 3	Year 4	Year 5	TOTAL
Personnel										
Project Director	63,295	15,824	15,824	15,824	15,824	47,162	47,162	47,162	47,162	$251,943
GIS Techs	290,400	72,600	72,600	72,600	72,600	103,665	103,665	103,665	103,665	$705,060
IT Infra. Specialist	57,600	14,400	14,400	14,400	14,400	28,800	28,800	28,800	28,800	$172,800
App. Developer	86,400	21,600	21,600	21,600	21,600	43,200	43,200	43,200	43,200	$259,200
TOTAL	497,695	124,424	124,424	124,424	124,424	222,827	222,827	222,827	222,827	$1,389,003
Fringe Benefits										
Project Director	31,647	7,912	7,912	7,912	7,912	23,581	23,581	23,581	23,581	$125,971
Travel	3,000	750	750	750	750	1,000	1,000	1,000	1,000	$7,000
Equipment										
Servers, desktops, networking	245,000	245,000	0	0	0	24,500	24,500	24,500	24,500	$343,000
Software	50,000	50,000	0	0	0	10,000	10,000	10,000	10,000	$90,000
TOTAL	295,000	295,000	0	0	0	34,500	34,500	34,500	34,500	$433,000
Supplies	0	0	0	0	0	0	0	0	0	$0
Contractual										
Project Manager	288,000	72,000	72,000	72,000	72,000	288,000	0	0	0	$576,000
Public Outreach & Sampling Contract	40,000	10,000	10,000	10,000	10,000	15,000	15,000	15,000	15,000	$100,000
Application Dev.	240,000	60,000	60,000	60,000	60,000	44,000	44,000	44,000	44,000	$416,000
Space rental for new staff	30,000	7,500	7,500	7,500	7,500	15,000	10,000	5,000	0	$60,000
TOTAL	598,000	149,500	149,500	149,500	149,500	362,000	69,000	64,000	59,000	$1,152,000
Other										
Data Acquisition	18,000	4,500	4,500	4,500	4,500	18,000	18,000	18,000	18,000	$90,000
GIS Data Dev for BB work	36,000	9,000	9,000	9,000	9,000	34,256	34,256	34,256	34,256	$173,025
Planning Tasks	100,000	25,000	25,000	25,000	25,000	100,000	100,000	100,000	100,000	$500,000
TOTAL	154,000	38,500	38,500	38,500	38,500	152,256	152,256	152,256	152,256	$763,025
Total Direct	1,579,342	396,086	396,086	396,086	396,086	796,164	503,164	498,164	493,164	$3,869,999
Indirect Charges										
10% Admin. Fee	86,000	21,500	21,500	21,500	21,500	86,000	86,000	86,000	86,000	$430,000
TOTALS	$1,665,343	417,586	417,586	417,586	417,586	$882,164	$589,164	$584,164	$579,164	**$4,300,000**

Project Contracting

CSCIC will use contractor assistance on several aspects of the project.

In order to support the needs of providers that choose to exercise the option of using a geocoding web service to avoid exposing their confidential customer records, CSCIC will use contractor assistance to develop and support a web service that includes the required functionality to geocode and return customer address records referenced to Census Blocks. This capability will be available to providers via an application programming interface (API). An additional standalone application will be developed to provide similar capabilities to providers without the need to write computer code to integrate with our API. This is likely to be more useful to smaller, less sophisticated providers with smaller numbers of customer records to process.

Contractor assistance will also be used to develop other tools, which may include development/implementation/configuration of the ETL tools, a wiki web map, a broadband speed test tool or other tools for validation checks. Similar assistance from contractors will be used to create the web services architecture needed to support our State broadband web map and data publishing capabilities. The State broadband web map is envisioned to serve as the central State website for access to broadband mapping information. The site will include the public broadband web map which can be searched by address to find broadband service providers, data downloads of relevant broadband map layers, as well as the wiki map functions for the public to tell us about their broadband service and to conduct speed tests. Data captured from the public web map applications will be augmented with additional sample data as needed.

Finally, CSCIC will contract with a firm experienced in outreach and sampling methods to collect an appropriate sample of broadband subscriber information and speed test results for the computation of weighted average speeds.

Equipment and Software

CSCIC's current IT infrastructure is near capacity in terms of server capacity, storage capacity, data center power capacity, and physical space. In order to process the data required to fulfill the requirements of the project, infrastructure updates will be required. The budget proposal includes additional SAN storage to support the data processing, GIS analysis and data storage, and to support the additional server infrastructure required for the project. CSCIC will also require additional power capacity to support the additional servers and storage required. Additional space will be required to accommodate the staff being added to support the project. The current CSCIC network will be extended to the new workspace to be developed for the additional staff. IT resources such as desktop computers will also be required to support the additional staff.

The project will require licenses and hardware for additional software to support the specific data processing requirements of the proposed business process. An additional GIS server will be implemented to handle the many geoprocessing and mapping aspects

of the project. Data integration and data standardization software (Extract, Transform, and Load, ETL) will be used to process the data feeds from the approximately 100 providers in New York State.

The total estimated expense for equipment and capabilities is $535,000 and this equipment must be purchased, installed, and configured as quickly as possible after grant award. Maintenance costs of $78,000 per year for years 2-5 are also included.

Budget Contingencies

CSCIC is proposing the foregoing budget based on preliminary internal estimates of contractual costs and has not been able to obtain contractor quotes for the proposed services. It is likely that adjustments in proposed budget allocations will be needed once actual contract costs are known. CSCIC understands that the budget cannot exceed $3.8 million for mapping activities and $500,000 for planning, and will rigorously maintain a budget cap at those levels. Adjustments may also be needed in the staffing elements of this budget proposal. If processes for creating and filling the proposed temporary new positions are delayed or disapproved, CSCIC is prepared to use standing State contracts to bring in the required staff. Under these circumstances there will be fewer total hours that can be funded towards the temporary State positions since contract staff or use of existing permanent State staff are at higher hourly billable rates.

In-Kind Match

CSCIC will exceed the 20% State match requirement with in-kind services. Assuming that our full grant request of $4.3 million is awarded, the 20% State match requirement is $860,000. We propose an in-kind match of $1,269,126 or 29.5%.

The work carried out on our existing broadband mapping work from February 17, 2009 to present will be applied in full toward the match, as that data will constitute our initial data delivery to NTIA and will also be an important secondary source and data verification source for our subsequent preparation of data under this project. The value of staff time expended on broadband mapping over that six month period was $193,082.

The bulk of CSCIC's proposed in-kind match is a reasonable portion of the value of GIS data being contributed to this project. The largest of these is the contract value of CSCIC's current ongoing contract with NAVTEQ for licensing and maintenance of streets and addresses data. This data will be an essential element of our geocoding capabilities and also contains the Census Block polygons realigned to properly fit our high-quality street alignments. We use the streets and addresses data for other purposes and therefore propose to allocate 50% of the annual base contract value towards our in-kind match. This will total $900,000 over five years.

The value of Tele Atlas wire center data licensed by CSCIC will also be applied towards our in-kind match requirement, again at 50% of the licensing fee incurred by CSCIC,

totaling $14,062 over five years. Similarly, a 50% share of our licensing fee for Dun & Bradstreet employer data will be applied, totaling $86,982 over five years.

Finally, we propose to assign 20% of our Enterprise License Agreement with ESRI towards our in-kind match, totaling $75,000 over five years. We will be making extensive use of ESRI software for this project and all additional staff hired for the project will need ESRI software licenses installed on workstations for their use. In addition, ESRI technology will be used for our custom geocoding tools, interactive State broadband web map, and data management.

Planning

CSCIC and other strategic partners propose to use NTIA planning funds to support several key activities. These activities will leverage the mapping to define and promote broadband priorities in the State and further engage broadband stakeholders in the advancement of the State's broadband strategy. Please see Section 5 for a complete description of proposed planning activities. In brief, they include:

- Additional mapping activities required under NYS Executive Order #22
- Support for activities of the Broadband Stimulus Program Office
- Commission a study and analysis of business needs for industrial-level Internet connectivity
- Commission a study of broadband adoption rates

Please note that we will provide a detailed cost breakdown on the proposed planning activities upon approval of our proposal and after we engage qualified contractors for bids on several of the activities. Contractor bids will assist us in determining the eventual allocations of the planning funds. CSCIC understands that a maximum of $500,000 is available from NTIA to support these activities. A separate budget spreadsheet for proposed planning activities is not provided, but please note that planning funds are included in the budget spreadsheet shown in Table 3, nominally indicating that the funds will be used over the five year performance period of the grant.