Follow Up Broadband Mapping Questions for the District of Columbia:

1) Please provide any updates in the status of procurements, negotiations, estimates, etc. since the submission of DC's application.

   a. DC has draft scopes of work prepared and we are waiting for the award. DC does not like to advertise when a significant funding or scope change is still likely. This maximizes competition. Once we have made a selection scope or funding changes will have to be negotiated with the winning vendor and some competitive leverage will be lost. Because of DC's small land area we still think we can make the NTIA deadlines, but it will be very tight.

2) Please provide the expected added cost of collecting subscription and market data?

   a. This is equal to the cost of the "Statistical Survey Contractor" page 22 of DC's proposal. Our original five year proposal the survey cost was projected to be $360,000 with the majority $200,000 coming in year 1. After speaking with NTIA we shifting the survey cost to DC planning request and dropping the second year of the survey. Please also see answers to questions 6, 7, 8, and 9.

3) You state that you are using engineers for some field verification (Wireless, Middle-mile, and backhaul). Have you considered using field verification for Wireline as well?

   a. DC believes the proposed "Broadband Test Web Application" will be the most cost effective way to verify wireline data. On the phone, NTIA pointed out that other states will be performing buffer analysis on "central offices locations" to predict DSL availability. Some are then using that analysis to direct field crews to locations where availability problems are predicted. This is a good idea and we intend to audaciously copy and learn from fellow awardees. Moreover, we expect very few problem geographies in DC so this additional verification can be accomplished within the proposed budget.

4) You describe a highly comprehensive engineering inspection. What is your level of confidence that such an inspection would be permitted and what contingency plans have you considered if access to facilities is not granted?

   a. When NTIA and the broadband industry came to an understanding and the NOFA was changed, middle mile facilities remained to be collected and verified by states. Moreover, except for the location, there is not much that can be verified unless access to the facility is granted. Therefore we are optimistic that broadband providers have anticipated this type of request.

   DC plans to make it easier for providers to accept our request for access by selecting an engineering firm with "experience working with and excellent references from broadband providers." The ideal firm will be one both the government can trust. DC will allow and encourage that firm to enter into NDA's directly with providers specifically for these types of inspections. The firm also will be allowed and encouraged to share its findings with the provider. Yes, DC will get a limited set of information to share with NTIA, but the provider gets something of value too -- a free independent professional inspection of its facilities.

   If this approach does not work as hoped, DC will quickly turn to NTIA and our follow awardees for advice on what is working elsewhere.

5) You seem to have given some serious thought to the securing of confidential data. Please further describe your ability to handle information requiring cyber security sensitive treatment (such as infrastructure information). In addition to dedicated computers, please describe other procedures or methods that you will employ to secure such data. Briefly describe the role of the District of Columbia Department of Homeland Security and Emergency Management in securing infrastructure data (Does this entity interface with the US Department of Homeland Security, Department of Defense, or other such national security agencies on cyber security matters).

   a. DC has modeled its response based on our experience working with U.S. Census Bureau Title XIII data. Isolating the confidential data in a locked office at the PSC on computers not attached to the Internet is a significant precaution. We will also work with OCTO's Citywide Information Technology Security Office harden the desktops and encrypt the data.

   Currently the DC GIS lacks detailed utility of all kinds (water, sewer, gas, electric, steam, and telcom). The NOFA gives us an important opportunity to work with telcom providers. The involvement of the DC Department of Homeland Security and the DC Fusion Center was not intended to help with securing the data. Securing digital data is part of OCTO's mission and other District departments look to OCTO for support with cyber security. Rather, OCTO's intention is to seek permission to share the confidential utility data this project will generate with those agencies. Such data sharing will help the District be prepared for natural and man-made incidents. DC will seek provider permission to use the data in that way.

   The best result would be for DHS, NTIA, and FCC to provide more guidance to states and providers on how this data should be both secured and simultaneously shared and put to good use.

6) Please explain why the chart on page 22 details that the statistical survey will be to map data to Census <u>Tract</u> level instead of <u>Block</u> level.

   a. A Survey that aggregated to Blocks would be significantly more costly (larger sample size) than a survey aggregated to Tracts (already a large sample size). The purpose of the survey is to understand the issue(s) of adoption and we believe that Tracts are sufficient for policy purposes. Please also see the answer to question 8.

7) For the chart on page 22, please provide the broken-out numbers for year two.

   a. DC is revising its mapping request down from $1,900,276 to 1,188,401. A revised cost table is attached. The most significant change is the Statistical Survey. Per our conversation with NTIA, survey contact costs have been moved to the planning request. Further we are cancelling/holding the second year of the survey. Also see the answer to question 9.

   We slightly revised upward other costs where the lack a five year commitment might make a difference. We also feel our original estimates for PSC, speed test software, and the engineering contract where on the low end.

Revised 10/9/2009	Cost Assumptions			Requested BDIA Funding		
Project Activities	Hourly Rate (w/ FTE benefits of 22%)	Year 1 Hours (includes Pre-Award)	Years 2-5 ~~Total hours over 4 years~~	2010	~~2011-2014~~ 2011	Funding Subtotal
Project & Task Management						-
Provider outreach and communication PSC (Cary Hinton or equivalent)	70.38	692	519	48,703	36,527	85,230
PSC Staff manage provider relations and communications	43.99	1,733	1,040	76,250	45,750	122,000
Contract RF/network engineering manager (Robert Pavlak of equivalent)	120.00	867	692	104,000	20,760	124,760
Data Gathering, Validation						-
Engineering contractor field verification (fixed and wireless)	Annual mobilization $10,500, engineer day rate, $700 per day, Year1, 2 engineers for 3 months, + 60K for PM and data processing. Years2-5, 1 engineer for 3 months + 30K for PM and			154,500	82,500	237,000
~~Statistical survey contractor~~ (moved to planning request)	Year1 design plus survey sample size of 11,000 to map data to Census Tract level, years2-5 sample size of 1,200 tracks citywide.			-	-	-
DC employee check from home speed test validation	Promotional material and outreach			15,000	5,000	20,000
GIS Staff and Contract Costs (GIS mapping & analysis, checking provider Web sites, processing data from public & employee speed tests, canvassing community anchor institutions, QC, metadata, managing data feeds, & transmittals to NTIA)	55.00	3,000	1,500	165,000	82,500	247,500
DC Broadband Mapping Application						-
Software	ArcGIS Server Advanced			65,286	13,057	78,343
Hardware	Dell Blade Server Power Edge			10,452		10,452
Database & Systems Administrators	110.00	519	300	57,090	33,000	90,090
FTE application development and Maintenance (Tianpu Liang or Equivalent)	58.65	600	300	35,192	17,596	52,788
DC Broadband Test Web Application						-
Software	Evaluate and purchase			40,000	8,000	48,000
Hardware	Dell Blade Server Power Edge M6010			10,452		10,452
Contract application development and maintenance contract software developer	90.00	600	346	54,000	7,785	61,785
				$835,925	$ 352,476	$1,188,401

8) The estimated costs for your to-be-retained statistical survey contractor seem high. Please explain how such an estimate was determined. How expensive do you expect the survey to be in the event you receive Form 477 data?

    a. As established by DC proposal it is critical that BDIA result in the District being able to measure broadband adoption rates. Under the original NOFA, DC had a reasonable expectation that we would receive subscriber addresses. Our initial plan was to geocode individual and then aggregate residential subscriptions to Census geographies. This would have allowed us to determine adoption rates.

    However, after amendment to the NOFA, the District no longer has a reasonable expectation of receiving subscriber addresses. It is more likely provider data will be limited to whether a Census block has service or does not have service. Without the ability to aggregate residential subscribers the District no longer has a reasonable expectation of being able to determine the adoption rate for small areas from provider submissions alone.

    Similarly, the changes to the NOFA also imply that subscriber cost data will not be provided. Of course understanding cost could be central to understanding adoption.

    Form 477 (if properly completed) does give subscriber data to the Census Tract. But DC government (outside the PSC) cannot be entirely confident of getting this data again. Even if the 477 data is forthcoming (as we expect it will be), that data can only identify areas of low adoption rates, but cannot explain why rates are low.

    Therefore the Statistical Survey we proposed is intended to solve two problems: 1. being able to map adoption to the Census Tract level with or without 477 data. 2. being able to understand the underlying causes of low adoption including cost. The expense of survey comes primarily from the large sample size required to map to the Census Tract level of geography. Blocks aggregation would have been much more expensive, but not much more enlightening from a policy point of view.

9) With regards to the planning funds, you describe the Operations of the District of Columbia Broadband Mapping Advisory Committee fully, however, please describe the Broadband outreach and education campaigns you anticipate funding with the planning funds.

    a. The <u>District of Columbia Broadband Mapping Advisory Committee</u> will still be constituted and have some discretion over these funds. The broadband education and outreach program consists of the following:

      - The statistical survey contractor described in DC's original proposal and questions

      - The District of Columbia <u>Office of Cable Television (OCT)</u> and Office of the Chief Technology Officer (OCTO) will embark upon an education campaign that will define and promote the applications and benefits of broadband. The campaign will include a series of PSAs, 2-3 minute informational pieces, topic inclusion in regularly produced programming and text crawls. The videos would be transmitted on the agency's channels to include TV-13, TV-16 and the District Knowledge Network (DKN). Airing PSAs on public airways and WMATA display advertising. OCT will work with other DC government agencies and local digital literacy experts to produce instructional videos in an effort to

expand community outreach efforts. Promotion of the OCTO funded wireless hotspots and Department of Recreation computer facilities located throughout the District.

- DC Public Library and OCTO in partnership with non-profits such as Byte Back (a District based non-profit in existence since 1997 that conducts computer training programs in conjunction with the public library system) will conduct digital literacy and training focused on the practical uses of broadband technology for education and job training purposes. Promotion of DC Department of Employment Services and their services that are available via broadband (job training, assessment and placement services, unemployment compensation applications).

Revised Planning Request:

DC Planning Revised 10/9/09	Requested Planning Funds
Project Activities	**Years 1-5, 2010-2014**
Project management and operations of the District of Columbia Broadband Mapping Advisory Committee	$ 50,000
Statistical Survey Contractor	$ 175,000
Office of Cable Television	$ 75,000
District of Columbia Public Library and non-profits	$ 200,000
	$ **500,000**

To: Edward Smith, Telecommunications and Information Administration

From: Barney Krucoff, GIS Manager, District of Columbia Office the Chief Technology Officer

Date: October 10, 2009

RE: Follow-up to Broad Mapping Questions for the District of Columbia

On the phone yesterday you requested additional information about how the District will protect the security and confidentiality of data. You also requested that the District take another look at our cost proposal and sharpen our pencil.

Security and Confidentiality

The District of Columbia Office of Chief Technology Officer (OCTO) is responsible for both information security and geospatial information. Robert Wines, CISP MPM (resume attached) is being added the project team reporting to Ken Boley. Mr. Wines heads The Information Security and Risk Office (ISRO) within OCTO and is charged with securing the IT infrastructure of the District of Columbia. GIS systems, processes, policies and procedures will be audited by the Information Security and Risk Office annually.

The Middle Mile data collected under this project will be considered critical infrastructure data and will thus be handled in accordance with the Federal Information Security Management Act (FISMA). In order to comply with FISMA, the District of Columbia will meet required NIST security guidelines. NIST performs its statutory responsibilities through the Computer Security Division of the Information Technology Laboratory.

To ensure data security, the District will conduct annual assessments of GIS using the 800-53 revision 3 guidelines. These assessments will insure that controls are in place and audited. In addition, the District will follow FIPS -199, which ranks the confidentiality, integrity and available of systems and their associated data.

Cost

DC is revising its mapping request down from $ 1,188,401 to $993,286. A revised cost table is attached. The statistical survey remains in the planning grant. In other aspects, this proposal is very similar to our original proposal, except that it requests mapping funding for 2 years instead of 5 years.

Project Activities	Cost Assumptions			Requested BDIA Funding		
	Hourly Rate (w/ FTE benefits of 22%)	Year 1 Hours (includes Pre-Award)	Year 2 Total hours over 4 years	2010	REVISED 10/16/09 2011	Funding Subtotal
Project & Task Management						-
Provider outreach and communication PSC (Cary Hinton or equivalent)	70.38	519	1,038	36,527	18,264	54,791
PSC Staff manage provider relations and communications	38.13	867	2,080	33,042	31,433	64,475
Contract RF/network engineering manager (Robert Pavlak of equivalent)	120.00	693	692	83,200	20,760	103,960
Data Gathering, Validation						-
Engineering contractor field verification (fixed and wireless)	Annual mobilization $7,500, engineer day rate $750 per day, Year1, 2 engineers for 3 months, + 30K for PM and data processing. Year 2, 1 engineer for 3 months + 20K for PM and			127,500	72,500	200,000
Statistical survey contractor (MOVED TO PLANNING GRANT)	Year1 design plus survey sample size of 11,000 to map data to Census Tract level, year 2 sample size of 1,200 tracks citywide.			-	-	-
DC employee check from home speed test validation	Promotional material and outreach			15,000	5,000	20,000
GIS Staff and Contract Costs (GIS mapping & analysis, checking provider Web sites, processing data from public & employee speed tests, canvassing community anchor institutions, QC, metadata, managing data feeds, & transmittals to NTIA)	50.00	3,000	6,000	150,000	100,000	250,000
DC Broadband Mapping Application						-
Software	ArcGIS Server Advanced			65,286	13,057	78,343
Hardware	Dell Blade Server Power Edge			10,452		10,452
Database & Systems Administrators	110.00	519	692	57,090	19,030	76,120
FTE application development and Maintenance (Tianpu Liang or Equivalent)	58.65	600	519	35,192	15,221	50,413
DC Broadband Test Web Application						-
Software	Evaluating open source speed			10,000	2,000	12,000
Hardware	Dell Blade Server Power Edge M6010			10,452		10,452
Contract application development and maintenance contract software developer	90.00	519	346	46,710	15,570	62,280
				$680,451	$ 312,835	$ 993,286