

BUDGET INFORMATION-Non-Construction Programs

OMB Approved 0348-0044

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.		\$	\$	\$	\$	\$
2.						
3.						
4.						
5. Totals		\$	\$	\$	\$	\$

SECTION B-BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	517,048				517,048
b. Fringe Benefits	97,206				97,206
c. Travel	100,000				100,000
d. Equipment	0				0
e. Supplies	10,000				10,000
f. Contractual	1,589,000				1,589,000
g. Construction					
h. Other	298,000				298,000
i. Total Direct Charges (sum of 6a-6h)	2,611,254				2,611,254
j. Indirect Charges	0				0
k. TOTALS (sum of 6i and 6j)	2,611,254				2,611,254
7. Program Income	\$	\$	\$	\$	\$

PREVIOUS EDITIONS USEABLE

PTFP-3

Standard Form 424A (Rev. 7-97)

Prescribed by OMB Circular A-102

Detailed Matching Funds Budget (includes mapping and planning phases)		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Personnel Salaries							
	State Project Manager @ .45 FTE - base is \$93,600 (936 hrs. @ \$45/hr)	\$42,120.00	\$42,120.00	\$0.00	\$0.00	\$0.00	\$84,240.00
	Analyst @ .20 FTE - base is \$82,616.16 (416 hrs @ \$39.72/hr)	\$16,524.00	\$16,524.00	\$0.00	\$0.00	\$0.00	\$33,048.00
	Analyst @ .20 FTE - base is \$58,423.20 (416 hrs @ \$28.09/hr)	\$11,686.00	\$11,686.00	\$0.00	\$0.00	\$0.00	\$23,372.00
	Various Commonwealth employees (planning)	\$10,278.00	\$10,278.00	\$10,278.00	\$10,278.00	\$10,278.00	\$51,390.00
Total		\$80,608.00	\$80,608.00	\$10,278.00	\$10,278.00	\$10,278.00	\$192,050.00
Personnel Fringe Benefits							
	Analyst @ .20 FTE - fringes \$22,752.24	\$4,551.00	\$4,550.00	\$0.00	\$0.00	\$0.00	\$9,101.00
	Analyst @ .20 FTE - fringes \$19,219.92	\$3,844.00	\$3,844.00	\$0.00	\$0.00	\$0.00	\$7,688.00
	Various Commonwealth employees (planning)	\$3,083.00	\$3,083.00	\$3,083.00	\$3,083.00	\$3,083.00	\$15,415.00
Total		\$11,478.00	\$11,477.00	\$3,083.00	\$3,083.00	\$3,083.00	\$32,204.00
Travel							
	None	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equipment							
	None	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Materials/Supplies							
	None	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Subcontracts							
	None	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Construction							
	None	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other							
	Storage, data warehousing	\$12,000.00	\$12,000.00	\$0.00	\$0.00	\$0.00	\$24,000.00
	Website development, planning and maintenance	\$0.00	\$20,000.00	\$0.00	\$0.00	\$0.00	\$20,000.00
	Software licensing and maintenance	\$22,000.00	\$22,000.00	\$0.00	\$0.00	\$0.00	\$44,000.00
	Increased usage of KY GeoNet	\$5,000.00	\$5,000.00	\$0.00	\$0.00	\$0.00	\$10,000.00
	Previous mapping						\$200,000.00
Total		\$39,000.00	\$59,000.00	\$0.00	\$0.00	\$0.00	\$298,000.00
Total Direct Costs		\$131,086.00	\$151,085.00	\$13,361.00	\$13,361.00	\$13,361.00	\$522,254.00
Total Indirect Costs		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Costs		\$131,086.00	\$151,085.00	\$13,361.00	\$13,361.00	\$13,361.00	\$522,254.00

Narrative on Match

Personnel Salaries

		Total
Project Manager	In-kind contribution \$42,120 each year for years 1 and 2 Position was estimated at 45% of time on this project (2080 hours * 45%), 936 hours at \$45/hour	\$ 84,240
Analyst	In-kind contribution \$16,524 each year for years 1 and 2 Position estimated at 20% of time on this project (2080 hours * 20%), 416 hours at \$39.72/hour	33,048
Analyst	In-kind contribution \$11,686 each year for years 1 and 2 Position estimated at 20% of time on this project (2080 hours * 20%), 416 hours at \$28.09/hour	23,372
Various Commonwealth employees	In-kind contribution \$10,278 each year for five years for planning team	51,390

Personnel Fringe Benefits

Project Manager	Contract employee; no fringes incurred	
Analyst	In-kind contribution \$4,550 each year for years 1 and 2 Position estimated at 20% of time on this project (actual fringes \$22,752.24)	9,101
Analyst	In-kind contribution \$3,844 each year for years 1 and 2 Position estimated at 20% of time on this project (actual fringes \$19,219.92)	7,688
Various Commonwealth employees	In-kind contribution \$3,083 each year for five years for planning team Estimated fringe benefits at 30% of salary amount	15,415

Other

Storage, data warehousing - monthly estimate of \$1,000 for a total of \$12,000.	24,000
Website development, planning and maintenance - estimate for year 2 when the data is added to the website of \$20,000	20,000
Software licensing and maintenance - estimate of \$22,000 based on current software and additional licenses needed	44,000
Increased usage of GeoNet - estimate of \$5,000/year for increased use of Geonet attributed to broadband mapping efforts	10,000
Previous mapping datasets - contract amount of \$400,000; depreciated cost estimated at \$200,000	200,000

Total Costs \$ 522,254

Narrative on Match

Personnel Salaries

Project Manager	In-kind contribution \$42,120 each year for years 1 and 2 Position was estimated at 45% of time on this project (2080 hours * 45%), 936 hours at \$45/hour
Analyst	In-kind contribution \$16,524 each year for years 1 and 2 Position estimated at 20% of time on this project (2080 hours * 20%), 416 hours at \$39.72/hour
Analyst	In-kind contribution \$11,686 each year for years 1 and 2 Position estimated at 20% of time on this project (2080 hours * 20%), 416 hours at \$28.09/hour
Various Commonwealth employees	In-kind contribution \$10,278 each year for five years for planning team

Personnel Fringe Benefits

Project Manager	Contract employee; no fringes incurred
Analyst	In-kind contribution \$4,550 each year for years 1 and 2 Position estimated at 20% of time on this project (actual fringes \$22,752.24)
Analyst	In-kind contribution \$3,844 each year for years 1 and 2 Position estimated at 20% of time on this project (actual fringes \$19,219.92)
Various Commonwealth employees	In-kind contribution \$3,083 each year for five years for planning team Estimated fringe benefits at 30% of salary amount

Other

Storage, data warehousing - monthly estimate of \$1,000 for a total of \$12,000.
Website development, planning and maintenance - estimate for year 2 when the data is added to the website of \$20,000
Software licensing and maintenance - estimate of \$22,000 based on current software and additional licenses needed
Increased usage of GeoNet - estimate of \$5,000/year for increased use of Geonet attributed to broadband mapping efforts
Previous mapping datasets - contract amount of \$400,000; depreciated cost estimated at \$200,000

Combined Two Year Broadband Planning and Mapping Budget, Federal funds and Match

	Applicant			Notes
	Share	Federal Share	Total	
Personnel Salaries	\$140,657.92	\$325,000.00	\$465,657.92	
Personnel Fringe Benefits	\$16,788.86	\$65,000.00	\$81,788.86	
Travel	\$0.00	\$100,000.00	\$100,000.00	
Equipment	\$0.00	\$0.00	\$0.00	
Materials/Supplies	\$0.00	\$10,000.00	\$10,000.00	
Subcontracts	\$0.00	\$1,589,000.00	\$1,589,000.00	
Construction	\$0.00	\$0.00	\$0.00	
Other	\$0.00	\$0.00	\$0.00	
Total Direct Costs	\$157,446.78	\$2,089,000.00	\$2,246,446.78	
Total Indirect Costs	\$0.00	\$0.00	\$0.00	
Total Costs	\$157,446.78	\$2,089,000.00	\$2,246,446.78	
			\$522,250.00	
Mapping Fed	\$1,589,000			
Planning Fed	\$500,000			
Total Fed	\$2,089,000			

Contracts Budgets

Cost	YEAR 1			YEAR 2			Total	Notes
	Applicant Share	Federal Share	Total	Applicant Share	Federal Share	Total		
Personnel Salaries								
Project Manager (\$120/hr)		161,760.00	161,760.00		48,000.00	48,000.00	209,760.00	The yearly amounts on this spreadsheet do not match the yearly amounts on Appendix E, submitted previously. The payment methodology for Appendix E is based on milestones not hours.
Data Manager (\$107.50/hr)		91,590.00	91,590.00		46,440.00	46,440.00	138,030.00	
Field Technician (\$87.50/hr)		289,537.50	289,537.50		24,500.00	24,500.00	314,037.50	
GIS Specialist (\$76.25/hr)		98,210.00	98,210.00		44,072.50	44,072.50	142,282.50	
Universities for Verification		400,000.00	400,000.00		0.00	0.00	400,000.00	
Total	0.00	1,041,097.50	1,041,097.50	0.00	163,012.50	163,012.50	1,204,110.00	
Personnel Fringe Benefits								
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Travel								
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Equipment								
Total								
Materials/Supplies								
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Waiting on information from the vendor on Marketing Intelligence Consulting costs.
Subcontracts								
Marketing Intelligence Consulting		283,371.00	283,371.00		0.00	0.00	283,371.00	
Total		303,321.00	303,321.00		0.00	0.00	303,321.00	
Construction								
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Other								
Total								The cost information from the vendor was received prior to the Commonwealth receiving the budget form. Initially, the vendor did not breakdown the costs in the same categories as required for the budget form.
Total Direct Costs	0.00	1,425,987.50	1,425,987.50	0.00	163,012.50	163,012.50	1,580,500.00	
Total Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Costs	0.00	1,425,987.50	1,425,987.50	0.00	163,012.50	163,012.50	1,580,500.00	

1) Also, I'm having trouble identifying budgeted amounts for your state staff. I can see from your proposal and responses that you have significant state involvement. This should either be included in the budget or counted as an in-kind contribution. Can you provide me with further details?

See Attached

2) Please provide more detail on the methods the universities intend to use in their verification role. The description for the contractor is strong, but a similar description for the universities would be good. Also, do you have a sense of how many universities, how much staff, how many students, etc.?

Verification and Audit of Kentucky Broadband Mapping Data

Background:

The Kentucky universities and community colleges have the expertise and resources to perform the verification and audit of the work product of the vendor selected by the State to collect and present data under the State Broadband Data and Development Grant Program.

Examples of the organizations that will lead the effort are:

- The Program of Distinction in Telecommunications Systems Management (TSM), <http://www.murraystate.edu/tsm/>, at Murray State University. The TSM is uniquely situated to lead the verification of Kentucky broadband mapping data. The initial broadband mapping efforts in Kentucky started with the Center for TSM, <http://www.murraystate.edu/tsm/ctsm/>, at Murray State. Approximately six years ago the initial broadband mapping efforts in Kentucky began at Murray State. These mapping efforts led to the later state mapping efforts. The success of Kentucky mapping efforts was a significant factor in the inclusion of funding the Stimulus Funding package to take the broadband mapping efforts to a national level.
- The University of Louisville will combine the efforts of the Survey Research Center (SRC), <http://usi.louisville.edu/sru/>, and the Kentucky State Data Center (KSDC), <http://ksdc.louisville.edu/>, both components of the Urban Studies Institute (USI), <http://usi.louisville.edu/>, and the Center for Geographic Information Sciences (ULCGIS), <http://www.ulcgis.org/>, a division of the Department of Geography.

The SRC has for more than thirty years been a premier center for primary data collection for hundreds of regional, statewide, and national projects. As a member of both the American Association of Public Opinion Research (AAPOR) and the Association of Academic Survey Research Organizations (AASRO), it has been a party to the establishment of the exacting standards utilized in scientific data collection processes. The KSDC is the Governor's official liaison to the United States Census Bureau and serves as the central office for demographic data in the Commonwealth. And ULCGIS has played a pioneering and continuing role in the training of GIS users and the expansion of GIS utilization in the Commonwealth.

Approach:

1. The Kentucky Council on Postsecondary Education (CPE) will help coordinate the efforts of the above lead organizations and additional resources at the University of Kentucky, <http://www.uky.edu/>, Northern Kentucky University's College of Informatics, <http://informatics.nku.edu/>, and the Kentucky Community and Technical College System, <http://www.kctcs.edu/>. Utilizing these universities allows the Commonwealth to review availability data using a regional approach: West Kentucky (Murray State University); North (Northern Kentucky University); Louisville and the

Central River Areas (University of Louisville); Central and Eastern Kentucky (University of Kentucky; University of Louisville).

2. Review the vendor's methodology – (Contract award – January 31, 2010) Working with the mapping contractor, the validation team will evaluate and provide feedback on the methodology put in place by the contractor. University experts will work closely with the selected contractor to assist all parties in gaining a clear understanding of the steps to be taken to achieve a valid product and to design a process evaluation which will assist the contractor's progress and provide a method for determining the underlying elements of the contractor's final products. They will review the goals set by NTIA and review the planning of the contractor to reach those goals. Maximum transparency in the data process will be an overarching objective. This review will include, but not be limited to:

- a. Validate the list of providers being used by the contractor to make sure all providers are included.
- b. Validate the list of state-provided and Census Tiger Data to identify the location of health facilities, schools, libraries, hospitals, universities, public buildings, etc.
- c. Review provider outreach methodology being used by the contractor.
- d. Review submission options, the Non-Disclosure Agreement and the timeframe for submission.
- e. Identify Business Intelligence data sources to validate provider information.
- f. Review contractor website used to collect comment/survey forms from visitors to validate the broadband coverage in their area. The data collection components, including sampling frame design, instrument development, and data collection and data entry methods, will be reviewed to assure that best practices are being followed.
- g. The process of verification will continue with observation of the data collection and data entry process and the ongoing steps in the development of the final products. The contractor will be required to produce reports systematically to be used to measure its progress toward articulated goals, including rate, effort, and adherence to standards of data collection.

3. Review the vendor's consistency with ESRI standards – (Contact award – January 31, 2010) Working with the mapping contractor, the validation team will review the data collection efforts to make sure GIS standards are being followed and comply with the most recent NTIA specifications. Review the initial plan for formatting and mapping data, assuring that the layers of data will permit the maximum flexibility in GIS data analysis.

4. Validation of the collected data – (February 1, 2010 – March 31, 2010) Working with the mapping contractor, the validation team will review the data provided on February 1, 2010 and on March 1, 2010. They will conduct a validation of the data collection by sampling data reported by the contractor and checking for data quality. Accepted survey research practices which best conform to the sampling frame of broadband providers and/or users will be employed. The KSDC will validate that the user base conforms to the actual population numbers and age distributions on the Commonwealth. Data modeling using GIS will be used on subsets of the data in an effort to demonstrate that the contractor's products adhere to the techniques as prescribed in the contractor's approved proposal. This review will include, but not be limited to:

- a. Cross check data for accuracy by using at least one other metric (e.g., the location and capability of local infrastructure and whether such infrastructure could realistically serve a supposed service address, on the ground verification or telephone survey). Alternate Business Intelligence data sources will also be explored to validate data accuracy.
- b. Statistically representative and significant samples will be used to validate data, especially in rural and potentially underserved areas (the potentially

- underserved areas will be identified from prior data collected by ConnectKentucky).
- c. Limited Field Census and Telephone Surveys will be used to validate data in situations where the data cross checks and statistical samples are not able to validate data provided by the contractor. Field Census work will be done by faculty and students from campuses of the Kentucky Community and Technical College System (KCTCS) to validate local adoption rates. KCTCS has 16 colleges and over 60 campuses. KCTCS involvement provides local knowledge of providers and customers that will need to be interviewed. Sample field inspections of middle-mile and backbone interconnection points will also be performed by KCTCS. The number of KCTCS campuses used in the Field Censuses will be determined after the initial validations have been completed.

Personnel/Resources:

Murray State University

Dr. James Gantt, Director, Center for Telecommunications Systems Management (TSM)
Dr. Fred Miller, Professor, Hutchens Distinguished Professor of Marketing, Business GIS and TSM

GIS faculty member
Statistics faculty member
Students – TSM, GIS, Marketing, etc

University of Louisville

Dr. Michael L. Price, Senior Urban Systems Researcher, Department of Urban and Public Affairs

Robert Warren Forbes, Associate Director, Center for Geographic Information Sciences
Bruce S. Gale, Executive Director, Urban Studies Institute, School of Urban and Public Affairs

Kentucky Community and Technical College System

Information Technology Faculty
IT Students

- 3) You describe that the contractor will house the website. Do you have protections to ensure that you own all data collected by the contractor? Do you have plans to protect against disruptions resultant of a need to change contractors and have you considered housing data in-house?

While the Commonwealth has reached an agreement with the mapping vendor to initially host the website, the Commonwealth has included in its contractual language that it is to receive all data submitted to NTIA on its behalf, less any data deemed proprietary or subject to NDA. This data will be stored and secured in-house by the Commonwealth's Office of Technology. Further, the Commonwealth has included in its contractual requirements that it will be the owner of all broadband mapping data collected on its behalf by the mapping contractor.

The Commonwealth does not have specific plans to address disruptions resulting from the dissolution of its relationship with its mapping provider. However the mapping vendor was carefully chosen from the competitors based in part on their past experience with broadband mapping in other states like California and North Carolina.

- 4) Under planning, please provide a much more detailed explanation of your planning initiative. For example: 1) how do you plan to formulate recommendations for appropriate infrastructure development (e.g., what stakeholder groups will you consult, how will you coordinate input, what will be your end product); 2) How do you plan on facilitating the used computer exchange (roughly how many computers do you expect to provide, through what mechanism of distribution, who will receive the computers, will you be conducting training and education, etc.); 3)How will you conduct the expansion of community anchors and initiatives?

We will also need more budget detail on the expenses under the planning budget and it should roughly mirror the kind of information you provide under mapping (see spreadsheet).

At this time, the Commonwealth of Kentucky does not have an established broadband planning group to develop and execute a vision for expanding broadband coverage throughout the Commonwealth. The planning funds being sought from NTIA under this grant will enable the Commonwealth to create a structured planning group whose responsibility will be to identify and evaluate the gaps in broadband coverage within the Commonwealth and develop a detailed plan for addressing those gaps. This group will represent the relevant stakeholders from around the Commonwealth and will include, but not be limited to, representation from state agencies, local development officials, representatives from local municipalities, institutions of higher education and private entities with interest in broadband activities.

Because the previously collected broadband mapping data is not regarded with confidence by the key stakeholders of the Commonwealth, we have little information about the existing nature of broadband coverage. Therefore, the evaluation and development of detailed plans for closing the gaps in broadband coverage can only commence after the collection of current broadband coverage data has been completed.

While it is, for the reasons stated, difficult to discuss any detailed planning activities at this time, some thought has already been given to how we might expand broadband coverage. If, for example, the Commonwealth finds that it is necessary to expand infrastructure there may be opportunities to use some of our existing network backbone infrastructure (wired and/or wireless) resources to create opportunities for last-mile providers to create offerings for communities where it would otherwise be cost prohibitive for a last-mile provider to offer service. In addition, there may be opportunities to expand the reach of the Commonwealth's network infrastructure to libraries and community centers, which then could perhaps expand their offerings of public computing resources to the public. Likewise, there has been preliminary discussion of an idea for expanding broadband access through the provision and distribution of low-cost computers. The distribution of these computers would be coordinated through the Commonwealth's development district and local municipality partners as a means to expand broadband by ensuring that more of our citizens have access to computers.

Unfortunately, until we can fully evaluate the nature of the broadband gaps in this state we will not be able to determine with certainty if any of these ideas represent a viable method for expanding broadband coverage within the Commonwealth.

5) We could use a more detailed description of the planning timeline as well (expected milestones, etc.)

Upon receipt of funds

Assemble Commonwealth Broadband Planning Council

February 2010

Begin analysis of broadband coverage data collected by mapping vendor

March 2010

Begin development of detailed plans for addressing broadband coverage gaps

June 2010

Complete development of detailed plans for addressing gaps in broadband coverage

6) Can you provide a more detailed explanation of the in-kind amounts. (See Attached) How did you determine the value of the previous data and what is the \$20,000 in-kind amount based on?

In December 2004 a contract was entered into between the Commonwealth of Kentucky (through Kentucky Infrastructure Authority) and ConnectKentucky to carry out the Governor's and President's initiative of having broadband service throughout the Commonwealth by 2007. The contract included an assessment of existing broadband infrastructure and service availability. The assessment process required vendor staff to collect data, compile and

analyze the data and distribute it to the Area Development Districts for processing. The contract amount was \$400,000 and is the basis of the pre-grant in-kind amount.

Comment on previous mapping efforts, and need for the current grant request:

Mapping information currently held by the Commonwealth lists broadband availability, and speeds at a county specific level of detail, service providers are also listed, but there is no connection between availability, speed, and provider. The information is aggregate. Provider-specific data has not been disclosed due non-disclosure agreements which limit the ability to identify providers within a given coverage area.

The Commonwealth does have a listing of service providers which is accurate as of the most recent data collection in 2007. While the information is in need of updating, it does provide a starting point for new efforts to map the Commonwealth by identifying the majority of service providers. Additionally, previous mapping efforts will provide an indication of which areas of the state are in most need, because these are agreed to as being unserved, even with the more aggressive estimates proposed by Connect Kentucky.

A number of service providers in the state took issue with Connect Kentucky and their methods for collecting data. More importantly, Kentucky was the first state mapped to show broadband availability, and both Connect Kentucky and Connected Nation have continued to refine their techniques going forward. Taking into consideration the dispute between some service providers, and the technological advancements made in the collection of data, a much more accurate broadband availability map is needed. That map must be created essentially from a "blank slate" in order to ensure that information is accurate, and generally viewed as legitimate by the relevant stakeholder groups involved.

From the outset of the NTIA NOFA the Commonwealth has worked diligently to ensure a fair and open dialogue with relevant stakeholders on both sides of the mapping issue. A Request for Proposals open to any interested party was issued to contract services for the state's data collection. The goal has been to concentrate on "what is right rather than who is right" so that the Commonwealth can capitalize on the current opportunity in its fullest.

In the Commonwealth's current proposal, significant planning has been given to ensure that mapping data which is collected will be accessible, accurate, ensure proprietary knowledge is protected, and provide the most accurate picture of availability in Kentucky to date. Third party verification has been employed to ensure accuracy, and planning dollars are being sought to ensure an institutional framework and body of extensive research for continued success.