OMB Number: 4040-0004 Expiration Date: 03/31/2012

Application fo	or Federal Assis	stance SF-424				
Preapplication X New		X New Continuation	* If Revision, select appropriate letter(s): * Other (Specify)			
* 3. Date Received	d:	4. Applicant Identifier:				
5a. Federal Entity	Identifier:		* 5b. Federal Award Identifier;			
State Use Only:						
6. Date Received	by State:	7. State Application	on Identifier:			
8. APPLICANT IN	FORMATION:	-				
* a. Legal Name:	Virginia Department	of Emgergency Management				
Land to the second seco	payer Identification N	lumber (EIN/TIN):	* c. Organizational DUNS:			
d. Address:			-			
* Street1: Street2: * City: County: * State: Province:	Richmond VA	urt				
* Country: * Zip / Postal Cod	USA de: 23236					
e. Organizationa	al Unit:					
Department Name	e:		Division Name:	7,7		
f. Name and cor	ntact information of	person to be contacted or	n matters involving this application:			
Middle Name:	Mrs. .ee	* First Na	ime: Cheryl			
Title: Grants Dir	rector					
Organizational Af	ffiliation:					
* Telephone Num	nber: (804) 897-976	0	Fax Number: (804) 897-6613			
* Email: cheryl	l.lee@vdem.virginia.gov					

Application for Federal Assistance SF-424
9. Type of Applicant 1: Select Applicant Type:
A. State
Type of Applicant 2: Select Applicant Type:
Type of Applicant 3: Select Applicant Type:
* Other (specify):
* 10. Name of Federal Agency:
National Telecommunications and Information Admin
11. Catalog of Federal Domestic Assistance Number:
1 1 5 4 9
CFDA Title:
State and Local Implementation Grant Program
* 12. Funding Opportunity Number:
2013-NTIA-SLIGP-01
* Title:
State and Local Implementation Grant Program
The same seems of the same see
13. Competition Identification Number:
2013-NTIA-SLIGP-01
Title:
14. Areas Affected by Project (Cities, Counties, States, etc.):
* 15. Descriptive Title of Applicant's Project:
FY2013 SLIGP
Attach supporting documents as specified in agency instructions.
mass supporting documents as specified in agency instructions.

Application for Federal Assistance SF-424						
16. Congression	nal Districts Of:					
* a. Applicant	VA07		* b. Program/Project SLIGP			
Attach an addition	nal list of Program/Project C	Congressional Districts if ne	eeded.			
Congressional Dis	stricts.doc					
17. Proposed P	roject:					
* a. Start Date:	07/01/2013		* b. End Date: 06/30/2016			
18. Estimated F	unding (\$):					
* a. Federal		2,756,850.00				
* b. Applicant						
* c. State		689,213.00	x-			
* d. Local						
* e. Other						
* f. Program Inc	ome					
* g. TOTAL		3,446,063.00				
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 in attachment.) ★ Yes No If "Yes", provide explanation and attach. 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:	Michael			
Middle Name:						
* Last Name:	Cline					
Suffix:			APPENDING CONTRACTOR OF THE PROPERTY OF THE PR			
* Title: State Coordinator						
* Telephone Nur	mber: (804) 897-6500		Fax Number: (804) 897-6613			
* Email: mich	nael.cline@vdem.virginia.gov	MC				
* Signature of Authorized Representative: /// Date Signed: 29702(3						

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BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006 Expiration Date: 06/30/2014

SECTION A - BUDGET SUMMARY

		1,1	OLO1	ION A - BUDGET SUMM	IAIX I		
	Grant Program Function or	Catalog of Federal Domestic Assistance	Estimated Unob			New or Revised Budget	
	Activity (a)	Number (b)	Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.	SLIGP	11.549	\$	\$	\$ 2,756,8	\$ 689,213.00	\$ 3,446,063.00
2.							
3.							
4.							
5.	Totals		\$[]	\$	\$ 2,756,8	50.00 \$ 689,213.00	\$ 3,446,063.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories		GRANT PROGRAM	FUNCTION OR ACTIVITY		Total
	(1) SLIGP				(5)
a. Personnel	\$ 228,000.00	0 \$ 0.0	0 \$	\$	\$ 228,000.0
b. Fringe Benefits	82,609.00	0.0	0		82,609.
c. Travel	105,480.00	0.0	0		105,480.
d. Equipment	511	0.0	0		
e. Supplies	29,401.00	0.0	0		29,401.
f. Contractual	2,167,060.00	0.0	0		2,167,060.
g. Construction		0.0	0		
h. Other	144,300.00	0 689,213.0	0		833,513.
i. Total Direct Charges (sum of 6a-6h)	2,756,850.00	0 689,213.0	0		\$ 3,446,063.
j. Indirect Charges					\$
k. TOTALS (sum of 6i and 6j)	\$ 2,756,850.00	0 \$ 689,213.0	\$	\$	\$ 3,446,063.
. Program Income	\$] \$	\$	s	\$

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Prescribed by OMB (Circular A -102) Page 1A

SECTIO	N C	- NON-FEDERAL RESC	UF	CES				
(a) Grant Program		(b) Applicant		(c) State		(d) Other Sources		(e)TOTALS
8. SLIGP	\$		\$]\$	689,213.00		689,213.00
9.								
10.								
11.								j i
12. TOTAL (sum of lines 8-11)	\$		\$		\$	689,213.00	5	689,213.00
SECTIO	N D	- FORECASTED CASH	NE	EDS				
Total for 1st Year		1st Quarter	١,	2nd Quarter		3rd Quarter		4th Quarter
13. Federal \$	\$		\$		\$		<u> </u>	
14. Non-Federal								
15. TOTAL (sum of lines 13 and 14)	\$		\$		\$		\$[
SECTION E - BUDGET ESTIMATES OF F	EDI	ERAL FUNDS NEEDED	FO	R BALANCE OF THE	PF	OJECT		
(a) Grant Program				FUTURE FUNDING				
		(b)First	L	(c) Second		(d) Third		(e) Fourth
16. SLIGP	\$		\$] \$		\$	
17.								
18.								
19.								
20. TOTAL (sum of lines 16 - 19)	\$		\$		\$		\$	
SECTION	F - (OTHER BUDGET INFOR	RM.	ATION		1		
21. Direct Charges:		22. Indirect	Ch	arges:				
23. Remarks:						3		

1. Existing Governance Body

a. Describe the organizational structure and membership of the existing Statewide Interoperability Governing Body (SIGB), or its equivalent, that is responsible for public safety communications in the State.

The Statewide Interoperability Governance Body in Virginia ensures that the Statewide Interoperability Communication Plan (SCIP) is stakeholder driven. The SIGB represents the seven Regional Preparedness Advisory Committees for Interoperability (RPAC-I) that Virginia is divided into, which serve as the basis from which all ideas, proposals, and guidance flows. Virginia's SIGB is the Statewide Interoperability Executive Committee (SIEC), which receives input from all stakeholders via the Statewide Interoperability Executive Committee Subcommittees which include Policy, Grants, and Operations. The SIEC provides all information gained to the Office of Veterans Affairs and Homeland Security which houses the Office of Interoperable Communications led by the Statewide Interoperability Coordinator.

To ensure interoperability planning and data collection efforts are closely coordinated with other important agencies in the Commonwealth, the SIGB also contains representatives from but not limited to:

- The Virginia State Police (VSP)- Statewide Law Enforcement. Manages the State Agency Radio System (STARS)
- The Virginia Department of Emergency Management (VDEM) Emergency Operations Planning and large scale response and recovery. Lead agency for statewide emergency communications when under a Governors Declaration of Emergency.
- Virginia Information Technologies Agency (VITA)- Information Technology procurement and coordination
- Virginia National Guard Domestic Crisis Response and support to VDEM and Public Safety.
- Virginia Department of Transportation (VDOT) Traffic Management and Coordination. Lead for ESF-1 within the Virginia Emergency Operations Center.
- Virginia Department of Health (VDH) Public health preparedness and response. Coordinator of the Strategic National Stockpile present in Virginia.
- Virginia's seven Regional Preparedness Advisory Committees-Interoperability
- Virginia Secretary of Technology/Virginia's Center for Innovative Technology -state broadband mapping designated entity.

The SIGB will continue to address matters of communications interoperability, these efforts will continue to be funded through the State Homeland Security Grant Program (SHSGP). The expanded SIGB, when meeting to discuss matters relating to public safety broadband, will be funded through the SLIGP. Those costs will largely be travel and supplies related, and are captured in the provided budget.

b. Describe the SIGB's authority to make decisions regarding public safety communications and how these decisions are implemented.

The SIGB works with the SWIC to write and maintain the SCIP, which is reviewed annually. The initiatives and priorities laid out in the SCIP have the force of grant guidance, and all communications

related grant requests must be reviewed by the SIGB and the SWIC to ensure that they support the initiatives and plans outlined in the SCIP. These authorities are documented in the Code of Virginia and provided below;

- § 2.2-231 "Designate a Commonwealth Interoperability Coordinator to review all communicationsrelated grant requests from state agencies and localities to ensure federal grants are used to enhance interoperability and conduct the annual review and update of the statewide interoperability strategic plan as required in §2.2-232."
- § 2.2-232 "All state agencies and localities shall achieve consistency with and support the goals of the statewide interoperability strategic plan by July 1, 2015, in order to remain eligible to receive state or federal funds for communications programs and systems."
- c. Describe how the State will leverage its existing SIGB, or its equivalent, to coordinate the implementation of the Public Safety Broadband Network (PSBN) in the State.

The existing SIGB will be expanded to included representation from the additional partners that will be required to implement public safety broadband. These include, but aren't limited to; Local and State Chief Information Officers, , County Administrators, Department of Manpower and Budget, the Attorney General's Office, the E911 Service Board, the Homeland Security Working Group, Fire Chiefs, Sheriffs, and Chiefs of Police Associations.

d. How does the State plan to expand its existing SIGB to include representatives with an understanding of wireless broadband and Long Term Evolution (LTE) technology in order to facilitate its consultations with FirstNet?

The SIGB will work with the private sector to establish partnerships with providers that have an understanding of wireless broadband and LTE technologies. Numerous existing forums for this relationship already exist through the E911 Service board and the Homeland Security Working Group.

e. Does the State currently dedicate sufficient financial resources to adequately support the SIGB? Does the State intend to invest funds received from SLIGP to financially support the SIGB? If so, provide the amount the State expects to request and describe the SIGB functions that these funds will support.

The expanded governance structure for PSBN, which includes the existing SIGB, will require more resources than the state currently dedicates to the SIEC in order to support a more aggressive meeting schedule and facilitate the completion of additional deliverables. The state expects to invest 15% of the available funds to support the travel, facilitation, and support that the SIGB will require.

- 2. Statewide Communications Interoperability Plan (SCIP)
- a. Are there existing strategic goals and initiatives in your SCIP focused on public safety wireless broadband? If so, what are they?

Yes, Initiative #4 in the 2013 SCIP which states; "Public Safety Broadband provides an unparalleled opportunity for the future of interoperable communications in the Commonwealth. It may result in a secure path for COMLINC, information-sharing initiatives, Public Safety Answering

Points (PSAP), and Next Generation 911 (NG911) integration. Broadband will not replace existing Land Mobile Radio (LMR) systems in the foreseeable future, as the cost to implement broadband is extremely high. A cautious approach to this investment is needed. Therefore, robust requirements and innovative business practices must be developed for Broadband initiatives prior to any implementation. "

b. Describe how the State has engaged local governments and tribal nations, if applicable, in public safety broadband planning activities that have been completed to date.

The interim Broadband Governance Committee references in 2(a) includes the chair of each of Virginia's seven Regional Preparedness Advisory Committees – Interoperability (RPAC-I). This person is elected biannually by the members of the region, and is the direct representative of the region's localities when discussing statewide issues such as public safety broadband.

c. Does the State intend to use SLIGP funding to support efforts to update the SCIP by adding public safety wireless broadband strategic goals and initiatives? If so, provide the amount the State expects to request and describe the activities that these funds will support.

Not directly. The State just completed a SCIP workshop provided by the Office of Emergency Communications (OEC) that incorporated PSBN into our strategic planning. As part of this effort the State also has a Broadband Technical Assistance opportunity being provided by OEC in 2013. PSBN strategic goals will continue to be evaluated and refined by the SWIC and the SIEC as a part of Virginia's annual review of the SCIP and provision of the SCIP implementation report.

- 3. State-level Involvement
- a. What is the status of the Statewide Interoperability Coordinator (SWIC) for your State? Does this person work full-time in the SWIC capacity? How will this person be involved with SLIGP?

Virginia has a full time Statewide Interoperability Coordinator who is appointed by the Governor and serves as the chair of the SIGB. Virginia's SWIC has been designated as the State Point of Contact for FirstNet, and will be coordinating our public safety broadband efforts.

b. How will the State's Chief Information Officer/Chief Technology Officer be involved with SLIGP and with activities related to the implementation of the nationwide public safety broadband network?

The State CIO and his representatives will be direct members of our expanded governance structure.

- c. What other State-level organizations or agencies will be involved with SLIGP?
- The list includes but is not limited to: The Virginia State Police, The Virginia Information Technologies Agency, The Virginia Department of Emergency Management, The Virginia Department of Health, The Virginia Department of Transportation, The State Corporation Commission, The Virginia Department of Agricultural and Consumer Services, Virginia Department of Fire Programs, Virginia Department of Military Affairs.
- d. What are the specific staffing resources the State requires to effectively implement

the consultation process with the First Responder Network Authority (FirstNet) and perform the requirements of SLIGP? If the application requests funding for additional staffing, provide the amount the State expects to request and describe the positions these funds will support.

Virginia will establish a project management office within the Office of Veterans Affairs and Homeland Security, Office of Interoperable Communications.

Staffing resources to support the PSBNPMO will require a mix between consulting services, state personnel, and stakeholder involvement and will constitute approximately 50% of the available budget. The primary resources needed to implement the FirstNet consultation process are identified as:

- Program Manager
- Project Manager
- Support Assistant
- Engineer
- Outreach Support

e. How is the State engaging private industry and secondary users (e.g., utilities)?

Through its participation in the Mid-Atlantic Consortium for Interoperable Nationwide Advanced Communications (MACINAC) Initiative (see response to Question 5), the State has engaged potential private users of the network, particularly electric utilities, in discussions regarding their interest in and potential support for the network in the mid-Atlantic region. As a regional approach, MACINAC is wellsituated to work with regional utilities, of which the mid-Atlantic has quite a few. MACINAC is defined as a regional agreement between the states, and thus will coordinate and share results of meetings with utilities that have regional interests with the other members. Thus far, MACINAC has focused its efforts on the major electric utility associations; it has presented a webinar to the CIOs committee of the Edison Electric Institute and held an in-person working session with regional utilities through the Utilities Telecommunications Council. It has also met with the National Rural Electric Cooperative Association and the American Public Power Association. MACINAC is now in the process of following up on those events by reaching out to specific interested utilities to discuss with more specificity the technical, operational and business relationship each of those utilities would like to enjoy in connection with the future nationwide network. The State, in its role as a MACINAC member, expects these discussions to yield tentative, documented terms that can serve as a starting point for active negotiations between the utilities and the network operator.

4. Coordination with Local Government Jurisdictions

- a. Describe the local government jurisdictional structure (e.g., municipalities, cities, counties, townships, parishes) located within the boundaries of the State, Commonwealth, Territory, or District applying for a grant. How many of these local jurisdictions exist within the State's boundaries?

 Virginia is a Commonwealth that consists of 95 counties total and 40 independent cities.
- Virginia is a Commonwealth that consists of 95 counties total and 40 independent cities.
- b. Describe how your State will involve these local jurisdictions to ensure there is adequate representation of their interests in the FirstNet consultation and in the planning and governance for SLIGP.

All of these jurisdictions are members of one of the seven Regional Preparedness Advisory Council-Interoperability (RPAC-Is) which will be relied heavily upon throughout the project implementation process. In addition, representatives from the County Administrators, local Chief Information officers, and various Public Safety Associations will serve on the SIGB.

c. Describe past methods the State has used to successfully coordinate state-wide projects or activities with local government jurisdictions.

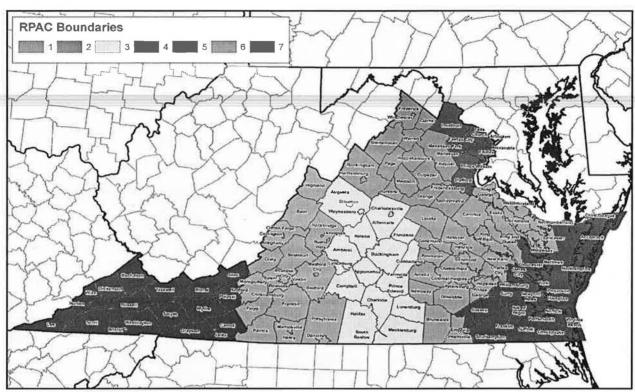
Virginia's SIGB was the first one established in the nation, and serves as the model for the rest of the country's interoperability governance efforts. They state/local partnership fostered through our SIGB structures, which has its foundation in the RPAC-Is, has been in place for over seven years, and has enabled collaboration that has resulted in greatly improved communications capabilities, while preserving the jurisdictional sovereignty inherent in a Commonwealth.

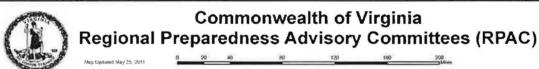
d. What have been some of the State's primary challenges when engaging with local jurisdictions? What are some of the strategies that the State will employ to overcome these challenges during implementation of SLIGP?

The biggest challenge has been consistent engagement of the stakeholders during the course of a long project. The state will employ an aggressive outreach program, targeting officials at various levels of the jurisdictional structure in order to secure participation. This will be supported by continued funding of outreach and education programs well beyond the timeframe established by the SLIGP, and is especially focusing on the many representative organizations present with =in the state (Virginia Association of Counties, Virginia Fire Chiefs, Virginia Chiefs of Police, Virginia Local Government Information Technology Executives, etc.).

- 5. Regional Coordination
- a. Does your State have intrastate regional committees that are involved with public safety communications? If so, please describe their organizational structure and membership and how they provide input to the SIGB.

Yes. Virginia is divided geographically into seven Regional Preparedness Advisory Committees-Interoperability (RPAC-Is). The chair of each region sits on the SIEC and works directly with the SWIC on communications issues. Additionally, all communications grant requests are vetted through the RPAC-I before being forwarded for consideration to the SIEC.







b. Describe any interstate regional bodies in which your State participates that are involved with public safety communications in the State.

Virginia is a member of the Mid-Atlantic Consortium for Interoperable Nationwide Advanced Communications (MACINAC), an initiative to implement a multi-state, regional approach to deployment and operation of the mid-Atlantic portion of the nationwide public safety broadband network (NPSBN). Beginning a year before passage of the Act that created FirstNet, the District of Columbia, the states of Delaware, Maryland, and West Virginia, and the commonwealths of Pennsylvania and Virginia formed MACINAC to help them take concerted action and thereby improve interoperability and realize cost efficiencies.

Thus far, MACINAC has drafted a charter to memorialize the agreement of its member states to work in a concerted, regional approach. It has held stakeholder meetings throughout the region to provide policy and technical education and develop user requirements, and it responded to requests for comment from both NTIA and FirstNet. It has also begun identifying government-owned assets in the states, identified and documented a cooperative procurement process that would allow all states to purchase from a single contract vehicle, and engaged critical infrastructure industries in discussions regarding their potential inclusion in a sustainable business model for the portion of the NPSBN within the MACINAC region. In addition, MACINAC has prepared (but not yet issued) a Request for Information to gain for FirstNet and the MACINAC states important information related to the planning, design, and non-LTE aspects of network deployment in the region.

Virginia has allocated \$30000/year for funding the MACINAC initiative. This funding is provided specifically for funding the regional coordination efforts of the involved states. This is especially important as the MACINAC initiative includes all of the jurisdictions in the National Capital Region, a highly integrated and interdependent area. To be clear, MACINAC is not a thing, it is a group. The nature of the support for MACINAC is yet to be determined, and will be based on the consensus of the states involved.

c. How does the State plan to engage and leverage these existing regional coordination efforts in the nationwide public safety broadband network planning?

Virginia plans to continue to participate in MACINAC and work with the other states in the region to realize the benefits of the regional approach. Though we are not certain at this point where our coordinated efforts will focus (each decision of the group requires consensus), we do expect our efforts to be helpful to the FirstNet consultation process. By providing a mechanism for the states to coordinate their activities and adopt concerted approaches to common tasks, MACINAC will not only ease the consultation process for FirstNet, but it will also help FirstNet execute on a region-wide basis some of the most challenging aspects of network deployment, such as site acquisition and improvement, and backhaul design and deployment. Importantly, MACINAC also will help educate and engage public safety stakeholders throughout the region, thereby creating critical support and buy-in for the NPSBN.

d. Please identify, if applicable, any other state, territory, or regional entity with which the State collaborated or coordinated in the development and preparation of this application and describe the nature of that collaboration or coordination.

Virginia collaborated and coordinated with the other five states that are members of MACINAC in the development and preparation of some parts of this application, including aspects of the response to this Question 5. Specifically, we shared language for all states to consider including in this response, and we also shared our plans for budget line items to help ensure that each state retained sufficient flexibility to support within SLIGP the cooperative work of the MACINAC states.

6. Tribal Nations

- a. How many federally recognized tribes are located within the State boundaries? (If the answer is zero, please skip to question #7.) Information on federally recognized tribes may be located at the Department of Interior, Bureau of Indian Affairs website: http://www.bia.gov/WhoWeAre/BIA/OIS/TribalGovernmentServices/TribalDirectory/index.htm Zero
- b. Describe how the State will involve the tribal nations to ensure there is adequate representation of their interests in the FirstNet consultation and in the planning/governance for the grant program. Does the State have a process for consulting with the tribes located within State boundaries? If so, please provide a description of that process.

 Zero
- c. Describe past methods the State has used to successfully coordinate with tribal nations.

N/A

d. Are there tribal representatives who regularly attend your SIGB meetings? If so, please identify the tribes represented. $\mbox{N/A}$

e. What have been some of the State's primary challenges when engaging with tribal nations? What are some of the strategies that the State will employ to overcome these challenges during implementation of SLIGP?

N/A

7. Rural Coverage

a. Please classify your local jurisdictions into rural and non-rural areas and identify the criteria used in making these rural and non-rural determinations.

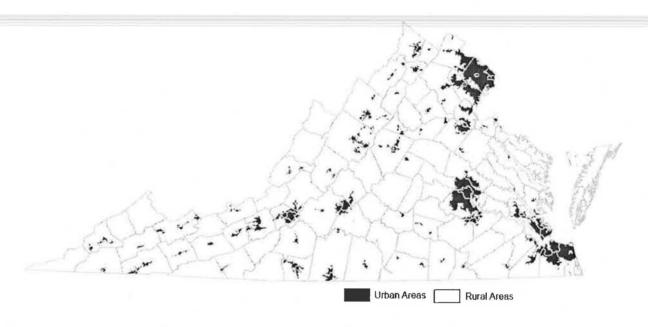
For the purpose of this analysis, Virginia uses the Census definition of what "rural" is: http://www.census.gov/geo/reference/pdfs/GARM/Ch12GARM.pdf

Rural area means any area, as confirmed by the latest decennial census of the Bureau of the Census, which is **not located within**:

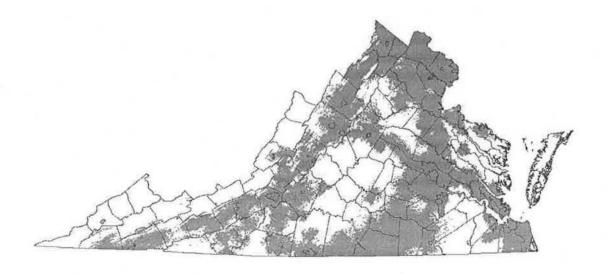
- 1. a city, town, or incorporated area that has a population of greater than 20,000 inhabitants; or
- 2. an urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants. For purposes of the definition of rural area, an urbanized area means a densely populated territory as defined in the latest decennial census of the U.S. Census Bureau.

Using this definition, 87 of Virginia's 95 counties have a substantial rural area.

2010 Census Urban Areas



b. Please describe the coverage area and availability of broadband service and LTE technology in the rural areas of the State as defined in response to 7.a.



4G coverage in Virginia

Coverage Statistics for rural areas in VA:

Technology Type	% Covered
4G LTE	47
Mobile Wireless	84
Fixed Wireless	4
Cable Wireline	21
DSL Wireline	32
Fiber Optic Wireline	2
Wireline	39
Wireless	86
Total Broadband Coverage	89

c. Please describe how the State plans to prioritize the grant activities to ensure coverage in, and participation by, rural areas. Please include specific plans, milestones, and metrics to demonstrate how you will achieve these requirements.

The State plans to develop data-driven method of prioritizing PS LTE coverage in a manner which will optimize the return on investment (ROI) of Public Safety Broadband deployments—for FirstNet, the state and the counties.

The recommended approach is to develop a simple tool which would use data-driven rankings and assessments and combine them into an overall "Priority Ranking." When complete this value assessment could be used to inform policy making and prioritization since it would be an objective and balanced assessment of multiple factors which must be considered.

This common framework would assess and rank counties in a state by established criteria, or categories of criteria for the more complex aspects such as "Public Safety Need." The program would develop these tools, processes and methodologies according to a stated list of objectives; these objectives could include the following:

- Develop a fair, data-driven analysis tool which will output an objective 700MHz PS LTE assessment of the value of deployment
- Use County based data
- Keep the process open and transparent
- Consider a variety of factors and develop consensus around the tool and mechanisms used to prioritize various aspects
- As required by the Statute, the factors pay special attention to tribal, rural areas and regions which are currently underserved by commercial broadband deployments.

Proposed Methodology and Assessment Factors

This approach uses a common practice of using credible and detailed data sets to establish objective ranking and prioritization criteria, in this case to include categories of assessing; Tribal, Rural and Underserved by Broadband, Population Density, Public Safety Need and Ease of Implementation.

Additional detail for each is provided in the descriptions below.

- Rural / Underserved Households Ranking It is proposed that in order to prioritize lower density
 population areas, this category would create a ranking which makes the lower density counties
 higher in ranking and also considers areas underserved by commercial broadband providers.
- Population Density by County
- Public Safety Need A combined ranking which attempt to cover a combined assessment of ranked needs (see below)
- Ease of Implementation These factors would capture aspects which will speed deployments by identifying readiness and opportunities for quick, low cost deployments. Detailed factors could include level of planning maturity, funding, and overall "PS LTE Readiness" factors, proximity to backhaul resources, and level of regional planning.

Public Safety Needs Assessment

It is proposed that this ranking be another categorized ranking assessment, "nested" inside the larger assessment criteria.

- Coastlines
- Critical Infrastructure (all) Power stations, oil refineries, racetracks, stadiums, airports, military bases,
 PS locations, PSAP locations, nuclear power plants
- Crime Rate Per capita by county
- Other risks wild fire risk, hurricane risk areas, water hazards,
- EMS/Hospital/Air Evac Operations Capture EMS needs
 - o Federal Ops DEA, CG, ICE, CBP, DoD, etc.
 - o State Operations State Patrol, VDOT, Parks & Wildlife, etc.
 - Other Aircraft operations, Evacuation centers, evacuation routes

8. Existing Infrastructure

a. What, if any, databases exist that collect data on government-owned wireless and/or communications infrastructure for the state, local, and/or tribal governments?

As part of the state broadband mapping initiative (SBI) managed by the Center for Innovative Technology, Virginia Tech has developed the Vertical Assets Inventory Tool (VAIT) located at http://www.cgit.vt.edu/verticalassets/. This inventory is a growing collection of vertical assets that include; 1.) Exports from the FCC Antenna Structure Registration (ASR) System (http://www.fcc.gov/help/antenna-structure-registration-asr-overview); 2.) Campaigns conducted in Virginia to inventory vertical assets where antennas could be mounted, for example the inventory contains a collection of water towers from the Virginia Municipal League (VML), and campaigns that have been conducted in a few Virginia localities and regions to document assets such as tall buildings and agricultural silos; 3.) Volunteered information from individuals regarding vertical assets acquired through http://www.cgit.vt.edu/verticalassets/; 4.) Virginia STARS towers acquired from Virginia State Police (http://www.vsp.state.va.us/stars.shtm); 5.) A limited number of communications infrastructure assets owned by commercial providers (i.e. MBC)

b. If these databases exist, what is the process for updating them and how often do these updates occur?

- 1.) Exports from the FCC Antenna Structure Registration (ASR) System (http://www.fcc.gov/help/antenna-structure-registration-asr-overview) are updated on a 6-month schedule at this time (March 2013), however, FCC does provide access to daily and weekly ASR transactions, and the SBI project plans to investigate the automated retrieval and processing of these transactions;
- 2.) Campaigns conducted by the SBI team in Virginia to inventory vertical assets where antennas could be mounted. Vertical asset information is updated as new information is available.
- 3.) Volunteered information from individuals regarding vertical assets acquired through http://www.cgit.vt.edu/verticalassets/; This information is updated once the submitted information is verified by our team, typically within 3-5 days after it is reported in the web interface.
- 4.) There is no publicly accessible database of existing infrastructure for the Statewide Agencies Radio System (STARS). The Virginia State Police maintains a secure database of the STARS infrastructure that is available to Statewide Interoperability Coordinator (SWIC).
- 5.) A limited number of communications infrastructure assets owned by commercial providers (i.e. MBC). This type of information collection is ongoing.

9. Existing Government-Owned Networks

a. Describe how you plan to identify any hardening, security, reliability, or resiliency requirements that are currently required for existing government-owned networks within the State, including those networks at the local and tribal governments.

Before the items above can be implemented there must be a national standard or design specification to design to. The FCC has several dockets addressing the improvements required in the telecommunications infrastructure in the US resulting from a number of natural disasters and it appears that they are consolidating them into a recommendation to Congress to support legislation. Virginia Representative Gerald Connonlly has offered several amendments to HR152 that harden E911 systems. The required hardening, increased security, improved reliability, and designed resiliency is in place to avoid complications that occur during natural disasters.

Once a standard is available we can look at our networks for compliance. A quick look at the Connolly amendments indicate that the Virginia State Agency Radio System (STARS) meets or exceeds the submitted proposals. The current STARS sites are hardened by having UPS, battery power backups and generator power backups. Security is achieved by fencing each site and having door open alarms that go to the Network Operations Center (NOC). Reliability is achieved by 24/7 monitoring of the health of the network in the NOC. All tower and network alarms go to the NOC. Resiliency is achieved by having the microwave network in SONET loops. If a microwave path goes down, the traffic automatically routes in an alternate direction, maintaining the traffic flow. Those microwave routes on spurs, have duel radios, should one fail the second on is on hot standby to carry the traffic. There is a four year contract in place to provide security updates and monitoring, technical support, assistance with infrastructure repair, software support and upgrades, and a full time on-site technologist.

Virginia will build on this experience, as well as canvas local network providers in order to form a composite picture of best practices and lessons learned. The results of this effort will serve as a foundation for a comprehensive requirements document that will guide network design and implementation.

b. Describe how you plan to identify any existing contractual requirements regarding hardening, security, reliability, or resiliency for commercial carriers providing wireless data services within the State, including those at the local and tribal governments.

The Public Safety Broadband Project will include thousands of cellular sites that are to be used to implement the network infrastructure. To accomplish this there must be standards that all sites are designed to. To contract with cellular carriers for this network in Virginia with or without a national standard will be very costly. When commercial carriers collocate on our towers, the contract typically mandates that the carrier pay for all site improvements necessary including but not limited to: tower structural improvements, increased power requirements, and frequency intermodulation studies. We would be expected to do the same when collocating on their towers and sites.

We are not aware of any existing contractual requirements regarding hardening, security, reliability and resiliency for commercial carriers providing data services within the state. Most commercial carriers do not have hardened sites. What they do for security, reliability and resiliency is unknown and will vary by carrier. If commercial carriers are to provide broadband data services to public safety agencies within the state; they must provide the hardening, security, reliability and resiliency that public safety requires. Examples include; ensuring proper backup emergency power is available for fail over and power restoration capabilities, and provision for the diverse routing of the fiber optic networks supporting the back haul for the carriers. In our experience commercial carriers have strenuously resisted state and local regulation in this area, and Virginia is looking to the FCC to take a leadership role in this area to ensure more survivable commercial network.

10. Network Users

a. Describe how you plan to identify the potential users of the nationwide public safety broadband network within the State, including at the local and tribal governments.

The Commonwealth's expanded governance structure will include representatives from all of Virginia's Public Safety Communities, both at the state and local level. Emergency Management, Health, Transportation, and Homeland Security membership is included as well. It is from these operators that requirements regarding users and usage of the network will be derived. It is from these operators that requirements regarding users and usage of the network will be derived.

11. Education and Outreach

 a. Describe how you plan to educate and train multi-discipline, public safety and other government users of the nationwide public safety broadband network at your State, local, and tribal levels.

Continue to use resources provided by the OEC/ICTAP, NASCIO, and other groups focused on public safety broadband to enhance stakeholder knowledge and gain insight form stakeholder use of public safety data systems today. Continue to leverage the SIEC and RPAC-I construct to push information out to the localities, and continue to take advantage of all available forums (Virginia Emergency

management Conference, semi-annual APCO/NENA/Interoperability conferences, Virginia Local Government Technology Executives meeting, the Information Technology Advisory Council, the Virginia Association of Counties meetings, etc...) to raise awareness and gain "buy-in" to the program. Also, develop easy to use and access training materials to provide stakeholders with initial and refresher training using virtual delivery systems. These will be established through a website dedicated to Virginia's Public Safety Broadband program.

12. Memorandum of Agreements

a. Describe any specific obstacles, laws, and/or legal issues that will likely impede your ability to participate fully in the nationwide public safety broadband network or in SLIGP.

Obstacles

- Agencies may not have the ability to sublease to FirstNet.
- Agencies that are leasing from other public safety entities have generally established a cooperative leases with rates that for Public Safety use that are far lower than commercial lease rates
- Agencies granting access to sites for FirstNet will expect a "quid pro quo " from FirstNet
- State expense to pay all infrastructure upgrades, including permits, National Environmental Policy Act (NEPA), etc.
- Some Agencies have contracts including data plans with carriers, some of which have contract terms, such that moving to FirstNet system would require waiting for contracts to expire or payment of penalties
- Many counties in Virginia are in financial hazardous positions. Investments in Public Safety Broadband service would have to have a strong correlation to demonstrate Return on Investment (ROI)and efficiencies
- Need for a lead agency on NEPA for coordination; this applies to new and existing sites with any federal nexus
- It can take significant time and funds to complete documentation required on older existing and new sites
- Many existing State and local sites are not on owned land.
- Sites on federal land, near airports, near the quiet zone, etc... require considerable long-lead efforts to satisfy permitting and NEPA
- Public acceptance of new sites is time consuming and contentious
- Actions of local government or state governments (i.e. proffers) must be overcome.

Mitigations

- Rework of existing "sharing agreement" templates to work across multiple signatories in support of FirstNet.
- Standardized lease language (template) for the state exists which could possibly be revised to include FirstNet provisions
- Any commercial use details allowing for exchange of services
- Established Service Level Agreements to help with coordination with FirstNet

 Participation by locals may be balanced to soft options, i.e. site sharing/lease exchange for service level

Timing for permits and NEPA reviews can be expedited and streamlined.

13. Tools

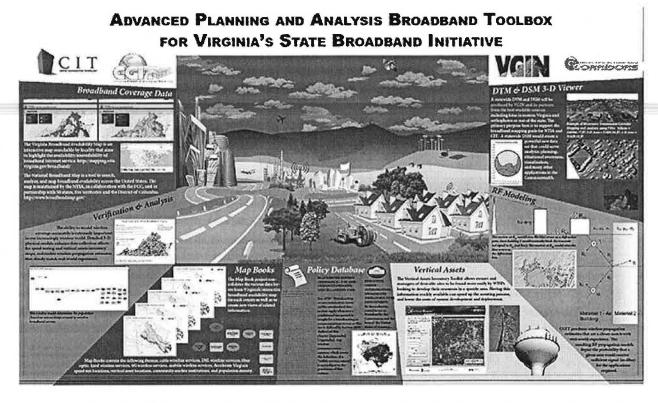
a. What are some of the software tools that the State has used and could apply to the planning and data collection activities associated with this program?

Through the state broadband mapping initiative (SBI) enhancements will be made to the 3D Geospatial Data Infrastructure for the Commonwealth of Virginia. This includes a new, seamless statewide digital terrain model (DTM) and digital surface model (DSM). The production and enhancement of elevation data will provide a robust basis for broadband mapping, visualization, provider verification and broadband related analysis in Virginia. The statewide DSM is created from the best available sources including lidar in eastern Virginia and orthophotos or rest of the state. Photogrammetric methods will be used to generate a DSM from orthophotos. The primary purpose here is to support the broadband mapping goals for NTIA and CIT. A statewide DSM would create a powerful new data set that could serve analysis, planning, situational awareness, visualization, and many other applications. The development of these datasets is managed by VGIN and will be completed by Dewberry in 2013.

As part of the statewide broadband mapping initiative (SBI), we developed the following statement for the web based 3-D viewer.

The Commonwealth of Virginia desires an interactive, web based 3-D viewing tool for visualizing broadband mapping data in the context of other geospatial data resources currently available or planned for Virginia. The targeted audience for this tool will be decision makers at the local, regional and state government offices as well as CEOs of private utility and communication firms in the state. The purpose will be to show existing broadband availability that may support policy and business investment decisions related to broadband and communications infrastructure. The technology solution should be compliant with geospatial web service standards for data and processing, and include the ability for 3-D scenes to be interactively displayed by internet browsers with 3-D plug-ins or other tools that provide similar capabilities. Furthermore, content from the 3-D web services should be able to load into virtual globe applications including Google Earth and ESRI ArcGIS Explorer to the extent that is possible. The proposed technology will support and enhance existing work flows and formats used in the Commonwealth of Virginia, specifically for broadband mapping initiatives, and should result in new capabilities and best practices for a broader range of 3-D geospatial applications and viewers across many departments and business practices statewide.

Advanced Broadband Analysis and Planning Toolbox - This software toolbox will be developed by Virginia Tech's Center for Geospatial Information Technology and brings together various tools and processes in the state broadband mapping initiative. The Toolbox would be used in planning and should have the ability to solve an optimization problem to provide coverage to a defined area based on all possible vertical structure locations. The Toolbox should be able to allow different vertical structure configuration alternatives to be explored to support the consensus building component.



- 1. **Broadband Coverage Data** The Virginia Broadband Availability map (and associated web services) is an interactive map searchable by locality that aims to highlight the availability/unavailability of broadband Internet service.

 http://mapping.vita.virginia.gov/Broadband/. The National Broadband Map is a tool to search, analyze, and map broadband availability across the United States. The map is maintained by the NTIA, in collaboration with the FCC, and in partnership with 50 states, five territories and the District of Columbia. http://www.broadbandmap.gov/
- 2. **Verification and Analysis** A collection of models that can be used to analyze broadband related data in numerous ways. For example, one model determines the population (based on census data) covered by wireless broadband service.
- Vertical Assets Inventory Tool The vertical assets inventory toolkit allows owners and
 managers of desirable sites to be found more easily by those looking to develop their
 resources in a specific area. Having this information readily available can speed up the
 scouting process, and lower the costs of system development and deployment.
 http://www.cgit.vt.edu/verticalassets/
- 4. **RF Propagation Models** large scale RF propagation models for the most common fixed and mobile wireless technology types present in Virginia and using spectrum included in the NTIA data model. We will consider the most important factors impacting outdoor propagation behavior including diffraction, reflection, and scattering as related to frequency, distance, and obstacles.
- 5. Map Books The map book production tools consolidate the various data layers from Virginia's interactive broadband availability map for each county or jurisdiction of interest. Map books contain many themes including: cable wireline services, DSL, fiberoptic, fixed

- wireless, 4G wireless, speed tests, vertical asset locations, community anchor institutions, and population.
- 6. Policy Database a policy database that organizes broadband policies at federal, state, county, and local jurisdictional levels and will be used for reasoning and constraints on scenarios for new towers / transmitters. Currently we are focused on the federal and state policies. The New River PDC has been developed for county and local policies and ordinances.
- 7. **RF Modeling** CGIT produces wireless propagation estimates that are a closer match with real-world experience. The resulting RF propagation models depict the probability that a given area would receive a specified signal strength (dBm).

b. Is the State aware of additional tools that could be useful for implementing allowable grant activities?

Another possibility is OEC/ICTAP's new Site Survey Tool, a component of CASM, which will be available in the summer. It will greatly expand on the infrastructure than can be collected for existing LMR equipment including shelters, backhaul, power/backup, capacity, etc. This tool could be useful once FirstNet identifies the data that is to be collected during Phase 2.

14. Phase Two Funding

a. Describe the activities that you expect to undertake with the Phase 2 funding when it is made available to the State, Territory, or District.

Initiate data collection activities plus continue all of the approved first phase activities (e.g., planning, governance, outreach, education, and consultation)

Virginia confirms it understands that one half of our SLIGP funding will be held in reserve until Phase 2 begins.

15. Other

a. Please list any consultants, vendors, or other entity that assisted in the preparation of this application.

None

SLIGP Detailed Budget Commonwealth of Virginia

Category	Detailed	Description of	Budget	Funding S	Source
a. Personnel	Quantity	Unit Cost	Total Cost	Federal	Non-Federal
SWIC/Program Director					
The SWIC will spend 50% of the time on					
SLIGP grant activities for 3 years. The			7		
SWIC's annual salary is \$100,000.			100		
\$100,000 x 50% = \$50,000	3 years	\$50,000	\$150,000	\$150,000	
Grants Administrator					
One grant administrator will spend 30% of					
her time on the project for 3 years. The					
Grant Administrator's annual salary is					
\$45,000. \$45,000 x 30% \$13,500.	3 years	\$13,500	\$40,500	\$40,500	
			11		
Financial/Procurement Specialist will			- 1		
spend 25% of their time on the project for			(1)		
3 years. The Specialist's annual salary is					
\$50,000. \$50,000 X 25% = \$12,500.	3 years	\$12,500	\$37,500	\$37,500	
Total Personnel		A CONTRACTOR	\$228,000	\$228,000	\$0
b. Fringe Benefits	Quantity	Unit Cost	Total Cost	Federal	Non-Federal
SWIC- Program Manager					
Fringe is calculated for the portion of time			100		
spent on SLIGP activities (50%)	3 years	\$15,446	\$46,338	\$46,338	
Grant Administrator					
Fringe is calculated for the portion of time			100		
spent on SLIGP activities (30%)	3 years	\$6,479.50	\$19,439	\$19,439	
Financial/Procurement Specialist			100		
Fringe is calculated or the portion of time					
spent on SLIGP activities (25%)	3 years	\$5,611	\$16,832	\$16,832	
Total Fringe Benefits	أأحشر وشيان		\$82,609	\$82,609	\$0
c. Travel	Quantity	Unit Cost	Total Cost	Federal	Non-Federal
5 to 7 individuals traveling at a minimum of 75 man-days traveling, at an average cost per day of \$130/day. \$130 per day X 75 days per year = \$9,750. Cost per mile (based on the approved mileage with no per-deim) is based on state mileage rates. Plus train and air travel (bases on the amt of trips x the cost of the trip) = \$5,250/year. Total unit cost per year is based on the avg costs per day+ train and air travel. Travel for Regional and National Meetings with FirstNet travel costs were calculated using historical costs for invitational travel for the SIEC: (89/day lodging + 41/day M&IE+ 150 mileage)*18 ppl= \$5040/mtg x 4 mtgs/year = \$20160.00. Not all attendees will require invitational travel.	3	\$15,000.00 \$20,160	\$45,000 \$60,480	\$45,000 \$60,480	
Total Travel	3	Ψ20,100	\$105,480	\$105,480	\$0
d. Equipment	Quantity	Unit Cost	Total Cost	Federal	Non-Federal
N/A	0	\$0	\$0	\$0	Non-i cuciai
Total Equipment	U	φυ	\$0	\$0	\$0
7 0	Quantitu	Unit Cost			
e. Supplies	Quantity	Unit Cost	Total Cost	Federal	Non-Federal
Printers for additional staff	2	\$4,950	\$9,900	\$9,900	
Laptops for Contractual personnel working			1		
on the project. Includes wireless and					
maintenance	3	\$4,420	\$13,260	\$13,260	
Office Supplies					
budgeted at \$134/month for 36 months	36 months	\$173.36	\$6,241	\$6,241	

SLIGP Detailed Budget Commonwealth of Virginia

Category	Detailed	Description of	Budget	100	Funding	Source
Total Supplies		- To 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$29,401	18	\$29,401	\$0
f. Contractual	Quantity	Unit Cost	Total Cost	M	Federal	Non-Federal
Data Collection				N		
2,000 hrs./year for 2 years; average hourly					weve vee	
rate is \$70	4,000 hours	\$70	\$280,000	-4	\$280,000	
Project Management/Subject Matter						
				E		
Experts - in the form of a fixed contract						
that will be bidded utilizing the						
Commonwealth's purchasing guidelines and policies. Using historical data and				B		
				W		
market analysis of similar projects, their				NII.	=	
contracts, and associated Scopes of Work,			_			
we determined that this was an				V		
appropriate budget to accomplish the				18		
deliverables set forth in the grant		4000 .00	*******	17	** *** ***	
guidance.	3 years	\$382,460	\$1,147,380		\$1,147,380	
Regional Coordination/Outreach Support				ě		
2080 hours per year for 3 years; average				P		
hourly rate is \$64.50	3 years	\$134,160	\$402,480		\$402,480	
Executive Asst/Office Manager 2,080				R		
hours/per year for 3 years; average hourly				P		
rate is \$30.00	3 years	\$62,400	\$187,200		\$187,200	
				U		
Interop Conference. The SLIGP funding				20		
represents 33.33% of the annual Virginia						
APCO/NENA conference. The funds will be				18		
provided to insert a track focusing on		8		100		Ï
topics associated with Public Safety						
Broadband. Funding will be provided to				10,		
Virginia APCO for conference support.						
Total cost of conference is approx.						
\$150,000 each year. APCO will charge VA						
a flat fee for the broadband tract and will						
resepent time worked, meeting supplies						
and venue rental, etc.	3	\$50,000.00	\$150,000		\$150,000	
Total Contractual	11.27 2510	\$50,000.00	\$ 2,167,060		\$ 2,167,060	\$ -
g. Construction	Quantity	Unit Cost	Total Cost		Federal	Non-Federal
N/A			\$0	22		
Total Construction	2 - 1-30	A STATE OF THE	\$0	7	\$0	\$0
h. Other	Quantity	Unit Cost	Total Cost		Federal	Non-Federal
Printing for fliers, handbooks, plans, and						
other large printing jobs as needed for stakeholder outreach as well as executive	25 000 copies					
meetings	25,000 copies per year	\$0.10	\$7,500		\$7,500	
meetings	per year	φυ, 10	\$7,500		\$7,500	
Full-time state, local, and private sector						
funded personnel to serve as project						
managers, technical experts and support the subcommittee work. Approx 30						
stakeholders average of \$39.88 per hourly						
salary, dedicating 16 hours per month						
(30x39.89)x(16x12)= \$229,737.67 per						
year.	3 years	\$229,737.67	\$689,213			\$689,213

SLIGP Detailed Budget Commonwealth of Virginia

Category	Detailed Description of Budget			Funding Source		
Rent for Program Office (designated space utilizing the Commowealth's space allocation plan) \$25,600/yr X 3yrs \$76,800	3 years	\$25,600	\$76,800	\$76,800		
Information Technology Services and other overhead costs (i.e. cost alocation or FTEs) for SLIGP Staff. IT Services are based on positions. 3 staff postions at a flat rate per year x \$6,666.66 = \$20,000 x 3 yrs = \$60,000	3 years	\$20,000	\$60,000	\$60,000		
Total Other			\$833,513	\$144,300	\$689,213	
Total Direct Charges			\$3,446,063	\$2,756,850	\$689,213	
TOTALS			\$3,446,063	\$2,756,850	\$689,213	

A. Personnel

Federal: \$228,000 Non-Federal Total: \$228,000

See the Detailed Budget Spreadsheet for calculations

SWIC/Program Director Primarily responsible for assisting and coordinating through state, regional and local stakeholders with the identification, development, planning, and implementation of the most efficient resources to use and integrate the infrastructure, equipment, and other architecture associated with the nationwide public safety broadband network. The SWIC is the Commonwealth's point of contact (POC) for the SLIGP and serves as lead POC for FirstNet. This position will spend 50% of their time on SLIGP program activities.

Grants Administrator is a Virginia Department of Emergency Management Employee (SAA/Fiduciary Agent). This position will spend 30% of their time ensuring compliance with the grant guidance, as well as compliance with Federal and State regulations.

Finance/Procurement Specialist is a Virginia Department of Emergency Management Employee (SAA/Fiduciary Agent). This position will spend 25% of their time processing procurement and financial transactions to include contract payments and travel reimbursements.

B. Fringes -

Federal: \$82,609 Non-Federal Total: \$82,609

See the Detailed Budget Spreadsheet for total calculations

SWIC/Program Director \$15,446 (50% of total fringe) per year @ 3 years = \$46,338

FICA: $$50,000 \times .0765 \times 3yrs = $11,475$

Other (group life, retiree health, long-term disability): \$50,000 x 2.67% x 3yrs = \$4,005

Retirement: $$50,000 \times .0658 \times 3yrs = $9,870$ Health Insurance: $$6,756 \times 3 \text{ yrs} = $20,268$

Deferred Comp Match: \$240 x 3yrs = \$720

Grants Administrator \$6,479.50 (30% of total fringe) per year @ 3 years = \$19,439

FICA: $$13,500 \times .0765 \times 3yrs = $3,098.25$

Other (group life, retiree health, long-term disability): \$13,500 x 2.67% x 3yrs = \$1,081.35

Retirement: \$13,500 x .0658 x 3yrs =\$2,664.90

Health Insurance: $$4,054 \times 3 \text{ yrs} = $12,162$

Deferred Comp Match: \$144 x 3yrs = \$432

Financial/Procurement Specialist \$5,610.58 (25% of total fringe) per year @ 3 years = \$16,831.75

FICA: $$12,500 \times .0765 \times 3yrs = $2,868.75$

Other (group life, retiree health, long-term disability): \$12,500 x 2.67% x 3yrs = \$1001

Retirement: \$12,500 x .0658 x 3yrs =\$2,468

Health Insurance: \$3378 x 3 yrs = \$10,134

Deferred Comp Match: \$120 x 3yrs = \$360

Total Personnel Cost: \$310,609

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C. Travel:

 Federal:
 \$105,480

 Non-Federal
 \$0

 Total:
 \$105,480

See the Detailed Budget Spreadsheet for total calculations

The program staff and key regional stakeholder are expected to travel around the State to visit sites, attend meetings and trainings/conferences, etc. Periodically there will be a need to travel outside the state for conferences and meetings with other state and federal partners. The agency per-diem is based on the States travel regulations and does not exceed the Federal guidelines. A projection for this project was developed utilizing prior historical travel budgets on similar projects that encompassed strong regional stakeholder involvement.

Mileage for Working Group Meetings 5 to 7 individuals traveling at a minimum of 75 man-days traveling, at an average cost per day of 130/day. 130 per day X 75 days per year = 9,750. Train and air travel = 5,250/year. Total of 15,000 per year

Staff Travel - \$15,000 per year X3 = \$45,000

Travel for Regional and National Meetings with FirstNet travel costs were calculated using historical costs for invitational travel for the SIEC: $(89/\text{day lodging} + 41/\text{day M&IE} + 150 \text{ mileage})*18 \text{ ppl} = $5040/\text{mtg} \times 4 \text{ mtgs/year} = $20,160 \text{ per year}.$

Invitational Travel for Key Stakeholders - \$20,000 per year X 3 = \$60,480

D. Equipment

Federal:	\$0
Non-Federal	\$0
Total:	\$0

We do not plan to have any equipment costs for the grant program.

E. Supplies:

Federal:	\$29,401		
Non-Federal	\$0		
Total:	\$29,401		

See the Detailed Budget Spreadsheet for total calculations

- Office supplies (including postage), are needed for the general operation of the program.
 Meeting supplies for administrative meetings, workshops, etc. These items include but are not limited to binders, folders, printer paper, toner, and general office supplies.
- Printers will be purchased for the additional staff added for the purpose of this program

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^{*}Not all attendees will require invitational travel.

• Laptops: Will be purchase new laptops for additional staff working on the project, includes wireless and maintenance.

F. Consultants/Contracts:

Federal: \$2,167,060

Non-Federal \$0

Total: \$2,167,060

See the Detailed Budget Spreadsheet for total calculations

Following the Commonwealth's purchasing and procurement policies there will be several contract agreements over the next three phases of the SLIGP entered into by the fiduciary agent over the period of performance. These contracts will be utilized to assist in the development, modifications, and enhancement of statewide plans and governance structures as it relates to the broadband deployment.

Item Computation Cost

- 1) Project Management/Engineering Support (Subject Matter Expert) the Commonwealth will contract with a vendor to assist with the development of planning for the establishment of a nationwide public safety broadband network. These activities will expand on the existing structures and establish/enhance governance structure.
- 2) Data Collection- during Phase 2, the Commonwealth will contract with a data collection firm to gather information about existing infrastructure, potential users, and other information as requested by FirstNet/NTIA.
- Coordination/Outreach Support The person will organize meetings with stakeholders and communicate information about grant activities. Maintain website for public awareness and education on the PSBN.
- 4) Executive Asst/Office Manager This position will assist with administrative office duties within the SLIGP office as it pertains to SLIGP funding.
- 5) Annually the program office in coordination with stakeholders will hold an annual conference to engage the Commonwealth's state, regional, and local partners. This conference will be utilized as a mechanism to inform, educate, and collaborate with these partners on the policies and requirements of the program. The SLIGP funds will provide a track focusing on topics associated with Public Safety Broadband, Funding will be provided to Virginia APCO for this portion of the conference support. Total cost of the conference is approximately \$150,000 per year.

G. Other Costs:

 Federal:
 \$144,300

 Non-Federal
 \$689,213

 Total:
 \$833,513

See the Detailed Budget Spreadsheet for total calculations

Printing for large printing jobs that will need to be developed and executed outside of the normal office environment, i.e. fliers, handbooks, plans, and other large printing jobs as needed for stakeholder outreach as well as executive meetings

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The program office will be required to maintain rented office space as well as other office related services (e.g., rent, IT equipment). Office space has been strategically designated within a state owned building in the Governor's Capitol Square for coordination purposes.

Item Computation Cost
Rent for Program Office \$25,600/yr X 3yrs \$76,800
Telephone/IT Services \$20,000/yr X 3yrs = \$60,000

Stakeholder Commitment – (Non-Federal) The SLIGP Program Office with the assistance from VDEM will track the in-kind match by requiring full-time, state, local, and private sector funded personnel to serve as project managers, technical experts, and support the subcommittee work. These individuals will contribute staff time and resources required to contribute to the successful and timely completion of this project. The SLIGP Program Office and VDEM will assist the localities in documenting their costs for documentation of meeting the cost share requirement. In addition, the SLIGP Program Office will look for other ways to meet the match obligation in forms of documented reduced overhead with contractors for the benefit of the project.

Full-time state, local, and private sector funded personnel to serve as project managers, technical experts and support the subcommittee work. All in-kind and third party match will be verified to ensure that the member is not federally funded or being matched by another program.

Average of 30 @ \$39.89 per hourly salary, dedicating approximately 16 hours per month; \$229,737.67 per year.

Totals

Federal \$2,756,850 Non-federal \$689,213 Total \$3,446,063

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OMB Number: 4040-0007 Expiration Date: 06/30/2014

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE:

Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
- Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation

- Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U. S.C. §§6101-6107), which prohibits discrimination on the basis of age: (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

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- Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
- 10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

- 13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
- 14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
- 15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
- 16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
- Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
- 19. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	* TITLE
Cheryl Adkins	State Coordinator
* APPLICANT ORGANIZATION	* DATE SUBMITTED
Virginia Department of Emergency Management	03/19/2013

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CERTIFICATION REGARDING LOBBYING

(REV 1-05)

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, 'New Restrictions on Lobbying.' The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying.' in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

* NAME OF APPI	LICANT			
Virginia Depa	rtment of Emergency Manag	ement		
* AWARD NUMB	ER		* PROJECT NAME	·
2013-NTIA-SLI	GP-01		2013 SLIGP	
Prefix:	* First Name:		Middle Name:	
Mr.	Michael			
* Last Name:				Suffix:
Cline				
* Title: State C	oordinator			
* SIGNATURE:			* DATE:	
Cheryl Adkins			03/19/2013	

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB 0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

1. * Type of Federal Action:	2. * Status of Federal Action:	3. * Report Type:					
a. contract	a. bid/offer/application	a. initial filing					
b. grant	b. initial award	b. material change					
c. cooperative agreement	c. post-award						
d. loan							
e. loan guarantee f. loan insurance							
4. Name and Address of Reporting I	Entity:						
Prime SubAwardee							
*Name Virginia Department of Emergency Mar	*Name Virginia Department of Emergency Managment						
*Street 1 10501 Trade Court	Street 2						
* City Richmond	State VA: Virginia	Zip 23236					
Congressional District, if known: VA07							
5. If Reporting Entity in No.4 is Subaw	vardee, Enter Name and Address of Pr	ime:					
6. * Federal Department/Agency:	7. * Federal Prog	ram Name/Description:					
DOC/NTIA	State and Local Impl	ementation Grant Program					
	CFDA Number, if applica	ble: 11.549					
8. Federal Action Number, if known:	9. Award Amour						
6. I ederal Action Number, II known.		it, ii kilowii.					
	\$						
10. a. Name and Address of Lobbying	Registrant:						
Prefix * First Name	Middle Name						
n/a	S. History						
*Last Name n/a	Suffix						
* Street 1	Street 2						
* City	State	Zip					
h. In dividual Barfannian Camina							
b. Individual Performing Services (included)							
Prefix * First Name n/a Middle Name							
*Last Name n/a Suffix							
* Street 1	Street 2						
* City	State	Zip					
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than							
\$10,000 and not more than \$100,000 for each such failure.							
* Signature: Cheryl Adkins							
*Name: Prefix Mr. *First Name	Michael Middle N	ame					
*Last Name Cline	Sut	fix					
	Talambany No.	Patri la mana					
Title: State Coordinator Telephone No.: 804-897-6500 Date: 03/19/2013							
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COMMONWEALTH of VIRGINIA

Office of the Governor

Robert F. McDonnell Governor

March 18, 2013

The Honorable Rebecca Blank, Acting Secretary United States Department of Commerce 1401 Constitution Avenue, N.W. Washington, D.C. 20230

Dear Secretary Blank:

As Chief Executive Officer of the Commonwealth of Virginia, the Interoperability Coordinator for the Commonwealth of Virginia will serve as the state's designated point of contact for FirstNet. The Interoperability Coordinator is a government employee and his contact information is as follows: Mr. Christopher I. McIntosh at Christopherung-chief (Action 1) Action 1 (Christopherung-chief) As Christopherung-chief (Christopherung-chief) As Christopherun

Additionally, I designate the Department of Emergency Management (VDEM), as the administering agency of the Commonwealth of Virginia for the State and Local Implementation Grant Program, (CFDA) 11.549. This includes administration of funds that may be allocated to these programs through supplemental funding. VDEM has the authority to receive and expend grant funds on behalf of the Commonwealth and will be applying for funding through Grants.gov.

Terrie Suit, Secretary of the Virginia Veterans Affairs and Homeland Security or her designee (*Code of Virginia* 2.2-231) will certify all required statutory assurances and will serve as the governmental body to coordinate the implementation of the grant funds.

Robert F. Madmill

Sincerely,

Robert F. McDonnell