State and Local Implementation Grant Program

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Supplemental Application Narrative

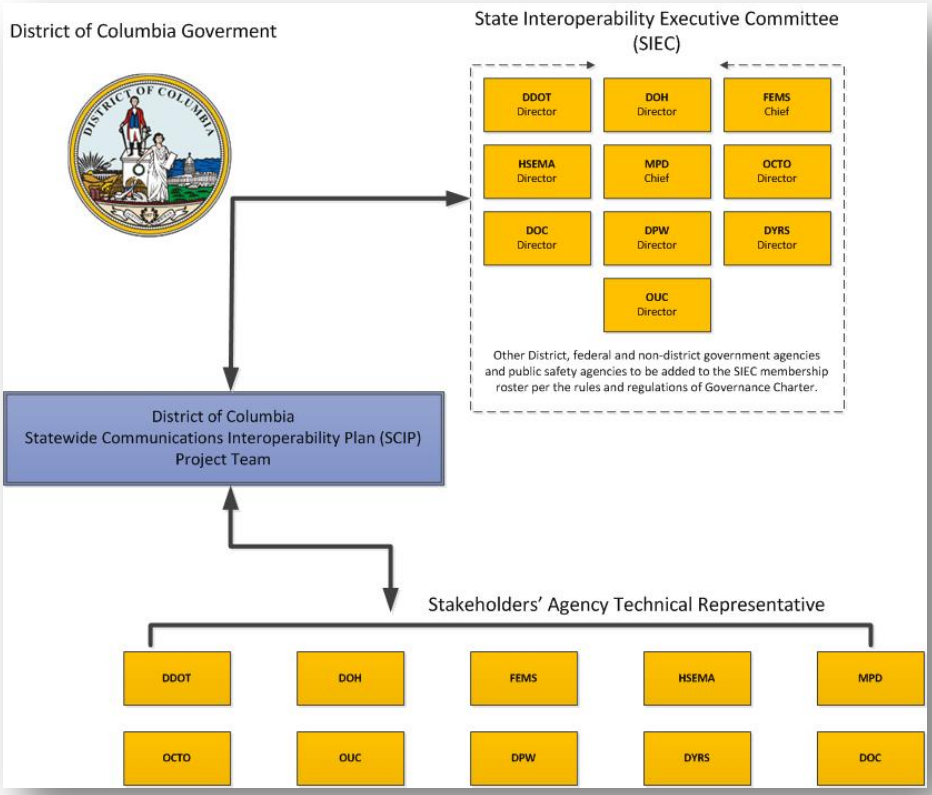
1. Existing Governance Body

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 District of Columbia's Statewide Interoperability Governing Body (SIGB) is the Statewide Interoperability Executive Committee (SIEC).

The following District government agencies comprise the core membership of the SIEC (Figure 1): The SIEC consists of the: Department of Health (DOH); District Department of Transportation (DDOT); Fire/Emergency Medical Services (FEMS); Homeland Security/Emergency Management Agency (HSEMA); Metropolitan Police Department (MPD); Office of the Chief Technology Officer (OCTO); and Office of Unified Communications (OUC). The Department of Corrections (DOC), Department of Public Works (DPW), and Department of Youth Rehabilitation Services (DYRS) were admitted to the SIEC after publication of the 2007 Statewide Communications Interoperability Plan (SCIP).

Figure 1: Statewide Interoperability Governing Body (SIGB)



Source: Statewide Communications Interoperability Plan (SCIP), District of Columbia, December 2007, with updated committee members.

The diverse composition of the SIEC ensures that the needs of first responders, as well as those of multi-disciplinary agencies, are addressed as interoperability plans are developed, reviewed, and implemented.

In addition, the SIEC created a technical advisory board known as the Interoperability Communication Committee (ICC), which is supported by the Statewide Interoperability Communication Coordinator (SWIC) and consists of the 10 agency technical representatives that have the authority to implement plans as directed by the SIEC. These governing bodies implement policies and procedures.[1]

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

As a centralized governance structure, the SIEC convenes quarterly to discuss and implement strategies focused on public safety communications. In addition, the SIEC's decisions emphasize improving interoperability in all other areas of communications, including but not limited to voice, data and video. The SIEC is chaired by an executive from each agency (outlined above)

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.

As the service provider and infrastructure owner within the SIGB, OCTO will take a leading role in data collection, planning, and coordination of communications services to ensure that the Public Safety Broadband Network (PSBN) will integrate with the existing District public safety and communications agencies. OCTO operates DC-Net, a facilities-based high-bandwidth Metropolitan Area Network that spans the District of Columbia, which provides the core communications infrastructure backbone for all District government IT/telecom services and is responsible for maintaining the communications infrastructure, including voice and data connectivity. DC-Net has deployed over 400 miles of fiber and serves over 30,000 users, at 86 agencies, and over 400 locations, providing a full suite of managed, interconnection, and transport services to government and public-services organizations throughout the City. DC-Net plays a significant coordination and technical role for public safety communications and can provide fiber optic backhaul between PSBN antenna sites.

Since 2004, OCTO has carried out several public safety wireless broadband projects (both evaluation and demonstration), for which the District has been singled out by NTIA as being a model of cost effectiveness and operations between the District and nearby state and federal agencies.[2] In particular, the District is a member of the Early Builders

[1] Mayor's Order 2012-62, April 27, 2012, Government of the District of Columbia.
[2] *See* Interoperability Planning for Wireless Broadband, 2011. U.S. Department of Homeland Security. http://www.dhses.ny.gov/oiec/technical-resources/documents/2011-Interoperability-Planning-Wireless-Broadband.pdf (accessed March 11, 2013).

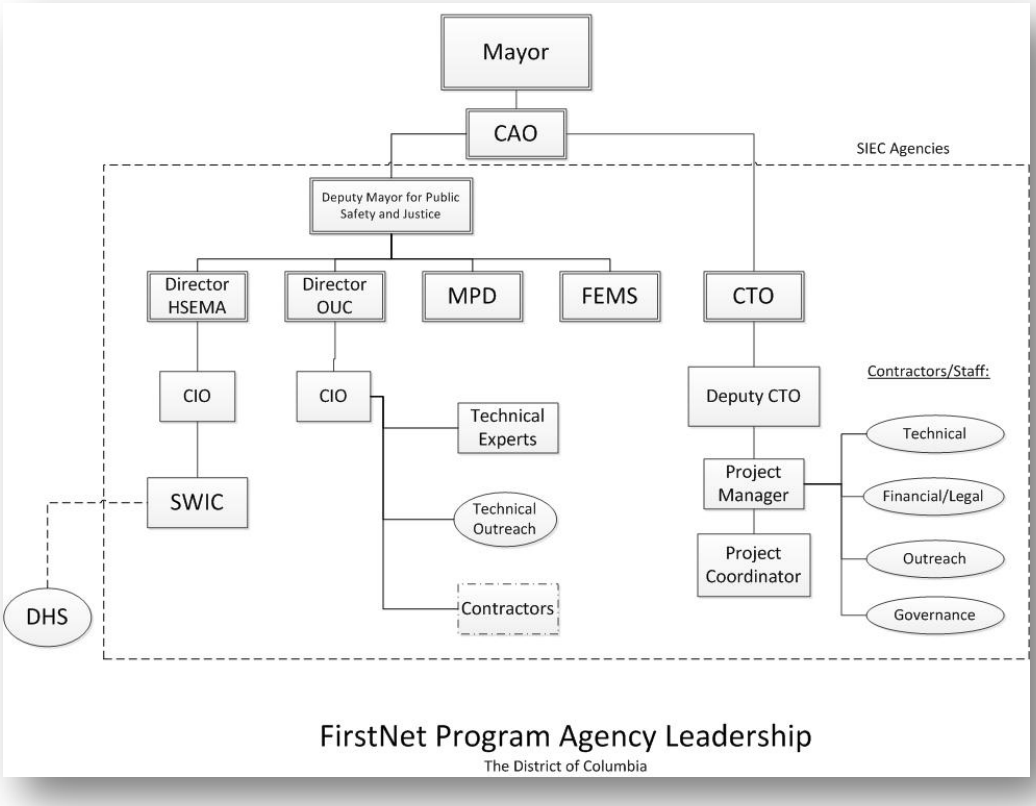
Advisory Council (EBAC), and has demonstrated abilities in 700 MHz spectrum development.

OUC, which manages the District's Land Mobile Radio (LMR), will manage the outreach to public safety agencies and network users and provide technical expertise. OUC consolidates the command-and-control functions of the District's public services, FEMS, and police. OUC provides centralized coordination and management of public safety communications, city services technology, and maintenance of radio and call center technology systems for the District. It also manages and operates the District's E911/311 Telephony, LMR, Computer-Aided Dispatching (CAD), Mobile Data Computing (MDC), and Client Relationship Management (CRM) systems. The agency's technology infrastructure supports over 9,000 radios, over 10 million radio transmissions, 3.3 million 911 and 311 calls, about 800,000 CAD events, and 367,000 service requests annually. Members of OUC participated in a two-day LTE training curriculum presented by Award Solutions and are well-positioned, both technically and operationally, to facilitate the District's consultations with FirstNet.

HSEMA will coordinate with other states and regional entities and with federal entities, including DHS.

A Program Manager will be identified within SIEC to lead the effort.

Figure 2: District of Columbia FirstNet Program Agency Leadership



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 District will need to augment its existing LTE technical resources. The current estimate of additional need for technical resources to prepare for consultation with FirstNet is half-time support of an LTE and wireless broadband engineering and technical contractor, managed by OCTO and OUC, in support of education, outreach, and planning efforts with public safety user agencies, as well as technical assistance in developing a uniform Memorandum of Agreement for resource sharing[3].

Currently, the SIGB has the resources within OUC and OCTO (staff and contractors) with the necessary understanding of wireless broadband and LTE. These individuals were responsible for planning and designing the District's earlier WARN and Regional Wireless Broadband Network (RWBN) networks, providing District representation as one of the Early Builders Advisory Council for urban areas, and applying through the BTOP to deploy a District-wide public safety mobile broadband network. OCTO is currently in the process of hiring two additional wireless network engineers to augment its base staff.

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 District has budgeted sufficient funds to support the current on-going operations and initiatives of the SIGB but will require supplemental funds from the SLIGP to assist in carrying out the FirstNet planning and consultation process. The District intends to invest approximately $431,200 received from SLIGP to augment the financial support for the SIGB related to FirstNet planning and implementation. Specifically, the District plans to hire additional staff and fund educational outreach to the community and continuing education for current staff. Also, this effort will include continuing support for software and subscriptions needed to maintain essential tools, legal review, and revisions that need to be made to the Statewide Communications Interoperability Plan (SCIP) and development of memoranda of agreement (MOA). We will pay for representatives of the SIGB to attend conferences and training as needed. See the Detailed Budget Justification for further information.

2. Statewide Communications Interoperability Plan

[3] See Detailed Budget Justification for more detail.

a. *Are there existing strategic goals and initiatives in your SCIP focused on public safety wireless broadband? If so, what are they?*

The District of Columbia's Statewide Communications Interoperability Plan (SCIP) was developed in 2007 and included a number of strategic goals and initiatives focused on public safety wireless broadband to be completed within a three-year time frame. The SCIP, having met a number of goals laid out by 2010, is currently under review/revision. The SCIP goal focused on public safety wireless broadband, which featured a discussion of the National Capital Region (NCR), was as follows:

> "The NCR had been granted the fortune, via generous UASI funding, to deploy the Nation's first Regional Wireless Broadband data Network. The wireless data network is a true broadband wireless network using the most advanced third commercial generation technology (EVDO RevA), but, in a private, public safety only spectrum (700MHz), with a future rollout to span across three separate state entities, i.e. Maryland, Virginia and the District of Columbia. Careful consideration has been made to insure that the Regional Wireless Broadband Network (RWBN) is interconnected using the expanding NCR-NET network of fiber/microwave connections being rolled out across the NCR. This provides the Regional Wireless Broadband Network complete separation from commercial networks and greater accessibility during emergency events."

The RWBN provided city-wide broadband data coverage offering 1.3 Mbps in average throughput to its users throughout the District. It used 12 transceiver sites. The network supported more than 250 users in more than 20 local and federal agencies. More than 20 applications were piloted over the network, including several streaming video solutions and a Radio-Over-IP solution interoperable with the District LMR system. The network was used for major events such as the Presidential Inauguration, the 4th of July festivities, and the IMF/World Bank demonstrations, where it facilitated the collaboration of local agencies (MPD, HSEMA, FEMS) and federal agencies (U.S. Park Police, U.S. Secret Service) by enabling them to share video streams and to exchange critical data in a timely manner through interoperable applications such as CapWIN. It also stimulated the region's public safety agencies to develop additional collaborative SOPs to improve the efficiency of their operations through enhanced collaboration and interoperability. As an example, the U.S. Park Police and the DC-FEMS have developed a protocol allowing them to share real-time helicopter video streams over the RWBN during major fire events. Though decommissioned due to lack of spectrum, the RWBN and WARN projects solidified the District as a national leader in public safety communications.

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.*

Not applicable. The District has no additional local governments or tribal nations.

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.*

The District will utilize $25,000 in SLIGP funding to aid in the update of the SCIP through the addition and refinement of new public safety wireless broadband strategic goals.

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?*

The Statewide Interoperability Coordinator (SWIC) for the District of Columbia works full-time under HSEMA. In addition to standard responsibilities outlined for SWICs by the Department of Homeland Security and the National Council of Statewide Interoperability Coordinators, the District's SWIC will be involved with SLIGP to:

- Serve as a key advisor to Program Management.
- Serve as the District point of contact regarding all statewide interoperability issues and emergency communications needs with DHS, other states, and the National Capital Region.
- Serve as the senior adviser in the coordination of statewide communications interoperability for the District of Columbia thru the SIEC.
- Participate in national and regional committees and working groups.
- Ensure SCIP alignment with the National Emergency Communications Plan (NECP).

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?*

As discussed in detail in the response to Question 1.c., the District's Chief Technology Officer will oversee the primary District agency responsible for the implementation of the SLIGP. As such, OCTO will be responsible for:

- Consulting with the Authority concerning the development and operation of FirstNet pursuant to Section 6206 of the Act;
- Entering into agreements to utilize existing District broadband infrastructure for purposes of FirstNet, pursuant to Section 6206 of the Act;
- Receiving grants for activities in connection with the implementation of FirstNet, pursuant to Section 6302 of the Act; and
- Undertaking such other activities as necessary and appropriate to execute the authorities and responsibilities of the District in connection with the development of FirstNet.

OCTO will partner with OUC in the assessement and development of the system requirements. Primary support to OCTO will come from OUC, which is responsible for

communications assets (such as radio caches), communications systems (such as 911/311), and policies, directives, and interoperable public safety communications. As such, the OUC will be responsible for:

- Administering the use of FirstNet PBSN.

OCTO and OUC will formalize their responsibilities with a Memorandum of Understanding (MOU).

c. What other State-level organizations or agencies will be involved with SLIGP?

The following District agencies from the SIEC will be involved with this SLIGP:

- Office of the Chief Technology Officer
- Office of Unified Communications
- Homeland Security and Emergency Management Agency
- Department of Health
- Department of Transportation
- Metropolitan Police Department
- Fire and Emergency Medical Services
- Department of Corrections
- Department of Public Works
- Department of Youth Rehabilitation Services

In addition, the following District agencies that are not currently part of the SIEC will also be involved with the SLIGP:

- Department of Employment Services
- Department of Parks and Recreation
- Office of Cable Television and Telecommunications
- Office of Communications, Executive Office of the Mayor
- Department of General Services

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 the 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.

The District will utilize current staff across OCTO, OUC, and HSEMA to create a program management structure. Staffing resources needed to support the PSBN will require a mix of existing staff, consulting services, and stakeholder involvement. Resources needed to implement FirstNet consultation processes include:

- Program Manager
- Deputy Program Managers

- Project Manager
- Outreach Manager
- Statewide Interoperability Coordinator
- Policy/Legal Support
- Technical Experts & Support

Additionally, the District plans to hire two additional wireless network engineers, which will be partially funded through the SLIGP. The wireless network engineers will support FirstNet through consultation, analysis, evaluation, configuration and maintenance of existing District infrastructure and operations as they relate to creating and maintaining the PSBN.

The District will request $632,900 in SLIGP funding for this effort.

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

The District has strong existing relationships with private industry and secondary users and will continue to leverage those relationships in the planning process for FirstNet. The continuity of relationships with Verizon, the Washington Metropolitan Area Transit Authority (WMATA), PEPCO, the DC Water and Sewer Authority (DCWASA), Washington Gas, and the District of Columbia Hospital Association (DCHA) are integral to interoperability of the network and the overall success of FirstNet, especially in a city that is home to the federal government. In particular, Verizon, WMATA, DCWASA, PEPCO, Washington Gas, and DCHA provide situational awareness information and communications assets that can be leveraged for public safety response activities. The Department of Homeland Security (DHS) and other government agencies will be important secondary users.

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?*

The District of Columbia is considered a state, city, and federal district. This question is not applicable.

b. *Describe how your State will involve these local jurisdictions to ensure there is adequate representation of their interest in the FirstNet consultation and in the planning and governance for SLIGP.*

Not applicable.

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

Not applicable.

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?*

Not applicable.

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.*

Not applicable.

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

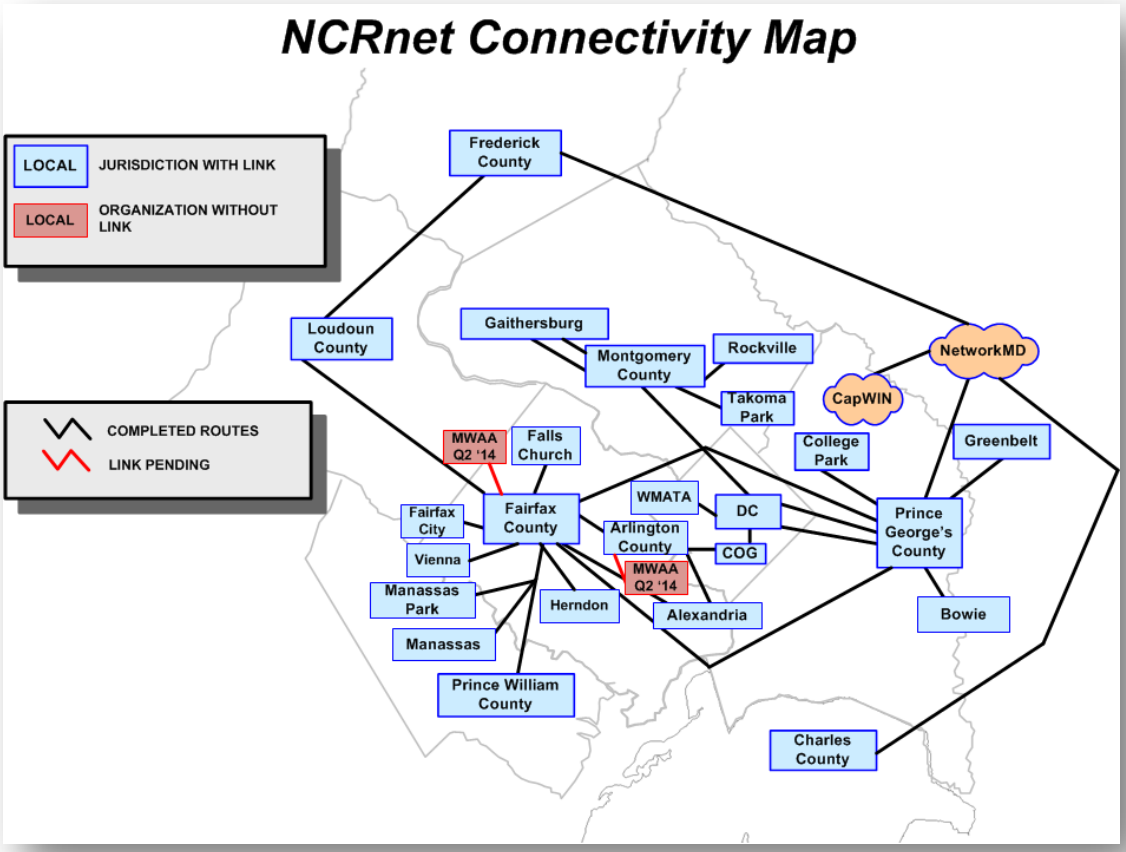
The District takes part in interstate regional committees that are involved with public safety communications. Specifically, as discussed above, the District is at the center of the National Capitol Region (NCR) Interoperable Communications Infrastructure, or NCRnet. The NCR is a regional public safety fiber optic network for coordination and emergency response. The initiative interconnects 22 regional jurisdictions and was funded by federal Urban Area Security Initiative (UASI) and Public Safety Interoperable Communications (PSIC) grants.[4]

NCRnet interconnects existing networks of all NCR jurisdictions and key partner entities and provides dedicated local government-controlled access to critical public safety, emergency management, and law enforcement systems. It also enables real-time cross-jurisdiction communications. Additionally, regional partners of NCRnet have developed specific regional data exchange applications that aid and support the jurisdictions' day-to-day operations and planning.

NCRnet is sponsored and overseen by the Chief Information Officer (CIO) Council of Governments (COG) committee with executive oversight through the Interoperability Council – a joint COG CIO and Chief Administrative Office (CAO) committee. Overall executive oversight is by the CAO COG board and the COG Senior Policy Group (SPG).

[4] See http://www.ncrnet.us/

Figure 3: NCRnet



The District participates in the Council of Governments (COG), "an independent, nonprofit association that brings area leaders together to address major regional issues in the District of Columbia, suburban Maryland and Northern Virginia. COG's membership is comprised of 300 elected officials from 22 local governments, the Maryland and Virginia state legislatures, and U.S. Congress."[5] The OUC participates in the COG communications sub-committee for both Police and Fire agencies. In this committee, the OUC engages in radio system sharing, radio ID sharing, system outage/system upgrade timelines and roll outs, and radio interoperability.

The District has worked on numerous regional spectrum coordination initiatives. It is part of the Region 20 Coordination Group. Spectrum coordination includes wideband spectrum coordination of LMR in the 700 MHz band, coordination of broadband use of the 700 MHz spectrum under a temporary authorization from the FCC.

The District has also coordinated with its NCR regional partners for use of the 700 MHz broadband spectrum as part of the RWBN program.

[5] See http://www.mwcog.org/about/.

Additionally, the District of Columbia was one of the 25 Major Cities identified for assistance by the Department of Justice (DOJ) for a federal interoperability project known as 25 City Wireless Interoperability. The project addressed Federal-Federal and Federal-State-Local Interoperability radio communications challenges during an emergency incident response in 25 of the largest Metropolitan cities in the U.S. The result is a P25 Integrated Wireless Network (IWN) system that allows for interoperability between jurisdictions in the region. This effort required the participation of several key federal agencies including:

- U.S. Park Police (USPP)
- U.S. Marshals Service (USMS)
- Drug Enforcement Administration (DEA)
- U.S. Coast Guard
- Federal Bureau of Investigation (FBI)
- U.S. Postal Inspection Service
- U.S. Secret Service(USSS)
- Federal Protective Service

The District also takes part in the Federal Partnership for Interoperable Communications (FPIC), which addresses technical and operational activities within the federal wireless communications community. Specifically, FPIC develops recommendations for advisory and regulatory bodies, communicates mission-critical communications issues while coordinating federal operations, and identifies and enhances interoperability capabilities within the Federal government while coordinating with state and local programs.[6]

Finally, the District is a member of the Early Builders Advisory Council (EBAC), an "organization made up of the twenty-one jurisdictions that received waivers from the FCC in May 2010 to build 4G LTE Public Safety Wireless Broadband Networks."[7]

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

The District will maintain the current regional collaborations with NCR, COG, Region 20 Coordination Group, DCHA, FPIC and EBAC.

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. The District intends to work with Maryland, Virginia, and their NCR municipalities through the COG-facilitated bodies to coordinate planning for the PSBN.

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.*

Not applicable.

[6] See http://ipv6.dhs.gov/files/committees/gc_1170097478666.shtm
[7] See http://www.ntia.doc.gov/files/ntia/noi-response_oac_early_builders_11-9-2012.pdf.pdf

6. Tribal Nations

There are no Tribal Nations located within the District of Columbia.

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.*

The District of Columbia is not considered rural by the United States Census Bureau.[8] Specifically, the Census Bureau defines 'rural' as areas that "encompass all population, housing, and territory not included in an urban area." The Bureau identifies two types of urban areas:

- Urbanized Areas (UAs) of 50,000 or more people;
- Urban Clusters (UCs) of at least 2,500 and less than 50,000 people.

The District is 100% composed of UAs and UCs[9].

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.*

As the District of Columbia is 100% composed of UAs and UCs, this question is not applicable.

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

As the District of Columbia is 100% composed of UAs and UCs, this question is not applicable.

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?*

[8] See http://www.census.gov/geo/reference/ua/urban-rural-2010.html
[9] See http://www.census.gov/geo/reference/ua/urban-rural-2010.html "Lists of Population, Land Area, and Percent Urban and Rural in 2010 and Changes from 2000 to 2010."

The District tracks radios and mobile data assets (MDCs, smartphones) in OCTO's BMC Remedy asset tracking system. Wireless assets such as towers, radios, interoperability policies and procedures, shared systems, spectrum bands, channels, and gateways are stored in the DHS OEC Communications Assets Survey and Mapping (CASM) database managed by SPAWAR Systems Center Pacific in San Diego.

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

The CASM database is updated annually through manual data entry. Currently, the District of Columbia is working with the Department of Homeland Security to update and implement the new CASM next-gen application. As part of this upgrade, the District of Columbia is conducting an assessment of its command vehicles, Tactical Interoperable Communication Plan, and Field Operation Guide. This information will allow the District of Columbia a comprehensive look at assets and real-time information sharing.

The BMC Remedy asset tracking system is updated as needed through manual data entry.

9. Existing Government-Owned Networks

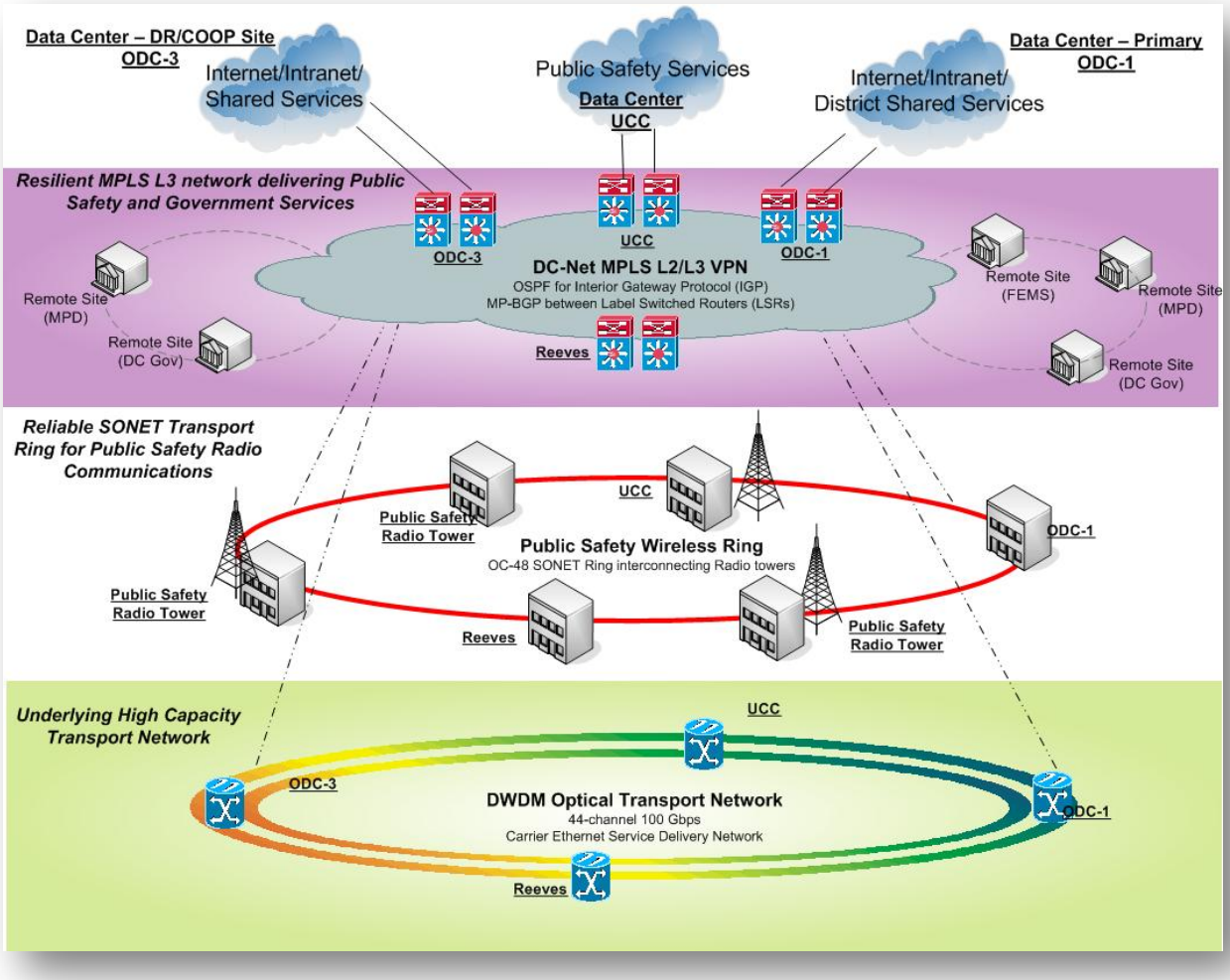
a. *Describe how you plan to identify any hardening, security, reliability, or resiliency requirements that are currently required for existing government-owned networks within the State, including those networks at the local and tribal governments.*

Through many years of operating public safety-grade data and voice networks, the District of Columbia and the SIEC agencies have experience designing and operating numerous examples of robust, hardened infrastructures. As an example, the DC-Net fiber optic network has multiple levels of physical and electronic redundancy (Figure 4).

Services of the Multiprotocol Label Switching (MPLS) network support core public safety and disaster recovery functions. The MPLS network is supported by underlying Synchronous Optical Network (SONET) and Dense Wavelength Division Multiplexing (DWDM) transport networks. The 4 core MPLS routers are interconnected over a DWDM optical transport ring. The Provider Edge (PE) to Provider (P) aggregation is accomplished over the SONET transport network.

While there are standards in place, the District currently does not have a written document relating to the identification of any hardening, security, reliability, or resiliency requirements for its existing radio and wireless government-owned networks. Creation of a formal document will be an important outcome of this planning process.

Figure 4: DC-Net Network Diagram



With the help of SLIGP funding, the District intends, through the SIEC, to survey its public safety entities to collect requirements for the future NPSBN; to inform those requirements, the District intends to include questions regarding requirements for existing networks.

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 District's Office of Unified Communications (OUC) manages the public safety use of commercial wireless broadband services in the District. In this role, OUC is aware of any requirements associated with these services.

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.*

Through outreach and consultation with the SIEC members and agencies noted in answers to question 3 and 5, we will seek agency input in executive input sessions to identify potential users of the NPSBN within the District. Although the District does not have local and tribal governments, there are numerous public safety and critical infrastructure entities within the District that are potential users, including federal agencies, transit agencies, and utilities:

- U.S. Department of Homeland Security
- WMATA
- PEPCO
- DCWASA
- Verizon
- Washington Gas

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.*

The District will educate leadership in executive input sessions. Phase 1 will address high-level department chairs and directors, including the Office of the Mayor. This phase will need to occur as soon as possible. Phase 2 will include and be designed to address federal agencies and users. Phase 3 will include and be designed to address IT leads across the project. The District will use the executive input sessions to organize focus groups, including end users, and also to determine likely needs for education and outreach.

The extent and specifics of PSBN education and training, however, will depend to some extent on FirstNet's decisions as to local control and operational specifications. Prior to FirstNet clarity on these matters, the District intends to provide basic education on the policies and history of the statewide and nationwide public safety broadband initiatives, as well as the basic technology and operational capabilities of LTE for public safety. Hands-on instruction on how to use the network will need to wait for FirstNet input.

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.*

The District is unaware of any specific obstacles, laws, and/or legal issues that will likely impede its ability to participate fully in the nationwide public safety broadband network or in SLIGP.

District real property is managed by the Department of General Services (DGS), which oversees tower space and co-location on District property. DGS has standard agreements, but these are likely to need review and revisions.

The District plans to use SLIGP funds to develop a standard MOA based on the existing agreements and arrangements between DGS and commercial carriers.

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?*

The District plans to leverage the following existing tools to aid in the planning and data collection activities associated with FirstNet:

- Communication Assets Survey and Mapping (CASM) Tool is a standardized collection method for emergency response agencies to store and visually display data about their public safety communications assets and how those assets are used. CASM allows for a single repository for data about LMR systems, methods of interoperability, and how they are used by public safety entities. Further, the CASM tool aids emergency management personnel by developing accurate situational awareness of their own capabilities while also helping to plan interoperable communications with neighboring jurisdictions, state-level agencies, and federal agencies.[10]

- Geographic Information System (GIS) software allows for the capture, analysis, manipulation, management, and presentation of geographical data for aiding in decision making.

- WIZARD® - a full-featured RF modeling software tool, provides "capabilities and terrain-based propagation model analyses for all major wireless technologies (AMPS, CDMA, GSM, TDMA, and SMR)," The software "produces full-color prediction plots to aid network growth planning, interference analysis, and multi-technology deployments. Open interfaces to other applications allow engineers to incorporate RF prediction maps into status reports and marketing presentations."[11]

[10] See www.siec.wa.gov/success/files/**casm**_infopaper_citycounty.doc
[11] See http://www.mindservices.com.au/index.php?option=com_content&view=article&id=85:rf-planning-toolls&catid=65:library-references&Itemid=61

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

The District would like to augment its current software tool by updating its RF planning software and RF measurement and testing equipment. We do not intend to fund this potential tool through this grant.

14. Phase Two Funding

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

The following tasks will be included in Phase 2 funding, when made available to the District:

- Collect data requested by FirstNet in the consultations with the District
- Align data collection with the FirstNet business plan and system model
- Continue outreach and education
- Pay for travel for stakeholders to conferences and events
- Develop business plan for District use of FirstNet

15. Other

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

<u>For OCTO:</u>

Andrew Afflerbach, Ph.D., P.E. – CEO and Director of Engineering,
CTC Technology & Energy
Joanne S. Hovis – President, CTC Technology & Energy
Heather D. Mills – Director of Operations and Analyst, CTC Technology & Energy
Ziggy Rivkin-Fish – Principal Analyst, CTC Technology & Energy
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