Recipient Name: State of Maryland Department of Information Technology (DoIT)

MILESTONE CATEGORIES

All projects must be completed within three years following the date of the issuance of the award.

Please use the table provided to indicate your anticipated number of activities you plan to complete each quarter for every year of your project. Year One begins July 1, 2013. Please include any data attr butable to early activities (i.e., January - June 2013) in your baseline data for "Q1, Year 1."

Please also provide a brief description (100 words or less) of the primary activities involved in meeting each milestone (a single description should be provided for each milestone, covering all quarters in years one through three). Please write "N/A" if your project does not include an activity. If necessary, please insert additional milestones at the bottom of the chart.

									Quarter End	ing					
	Description of Activity	TOTAL	01.7	0.0	00	010	011	012	012	014	015	016	017	018	019
MILLSTONE ACTIVITY CATEGORIES	Description of Activity	TOTAL	Q1-7	QU	69	GIU	Gern	QTZ	Q I J	Q 14	Q I J	GIU	Q 17	Q TO	Q I J
			9/30/2013-												
			3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	3/31/2018
1. Stakeholder Meetings (Number of	Hold meetings with representatives from														
individuals reached via stakeholder	each county, municipality, and State agency														
meetings)	to inform and educate about NPSBN	1986	686	200	100	100	100	100	100	100	100	100	100	) 100	) 100
	SLIGP staff and other representatives to													1	1
2. Broadband Conferences	attend national broadband conferences.	119	95	2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2	2 2
	Support existing State Staff: SWIC - 20%														
	annually or .20 FTE, State Radio Director -														
	20% annually or .20 FTE; Systems														
	Engineer - 30% annually or 30 FTE; State														
	Deputy GIS Director - 10% annually or .10	4.05	0.05												
3. Staff Hires (Full Time Equivalent)	FIE Hired contractors for Broadband	1.05	0.25	0.8	i (	) (		) ()	) (		) (		) (	/	) (
4 Contract Executions	Outreach/Administration (1 contract): Five	4													
	Odireach/Administration (1 contract), Five	4	4		, <u> </u>	, (		, .	, (		, .	, .	, .		/ (
5. Governance Meetings	SIEC meetings and working group meetings	15	3	1	1	1	1 1	1	1	1	1	1	1	1	· ·
	Develop and maintain website. Develop and													1	-
	distribute information and educational														
	handouts at														
	meetings/workshops/conferences. Includes														
6. Education and Outreach Materials	website hits and social media.	13332	7332	500	500	500	500	500	500	500	500	500	500	500	) 500
7. Subrecipient Agreements Executed	No subrecipients planned	0	0	0	0 0	) (	0 0	0 0	) (	(	0 0	0 0	0 0	/ C	) (
	Identify desired sources within the														
8 Phase 2 - Coverage	state/territory and proposed build-out phases	Ν/Δ	Stage 1/2	Stage 2	Stage 3/4	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 6
9 Phase 2 - Users and their Operational	Gather information on potential user base	10/7	Oldge 1/2	Oldgo 2	Oldgo 0/1	Oldge 0	Oluge 0	olage e	Olage 0	Oluge 0	oluge o	olage o	olage e	Clage C	Clage C
Areas	and their operational areas	N/A	Stage 1	Stage 2	Stage 3/4	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 6
				Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ	Ŭ		
	Estimate surrent data usage and projected														
10 Phase 2 Capacity Planning	deta usago on EirstNot	NI/A	Store 1	Store 2	Stage 2/4	Store F	Store F	Store F	Store F	Stogo 5	Store F	Stage 5	Store F	Stage 5	Store 6
To: Fliase 2- Capacity Flanning		IN/A	Slage	Stage 2	Stage 3/4	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 0
	Identify current service providers and plans.														
11. Phase 2 -Current	procurement vehicles and barriers to														
Providers/Procurement	adoption	N/A	Stage 1	Stage 2	Stage 3/4	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 6
	Document the process for state plan review										1	1	1	1	
12 Phase 2 - State Plan Decision	and decision making	N/A	Stane 1	Stage 1/2	Stage 3/4	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 5	Stage 6

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0660-0038, expiring 8/31/2016. Public reporting burden for this collection of information is estimated to average 3 hours 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, information, searching suggestions for reducing this burden, to Michael Dame, Director, State and Local Implementation Grant Program, Office of Public Safety Communications, National Telecommunications and Information, U.S. Department of Commerce (DOC), 1401 Constitution Avenue, N.W., HCHB, Room 7324, Washington, D.C. 20230.

Recipient Name: State of Maryland Department of Information Technology (DoIT)

#### Cost Class Category Federal Expenditures

The completion of your project budget (fee	deral funds) should I	be reported in the	quarter you are a	anticipating expend	ding the funds. Ye	ear One begins July	1, 2013. Please	include any data	attributable to earl	v activi ies (i.e., J	anuary - June 20	13) in your baselir	e data for "Q1, Ye	ear 1."
	TOTAL		· ·			· · ·	(	Quarter Ending				, <b>,</b>		
Quarterly Cost Category Expenditures	FEDERAL	Q1-7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19
		9/30/2013- 3/31/15	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016	9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	12/31/2017	3/31/2018
a. Personnel	\$0.00	\$-												
b. Fringe Benefits	\$0.00	\$-												
c. Travel	\$149,082.00	\$16,358.10	\$27,418.42	\$38,478.74	\$49,539 06	\$60,599.38	\$71,659.70	\$82,720.02	\$93,780.34	\$104,840.66	\$115,900.98	\$126,961.30	\$138,021.62	\$149,082.00
d. Equipment	\$0.00	\$-												
e. Supplies	\$5,694.00	\$ 2,681.60	\$ 3,599.30	\$ 4,517.00	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,434.70	\$ 5,694.00
f. Contractual	\$1,822,585.00	\$ 367,363.09	\$ 596,500.64	\$ 796,500.64	\$ 996,500.64	\$ 1,196,500.64	\$ 1,396,500.54	\$ 1,467,514.54	\$ 1,538,528.54	\$ 1,609,542.54	\$ 1,680,557.00	\$ 1,750,571.00	\$ 1,786,578.00	\$ 1,822,585.00
g. Construction	\$0.00	\$-												
h. Other	\$8,000.00	\$ 1,000.00	\$ 4,000.00	\$ 4,000.00	\$ 5,000.00	\$ 5,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 6,000.00	\$ 7,000.00	\$ 7,000.00	\$ 8,000.00	\$ 8,000.00
i. Total Direct Charges (sum of a-h)	\$1,985,361.00	\$ 387,402.79	\$ 631,518.36	\$ 843,496.38	\$ 1,056,474.40	\$ 1,267,534.72	\$ 1,479,594.94	\$ 1,561,669.26	\$ 1,643,743.58	\$ 1,725,817.90	\$ 1,808,892.68	\$ 1,889,967.00	\$ 1,938,034.32	\$ 1,985,361.00
j. Indirect Charges	\$0.00	\$ -												
k. TOTAL (sum i and j)	\$1,985,361.00	\$ 387,402.79	\$ 631,518.36	\$ 843,496.38	\$ 1,056,474.40	\$ 1,267,534.72	\$ 1,479,594.94	\$ 1,561,669.26	\$ 1,643,743.58	\$ 1,725,817.90	\$ 1,808,892.68	\$ 1,889,967.00	\$ 1,938,034.32	\$ 1,985,361.00

#### Cost Class Category Non-Federal Expenditures

The completion of your project budget (non-federal, matching funds) should be reported in the quarter you are anticipating expending the funds. Year One begins July 1, 2013. Please include any data attributable to early activities (i.e., January - June 2013) in your baseline data for "Q1, Yea

	TOTAL							C	Qua	rter Ending							
Quarterly Cost Category Expenditures	NON-FEDERAL		Q1-7	Q8	Q9	Q10	Q11	Q12		Q13	Q14	Q15	Q16	Q17		Q18	Q19
															1		
		9/30	/2013- 3/31/2015	6/30/2015	9/30/2015	12/31/2015	3/31/2016	6/30/2016		9/30/2016	12/31/2016	3/31/2017	6/30/2017	9/30/2017	1	12/31/2017	 3/31/2018
a. Personnel	\$255,438.00	\$	46,723.12	\$ 67,357.94	\$ 87,992.76	\$ 108,627.58	\$ 129,262.40	\$ 149,897.22	\$	170,532.04	\$ 191,166.86	\$ 211,801.68	\$ 232,436.50	\$ 253,071.32	\$	255,438.00	\$ 255,438.00
b. Fringe Benefits	\$74,513.00	\$	7,110.70	\$ 12,711.05	\$ 18,311.40	\$ 23,911.75	\$ 29,512.10	\$ 34,512.45	\$	40,112.80	\$ 45,713.15	\$ 51,313.50	\$ 56,913.85	\$ 62,514.20	\$	68,114.55	\$ 74,513.00
c. Travel	\$0.00		\$0.00	\$0 00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	1	\$0.00	\$0.00
d. Equipment	\$0.00	\$	-												1		
e. Supplies	\$0.00	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$	-	\$ - 3	\$ -	\$ -	\$ -	\$	-	\$ -
f. Contractual	\$63,374.00	\$	30,000.00	\$ 35,000.00	\$ 40,000.00	\$ 45,000.00	\$ 50,000.00	\$ 55,000.00	\$	60,000.00	\$ 63,374.00	\$ 63,374.00	\$ 63,374.00	\$ 63,374.00	\$	63,374.00	\$ 63,374.00
g. Construction	\$0.00	\$	-												1		
h. Other	\$103,815.00	\$	30,006.51	\$ 38,212.51	\$ 47,418.51	\$ 56,624.51	\$ 56,624.51	\$ 65,830.51	\$	75,036.51	\$ 84,242.51	\$ 93,448.51	\$ 102,654.51	\$ 103,815.00	\$	103,815.00	\$ 103,815.00
i. Total Direct Charges (sum of a-h)	\$497,140.00	\$	113,840.33	\$ 153,281.50	\$ 193,722.67	\$ 234,163.84	\$ 265,399.01	\$ 305,240.18	\$	345,681.35	\$ 384,496.52	\$ 419,937.69	\$ 455,378.86	\$ 482,774.52	\$	490,741.55	\$ 497,140.00
j. Indirect Charges	\$0.00	\$	-												1		
k. TOTAL (sum i and i)	\$497,140.00	\$	113.840.33	\$ 153,281,50	\$ 193,722,67	\$ 234,163,84	\$ 265.399.01	\$ 305.240.18	\$	345.681.35	\$ 384,496,52	\$ 419.937.69	\$ 455.378.86	\$ 482,774,52	\$	490.741.55	\$ 497,140,00

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0660-0038, expiring 8/31/2016. Public reporting burden for this collection of information is estimated to average 3 hours 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 Michael Dame, Director, State and Local Implementation Grant Program, Office of Public Safety Communications, National Telecommunications, Autional Information Administration, U.S. Department of Commerce (DOC), 1401 Constitution Avenue, N.W., HCHB, Room 7324, Washington, D.C. 20230.

# Maryland: SLIGP Detailed Budget Spreadsheet

Category	Detailed Desc	ription of Budget	(for full grant period)	Brea	akdown of Costs	
a. Personnel	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	In-Kind/Cash
SWIC The SWIC will spend 25% of the time on SLIGP grant activities for 3 years. The SWIC's annual salary is \$135,000. \$135,000 x 25% = \$33,750	3	\$33,750	\$101,250	\$0	\$101,250	In-Kind
Department of Information Technology: Fiscal Services Director and Manager, and Assistant Attorney General will spend 50 hours per year for 3 years overseeing and processing grant invoicing and expenditures and reviewing legal documents. The average hourly rate of the three employees is \$45. $5 = 2,250$	3 years	\$2,250	\$6,750	\$0	\$ 6,750.00	In-Kind
Application Preparation by SWIC. <b>Pre-award Expense</b> The SWIC's annual salary is \$135,000. or \$66/hour times 10 hours.	10	\$66	\$660	\$0	\$660	In-Kind
Total Personnel		·	\$108,660	\$0	\$108,660	
b. Fringe Benefits	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	
SWIC						
Fringe is calculated at 28% of salary, for the portion of time spent on SLIGP activities (25%)	\$101,250	28%	\$28,350	\$0	\$28,350	In-Kind
DoIT Employees Fringe is calculated at 28% of salary.	\$6,750	28%	\$1,890	\$0	\$1,890	In-Kind

Total Fringe Benefits			\$30,240	\$0	\$30,240	
c. Travel	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	
PRE-AWARD COST: Travel for Regional						
and National Meetings with FirstNet: 6						
individuals will attend 1 meeting: the						
FirstNet Workshop in Arlington, Virginia on						
May 15-16, 2013. Local travel is estimated						
at \$45 gas/tolls; hotel is estimated at						
\$230/night for one night; per diem is						
estimated at \$66/day for two days						
(Washington, DC rates), for a total of						
\$407/trip.	6	\$407	\$2,442	\$2,442		
POST-AWARD COSTS: Travel for						
FirstNet: 10 individuals will attand 0						
meetings Airfore is estimated at						
\$600/ticket: airport parking is estimated at						
\$46' hotel is estimated at \$200/night for						
two nights: per diem is estimated at						
\$70/day for three days for a total of						
\$1.256/trip	90	\$1 256	\$113.040	\$113.040		
Mileage for Working Group Meetings: We		φ1,200	\$110,010	<i>\\</i>		
estimated the working group will 60,000						
miles to attend 50 meetings; cost per mile						
is based on state mileage reimbursement						
rates.	60,000	\$0.56	\$33,600	\$33,600		
Total Travel			\$149,082	\$149,082	\$0	
d. Equipment	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	
N/A	0	\$0	\$0	\$0		
Total Equipment	0 111		\$0	\$0	\$0	
e. Supplies	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	
such as pens folders, conference and						
meeting supplies: Meals budgeted at						
1\$8,000 total: \$200 each for 10 meetings						
(\$10 a lunch per person) for a total of						
\$2,000 and \$600 each (\$20 a dinner for 30						
people) at 10 conferences for a total of						
\$6,000.						
	1	\$13,694	\$13,694	\$13,694		
Total Supplies		• •	\$13,694	\$13,694	\$0	
f. Contractual	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	

g. Construction	Quantity	Unit Cost	Total Cost	Federal	Non-Federal		
Total Contractual			\$ 2,090,075	\$1,731,835	\$358,240		
Site surveys: Contractural services to complete FirstNet developed site survey forms for Maryland facilities that will likely occur in Phase 2 of the grant period. A total of 3582.4 hours in years 2 and 3 at an hourly rate of \$100 per hour.	3582.4	\$100	\$358,240	\$0	\$358,240	Cash	
Broadband Website Development, maintenance for three years based on approximately 1450 hours per year (60%) and an hourly rate of \$92 per hour.	3	\$115,000	\$345,000	\$345,000			
							-
Broadband Grants and Project Coordinator: One coordinator will spend 50% (1000 hours per year) on the project for two and a half years (30 months).	30	\$3,019	\$90,563	\$90,563			-
Regional Coordinators: Assigned to cover each of Maryland's five Interoperability regions to coordinate activities related to FirstNet such as surveys, stakeholder outreach, inventory of assets, development of local plans and reports. Positions are contractors working 520 hours per year (50%) for 31 months.	31	\$16,217	\$502,712	\$502,712			-
Broadband Outreach/Administrator: Fulltime contractor at 2080 hours per year to provide outreach to regional representatives, coordination with Federal and neighboring States for 3 years.	3	\$160,000	\$480,000	\$480,000			
Broadband SME - Contractor to provide technical support on a part time basis. Hourly rate of \$201 per hour times 520 hours in year 1; 1040 hours per year in years 2 and 3 for a total of 1560 hours	1560	\$201	\$313,560	\$313,560			

1			2	1		
N/A	· · · · · · · · · · · · · · · · · · ·		\$0			-
Total Construction	1	1	\$0	\$0	\$0	
h. Other	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	
Regional Coordination MACINAC: Likely sub-grant to provide coordination with FEMA Region III States for 3 years. Research, evaluation, planning and outreach on behalf of member States. Estimated to be 300 hours per year at a rate of \$100.83 per hour equals \$30.250 a						
year.	3	\$30,250	\$90,750	\$90,750		
Total Other			\$90,750	\$90,750		
		. 2			2	х. К
Total Direct Charges			\$2,482,501	\$1,985,361	\$497,140	
i. Indirect Costs	Quantity	Unit Cost	Total Cost	Federal	Non-Federal	2
N/A			\$0	\$0	\$0	
Total Indirect			\$0	\$0	\$0	
TOTALS			\$2,482,501	\$1,985,361	\$497,140	

GRAND TOTAL

\$2,482,501

	Federal Share	Non-Federal Share
Sequestration Reduction Amount:	\$1,985,361	\$497,140
Total Project Cost		\$2,482,501

	REV	/ISED
Category	Detailed Description	of Budget (for eriod)
a. Personnel	Quantity	Unit Cost
The former SWIC spent 25% of the time on SLIGP grant activities from August 2013 to December 2014. The SWIC's annual salary is \$135,000.		
The SWIC contributed 510 hours over this time period.		
The SWIC will spend 20% of the time on SLIGP grant activities for 3 years. The SWIC's annual salary is \$125,000. \$125,000 x 20% = \$25,000	3	\$25,000
Department of Information Technology Radio System Director. This person will spend 20% of his time on SLIGP activitites for 2.5 years at an annual salary of \$110,729, 20% is \$22,146 a year	2.5	\$22.146
Department of Information Technology Systems Engineer. This person will spend 30% of his time on SLIGP activities for 2.5 years. 30% of annual salary of \$77,699 is \$23,310	2.5	\$23,310
Department of Information Technology GIS Deputy Director. This person will spend 10% of his time on SLIGP activitites for 3 years at an annual salary of \$108,260. 10% of this is \$10,826.	3	\$10,826
10 hours spent on application preparation by the SWIC. (Pre-award Expense.) The SWIC's annual salary is \$135,000. or \$66/hour times 10 hours.	10	\$660
Total Personnel		
b. Fringe Benefits	Quantity	Unit Cost
The former SWIC spent 25% of the time on SLIGP grant activities from August 2013 to December 2014. The SWIC's annual salary is \$135,000. Using his monthly salary of \$11,250 for 16 months, the fringe benefits of 28% of hs salary have been allocated for the portion		
of time spent on SLIGP activities (25%).	45000	28%
Current SWIC. Fringe is calculated at 28% of the \$125,000 annual salary for the 20% of the time spent on SLIGP activities.	\$75,000	28%
the portion of time spent on SLIGP activities (20%)	\$55,365	28%

f. Contractual	Quantity	Unit Cost
Total Supplies		
conference and meeting supplies;	1	\$5,694
Office Supplies: \$5,694 for office supplies such as pens, folders,		
e. Supplies	Quantity	Unit Cost
Total Equipment		
N/A	0	\$0
d. Equipment	Quantity	/ Unit Cost
on state mileage reimbursement rates.	60,000	\$0.56
Mileage for Working Group Meetings: We estimated the working group will 60.000 miles to attend 50 meetings: cost per mile is based		
days, for a total of \$1,256/trip	90	\$1,256.00
\$200/night for two nights; per diem is estimated at \$70/day for three		
at \$600/ticket; airport parking is estimated at \$46; hotel is estimated at		
POST-AWARD COSTS: Travel for Regional and National Meetings with FirstNet: 10 individuals will attend 9 meetings. Airfare is estimated		
total of \$407/trip.	6	\$407
is estimated at \$66/day for two days (Washington, DC rates), for a		
\$45 gas/tolls; hotel is estimated at \$230/night for one night; per diem		
FirstNet: 6 individuals will attend 1 meeting: the FirstNet Workshop in		
PRE-AWARD COST: Travel for Regional and National Meetings with		
c. Travel	Quantity	Unit Cost
Total Fringe Benefits		
the portion of time spent on SLIGP activities (10%)	\$32,478	28%
portion of time spent on SLIGP activites (30%)	\$58,275	28%
DoIT Systems Egineeer. Fringe is calcuated at 28% of salary for the		

g. Construction	Quantity	Unit Cos
Total Contractual		
Coverage Objectives Analysis: MD FiRST Maps, coverage analysis and data to be used to in planning for FirstNet coverage objectives. A total of 316.87 hours from March 25, 2015 to January 31, 2018 at an hourly rate of \$200 per hour will be contributed as an in-kind match.	316.87	\$200
Regional Coordination MACINAC: Sole Source Award to provide coordination with FEMA Region III States for 3 years. Research, evaluation, planning and outreach on behalf of member States. Money contributed in turn by each State and fully spent before using another State's funds.	1	\$90,750
Broadband Website and Manning and Data Collection Analysis	2	\$115.000
Western Maryland Regional Coordinator and Exercise Director for outreach, exercise, and data collection activites. 1,000 hours for 22 months at \$75 a hour.	1000	\$75
ONE MOU TO ONE STATE AGENCY FOR THREE YEARS: 1. Broadband Outreach/Administrator: Full-time position to direct outreach and data collection and coordination with Federal and neighboring States. 2. Three Regional Coordinators for outreach and data collection activities (One full-time and two half-time positions). 3. Grants Manager and Project Administration - one quarter-time position.	3 years	\$998,27
Broadband Technical Engineer SME - Contractor to provide technical support and data collection analysis. Total contract amount of \$313,560 (1334.297 Hours or 65.0877 hours a month for approximately 20.5 months at \$235 an hour.) COMBINED THREE POSITION CATEGORIES AND AWARDED	20.5 months	\$313,560

h. Other	Quantity	Uni
Conference Supplies: This is for meals for participants attending MD		
FirstNet conferences hosted by the SLIGP team. Meals are budgeted		
at the state per-diem rate of \$9 for breaktast; \$11 for lunch. A total of		<b>*</b> 4
400 Dreaklasts (\$3,500) and 400 lunches (\$4,400) will be served.	20	\$4
for 3 years (total of 9 meetings): each meeting will be 2 hours long		
(250  rep/meeting x 9 meetings x 2 hr/meeting = 4.500 hours). The		
average value of the representatives' time is \$23.07/hour (2014		
Bureau of Labor Statistics data)	4.500	\$
Total Other		
Total Direct Charges		
i. Indirect Costs	Quantity	Uni
N/A	\$0	
Total Indirect		
TOTALS		

full grant	Breakdown of Costs	
Total Cost	Federal	Non-Federal
\$33,660		\$33,660
		•
\$75,000		\$75,000
\$55,365		\$55,365
\$58.275		\$58,275
,	_	
\$32.478		\$32.478
ψ02,470		ψ02,470
\$660		\$660
	_	\$255,438
Total Cost	Federal	Non-Federal
\$12,600		\$12,600
\$21,000		\$21,000
\$15.502		\$15 502
ψ10,002		ຈາວ,502

Variance	
	\$0
	\$11.250
	ψ11,200
	\$48,615
	\$58,275
	<b>*</b> •••
	\$33,858
	\$0
	\$185,681
	\$0
	¢0.450
	\$3,150
	\$15,502

\$16,317		\$16,317
\$9,094		\$9,094
		\$74,513
Total Cost	Federal	Non-Federal
<b>*</b> 0.440	<b>AA</b> 4 4 <b>A</b>	
\$2,442	\$2,442	
\$113,040	\$113,040	
\$33,600	\$33,600	
\$149,082	\$149,082	\$0
Total Cost	Federal	Non-Federal
\$U	\$U	¢0
τotal Cost	عن Federal	ہو Non-Federal
10141 0001	i cuciui	
<b>#=</b>	<b>*</b> = <b>*</b> = <b>*</b>	<b>A</b> -1
\$5,694	\$5,694	\$0
⊅0,094 Total Cost	۵۵,694 Eodoral	\$0 Non-Eodoral
Total Cost	reaerai	Non-redefai

\$16,317
\$8,640
\$44,075
\$0
\$0
\$0
\$0
¢0
φ
¢∩
φ0 ¢0
 ψυ



\$0
\$0
\$0
\$0
\$0
\$0

Total Cost	Federal	Non-Federal
¢0,000	<b>#0.000</b>	
\$8,000	\$8,000	
		<b>A</b> / <b>A A</b> / <b>A</b>
\$103,815		\$103,815
\$111,815	\$8,000	\$103,815
<u> </u>		
\$0	\$1,985,361	\$497,140
Total Cost	Federal	Non-Federal
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$1,985,361	\$497,140

	\$0
¢.	50 724
	55,724
	0.040
50	59,210
\$17	11,815
	\$0
	\$0
	\$0
	\$0
	ΨŬ

## **Revised Budget Narrative**

Personnel	
I CI SUIIICI	

Federal:	<b>\$0</b>
Non-Federal:	\$255,438
Total:	\$255,438

See the Detailed Budget Spreadsheet for calculations.

- The former SWIC spent 25% of the time on SLIGP grant activities from August 2013 to December 2014. The SWIC contributed 510 hours over this time period.
- SWIC (Non-Federal): The SWIC will provide public-safety expertise for the SLIGP grant as well as contribute to the SLIGP grant's outreach, education, and data collection activities. This person will spend 20% of his time for 3 years (January 2015 to January 2018) only for the duties associated with public safety broadband and the SLIGP grant, not any additional general interoperable communications duties of the SWIC. All of this expense will be provided as an in-kind match. The source of this match is the state's general fund and is not from another Federal source.
- State Radio System Director (Non-Federal): This person will provide oversight for the SLIGP grant, ensuring that all activities are completed on time and within budget. The person will spend 20% of his time for 2.5 years (from June 2015 to January 2018) only for the duties associated with public safety broadband and the SLIGP grant, not the additional land mobile radio and general interoperable communications duties. All of this expense will be provided as an in-kind match. The source of this match is the state's general fund and is not from another Federal source.
- Department of Information Technology Systems Engineer (Non-Federal): The person will spend 30% of his time for 2.5 years (from June 2015 to January 2018) only for the duties associated with public safety broadband and the SLIGP grant, not any land mobile radio and general interoperable communications duties. All of this expense will be provided as an in-kind match. The source of this match is the state's general fund and is not from another Federal source.
- State Deputy GIS Director (Non-Federal): This person will provide oversight of the mapping and GIS components of the data collection efforts in Phase 2. This person will spend 10% of his time for 3 years (January 2015 to January 2018) only for the duties associated with public safety broadband and FirstNet mapping activities. All of this expense will be provided as an in-kind match. The source of this match is the state's general fund and is not from another Federal source.

- The former SWIC spent 25% of the time on SLIGP grant activities from August 2013 to December 2014. The SWIC's annual salary is \$135,000. The SWIC contributed 519 hours over this time period.
- 10 hours spent on application preparation by the SWIC. (Pre-award Expense.)

# Fringe

Federal:	<b>\$0</b>
Non-Federal:	\$74,513
Total:	\$74, 513

See the Detailed Budget Spreadsheet for calculations.

- The former SWIC spent 25% of the time on SLIGP grant activities from August 2013 to December 2014. Fringe is calculated at 28% of salary. Using his monthly salary of \$11,250 for 16 months times 25% time on SLIGP times 28%, the fringe benefits have been allocated at the percent of time spent on this grant. All of this expense will be provided as an in-kind match from the state's general fund, and is not from another Federal source.
- State Radio System Director (Match): Benefits include FICA, unemployment, and retirement. This position will spend 20% of his time on SLIGP, so fringe benefits have been allocated at the percent of time spent on this grant. All of this expense will be provided as an in-kind match from the state's general fund, and is not from another Federal source. Fringe is calculated at 28% of salary.
- SWIC (Match): Benefits include FICA, unemployment, and retirement. This position will spend 20% of his time on SLIGP, so fringe benefits have been allocated at the percent of time spent on this grant. All of this expense will be provided as an in-kind match from the state's general fund, and is not from another Federal source. Fringe is calculated at 28% of salary.
- Department of Information Technology Systems Engineer. This position will spend 30% of his time on SLIGP, so fringe benefits have been allocated at the percent of time spent on this grant. All of this expense will be provided as an in-kind match from the state's general fund, and is not from another Federal source. Fringe is calculated at 28% of salary.
- State Deputy GIS Director (Match): Benefits include FICA, unemployment, and retirement. This position will spend 10% of his time on SLIGP, so fringe benefits have been allocated at the percent of time spent on this grant. All of this expense will be provided as an in-kind match from the state's general fund, and is not from another Federal source. Fringe is calculated at 28% of salary.

Travel

Federal:	\$149,082
Non-Federal:	<b>\$0</b>
Total:	\$149,082

See the Detailed Budget Spreadsheet for calculations.

- PRE-AWARD COST: Travel for Regional and National Meetings with FirstNet: 6 individuals attended the FirstNet Workshop in Arlington, Virginia on May 15-16, 2013. Travel costs totaled \$2,442.
- Mileage for Working Group Meetings (Federal): Staff members and invited stakeholders will drive to various locations across the State to participate in meetings with local and State participants to continue the data collection efforts, raise awareness of FirstNet, discuss local and state needs, and identify potential network users.
- Travel for Regional and National Meetings with FirstNet (Federal): Staff will attend national and regional conferences to meet with FirstNet and share information and collaborate with other grant recipients. Travel costs include airfare, hotel, and per diem.

#### Equipment

Federal:	\$0
Non-Federal:	\$0
Total:	<b>\$0</b>

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

#### **Supplies**

Federal:	\$5,694
Non-Federal:	\$
Total:	\$5,694

See the Detailed Budget Spreadsheet for calculations.

• **Office Supplies** (Federal): This includes paper, folders, pens, and other general office supplies which will be used by the SLIGP team staff for grant-related activities.

## Contractual

Federal:	\$1,822,585
Non-Federal:	\$63,374
Total:	\$1,885,959

See the Detailed Budget Spreadsheet for calculations.

Broadband Technical Engineer SME (Federal) – This position supports the data collection efforts, and provides technical reports, briefings, and evaluations on FirstNet's requirements, coverage objectives, plans, and standards. At a bill rate of \$235 an hour and 65 hours a month, this position will be funded from January 2015 through mid-September 2016 (20.5 months).

# • University of Maryland:

- **Broadband Outreach/Administrator** (Federal) This position will continue to provide full-time oversight of the outreach and data collection activities and lead the work of the MD FirstNet team, regional representatives and coordination with Federal and neighboring states.
- **Regional Coordinators** (Federal) –These positions will continue to conduct activities related to FirstNet such as data collection surveys, stakeholder outreach, and development of local plans and reports.
- **Broadband Grants and Project Coordinator** (Federal) This position provides grant management and project coordination, including monitoring the budget, producing grant progress reports, calculating and tracking the inkind match, and maintaining project oversight to align activities with project budget and timeline.
- The funds for these positions will run through July 31, 2016.
- Western Maryland Regional Coordinator and Exercise Director (Federal): This
  position will continue to conduct activities related to FirstNet such as data collection
  surveys, stakeholder outreach, and development of local plans and reports for the
  Western Region and will also serve as Exercise Director. The funds for this position
  will run through July 31, 2016.
- Broadband Website and Mapping Analysis (Federal) These positions will continue to maintain the MD FirstNet's public website. These positions will also lead the development of the State's FirstNet coverage prioritization strategy, based on specific need factors, data collection results, and historical data, by analyzing and mapping where broadband coverage is most needed in the State and to propose build-out phases. The funds for this position will run through January 31, 2018. This MOU is for \$330,00 with \$15,000 being held in reserve for a possible amendment in the future.

- Regional Coordination (MACINAC) (Federal): The State intends to continue its coordination on broadband issues through the FEMA Region III consortium called MACINAC. The contractor will continue to provide research, evaluation, planning and outreach on behalf of member States. The cost shown is Maryland's contribution of \$90,750 and awarded by a sole source contract. The funds for this position will run through July 31, 2016.
- Coverage Objective Analysis (Non-Federal) The State of Maryland has an existing contract with Motorola to build a statewide 700 MHz voice radio system. The maps, coverage analysis, and other information produced by various contractors and vendors in the course of planning for the statewide 700MHz public safety voice radio system that document the existing and/or planned public safety coverage for agencies within Maryland. The information will be used as input into the design for FirstNet in order to display where users expect coverage today based on the system called MD FiRST. State-paid for work is eligible to count as match as of March 25, 2015. Contractors will note on their invoices that the information they are providing, working on, analyzing is also for "LTE" or "broadband services." This will be an in-kind match. The State does not plan to modify its existing contract for the deliverables.

# Construction

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

We do not plan to have any construction costs for this grant program.

# Other

Federal:	\$8,000
Non-Federal:	\$103,815
Total:	\$111,815

See the Detailed Budget Spreadsheet for calculations.

**Conference Supplies** (Federal): This included meals for participants attending MD FirstNet conferences hosted by the SLIGP team. Meals are budgeted at the state per-diem rate of \$9 for breakfast; \$11 for lunch. A combined 400 breakfasts and lunches will be served to participants.

**Meeting Attendance Time** (Non-Federal): We will continue to hold FirstNet meetings and State Interoperability Executive Committee meetings as we advance our data collection activities and outreach and education initiatives. These meetings are attended by representatives of local and state jurisdictions and agencies. The jurisdictions donate the time their staff spends participating in these meetings as an in-kind match. The meeting attendance is noted on sign-in sheets that are maintained by the Grants administrator. The value of the representatives' time is based on 2014 Bureau of Labor Statistics volunteer rate of \$23.07 an hour, unless other information is provided by the participant.

# TOTALS

Federal:	\$1,985,361
Non-Federal:	\$497,140
Total:	\$2,482,501

#### State and Local Implementation Grant Program (SLIGP) Supplemental Application Narrative

#### 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.

Phase Two Activities for the State of Maryland Coverage and Data Collection for the Nationwide Public Safety Broadband Network and what it Means for MD

Objective: The Nationwide Public Safety Broadband Network (NPSBN) promises to provide critical broadband data capability in the hands of first responders throughout the State of Maryland and nationwide. However, in order to serve its purpose, the Network must provide coverage in the areas where it is most needed by first responders. While it would be ideal to have immediate coverage in all areas of the country, FirstNet acknowledges that its limited budget of \$7 billion allocated for the Network will necessitate a more gradual build out of the Network. Therefore, FirstNet has requested four data collection elements from the States that will provide relevant information to inform its Comprehensive Network Solution(s) Request for Proposal (RFP) and the State Network Plans that will be developed after the RFP is awarded.

The first element is the State's coverage objectives. FirstNet wants the States to identify desired coverage areas by developing their own baseline coverage objectives or by providing feedback on the FirstNet-developed baseline. FirstNet is also asking the States to plan a phased build-out approach and provide recommendations on targeted areas or objectives for each phase of a minimum five phase build out. More detail on this request will be discussed below.

The second element will document the State's users and their operations. FirstNet has requested information about the State's Public Safety Entities (PSEs), their devices, and their operational areas.

The third element will drive capacity planning. States are asked to gather information about Public Safety's application usage; frequency of use; and potential future use, as well as capturing and analyzing data that quantifies how much data is actually being used by a variety of PSEs.

The fourth element is current providers and procurement, asking for information about mobile data providers, plans, and costs.

The Maryland FirstNet team has determined that a coverage prioritization strategy is needed to analyze where broadband coverage is most needed in the State and to propose build-out phases. A methodology to prioritize coverage based on specific need factors and historical data follows.

Survey Requests: Two surveys have been distributed to Public Safety agencies across the State. One survey was sent to each of the 24 Public Safety Answering Points (PSAPs), as well as the state agencies that handle emergency calls, to ask for information about fire, law enforcement, and emergency medical calls for service. Due to the sensitive nature of the calls for service data, the data is aggregated to a grid and summed over a one year time period to establish trends and to avoid reference to any specific incidences. This will provide the Maryland FirstNet team with data required

for analysis, while maintaining anonymity of individual calls. The Eastern Shore Regional GIS Cooperative (ESRGC) at Salisbury University (SU) is receiving, housing, and processing the calls for service data on SU's secure servers. The ESRGC has years of experience working with sensitive and confidential data and will not share or release the calls for service data to other parties. All calls for service data will be destroyed once the data has been processed and aggregated to a statewide grid. The data will be deleted from SU's secure servers after 60 days from delivery.

The other survey asks public safety agencies about users and operational areas, devices, and providers and procurement. The answers provided from both surveys, as well as additional data from several additional sources, will be compiled and combined using a weighted algorithm to establish an overall "Public Safety Broadband Need" value. The "Public Safety Broadband Need" value will be used to prioritize the broadband coverage needs and establish a phased deployment plan for the NPSBN in Maryland.

Coverage Background: FirstNet has provided some guidance to the State as to how to develop coverage recommendations and how to discuss these with the FirstNet consultation team. Initially, the State was provided with baseline coverage recommendations from Homeland Security's Office of Emergency Communications (OEC), which was provided during the State's coverage workshop held in October of 2013. The data provided by OEC was based on population density and provided suggested levels of coverage in each county in the State based upon the following criteria:

- Metro areas with a population density greater than 1,000 people per square mile should be designed for In-Building Coverage with a handheld unit (Dark green in Figure 1).
- Areas outside of the large metros where the population density is less than 1,000 people per square mile but more than 500 people per square mile should be designed for Handheld Coverage/Partial In-Building (Green in Figure 1).
- Interstates and rural areas where the population density is at least 5 people per square mile should be designed for Vehicular Coverage (Light green in Figure 1).
- Rural areas with populations less than 5 people per square mile would not receive any terrestrial network coverage, but could be covered either through satellite coverage or through the use of a deployable system (White areas in Figure 1).

An image of these recommendations at the State level is provided in the figure below:



Figure 1: Original OEC Coverage Recommendations

It is recognized that these baseline coverage parameters should be viewed as only initial suggestions and must be reviewed and confirmed or updated by the local responders in each area. Additionally, specific venues such as public safety facilities, large public venues, key gathering places, critical infrastructure facilities, etc. must also be taken into account.

More recently, FirstNet has proposed a new approach to coverage for the states to consider. FirstNet has generated public safety concentration area maps using a one mile by one mile grid based on the following data:

- Public safety user population;
- US population;
- Developed areas/buildings;
- Roadways (and other transportation): Includes roads and highways; commercially navigable waterways; railroads; transit links.
- Public safety high risk/areas of interest (shown in Figure 2 below includes over 5000 points in MD);



Figure 2: High Risk and Areas of Interest Points

All of the data described above was aggregated and then classified into three levels of anticipated public safety concentration. The map of the State, shown below in Figure 3, displays three different concentration levels (Low (green), Moderate (blue), and High (red)). This data will be referred to as the Public Safety Data recommendations.



Figure 3: Coverage Recommendations based on Public Safety Data

Coverage Analysis: As part of FirstNet's data request from to the states, FirstNet has requested feedback on the methodology and baseline data used to include potential enhancements. The MD

FirstNet team has analyzed the coverage recommendations provided by FirstNet in order to determine how best to respond to FirstNet's inquiries and to develop a method to evaluate coverage requirements across the entire State.

Initially, a comparison of the two different forms of coverage recommendations was performed. In the two figures below, it can be seen that differences exist between the two different recommendations. In Figure 4, the OEC recommendations (aggregated and shown as all green) are overlaid onto the Public Safety Data recommendations (aggregated and shown as all pink). It can be seen that several areas of pink can be seen through the top green layer. This indicates there are some areas recommended for public safety broadband coverage based on the Public Safety Data that were not identified in the original OEC recommendations. Conversely, Figure 5 displays the Public Safety Data recommendations (all in pink) overlaid onto the OEC recommendations (all in green). In this image, it can be seen that several areas of green can be seen through the top pink layer. This indicates there are some areas recommended for public safety broadband coverage based on the original OEC recommended for public safety broadband coverage based on the DEC recommendations (all in green). In this image, it can be seen that several areas of green can be seen through the top pink layer. This indicates there are some areas recommended for public safety broadband coverage based on the original OEC recommendations that were not identified in the Public Safety Data.



Figure 4: OEC Recommendations Overlaid on Public Safety Data



Figure 5: Public Safety Data Overlaid onto OEC Recommendations

Due to the results seen in Figures 4 and 5, it can be concluded that there are some significant differences between the two coverage recommendations in some areas. Additionally, when the Public Safety Data is examined closely, it can be seen that the one-mile by one-mile grid is too course of a measurement to provide accurate recommendations, especially along the coastal areas.

Methodology: In order to ensure that all areas within the State of MD receive an accurate assessment of their public safety broadband needs, the MD FirstNet team will perform its own geographical public safety coverage evaluation on a quarter-mile by quarter-mile grid. This will be done by examining and evaluating a number of factors that suggest the need for public safety response and that indicate areas where public safety broadband coverage would be beneficial.

The factors chosen are either those that demonstrate historical public safety response, or factors that are believed to drive the need for public safety response as confirmed through discussions with public safety users in the State. The specific need factors identified are grouped by category and described below:

- Calls for Service Data
  - Historical calls for service based on Computer Aided Dispatch (CAD) data: The number of calls recorded in a grid area over the 2014 year. This data will be classified to one of 10 levels (1-10).
  - Average Call Duration: The average duration of calls for service in each grid. The duration is measured from the time of unit dispatch until the call is closed. Calls for service that are transported to a hospital will be closed at the time the unit arrives at the hospital. The duration for all other calls will be calculated f to the close time. This data will be classified to one of 4 levels (1-4).
  - Call Priority Rank: A priority ranking will be given to the predominant call category or type of call recorded in that grid. The ranking (1-3) will be assigned with input from first responders, based on the likelihood that certain types of calls will be more data intensive.

- Population
  - Public Safety Personnel: This number will represent the total number of public safety personnel assigned to an area. It will be derived from the survey responses and calculated based on the total number of personnel assigned to each agency distributed over the designated response area of that agency. This data will be classified to one of 3 levels (1-3).
  - Nighttime Population: The total number of people residing in a grid based on US Census data (2010). This data will be classified to one of 10 levels (1-10).
  - Daytime Population: This will reflect the daytime population of each grid, taking into account where people work, based the US Census American Community Survey data (2006-2010). This data will be classified to one of five levels (1-5).
- Transportation
  - Traffic Count Data: The average number of vehicles that pass through a grid on a daily basis. This is based on Maryland's State Highway Administration Annual Average Daily Traffic report data and will be classified to one of five levels (1-5).
  - Evacuation Route: Grids that intersect an evacuation route will have a value of 1, otherwise the value of the grid will be 0.
  - Transportation: Grids that intersect a train, light rail, subway, or bus line will have a value of 1; otherwise the value of the grid will be 0.
- Facilities/Public Places
  - Community Anchor Institutions: Grids that contain a critical facility, such as a school (K through 12), university (college or other post-secondary), medical/healthcare center, public safety facility, or community support government building, will be assigned a value of 1, otherwise the value of the grid will be 0.
  - Facilities: Grids are within a set distance of a facility will have a value of 1; otherwise the value of the grid will be 0.
    - Airport (within 500 feet)
    - Energy Plant (within 2,000 feet)
    - Wastewater Treatment Plant (within 200 feet)
    - Correctional (Federal, State, and Local within 500 feet)
  - Public Places: Grids that are within as set distance of a public place will have a value of 1; otherwise the value of the grid will be 0.
    - Sports/Racing Arena
    - State/County Park
    - National Park/Federal Protected Land
    - State Fairground (within 2,000 feet)
- Other Coverage

- Access to Commercial 4G Service: Grids that intersect a commercial wireless 4G coverage area will be assigned 0, whereas grids that do not intersect a commercial wireless 4G coverage area will be assigned 1. Commercial providers include AT&T, Sprint, T-Mobile, Verizon Wireless, and US Cellular as collected by the Maryland Broadband Mapping Initiative Areas where commercial 4G service is not available will be considered a higher need for public safety broadband.
- Dead Zone: A dead zone is a location where broadband cannot be accessed. Maryland dead zones were collected by crowdsourcing efforts of the Maryland Broadband Mapping Initiative from 2009 to 2014. Grids that contain a broadband dead zone will be assigned 1, whereas grids that do not contain a broadband dead zone will be assigned 0. Areas where broadband cannot be access will be considered a higher need for public safety broadband.
- MD FiRST Coverage: It is assumed that areas with portable coverage for the statewide 700MHz public safety radio system known as Maryland FiRST represent a high level of need for public safety communications. Additionally, areas with high levels of in-building MD FiRST coverage will be evaluated to determine the type of coverage necessary for public safety broadband.

The data from each Need Factor will be mapped geographically and overlaid onto a quarter-mile by quarter-mile grid throughout the State. In addition to a value to be assigned to each Need Factor described above, a weight will also be applied to each. The weight components will be based on each Need Factor's relative importance in predicting public safety broadband need. The weights will be determined based on input from experienced public safety personnel. A total value can then be calculated for each grid by multiplying each Need Factor value with its corresponding weight component and summing them. The values for each grid will then be classified into five levels of Highest Need to Lowest Need. This process will result in a map for each county throughout the State, which displays the relative Public Safety Broadband Need areas and which can be used for establishing the coverage priorities and deployment phases.

In addition to public safety broadband need, it is also important to identify what level of coverage is required and where coverage inside buildings is needed. A metric known as Total Building Footprint will be used to determine this need. This value can be determined for each grid and then classified as Low, Medium and High. Those areas with Low total building footprint could likely be served well with vehicular broadband coverage. Those areas with Medium total building footprint would likely require handheld coverage with some level of in-building penetration. Finally, areas with a High total building footprint would be best served by a higher level of coverage with in-building penetration.

In order to take advantage of the data provided, and to develop a process for establishing the coverage requirements across the State, the following is recommended:

- The data sets described above will be used together to evaluate the coverage needs within each county. This process and data will provide justification to negotiate with FirstNet if areas of additional or improved coverage are needed. Also, it is recommended that specific coverage areas be identified for:
  - a. Vehicular mounted modems (take into consideration the use of high power UEs and WiFi for additional coverage around the vehicle);
  - b. Handheld units.

Phased Deployment: FirstNet has requested that the coverage requirements be established as part of a phased implementation plan, where the required coverage is deployed/built-out over time, where a minimum of five phases are recommended. A plan for establishing these phases must be identified. When establishing this plan, it is important to take into account rural coverage requirements. The broadband legislation requires "substantial rural coverage milestones as part of each phase of the construction and deployment of the network."

In the draft RFP documents FirstNet has distributed, preliminary milestones for different phases of the project are suggested. These are summarized in the table below:

Operating Capability	IOC-1	IOC-2	IOC-3	IOC-4	IOC-5	FOC
Projected Timeline	6 months after RFP award	12 months after award	24 months after award	36 months after award	48 months after award	60 months after award
Projected Band-14 (PS) Build-Out	None	15% of objectives	60% of objectives	80% of objectives	95% of objectives	100% of objectives
Projected Rural Milestones	None	15% of rural objectives	40% of rural objectives	60% of rural objectives	80% of rural objectives	100% of πıral objectives

The State can use these preliminary milestones as guidance when recommending the deployment phases.

Capacity Planning and Throughput Needs: The data received from the surveys pertaining to the types and frequency of applications currently in use or planned for use will be compiled to establish the anticipated throughput needs or capacity requirements for the network. The throughput needs for both the uplink and downlink directions (in Mbps) will also be mapped on the same quarter-mile by quarter-mile grid as the Public Safety Broadband Need values and will be a key part of the data package to be provided to FirstNet which will define the complete public safety broadband needs for the State of Maryland.

September 30, 2015 deadline: The data package that prioritizes the broadband coverage needs and establishes a phased deployment plan for the NPSBN in Maryland will be sent to FirstNet Technical Team by the September 30, 2015 deadline. Additionally, our analyses will be provided to each jurisdiction that submitted data to us for its own use.

Data Collection ongoing beyond September 30, 2015: We will work to continue reaching out to public safety entities, PSAPs, and allied stakeholders that have not provided data by the September 30 deadline. As that information is provided to us, the team will analyze it according to the factors and metrics detailed in this document and provided the updated information the FirstNet Technical Team. We will continue to generate additional data and GIS elements as information is provided by our stakeholders and FirstNet. Continuing to incorporate data and information into a State coverage plan will be especially key as the RFP is to be released at the end of 2015. We anticipate spending

much of 2016 continuing to refine the elements of our network coverage plan as we receive additional data, information, and feedback from stakeholders.

#### Continued Phase One Activities

The State does not plan to bring on any additional contractors in Phase Two. The positions that the State currently has contracted for its FirstNet work in Phase One will stay onboard and will continue to work on the following activities that the team has been active on since the grant's inception.

- I. **Continued outreach and education**: We will continue conducting outreach sessions, regional Interoperability forums, meetings, webinars, website updates, and training materials to reach a wide audience of our stakeholders to raise awareness and visibility of the NPSBN.
  - a. The Broadband Outreach Coordinator: Program oversight of the planning, grant coordination, development of communications plan, web site, documentation, webinars, workshops and training activities.
  - b. Regional Coordinators: Work with the points of contact in each Region to conduct activities related to FirstNet outreach and data collection such as educational briefings and stakeholder outreach and the development and analysis of data collection surveys and network planning.
  - c. Grants and Program Administration: Grant management support, including monitoring the budget, producing grant progress reports, and project oversight to align activities with project budget and timeline.
  - d. GIS Support: As noted above, continue to generate additional data and GIS elements as information is provided by our stakeholders and FirstNet. The current contractor on board, the Eastern Shore Regional GIS Cooperative, which is based at Salisbury University, will continue to provide mapping and website support through the end of the period of performance for this grant.
  - e. LTE Technical Expertise: Continue to provide technical and consulting program management functions to the State; review and advise on FirstNet issues related to the design of the NPSBN, State assets, commercial services and, devices, as well as related public safety communications interoperability and broadband issues, and provide advice and guidance on the impact of said issues on the State of Maryland.
  - f. Regional Coordination Support: MACINAC support is described below in Section IV.
- II. Continued governance meetings and program oversight: Under the provisions of the Executive Order that created the Statewide Interoperability Program Management Office in 2008, the Statewide Interoperability Executive Committee (SIEC) has the responsibility of providing policy-level advice regarding public safety communications interoperability and to promote the efficient and effective use of resources for matters related to public safety communications and interoperability. The SIEC is responsible for providing high-level

oversight of the Maryland FirstNet Team's work. The SIEC meets at least biannually, with additional meetings scheduled as needed throughout the year. The Practitioners Steering Committee (PSC) was established by the EO to provide recommendations and advice to the SIEC, the PMO, and the Governor's Office of Homeland Security (GOHS) on all matters pertaining to communications interoperability (e.g., assessment, acquisition, standardization, planning, management, use, and oversight of communications). The PSC meets monthly and is comprised of senior communications practitioners from all fields of public safety. The Maryland FirstNet Team regularly updates the SIEC and PSC on its work. Decisions from the SIEC are implemented through the position of Statewide Interoperability Coordinator (SWIC) who is responsible for the Interoperable Communications programs within the State. The EO established that the Interoperability Coordinator is a full-time State employee who reports directly to the State Police Superintendent. The current SWIC is the CIO of the Maryland State Police. Program oversight of the Maryland FirstNet team is being assigned to the Radio System Director who oversees the statewide 700MHz public safety radio system.

- III. SCIP Update: Maryland plans to use SLIGP funding to support efforts to update the SCIP by developing a mid-term report that focuses on the planning and work the team has done to date of June 30, 2015 and a final report that documents the work as of the end of the grant's period of performance of January 31, 2018. Additional yearly updates in 2016 and 2017 will be included in the annual SCIPs to document additional public safety wireless broadband strategic goals and initiatives.
- IV. **Regional Coordination**: Maryland 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. The MACINAC States have been working cooperatively for more than four years now to monitor, review, and evaluate issues related to the Nationwide Public Safety Broadband Network. Our purpose in forming this consortium is to assure seamless interoperability across all State borders. Maryland plans to continue this coordinated effort and has funded its portion of the costs associated with one contractor to provide this oversight of meetings, calls, and analysis of FirstNet proposals with its SLIGP funds. MACINAC plans to continue its regional coordination with the contractor who is under contract with the State through July 31, 2016. The group will continue its calls and meetings, with another regional meeting planned for later this year. In addition, MACINAC plans to submit a response to two documents that FirstNet is currently seeking comments on: the Special Notice and the Operational Architecture Functional Descriptions (SOO Appendix C-7 Operational Architecture Comments Form)

The Special Notice includes a high-level outline of FirstNet's proposed approaches to the build-out of the NPSBN, including 1) a Nationwide Core Radio Access Network and Subscriber Adoption for All States and 2) a Regional Radio Access Network (RAN) and a Covered Lease Agreement (CLA). Figure 1 highlights both approaches.



Figure 1 Proposed Acquisition Approach

The second approach is a model based on the premise to build out the nationwide network region by region (multiple Regional RANs and CLAs) which would be integrated with a nationwide network core and each other to create a comprehensive nationwide solution. This model closely aligns to the objectives of MACINAC. At this point in the time the group is developing and deciding on its response. Tentatively we propose to open our response with a brief statement to a) acknowledge FirstNet's support for a Regional RAN/CLA Proposal, b) express MACINAC's continued support for this model, and c) reiterate the benefits of a Regional RAN and CLA approach for public safety.

The Operational Architecture Functional Descriptions document outlines the functional details of the operational architecture for the NPSBN. It includes a total of 614 individual functional descriptions. We do not propose to draft a detailed response to all functional descriptions. Instead, at this point in time, we are researching how best to identify, and provide comment for, those functions that require input by the public safety community with a special focus on functions that could benefit from regional collaboration (e.g., resource sharing) and that speak to the issue of local control.

Below is an example of an operational architecture functional description MACINAC may want to weigh in on.

A HOME INS	ERT PAGE L	AYOUT I	D15P500295_C-7 ORMULAS DATA REVI	Operational	Architecture_Co	mmen	ts_Form - Excel		7	(전 - 년 A Ray Lehr -	×
Paste S E I U	• 11 • 7	A - ≡	₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩	xt Center -	S - % + •	+   0 4.5	Conditional Format as	Cell Format	Σ · A Z · Sort & Filter	Find &	
Clipboard 6	Fant	-	Alignment		Number	Ę.	Styles	Cells	Editing		^
G557 + i ;	$\times \checkmark f_i$	E911	s a State and Local responsi	bility							¥
A 1 <u>Name</u> 3-1-1 Services Product Management	B Tille A7252	D QASP Reference	E FinalNet Proposed Functional Dener White - Comments Solicited	Respondent Functional C	Proposed Dwner	Resp Funct	5 undent Comment on tional Owner	H Respondent Comm	ent on Function	<u>       </u>	-
556 E9-11 Service Management	A72521		White - Comments Solicited	B.E		E9TT La	a State and Local responsibility				T.
557 Text To 9-1-1 Service Management	A725211		White - Comments Solicited			-					ंत
553 Provide Connection for NextGen 9-1-1 Service Management	A72522		White - Commenter Colicited	Sho	uld MACII	NAC	identify function	ns that shou	ld be desi	gnated	9
Security Requirements Management	A.7.3		White - Comments Solicited	"Blu	ie" for "Pi	iblic	Safety Entity" a	nd add Com	ments?		
Public Safety Product, Feature Roadmap Development	t Matrix	0-APP-7	Green - FirstNet Only								
ENTER		opare th						# 11	<u> </u>	1.:	436

6 Object Class Categories		GRANT PROGRAM, F	UNCTION OR ACTIVITY		Total
6. Object Class Categories	(1) Maryland FirstNet Planning and Implementation Project	(2)	(3)	(4)	1 otal (5)
a. Personnel	\$ 255,438.00	\$	\$	\$	\$ 255,438.00
b. Fringe Benefits	74,513.00				74,513.00
c. Travel	149,082.00				149,082.00
d. Equipment	0.00			L	
e. Supplies	5,694.00				5,694.00
f. Contractual	1,885,959.00				1,865,959.00
g. Construction	0.00				
h. Other	111,815.00			[	111,815.00
I. Total Direct Charges (sum of 6a-6h)	2,482,501.00				\$ 2,482,501.00
j. Indirect Charges	0.00				\$
k. TOTALS (sum of 6i and 6j)	\$ 2,482,501.00	\$	\$	\$	\$ 2,482,501.00
7. Program Income	\$	\$	\$	\$	\$

SECTION B - BUDGET CATEGORIES

Authorized for Local Reproduction

1

Standard Form 424A (Rev. 7- 97)

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

2.5