NORTH CAROLINA 911 BOARD MEETING
Friday, April 26, 2019
3514 Bush Street, Raleigh, NC
10:00 AM – 12:00 PM

North Carolina Next Generation 911

Status
- Live on ESINet
- Active Projects
- Approved for Migration
- No Decision From PSAP

Map Date: April 18, 2019
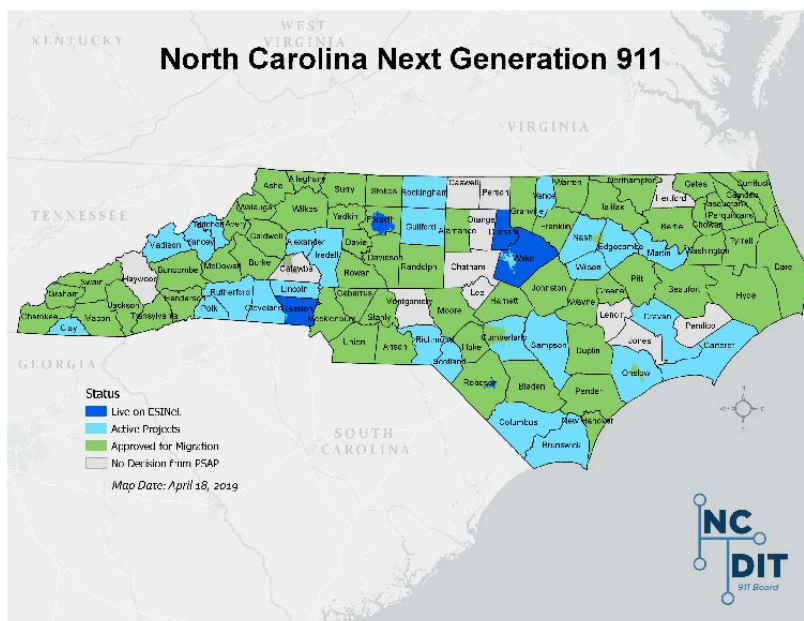
#NexGen911isNowGen911inNC

Call to Order *(1 Minute)*
Donna Wright

Roll Call *(1 Minute)*
Pokey Harris

Tab 1 *(1 Minute)*
Vice-Chair's Opening Remarks
Donna Wright

Tab 2 *(1 Minute)*
Ethics Awarness/Conflict of Interest Statement
Donna Wright

In accordance with G.S. 138A-15, It is the duty of every Board member to avoid both conflicts of interest and potential conflicts of interest. Does any Board member have any known conflict of interest or potential conflict of interest with respect to any matters coming before the Board today? If so, please identify the actual or potential conflict and refrain from any undue participation in the particular matter involved.

Tab 3 *(1 Minute)*
Public Comment
Donna Wright

The NC 911 Board welcomes comments from state and local government officials, first responders, finance directors, 911 directors, citizens and interested parties about any 911 issue(s) or concern(s). Your opinions are valued in terms of providing input to the NC 911 Board members. When addressing the Board, please state your name and organization for the record and speak clearly into the microphone.

Tab 4 *(3 Minutes)*
Consent Agenda
Pokey Harris
(Consent Vote Required)

4 a)

Minutes of Meeting – March 22, 2019

4 b – e)

b) **NG 911 Fund**
     March 2019 Fund Balance   **$42,891,816**
     March 2019 Disbursement   **-$ 87,151**

c) **CMRS Fund**
     March 2019 Fund Balance   **$ 6,586,818**
     March 2019 Disbursement   **-$ 750,049**

d) **PSAP Fund**
     March 2019 Fund Balance   **$14,926,600**
     March 2019 Disbursement   **-$ 4,273,829**

e) **Grant Fund**
     March 2019 Fund Balance   **$33,471,496**
     March 2019 Encumbered   **-$26,825,411**

4 f)

Grant Project Updates per Reports

<div style="text-align:center">

North Carolina 911 Board Meeting
MINUTES
WebEx and Conference Bridge
Friday, March 22, 2019
10:00 AM – 12:30 PM

</div>

Members Present	**Staff Present**	**Guests**
David Bone (NCACC) Martin County - *Via Phone*	Richard Bradford (DOJ)	Josh Briggs, AT&T - *Via Phone*
Heather Campbell (CMRS) Sprint - *Via Phone*	Ronnie Cashwell (DIT)	Greg Dotson, Rutherford Co 911 - *Via Phone*
Eric Cramer (LEC) Wilkes Communication - *Via Phone*	Tina Gardner (DIT) - *Via Phone*	Kylie Felton, Pasquotank 911 - *Via Phone*
Bo Ferguson (Deputy City Manager) Durham County - *Via Phone*	Pokey Harris (DIT)	Brad Fraiser - *Via Phone*
Chuck Greene (LEC) AT&T - *Via Phone*	Jesus Lopez (DIT)	Del Hall, Stokes Co. 911 - *Via Phone*
Greg Foster (Director, Comm.) NC Association of Rescue EMS - *Via Phone*	Gerry Means (DIT) - *Via Phone*	Tim Johnson, DIT CGIA
J.D. Hartman (Sheriff) Davie County - *Via Phone*	Marsha Tapler (DIT) - *Via Phone*	Matthew McLamb, DIT CGIA
Jeff Ledford (NCACP) City of Shelby PD - *Via Phone*	Angie Turbeville (DIT) - *Via Phone*	Melanie Neal, Guilford Metro 911 - *Via Phone*
Buddy Martinette (Fire Chief, Wilmington) NCSFA - *Via Phone*		Phillip Penny, MCP - *Via Phone*
John Moore (VoIP) Spectrum Communications - *Via Phone*	**Staff Absent**	Craig Schulz, MCP - *Via Phone*
Niraj Patel (CMRS) Verizon - *Via Phone*	Don Rice (DIT)	
Jude O'Sullivan (CMRS) Carolina West - *Via Phone*		
Jeff Shipp (LEC) Star Telephone - *Via Phone*		
Amy Ward (LEC) CenturyLink - *Via Phone*		
Donna Wright (NENA) Richmond Co Emergency Services - *Via Phone*		
Members Absent		
Secretary Eric Boyette (NC CIO) Board Chair		
Mike Reitz (APCO) Chatham Co 911		

Call to order — Vice Chair Donna Wright called the meeting via WebEx and conference call to order at 10:00 AM and asked Pokey Harris to call the roll of attendees.

1. Chairman's opening remarks — Vice Chair Wright welcomed everyone to the meeting and thanked them for taking the time to join.

2. Ethics Awareness/Conflict of Interest Statement — Vice Chair Wright read the Ethics Awareness/Conflict of Interest statement as printed in the agenda. David Bone advised he had a conflict with agenda item 5b) so he would be abstaining from that vote.

3. Public Comment — Vice Chair Wright read the invitation to public comment as printed in the agenda, but no one had pre-registered to speak and no one present or on the phone asked to.

4. **Consent Agenda —** Vice Chair Wright asked Ms. Harris to proceed with the consent agenda.
   a) Minutes of Previous Meeting – February 22, 2019
   b) NG 911 Fund

February 2019 Fund Balance	$42,106,002
February 2019 Disbursement	-$0

   c) CMRS Fund

February 2019 Fund Balance	$ 6,706,144
February 2019 Disbursement	-$0

   d) PSAP Fund

February 2019 Fund Balance	$12,577,270
February 2019 Disbursement	-$4,273,829

   e) Grant Fund

February 2019 Fund Balance	$33,161,273
February Grant Funds Encumbered	-$28,640,063

   f) Grant Project Updates per Reports

David Bone put forth the motion to accept the consent agenda as presented. Bo Ferguson seconded the motion and it carried unanimously.

5. **Executive Director Report**
   a) Winston Salem 911 ESInet Migration – On Wednesday, March 13 Winston Salem 911 became the second PSAP in NC to migrate to AT&T managed service ESInet. Ms. Harris congratulated them on their successful migration.
   b) Martin County 911 Grant Extension – Martin County 911 requested a 9-month extension on their grant until March 31, 2020. Ms. Harris stated she does recommend the extension. Greg Foster motioned to extend the grant. John Moore seconded the motion and it carried unanimously.
   c) Pasquotank 911 Grant Extension – Pasquotank 911 requested a 9-month extension on their grant until March 31, 2020. David Bone asked to recuse himself from this vote. Greg Foster motioned to extend the grant as recommended by Ms. Harris. Amy Ward seconded the motion and it carried unanimously.
   Added Item - Franklin County 911 Grant Extension – Franklin County 911 requested a 30-day extension on their grant until June 30, 2019. J.D. Hartman motioned to extend the grant as recommended by Ms. Harris. Eric Cramer seconded the motion and it carried unanimously, (*Note this was not previously identified as an agenda item. However, the request was presented in the monthly grant report for Franklin County that was presented and approved in the consent items. Ms. Harris requested to have the item added to the agenda as an action item for continuity.)
   d) Staffing Update – Ms. Harris reported that Danette Jernigan has accepted a position at the NC Office of Recovery and Resiliency and wished her well in that new position. Ms. Harris stated she is in the process of working with DIT HR to reclassify the Financial Review Specialist positions to better define the duties and responsibilities. She hopes to get those positions posted in the near future. In the meantime, contractor employees with PSAP experience may be engaged to help wrap up the FY2017 reports.
   e) Federal 911 Grant Program Status – The deadline for submission of the Federal 911 grant is April Ms. Harris indicated there are no foreseen issues to preclude meeting the deadline though it is a short turnaround. There are three elements and key components that will be identified in the grant plan to utilize the $3.6 million that has been allocated to North Carolina. They are GIS call routing ($381,166), ESInet cybersecurity element ($1,058,570) and diverse routing installation ($2,197,696). Jeff Shipp made the motion approve the fund distribution as presented and to proceed with submission of the grant application. Heather Campbell seconded the motion and it carried unanimously.
   f) FY 2018 Biennial Audit – The audit is still in process and progressing as expected. It as anticipated it will be completed by the end of April.
   g) Legislative Update – Ms. Harris and Nate Denny, the DIT Legislative Liaison, recently met with several Legislators about the NC911 Legislative agenda. She has received positive feedback from them about NextGen 911 and the other 911 legislative agenda items. Richard Bradford spoke about other bills of relevance to the 911 Board and their status.

6. Education Committee Report

a) TC Training and Standards Stakeholder Summit – Angie Turbeville spoke about the summit, where attendees received information to help create a training standard for the state. Stakeholders were presented the national model of Telecommunicator Training Guidelines, and Mr. Bradford presented the Legislative agenda regarding training. Ms. Turbeville will be scheduling meetings with stakeholders to discuss the topics brought up during the summit and to help decide what should be the next steps.

b) General Report – Ms. Turbeville had no other items to report on behalf of the Committee Chair.

7. Funding Committee Report

a) Surry County Reconsideration – Surry County 911 submitted a request for $449,063 which entails phone and console furniture. This reconsideration was recommended by Staff and a motion to approve was brought forward by the Funding Committee. Vice Chair Wright entertained a motion to accept the Funding Committee's recommendation and the motion passed unanimously.

b) Funding Position Policy (Base Seat Count) – David Bone stated this item is a policy recommendation to the Board coming from the Funding Committee. They ask the 30-day review period to begin so the Board can consider the recommendation at the April 26th meeting. Subcommittee Chair Chuck Green presented the policy as stated below and reported that the committee is continuing to work on the overflow position policy.

Funding Position Policy

G.S. 143B-1406 requires distributions to primary PSAPs on a monthly basis to fund eligible operations and expenses of such operations. PSAP staffing, and work duty assignments, are made by local governments. It is the policy of the 911 Board to provide funding to primary PSAPs for achieving call taking metrics established by applicable rules and standards. Primary PSAPs may, from time to time, need to increase the number of personnel assigned, the number of call taking positions, or other changes impacting positions within the primary PSAP. Non call taking duties shall not be considered when determining staffing or positions. It is the further policy of the 911 Board to enable necessary changes by allocating funds as permitted by law for such necessary position changes.

A "position" refers to the workstation and other associated workspace attributes.

A primary PSAP may request funding associated with changes in the number of positions.

Prioritization of factors identified shall be determined by the Funding Committee and identified

Factors for consideration of such requests include:

a) demonstration of staffing needs and the PSAP's analysis of the staffing needs as shown by industry recognized methods (e.g. as published by APCO, NENA, etc.), see e.g. 9 NCAC 06C.0208.
b) comparison of similar PSAPs' staffing, operations, levels of service, see e.g. 9 NCAC 06C.0211(a)(5).
c) only call taking duties shall be considered when determining positions, see e.g. 9 NCAC 06C.0208(c), 06C.0208(e).
d) PSAPs must demonstrate that staffing changes are necessary to meet the call taking rule; e.g. 09 NCAC 06C.0209(a) requires answering 90% of calls within ten seconds or less.
e) other factors consistent with G.S. 143B-1406, 911 Board rules, and applicable laws.

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c) Pamlico County Approved Use of Funds Discussion – Ms. Harris explained that at the review of Pamlico County's FY2017 revenue and expenditure report it was found that $42,766.64 was expended from their 911 fund (ETSF) for the purchase of equipment of the backup center, which is ineligible. Therefore, it is necessary for them to repay the fund. Ms. Harris believes the ineligible expenditures were not deliberate, but simply a mistake on the part of the County. Ms. Harris recommends the County be advised of the need to repay their 911 fund and do so by end of FY2019, June 30, 2019. Bo Ferguson made the motion to accept the recommendation. David Bone seconded the motion and it carried unanimously.

d) General Report – David Bone mentioned that a subcommittee is working on the overflow seats policy and that the Funding Committee continues to work on the NextGen PSAP funding model as well as the review of eligible expenditures.

8. Finance Team Report — Marsha Tapler noted that she was still working on the audit, and the FY2018 Revenue Expenditure Reports are still in progress. The shortage in staff has affected the completion of these reports, but she hopes the temporary help will be in place soon to assist.

9. Grant Committee Report
   a) 2020 Grant Workshop – Heather Campbell thanked everyone that attended the Grant Workshop, and also thanked Randy Beeman, Tonya Evans and all the staff of Durham County 911 for hosting the event. She also thanked Brent Renfrow for working with her to improve and streamline the Grant Application. The Grant Application will be posted online on April 1st and will be due by midnight on May 31, 2019. No extensions will be allowed. Once the application is submitted the PSAPs will receive a confirmation email within 24 hours. The committee will review applications at the end of June and presentations will occur on July 9, 2019. David Bone suggested the Grant Application information have a dedicated place website that would be easily found and available year-round. Ms. Harris advised work would be coordinated with DIT staff managing the website to accomplish this as soon as staffing levels allowed for such tasks. Vice Chair Wright asked about working with NENA and APCO to create breakout sessions for grant information. Ms. Harris noted she would reach out to the presidents of both organizations for discussion.
   b) General Report – Ms. Campbell advised there were no other items to report.

10. Standards Committee Report — Donna Wright said the next committee meeting is scheduled for May and there were no other items to report.

11. Technology Committee Report
   a) ESInet/HCH Migration/Deployment – Gerry Means gave an update, stating that 108 PSAPs were onboard for the ESInet with a large majority participating in the hosted call handling solution. The NextGen project is on target to meet the yearly objective with 40 PSAPs migrated to the ESInet.
   b) NMAC Status – Mr. Means said the build-out of the facility is complete and quotes should be arriving soon for console furniture. Stanley Meeks has been hired as the NMAC Manager and will start on April 1. He will be introduced to Committees held after his arrival and to the full Board at the April meeting.
   c) GIS Contract Award Status – GeoComm, Inc. was awarded the GIS contract at the last Board meeting and Mr. Means plans to meet with them in the coming weeks to discuss further steps, particularly to schedule a kick off meeting.
   d) General Report – Mr. Means provided additional comments about the Federal 911 grant and how beneficial it will be to the overall NextGen 911 project.

12. 911 Regional Coordinator Reports — Tina Gardner reported she and Angie Turbeville had a meeting with Forsyth County about ESInet. They also met with Greene County about ESInet and the review process. Tina completed the Currituck County and Pasquotank County reviews, who had only minor deficiencies to address. To date, 33 PSAPs have completed the peer review process. Ms. Harris said additional PSAP reviewers are needed and anyone interested should contact Tina Gardner. Future tasks for the RCs include meeting with PSAPs to work on their call answer times, scheduling additional PSAP peer reviews and reviewer training. Ms. Turbeville has been working on the Microsoft Dynamic 365 CRM project and a meeting is planned for April 9 with developers and project mangers from Planet Technologies to discuss requirements with staff. This is the first stage of the six-week project.

13. Other — Vice Chair Wright mentioned the third PSAP Managers Certification course has begun with 71 students in two sections. Students will be required to listen to the Board Meeting and report Board action items and discussion.

The next Board Meeting will be held on April 26, 10:00 AM, at 3514 Bush Street, Raleigh

Adjourn — Vice Chair Wright adjourned the meeting at 11:07 AM.

NG 911 FUND

FY2019 begining Fund Balance: $23,982,041.12

	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019
Revenue 10%	$742,198.28	$770,273.57	$759,742.49	$721,143.23	$795,804.48	$766,266.11	$804,652.25	$717,760.34	$810,940.27
Interest allocation	$31,728.53	$33,344.74	$35,395.85	$36,585.89	$40,170.25	$44,167.47	$65,257.05	$64,428.60	$62,024.51
Grant Fund Transfer						$11,800,000.00	$0.00	$0.00	$0.00
NG 911 Disbursement	-$20,521.77	-$10,496.00	-$14,521.50	-$19,943.00	-$15,088.00	-$13,699.00	-$10,688.70	$0.00	-$87,151.02
NG 911 Fund Balance	$24,735,446.16	$25,528,568.47	$26,309,185.31	$27,046,971.43	$27,867,858.16	$40,464,592.74	$41,323,813.34	$42,106,002.28	$42,891,816.04

CMRS FUND

FY2019 begining Fund Balance: $6,246,558.26

	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019
CMRS Revenue 15%	$559,586.10	$582,703.11	$597,782.52	$528,732.47	$601,956.80	$580,775.17	$643,777.96	$554,998.85	$620,845.27
Interest allocation	$8,264.27	$9,186.20	$10,268.97	$6,412.15	$7,643.11	$8,569.08	$8,944.13	$9,575.42	$9,878.53
Grant Fund Transfer			-$3,000,000.00						
CMRS Disbursement	$0.00	$0.00	-$403,322.40	$0.00	-$349,034.18	-$450,007.58	-$57,226.75	$0.00	-$750,049.02
CMRS Fund Balance	$6,814,408.63	$7,406,297.94	$4,611,027.03	$5,146,171.65	$5,406,737.38	$5,546,074.05	$6,141,569.39	$6,706,143.66	$6,586,818.44

PSAP FUND

FY2019 begining Fund Balance: $15,115,621.09

	July 2018	August 2018	September 2018	October 2018	November 2018	December 2018	January 2019	February 2019	March 2019
PSAP Revenue 85%	$3,170,987.91	$3,301,984.25	$3,387,434.27	$2,996,150.63	$3,411,088.59	$3,291,059.29	$3,648,075.11	$3,144,993.48	$3,518,123.15
Wireline Revenue	$781,929.85	$922,998.00	$637,676.78	$810,918.75	$1,600,486.15	$790,361.46	$777,408.64	$1,384,185.14	$832,807.23
VOIP Revenue	$968,260.32	$1,057,440.06	$1,100,957.88	$1,024,156.56	$401,726.78	$1,023,334.84	$1,048,765.39	$397,435.28	$999,523.85
Prepaid Wireless Revenue	$1,132,222.27	$998,011.93	$1,045,454.09	$1,065,427.55	$1,075,359.55	$1,141,900.22	$1,051,424.05	$913,631.92	$1,254,178.06
Interest allocation	$19,998.15	$22,854.79	$26,336.34	$4,011.47	$6,717.17	$10,688.94	$14,075.27	$17,140.47	$18,527.03
Subtotal	$6,073,398.50	$6,303,289.03	$6,197,859.36	$5,900,664.96	$6,495,378.24	$6,257,344.75	$6,539,748.46	$5,857,386.29	$6,623,159.32
Grant Fund Transfer Out			-$18,045,136.00						
PSAP Distribution	-$4,235,116.50	-$4,262,617.06	-$4,262,617.06	-$4,262,617.06	-$4,273,829.24	-$4,273,829.24	-$4,273,829.24	-$4,273,829.24	-$4,273,829.24
PSAP Fund Balance	$16,953,903.09	$18,994,575.06	$2,884,681.36	$4,522,729.26	$6,744,278.26	$8,727,793.77	$10,993,712.99	$12,577,270.04	$14,926,600.12

PSAP Grant-Statewide 911 Projects Fund

		Total Disbursed YTD	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Remaining Expenditures Grant Balance
			$30,028,840.94	$29,003,750.23	$28,391,979.78	$48,743,802.60	$47,703,698.65	$46,994,633.31	$34,343,094.96	$34,078,858.08	$33,161,273.46	
FY2016	**Award Amount**											
Graham County G2016-01	3,401,528.00	-1,663,440.31	-294,534.90				-146,614.50				-75,961.85	1,220,976.44
Hyde County G2016-02	1,266,887.00	-1,059,862.39				-130,999.61						0.00
Richmond County G2016-03	6,357,537.00	-4,717,991.65				-361,750.73						1,277,794.62
FY2017	**Award Amount**											
Catawba G2017-1A	296,827.00	-240,058.32										56,768.68
Forsyth G2017-3	1,085,000.00	-408,843.84					-131,613.29					544,542.87
Lincoln G2017-6	2,000,000.00	-545,158.62		-233,437.92								1,221,403.46
Martin G2017-7	5,196,315.00	-268,249.59		-136,984.98				-244,509.34	-261,171.96	-638,986.45		3,646,412.68
Mitchell G2017-9	3,163,000.00	-249,251.47	-11,625.63			-339,700.27	-111,499.93	-246,896.17	-39,346.77		-325,573.63	1,839,106.13
Moore G2017-10	586,404.00	-546,169.09										40,234.91
Pasquotank G2017-11	1,010,779.00	-531,580.33									-164,425.00	314,773.67
Perquimans G2017-12A	176,206.00	-145,352.51	-30,853.00									0.00
Rocky Mount G2017-13A	166,749.00	-19,275.00										147,474.00
Washington G2017-16	344,524.00	0.00										344,524.00
FY2018	**Award Amount**											
Franklin G2018B-4	1,204,482.00	0.00	-542,025.00		-81,167.75		-323,915.65	-40,709.25			-9,290.75	207,373.60
Robeson G2018B-1	339,065.00	0.00						-288,398.86				50,666.14
Wilson G2018B-2	157,913.00	0.00										157,913.00
Iredell G2018B-3	2,361,230.00	0.00					-156,275.81			-297,843.79		1,907,110.40
FY2019	**Award Amount**											
Wilson G2019-01	4,670.00	0.00										4,670.00
Pender G2019-02	361,760.00	0.00										361,760.00
Greene G2019-03	841,964.00	0.00										841,964.00
Wayne G2019-04	1,530,693.00	0.00										1,530,693.00
Rutherford G2019-05	1,161,548.00	0.00										1,161,548.00
Halifax G2019-06	4,067,780.00	0.00										4,067,780.00
STATEWIDE PROJECTS:	**Award Amount**											
E-CATS II	2,974,002.00	-845,161.71	-66,600.00	0.00							-632,240.00	1,430,000.29
Interpretive Services	1,155,000.00	-239,637.56	-51,822.00	-18,766.50	-17,504.25	-19,597.50	-17,403.00	-17,856.75		-33,887.25	-14,171.25	724,353.94
Ortho Project III Image 17	3,815,129.00	-3,466,793.24	-1,698.05									0.00
Ortho Project III Image 18	3,508,433.00	-1,572,924.74	-65,660.65	-261,679.70	-634,007.20	-124,226.30	-24,206.13	-87,122.64	-14,497.41		-188,917.66	535,190.57
Ortho Project III Image 19	3,273,555.00	0.00						-526.64	-4,605.68		-328,045.60	2,940,377.08
CRM Statewide One-time Development	250,000.00	0.00										250,000.00
Approved Transfer from PSAP Fund					21,045,136.00			-11,800,000.00				
Interest			39,728.52	39,098.65	39,366.02	67,783.75	70,849.68	74,481.30	55,384.94	53,132.87	48,848.42	
Total Ending Fund Balance		$ 30,028,840.94	$29,003,750.23	$28,391,979.78	$48,743,802.60	$47,703,698.65	$46,994,633.31	$34,343,094.96	$34,078,858.08	$33,161,273.46	$31,471,496.14	

Encumbered Grants total:	$ 26,825,411.48
Total available fund balance:	$4,646,084.66

CASH BASIS REPORTING

MissionCriticalPartners

Graham County, NC

Activity	This Period	Next Period
1. Design	• Construction complete	• Construction complete
2. Permits	• Construction complete	• Construction complete
3. Construction	• Construction complete	• Construction complete
4. Communications Systems	• Continued review / testing of backup sites • Finalize invoices and prepare to submit reimbursement • Complete any punchlist items	• Determine final steps for project • Submit funding reimbursement • Identify any outstanding punchlist items
5. Other Activity	• MCP held weekly conference calls with the County	• MCP will continue the weekly conference call schedule with the County

MissionCriticalPartners

Greene County, NC

Monthly Progress Report – March, 2019

Activity	This Period	Next Period
1. Design	• Reviewed RFQ submission for project design team • Received approval to proceed by County Board of Commissioners	• Begin negotiations with project design team • Review contracts of selected architect
2. Permits	• None in this period	• None expected in this period
3. Construction	• None in this period	• None expected in this period
4. Communications Systems	• MCP performed a technology assessment in preparation for developing a project budget	• None expected in this period
5. Other Activity	• Held routine project planning meetings with MCP • Participated in the NC 911 Board Grant Workshop • Prepared and submitted required grant budget and timeline documents	• Continue to participate in routine project planning and working meetings to facilitate the next steps of the project.

MissionCriticalPartners

Iredell County PSAP Enhancement and Regional Backup Initiative

Activity	This Period	Next Period
1. Design	• No actions required	• No actions expected
2. Permits	• No actions required	• No actions expected
3. Construction	• No action required	• No actions expected
4. Communications Systems	• Continued biweekly meetings with AT&T on call handling • Continued migration planning for radio console system • Kickoff meeting for ECOM network and the server / storage environment • Prepared for kickoff of CAD installation • Continued installation of audio-visual system • Internal coordination meetings on technology procurement and installation • Detailed budget review • Finalized installation of equipment racks • Aligned power and grounding needs in data center • Began work with Duke on installation of equipment • Issued procurement for building amplifier system • Kickoff radio system installation project • Track progress of fiber installation	• Continue biweekly meetings with AT&T on call handling • Continue biweekly meetings for procurement planning / timelines for technical systems • Continued coordination with other entities utilizing the facility for backup • Finalize installation of Spectrum services • Begin rack/stack compute and storage equipment • Begin building CAD virtual environment • Design firewall initial layout • Finalize Audio-Visual installation • Prepare testing plans for installed systems

Activity	This Period	Next Period
5. Other Activity	• MCP continued biweekly project meetings with the client	• MCP will continue biweekly project meetings with the client

Lincoln County PSAP, NC

PSAP Grant Project   MCP Project Number 17-125
Monthly Progress Report – March, 2019

Activity	This Period	Next Period
1. Design	• Continued submittal review	• Continue submittal process
2. Permits	• No actions required	• No actions expected
3. Construction	• Continued overhead rough-in • Continued wall rough-in • Continued exterior electrical conduit • Completed light pole bases • Completed masonry • Completed roof drainage • Continued roofing • Continued temporary heating measures • Continued drywall • Continued curb and gutter • Continued sidewalks • Completed equipment pads • Completed fireproofing • Set fire pump • Set generator • Began site grounding	• Complete site grounding • Complete masonry • Complete metal stud framing • Complete drywall • Complete wall rough-in • Complete overhead rough-in • Complete roofing • Complete exterior concrete • Complete curb & gutter • Complete aluminum storefront • Continue temporary heating measures • Complete fire pump installation • Begin perimeter fencing • Begin painting • Begin ceramic tile • Begin access flooring
4. Communications Systems	• Participate in AT&T project status calls • Review procurement of IT needs, to include PC workstations, networks, servers, storage, etc. • Finalize alarm light for dispatch furniture • Continue radio console migration planning	• Continue to participate in biweekly AT&T project meetings • Continue radio console migration planning • Finalize procurement of IT needs, to include monitors, PC Workstations, Networks, Servers and other required technology • Schedule kickoff and next steps for recording system

Activity	This Period	Next Period
	• Perform review of IT aspects of the project, identifying any gaps and begin locating equipment within the datacenter • Procure ProQA • Prepare kickoff of CAD server / software installation • Prepare printer and multi-function device procurement • Continued technology planning and timeline meetings • Continue to track fiber construction project	• Schedule kickoff and next steps for the CAD system • Align equipment for DukeNet • Verify 10-digit telephone needs • Continue technology planning and timeline meetings
5. Other Activity	• MCP held biweekly project meetings with the client • Lincoln County staff and MCP participated in monthly construction meeting	• MCP will continue biweekly project meetings with the client • Lincoln County staff and MCP will participate in the monthly construction meeting

MissionCriticalPartners

Martin County PSAP and Regional Backup Facility, NC

Activity	This Period	Next Period
1. Design	• Continued submittal review	• No additional actions planned
2. Permits	• No additional permits required	• Radio tower installation
3. Construction	• Continue site work • Continue siding and exterior work • Install raised floor • Install under-floor grounding • Finish drywall • Begin painting • Install windows • Begin cabling	• Finalize site work • Finalize paving • Install UPS • Install Generator • Finalize siding and exterior work • Finalize grounding • Finalize windows • Begin punchlist items • Finalize cabling
4. Communications Systems	• Continue biweekly meetings with AT&T on hosted call handling • Sitewalk for radio tower • Procure office / admin furniture • Track installation of MCNC fiber circuits • Finalize owner provided kitchen items • Issue order for security camera system • Evaluate options for recording solutions • Sitewalk with Audio Visual vendors • Continue technology coordination meetings • Continue design of Bertie County technology needs • Begin receiving and setting up technology items	• Continue biweekly coordination calls with AT&T • Install radio tower • Continue discussions on audio visual needs • Plan install of security cameras • Continue coordination with Bertie and Pasquotank on facility / technology needs • Issue remaining orders and begin scheduling installations • Finalize administrative telephone system • Schedule install of cable TV service • Verify 10-digit admin lines

Activity	This Period	Next Period
5. Other Activity	• MCP conducted periodic conference calls with the clients • Participated in on-site construction meeting • Requested extension on grant deadline.	• MCP will participate in project team meetings with the clients • Continued participation in construction meetings

Mitchell County, NC

Activity	This Period	Next Period
1. Design	• N/A	• No further activity
2. Permits	• N/A	• No further activity
3. Construction	• Completed drywall installations • Installed corner guard backing angle • Completed dryfall paint above ceiling • Completed priming • Began interior storefront • Began above-ceiling rough-ins • Completed ceramic tile • Continued ceiling grid installations • Substantially completed exterior trim • Poured electrical and mechanical equipment pads • Attended monthly construction meeting • Discussed grounding concerns with electrician • Reviewed and commented on contractor submittals • Conducted site reviews (County, MCP, and Stewart Cooper Newell) • Took site photographs (MCP and Stewart Cooper Newell)	• Complete finish grading • Complete drive and parking subgrade • Begin fencing • Complete storm water retention system • Complete exterior trim • Accept generator on-site • Set electrical disconnects • Install bullet-proof windows • Complete interior storefront • Install guttering • Complete casework • Install window trim • Install doors and hardware • Conduct third-party testing when applicable (ongoing) • Conduct site review(s) (ongoing) • Attend monthly construction meeting • Review contractor submittals • Maintain photographic progress
4. Communications Systems	• Completed draft RFP for radio consoles • Reviewed draft RFP for radio consoles between County and MCP	• Release RFP for radio consoles • Release workstation furniture vendor • Enter into contract for workstation furniture

Activity	This Period	Next Period
	• Select workstation furniture vendor • Held logging recorder demonstration • Reviewed cabling designs • Continued to refine technology plan • Continued to refine procurement timeline • Held technology review meeting	• Select radio console vendor • Procure tower • Continue to refine procurement timeline • Hold technology review meeting
5. Other Activity	• Continued to track grant spending • Updated budget tracking spreadsheet	• Regular communications with project team, as needed • Track grant budget (ongoing) • Hold status meeting between County and MCP

Pasquotank County PSAP, NC

PSAP Consolidation Project   MCP Project Number 16-185

Monthly Progress Report – March, 2019

Activity	This Period	Next Period
1. Design	• Continued submittal review	• No additional actions planned
2. Permits	• No action	• No action
3. Construction	• Continue site work • Continue siding and exterior work • Install raised floor • Install under-floor grounding • Finish drywall • Begin painting • Install windows • Begin cabling	• Finalize site work • Finalize paving • Install UPS • Install Generator • Finalize siding and exterior work • Finalize grounding • Finalize windows • Begin punchlist items • Finalize cabling
4. Communications Systems	• Continue biweekly meetings with AT&T on hosted call handling • Track installation of dispatch furniture • Continue to track progress on tower modifications • Begin coordination of data circuits • Begin discussions on migration of equipment to new backup site	• Continue biweekly coordination calls with AT&T • Participate in equipment migration planning and documentation • Participate in planning meetings with Martin County • Begin procurement of needed IT equipment • Begin planning the installation of the local paging system upgrade
5. Other Activity	• MCP conducted periodic project communications with the stakeholders • Requested extension on grant deadline	• MCP will conduct periodic communications with the stakeholders

Richmond County, NC

Monthly Progress Report – March 2019

Activity	This Period	Next Period
1. Design	• N/A	• No further activity
2. Permits	• N/A	• No further activity
3. Construction	• N/A	• No further activity
4. Communications Systems	• Held-kick-off meeting for MDT and cradlepoint projects • Imaged one MDT • Prepared installation schedule	• Confirm MDT imaging • Replicate images to other MDTs • Install MDT mounts and cradlepoints • Schedule MDT training
5. Other Activity	• Held status meeting between County and MCP • Conducted budget review meetings with County	• Hold status meeting between County and MCP • Continue to track grant budget • Regular communications with project team, as needed – ongoing

Richmond County, NC

PSAP Consolidation and Construction   MCP Project Number 15-175

Monthly Progress Report – March 2019

Activity	This Period	Next Period
1. Design	• N/A	• No further activity
2. Permits	• N/A	• No further activity
3. Construction	• N/A	• No further activity
4. Communications Systems	• Held-kick-off meeting for MDT and cradlepoint projects • Imaged one MDT • Prepared installation schedule	• Confirm MDT imaging • Replicate images to other MDTs • Install MDT mounts and cradlepoints • Schedule MDT training
5. Other Activity	• Held status meeting between County and MCP • Conducted budget review meetings with County	• Hold status meeting between County and MCP • Continue to track grant budget • Regular communications with project team, as needed – ongoing

Rutherford 911

Current Activity   April 2019

Rutherford PSAP Relocation / Enhancement

- Property owner has been presented with the **Agreement to Purchase.**
- Completing interviews with Architect(s)/Engineering firm.
- Architect *Proposal* will be accepted and signed the first week of April.
- Provide Architect with conceptual *interior* design plans.
- Preparing revised **budget and work plan** – completion by April 30th.

Next Month's Activity   May 2019

Rutherford PSAP Relocation / Enhancement

- Review and approve schematic drawings from Architect.
- Review PSAP configuration of existing console furniture.
- Follow up meeting(s) with Electrical engineer.
- Begin strategic planning with Mobile Communications for relocation.

Future Activity   June 2019

Rutherford PSAP Relocation / Enhancement

- Anticipated closing date (June 28, 2019) 153 Sparks Drive, Forest City
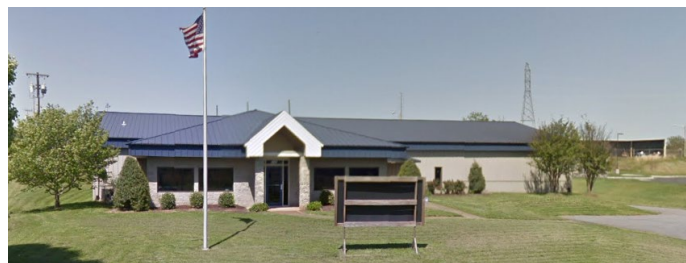
Tab 5 *(15 Minutes)*
Executive Director Report
Pokey Harris

5 a)
National Public-Safety Telecommunicator Week
April 14 – 20, 2019

State of North Carolina

ROY COOPER
GOVERNOR

PUBLIC SAFETY TELECOMMUNICATORS WEEK
2019

BY THE GOVERNOR OF THE STATE OF NORTH CAROLINA

A PROCLAMATION

WHEREAS, emergencies that require law enforcement, fire, or emergency medical services can occur at any time; and

WHEREAS, when an emergency occurs, the prompt response of law enforcement officers, firefighters, and paramedics is critical to the protection of life and preservation of property; and

WHEREAS, the safety of our law enforcement officers, firefighters, and paramedics depends in part upon the quality and accuracy of information obtained from people who contact the Emergency Communications Centers of North Carolina; and

WHEREAS, in crisis situations, public safety telecommunicators are the first contact many people have with emergency services; and

WHEREAS, public safety telecommunicators are a lifeline for our law enforcement officers, firefighters, and paramedics, monitoring their activities by radio and providing them information to help ensure their safety; and

WHEREAS, each public safety telecommunications dispatcher exhibits compassion, understanding, and professionalism during the performance of his or her duties; and

WHEREAS, the State of North Carolina commends the many dedicated public safety telecommunicators whose ongoing contributions help to keep our state and residents safe;

NOW, THEREFORE, I, ROY COOPER, Governor of the State of North Carolina, do hereby proclaim April 14 – 20, 2019, as **"PUBLIC SAFETY TELECOMMUNICATORS WEEK"** in North Carolina, and commend its observance to all citizens.

Roy Cooper
Roy Cooper
Governor

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of North Carolina at the Capitol in Raleigh this first day of April in the year of our Lord two thousand and nineteen and of the Independence of the United States of America the two hundred and forty-second.

North Carolina APCO

Across North Carolina in times of intense crisis and community-wide disasters, the first access point for those seeking all classes of emergency services is 9-1-1. The city, county, tribal, state and military communications centers that received these calls have emerged as the first and single point of contact for persons seeking immediate relief during an emergency.

As we near the end of the 2019 National Public-Safety Telecommunicator Week, on behalf of North Carolina APCO we acknowledge and honor the thousands of men and women who respond to emergency calls, dispatch emergency professionals and equipment, and render life saving assistance to citizens throughout North Carolina.

The importance of recognizing the hard work of these dedicated professionals is immeasurable at every level. As the Presidents of North Carolina APCO we stand behind the commitment and dedication of these men and women providing to ensure the safety and security of the citizens and public-safety responders throughout the state.

On behalf of the Board of North Carolina APCO we wish you all a Happy National Public-Safety Telecommunicator Week!

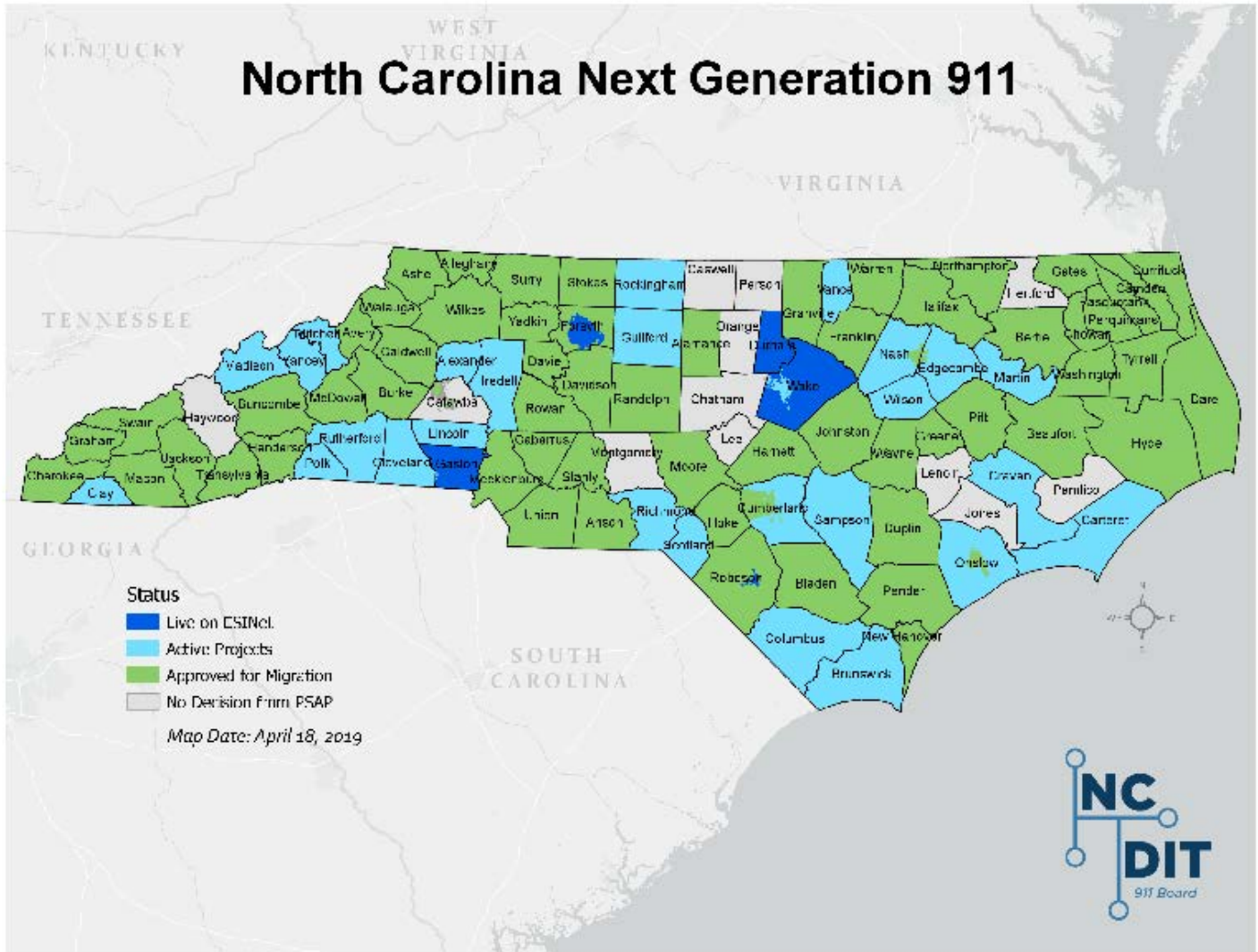|	
Brett Wrenn	**Grayson Gusa, RPL**
Chapter President	First Vice-President
Stephanie Conner, CPE	**Melanie Neal, RPL**
Second Vice-President	Immediate Past President

5 b)
NextGen 911 Migration Status

5 c)
Gaston County
ESInet Migration #3

On Monday, March 25, Gaston County migrated to the ESInet. They continue to use their on-premise call handling solution. Everything went smooth, with Captain Myron Shelor of the Gaston County Police Communications Division sharing his thoughts saying that *"things went extremely well and I think that has to do with the work that everyone put in leading up to now. This was one big piece in a large technology upgrade we are going through. CAD in 2018, ESInet in 2019 and good lord willing and the creek don't rise, 800 radio in early 2020. Big things going on here and thank you for all your support!!!! We look forward to helping pave the way forward for 911 in NC."*
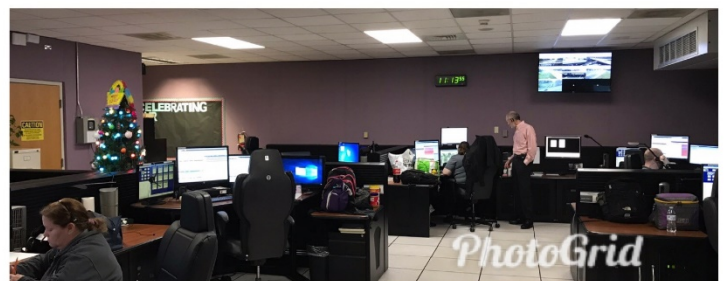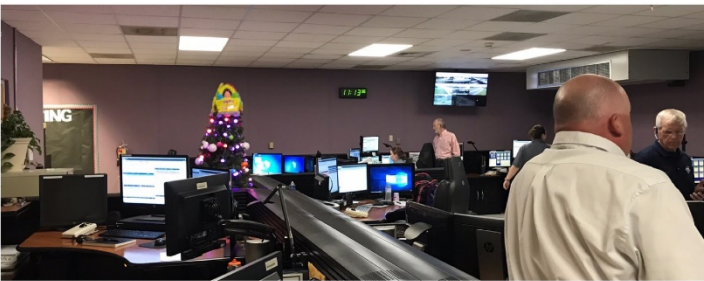
5 d)
Lumberton
ESInet Migration #4

On Wednesday, March 27, the City of Lumberton migrated to the ESInet with their primary PSAP joining the hosted call handling solution. Their backup PSAP remains an on-premise call handling solution. Bill French, Director of Emergency Services for the City noted, *"I would like to thank all those vendors and partners and especially the NC 911 Board that made the ESInet possible. Our transition at both our primary and backup went smoothly, and any issues were identified and resolved quickly. We are really looking forward to collaborating with other agencies and discovering all the possibilities that this system will bring to our industry."*

5 e)

Meeting with Camp Lejeune

5 f)

Presentation to North Carolina Commander Council

5 g)

Upcoming NG911 GIS Roadshow

5 h)

Staffing Update

5 i)

Federal 911 Grant Program Status

5 j)

FY 2018 Biennial Audit

5 k)

Meeting with new DIT CFO, Mark Newsome

5l)

Upcoming Chairman PSAP Tours – May 2019

5 m)
Legislative Update
Richard Bradford

5 n)

Acknowledgement for PSAPs During Recent Events

Tab 6 *(15 Minutes)*
Center of Geographic Information Analysis 2020-23 Cycle Proposal
Pokey Harris

6 a)
Presentation
Tim Johnson, CGIA Director

6 b)
Proposal Consideration and Recommendation
(Vote Required)

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY & STATE CHIEF INFORMATION OFFICER

March 29, 2019

L.V. Pokey Harris, MPA, ENP
Executive Director
NC 911 Board
NC Department of Information Technology
PO Box 17209
Raleigh, NC 27619-7209

Dear Ms. Harris:

On behalf of the entire state project team, I am pleased to submit the attached proposal for the 2020-23 cycle of the Statewide Orthoimagery Program. This continues the collaborative effort between the NC 911 Board and CGIA, along with the Department of Transportation-Photogrammetry Unit, Department of Public Safety-NC Geodetic Survey, and the NC Department of the Secretary of State to deliver timely and accurate orthoimagery to all PSAPs in North Carolina. This partnership started in 2012 with the first four-year cycle (2012-15) and has continued through the current four-year cycle (2016-19). A letter of support is attached from each team member.

The team proposes dividing the state into the same four project phases as the current cycle. This allowed for more efficient collection of the Fort Bragg area in recent years. Along with Fort Bragg, the team will renew current agreements with all other military installations to streamline capture of imagery in those areas. Much like the current statewide cycle, the proposed 2020-23 effort will benefit from the use of large format, second generation cameras to collect large project areas efficiently. This will reduce the number of flights required to collect imagery compared to the use of older, smaller format cameras. Since the cost of flying the aircraft is the largest cost involved in collecting imagery, utilizing the largest format cameras available reduces the overall cost of the program.

An optional color infrared (CIR) imagery product is being proposed for the 2020-23 cycle and is described in the proposal along with its associated cost per phase of the cycle. Second generation cameras acquire four bands representing the three primary colors of red, green, and blue and a fourth CIR band. Previously, the contractors have used the first three bands to create the orthoimagery product and did not process the fourth band. The costs associated with storing and processing the CIR band were prohibitive to include in the product delivered to the PSAPs. However, since the Board approved the 2016-19 cycle, costs have decreased substantially due to improvements in computer hardware and processing to produce the imagery. The team believes that the addition of CIR to the standard true color product will provide an additional imagery layer that will be useful to CAD operators and would also benefit the upcoming workflow for NextGen 911 within each PSAP jurisdiction.

The proposal for the 2020-23 cycle calls for an investment of $15,369,097 with an additional cost of $268,822 over the four-year cycle if the CIR option is chosen, yielding a total cost of $15,637,919. This includes all steps covered under earlier phases including project initiation/planning, imagery acquisition and processing, quality review, and final product packaging and delivery. Through contract negotiations led by CGIA with the private contractors, the cost of private contractor services for the past four projects covering 2016-19 has been reduced by almost $500,000. When the 2016-19 cycle is completed early next year, the overall cost of the cycle will likely finish $1,500,000 under the four-year budget that was approved for the 2016-19 cycle.

The NC Center for Geographic Information and Analysis looks forward to fulfilling its leadership role in delivering the quality product that the project team has consistently produced since 2012. We appreciate the support and confidence that the NC 911 Board has placed in us to meet your needs for orthoimagery for 911 response. The project team is ready to begin work as soon as the NC 911 Board approves the 2020-23 proposal and the budget is available.

Please feel free to call on me at 919-754-6588 with any questions about the proposal. I look forward to briefing you and the Board on this proposal at the April 26 Board meeting.

Sincerely,

Tim Johnson, GISP
Director, NC Center for Geographic Information and Analysis

attachments

STATEWIDE ORTHOIMAGERY PROGRAM
2020-2023

Orthoimagery Acquisition, Processing and Distribution

Prepared for

North Carolina 911 Board

Prepared by

North Carolina Center for Geographic Information and Analysis

Submitted on

March 29, 2019

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Contents

Statement of Need

Orthoimagery is a fundamental, mission critical dataset loaded into Computer Aided Dispatch (CAD) systems for use in all 911 Public Safety Answering Points (PSAPs) in North Carolina. The availability of consistent, current, highly-accurate orthoimagery when responding to an emergency is essential for effective response. This is especially critical with the prevelance of 911 calls from mobile phones. According to the North Carolina 911 Board website, over 75% of calls to NC PSAPs in 2018 were wireless. Having consistent orthoimagery with a high-degree of spatial accuracy provides positioning and situational awareness necessary to properly respond to these calls. Since the first statewide orthoimagery project in 2010, North Carolina has moved from a patchwork quilt of county imagery with varying quality and dates of acquisition to a complete, consistent, and current dataset due to the investment of the NC 911 Board.

The Statewide Orthoimagery Project in 2010 collected and distributed imagery for all 100 counties and demonstrated the value of digital aerial imagery as a fundamental dataset for PSAPs, as well as numerous local, regional, state, and private purposes. The Geographic Information Coordinating Council (GICC) and its collaborating participants developed and distributed the *Business Plan for Orthoimagery in North Carolina* in October 2010 in response to questions about the future of orthoimagery in the context of statewide programs and policies (https://files.nc.gov/ncdit/documents/files/OrthoImageryBusinessPlan-NC-20101029.pdf). The result was a plan that recommended an annual, quarter-state acquisition of new leaf-off orthoimagery beginning in January 2012 and continuing through 2015 (the first four-year cycle). The Business Plan recognized that funding sources with a statewide perspective, thus recognizing economies of scale, were essential to achieving a coordinated program. A second four-year cycle began in 2016 along the coast and is currently in the fourth and final project phase of sustaining the recommended four-year refresh rate for every county. Benefits resulting from this investment by the 911 Board include saving time in locating and responding to emergencies, saving time in informing public decisions, increasing public revenue due to more accurate data for assessments, and avoiding costs of erroneous information from out-of-date imagery and map features.

The *Business Plan for Orthoimagery in North Carolina* also outlined how vital aerial imagery is for the creation and maintenance of other GIS datasets. Current and accurate orthoimagery products decrease the effort necessary to maintain other framework datasets, which in turn improves the overall quality of mapping in the state. Implementation of Next Generation 911 (NG911) in North Carolina will rely heavily on the orthoimagery produced from this initiative, as well as several other statewide GIS datasets. Utilizing the National Emergency Number Association (NENA) i3 standards will require the development and on-going maintenance of three GIS datasets: street centerlines, address points, and emergency service boundaries. The spatial accuracy and consistency of the orthoimagery will support the maintenance and quality control requirements for these GIS data layers.

Proposed Project Cycle
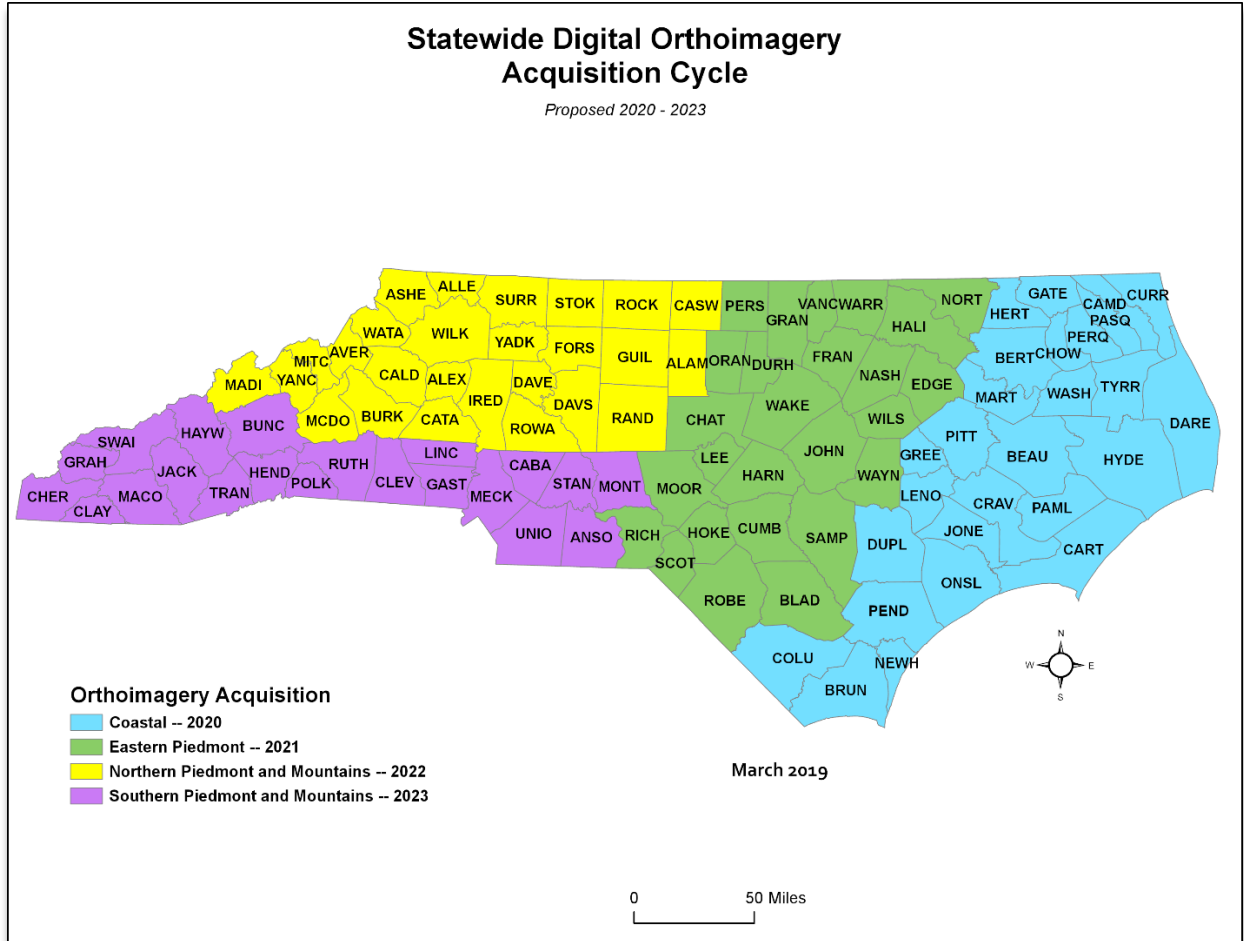
Figure 1: Proposed Four-Year Statewide Orthoimagery Cycle

Figure 1 outlines the proposed four-year cycle beginning in 2020 with 26 counties in the coastal region of the state. This division of the state into four project regions is identical to the 2016 through 2019 program cycle. Each region of the state: the coast, piedmont, and mountains, present unique challenges for acquiring and processing orthoimagery. The project team must approach each project with an understanding of what these challenges will require.

Along the coast and in the piedmont, flooding tends to be an issue during the winter months when acquisition is underway. In the mountains, snow cover often prevents the imagery from being acquired. Close coordination with our military partners at MCB Camp Lejeune, MCAS Cherry Point, Fort Bragg, Seymour Johnson AFB, and at the Military Ocean Terminal Sunny Point is a major factor in successfully acquiring imagery during the coastal and eastern piedmont projects. As the overall project manager, CGIA must take all the distinctive challenges for each project into consideration when developing requirements and oversight. CGIA oversees all third-party contractors and state partners that contribute to the program. Each project is a collaborative effort among many different state agencies and external

contractors. Figure 2 below outlines the organizations that make up the project team and contribute to the final success of each project.
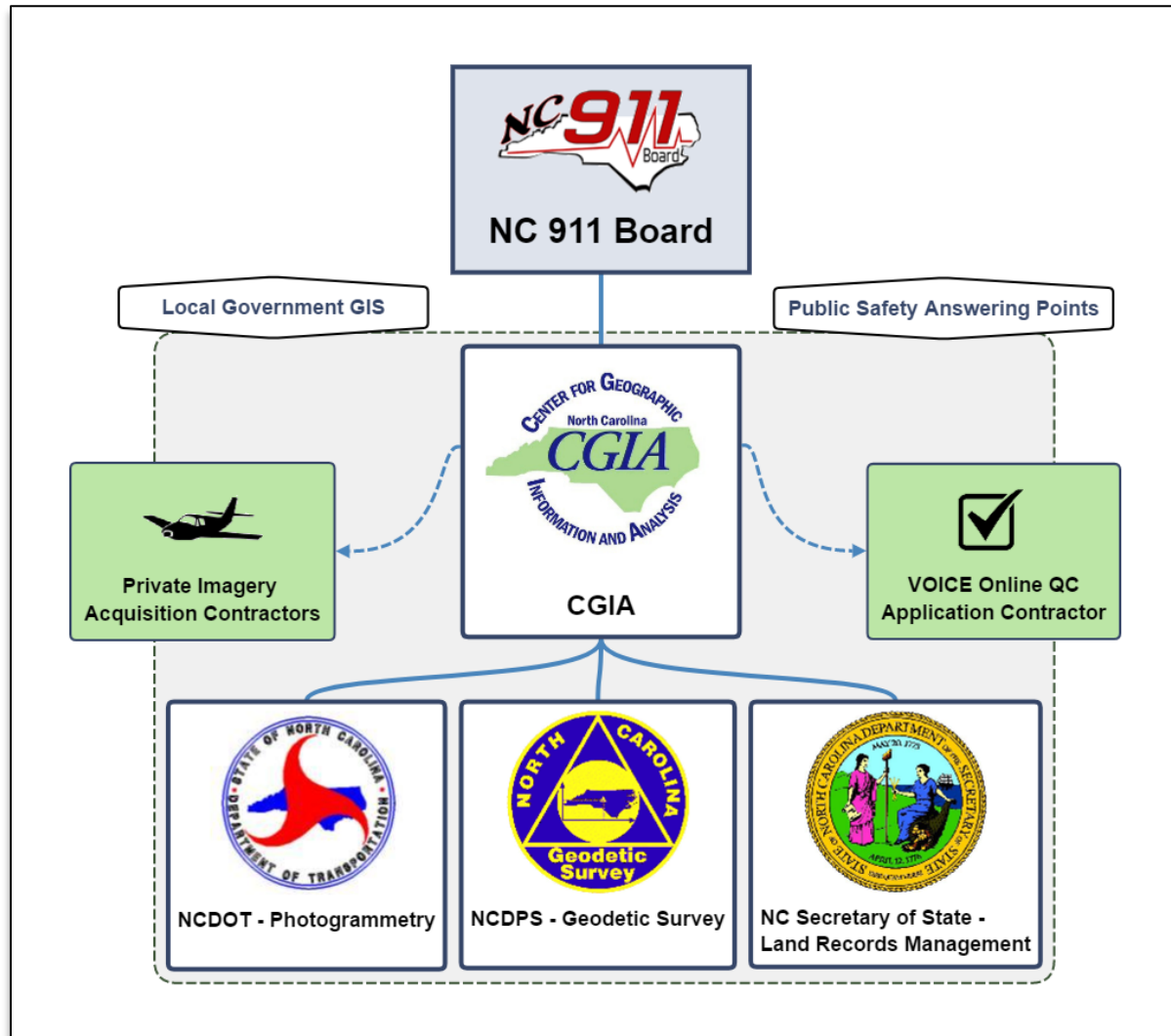
Figure 2: Project Team

Project Team Roles and Responsibilities

1. CGIA

CGIA will serve as the project manager of all third-party contractors and state partners, to include performing qualifications-based selection (QBS) procurement for private sector contractors, developing contracts, managing invoices, and documenting scope of work on the projects. CGIA will specify the detailed requirements for products and services based on *North Carolina Technical Specifications for Digital Orthophoto Base Mapping*. CGIA will also oversee all quality review activities and resolutions, manage the creation of all final orthoimagery products, coordinate outreach with Primary PSAPs and local government representatives, and ensure client satisfaction.

2. NCDOT Photogrammetry Unit

NCDOT Photogrammetry will provide advisory and technical services throughout the project phases. NCDOT has extensive expertise and experience in photogrammetry (i.e., the art, science, and technology behind obtaining reliable accurate measurements and three-dimensional data from overlapping photographs). NCDOT Photogrammetry is responsible for the technical details associated with photogrammetric processes and production which include flight and control planning, imagery acquisition, image post processing, GNSS-IMU post processing, aerotriangulation, and orthoimagery generation. GNSS-IMU comprises technology on the acquisition aircraft that uses orbiting GNSS satellites to compute the aircraft's relative position, time, and velocity at the time of each exposure collected by the sensor. GNSS-IMU is used in aerotriangulation, which is the use of ground control to spatially rectify each image to the correct location on the earth's surface. This facilitates detailed analysis of acquisition coverage requirements and compliance to the specifications outlined in the North Carolina standards for orthophotography. The NCDOT Photogrammetry Unit will evaluate and advise on all report documentation, technical data submittals, and contractor submittals. NCDOT will also perform quality review for 30% of each project.

3. NC Department of Public Safety-NC Geodetic Survey

The NC Geodetic Survey has extensive expertise and experience in managing positional quality control for orthoimagery. NC Geodetic Survey will advise on the QBS procurement process for private contractors, maintain validation range for testing and approving digital cameras, and perform horizontal quality control. They will also evaluate report documentation and technical data submittals directly related to survey control.

4. NC Department of the Secretary of State, Land Records Management Section

The Department of the Secretary of State is the author of the *North Carolina Technical Specifications for Digital Orthophoto Base Mapping*, the state standard for orthoimagery acquisition. The Land Records Management Section will advise on the QBS procurement process of private contractors, interpret the state standard for the project team as needed, and serve as a member of the state project team throughout the projects.

5. Private Contractors

Private contractors, managed by CGIA with support from collaborating members of the state project team, will perform acquisition, processing, production and delivery of orthoimagery to CGIA covering all project counties. An additional private contractor will develop and deliver an online application for quality review of the imagery product by PSAP and GIS end users in the project areas.

6. Local Governments

The Public Safety Answering Points and the local government GIS representatives are critical to the successful completion of each orthoimagery project. They will perform preliminary quality review of the product, receive final delivery of the orthoimagery from CGIA, and coordinate with project team for any product exceptions or outstanding issues. Feedback from the PSAP and GIS community validate current deliverables and support the development of future product requirements.

Program Approach

In 2011, the NC 911 Board selected CGIA as the Project Manager over all aspects of the Program. Throughout all phases of the statewide orthoimagery program, the project team has focused on taking a proactive approach to quality control and project administration. The foundation for this high standard of quality and oversight is based on the *North Carolina Technical Specifications for Digital Orthophoto Base Mapping*, which were originally adopted by the GICC on August 18, 2004. This State Standard for orthoimagery was updated and re-adopted on December 11, 2014 by the NC Secretary of State (see https://www.sosnc.gov/documents/ forms/land_records/Technical_Specifications.pdf). Using these specifications as a basis for the orthoimagery program has allowed CGIA and the project team to perform oversight and accountability of all contractor processes and deliverables to ensure that the investment of the NC 911 Board leads to the best orthoimagery products possible.

Throughout each phase of the program, oversight and accountability of private contractors has been achieved through the review of several required compliance documents that each contractor must submit at milestones throughout the project. Much of the compliance documentation must be signed and sealed by a Professional Land Surveyor (PLS) licensed in North Carolina to attest to the accuracy of the processes outlined. They outline the processes, technologies, and results of each phase of orthoimagery development, such as flight planning, horizontal control surveys, imagery acquisition, GNSS-IMU post-processing, aerotriangulation, and final product delivery. Each piece of documentation is analyzed by the state project team for adherence to the state standards for orthoimagery and the project requirements. This generates a consistent, high-quality product from every contractor on each project.

The imagery acquisition season is the most critical period for each project. This typically runs from the first of February into mid-April depending on which part of the state is being flown. Due to the stringent requirements of the projects for leaf-off collection, lack of cloud cover, rivers within their banks, absence of snow cover, minimum sun angle, and other conditions, the contractors may only have eight to ten days with optimum conditions to fly the project area. NCDOT has developed real-time acquisition monitors allowing the team to review the results of every flight mission not to exceed five days after the mission occurs. If the flight mission does not meet certain requirements, re-flights are required. CGIA includes contractual terms
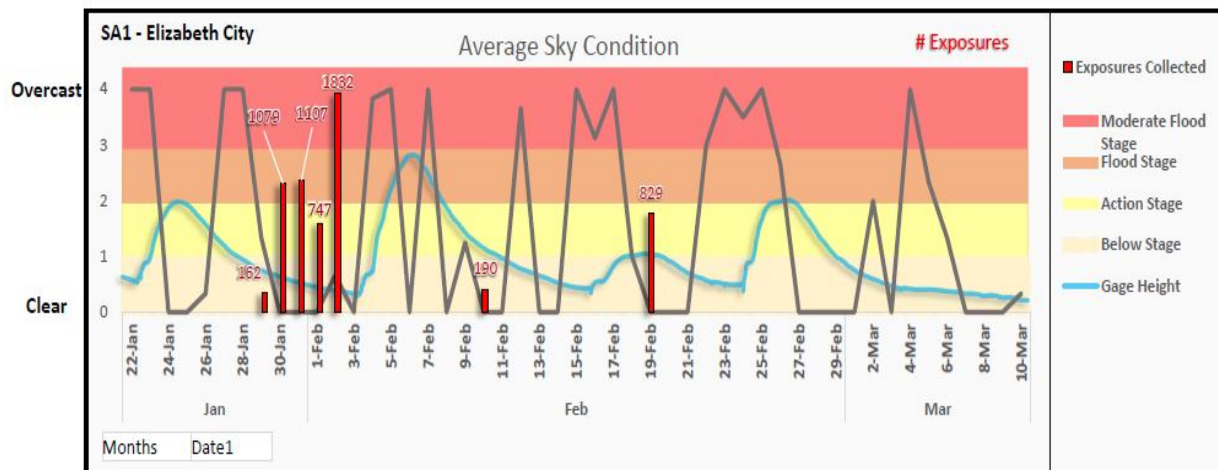
Figure 3: Acquisition Weather Analysis used in Contractor Performance Evaluations

and condtions mandating re-flights the next flying season if there is demonstrated non-compliance. This ensures that the contractors are placing North Carolina as a high priority and not missing opportunities to acquire imagery when conditions are favorable. Figure 3 displays a combination of multiple data sources representing cloud cover and river gage levels, along with the number of exposures collected each day. These graphs demonstrate whether the contractor was proactive during the flying season to ensure imagery was collected before leaf-on conditions. Incorporating this analysis into the contractor performance evaluation contributes a measure of accountability in selecting firms for subsequent projects.
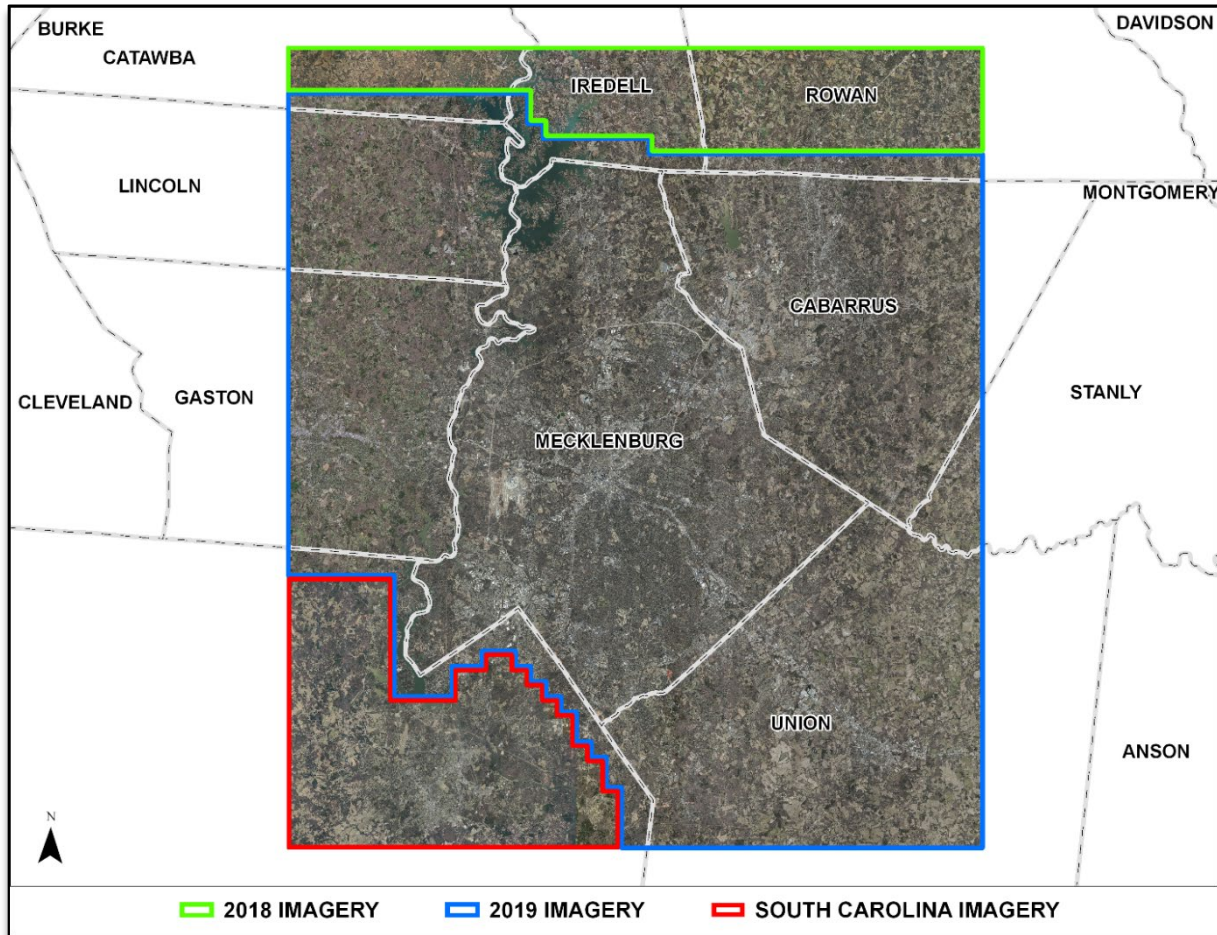
Figure 4: Single File Deliverable Extent for Mecklenburg County for the 2019 project

CGIA and the project team continually strive to improve upon the administration of the program and the products produced. CGIA has incorporated lessons learned and feedback from the 911 Board to improve the final products delivered at the end of each project. Table 1 outlines the current requirements related to the coverage of the imagery delivered to each county. Having these requirements in place ensures each PSAP receives the coverage necessary to respond to any emergencies even if they fall outside their respective county boundary. Throughout the first four-year cycle, advancements have been made to the county-wide, single file imagery deliverable that many of PSAP CAD systems employ. Figure 4 demonstrates an example of how the new coverage requirements combine to produce the single file product that is now delivered at the end of each project to the PSAPs. Feedback received from the 911

911 BOARD COVERAGE REQUIREMENTS	
7 Mile Extent	Coverage that extends a minimum of 7 miles outside that county. Provides coverage for cellular call routing.
Neighbor Counties – Current project year	Provides regional coverage within the current project year.
Neighbor Counties – Previous project years	Completes regional coverage with imagery from previous projects where applicable.
Adjacent State Imagery	GA, SC, TN, and VA imagery from partners in those states incorporated into the single file mosaic for counties that border these states.

Table 1: Imagery Extent Requirements

community showed concern of having basemapping that extended outside the county boundary far enough for the routing of mobile phone calls that may originate outside a county's borders depending on where the cellular tower is located that is used to route that call.

CGIA makes every effort to stay up to date with the latest trends in imagery collection and processing techniques to assess the potential for improvements to the products delivered to North Carolina PSAPs. A new approach that was tested in Raleigh during the 2017 project and was implemented for downtown Greensboro and Winston-Salem for the 2018 project is to increase processing requirements for downtown areas with tall structures. In past projects the central business districts of large urban areas had increased specifications for flight planning to minimize the lean of tall buildings in the imagery. However, this did not eliminate all building lean as can be seen in the left side of Figure 5. By implementing a new processing approach that requires additional workflows and three-dimensional modeling, the orthoimagery product shown in the right of Figure 5 eliminates all building lean so that sidewalks, roads, and ingress/egress routes surrounding the structure are clearly visible. This approach to downtown

Figure 5: Typical Nadir Orthoimagery (Left) compared with new processing requirements for tall structures (Right)

areas is being utilized for the Charlotte and Asheville central business districts in the current 2019 project and will continue throughout the proposed statewide cycle.

Another improvement proposed as an option for the 2020 through 2023 orthoimagery cycle is the inclusion of color infrared (CIR) imagery alongside the typical 3-band, true color (RGB) product developed in past projects. In 2011, the GICC published a guide to understanding and utilizing CIR imagery (see http://www.nconemap.com/Portals/7/documents /Using_Color_Infrared_Imagery_20110810.pdf). This guide defines CIR as a form of imagery derived from part of the light spectrum that the human eye cannot detect. It was originally developed during World War II for the U.S. military to detect camoflauged enemy tanks and is typically collected by the imagery sensors used for this program, but not processed or delivered to CGIA. The *North Carolina Technical Specifications for Digital Orthophoto Base Mapping* recommends including the CIR product alongside the normal 3-band imagery product. However, back in the original 2010 statewide orthoimagery project it was considered too cost-prohibitive due to the increased processing and storage requirements.

In recent years, the costs associated with this additional product have been drastically reduced due to the lower prices for computer processing hardware and storage. The benefits of CIR imagery now outweigh the minimal remaining cost, especially with the upcoming transition to NG911. CIR has many uses for a variety of industries, but in terms of NG911, it greatly enhances the ability to distinguish built features and impervious surfaces, such as roads, buildings, and parking lots, from trees and other vegetation, which can be seen in Figure 6 below. The CIR product will aid in improving and validating the GIS datasets used in NG911 for street centerlines and addressing. It can also be loaded as an additional layer in conjunction with the standard orthoimagery products in certain CAD software that can aid response teams in navigating difficult terrain and highlighting man-made objects in dense vegetation. If a road

Figure 6: Color Infrared Imagery Example

or path is in dense forest, swamp, or other problematic conditions, it can become difficult to see on the basemap even with leaf-off conditions. However, by turning on a CIR data layer, roads and paths will stand out more against the red tree and vegetation features.

The CIR can also aid in change detection to highlight areas where the GIS datasets are not reflecting current conditions. This includes highlighting areas where the statewide LiDAR program operated by the Department of Public Safety's Floodplain Mapping Program requires updating. The NC 911 Board recognized significant cost savings beginning in 2016 due to the new, high-density LiDAR developed as part of the statewide LiDAR program. Use of this new elevation data reduced the cost of developing orthoimagery by decreasing the number of elevation errors that needed to be fixed by the contractors. By providing that program with additional tools for highlighting change and improving quality, the orthoimagery program will in turn benefit from higher quality elevation data in future projects.

Costing Approach
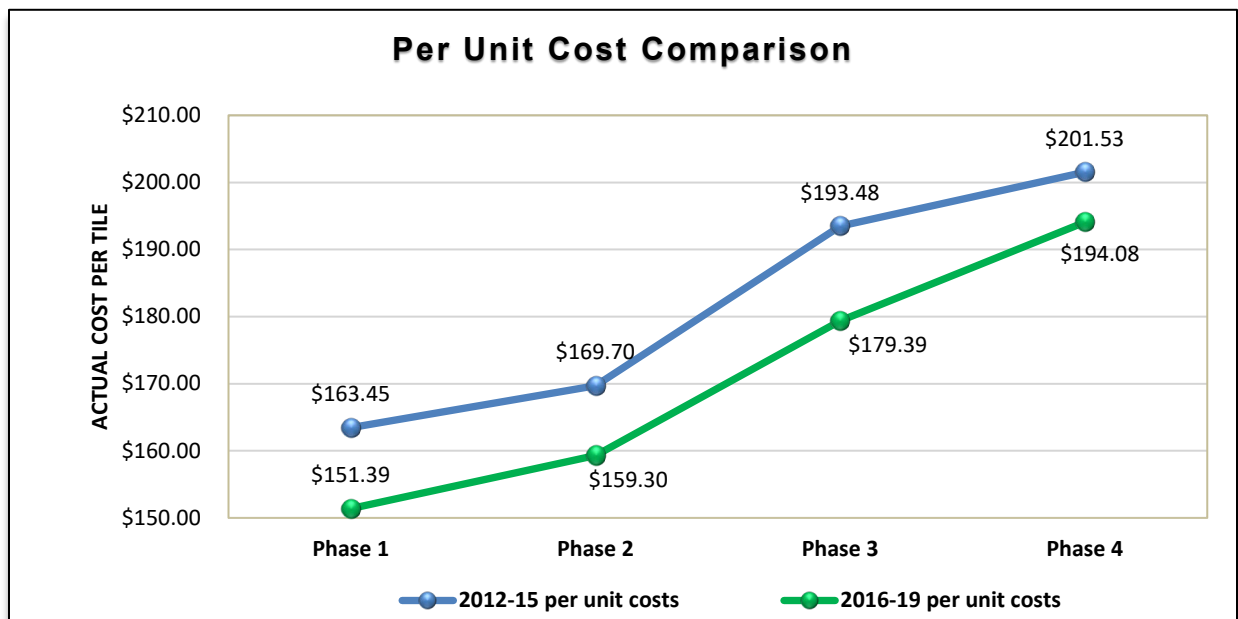
Figure 7: Previous Projects' Contractor Costs per Tile of Imagery

Private contractors account for up to 75% of the budget. In as much as CGIA administers project management, it places an equal focus on the analysis of contractors' costs. Figure 7 compares per unit contractor actual costs over the past two statewide cycles. The increases in unit cost for phases 3 and 4 for both statewide cycles in Figure 7 demonstrates the difficulty of flying in the mountains and the increased flight lines necessary to collect. As seen in the chart, the most recent statewide cycle's costs were lower than the previous cycle due to the updated statewide LiDAR elevation dataset, efficiencies from lessons learned from past projects, lower jet fuel prices, and contract negotiations by the project team.
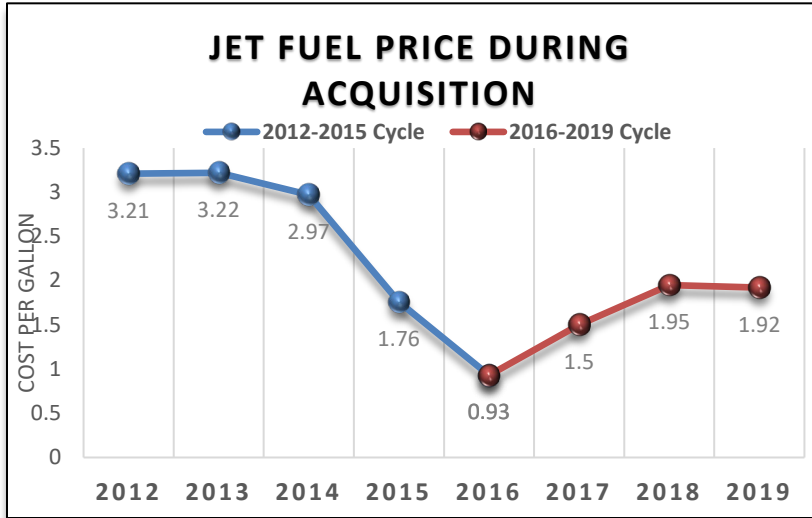
Figure 8: Jet Fuel Price Analysis

Over the past four projects, negotiations have resulted in a reduction of almost $500,000 in acquisition contractor costs. This is a direct result of the detailed cost analysis done by the project team prior to each phase that examines past project actuals, the cost of fuel, overhead inflation, the efficient use of advanced 2nd Generation sensors, and the complexity of the study area, most notably the difficulty in the mountains. One of the biggest factors in cost is directly tied to flying the aircraft and the price of jet fuel, which can fluctuate as seen in Figure 8. Jet fuel prices must be analyzed prior to each project proposal and before contract negotiations to determine the effect on the overall project budget.

Figure 9 presents CGIA's proposed contractor costs for the next four phases. These costs are derived from the application of the per unit figures from Figure 7, adjusted for inflation and historical trends, to the breakdown of the project areas identified in Figure 1. The last two phases encompass a smaller geographic area, and therefore a lower projected total cost. However, the more mountainous terrain and stricter requirements for sun angle, flight planning, and weather conditions cause a higher per tile cost for those final two phases.
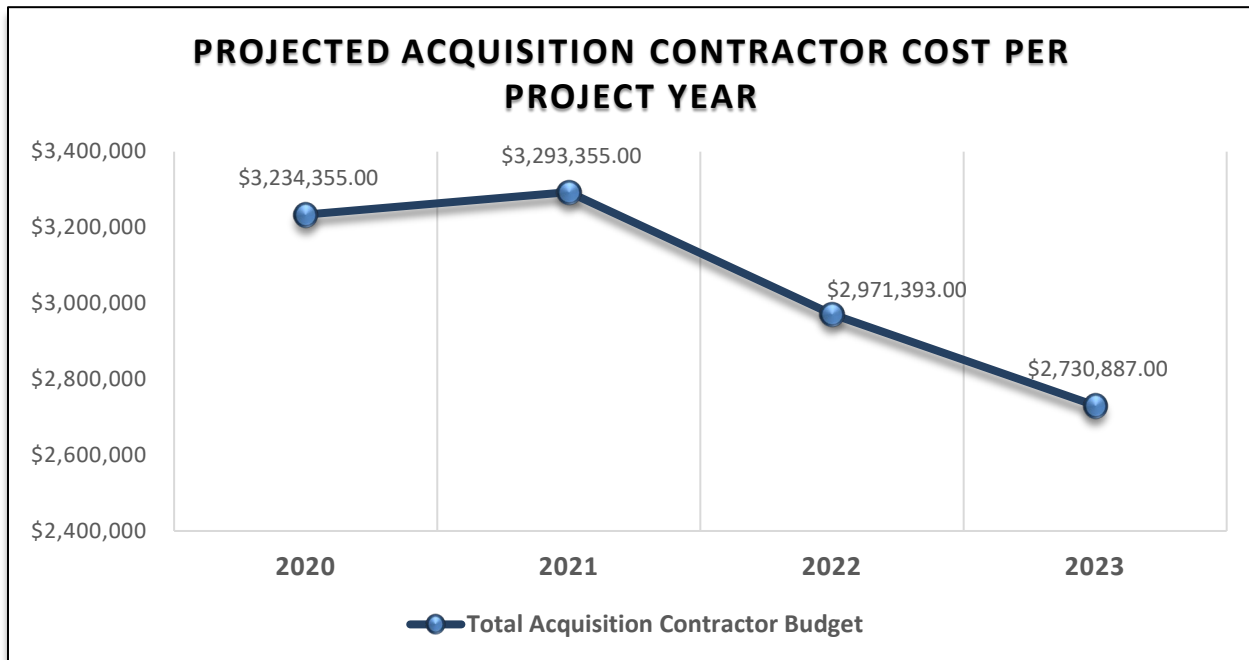
Figure 9: Projected Acquisition Contractor Budget per Project

Overall, CGIA takes a calculated approach to ensuring the NC 911 Board funds are spent efficiently to produce the highest-quality product possible. Each project since 2012 has been delivered on time and under budget. The 2012 through 2015 statewide orthoimagery cycle was completed with a savings to the Board of $1,353,723 below the combined budget totals from each project. The 2016 through 2019 statewide orthoimagery cycle is projected to finish at least $1,500,000 under the combined project budgets over the four years. CGIA and the project team continue to improve upon processes and timelines to maintain this trend for future efforts.

Conclusion

Prior to the first statewide orthoimagery project in 2010, the PSAPs across the state were using a patchwork quilt of imagery products of varying quality and dates. Some counties were using imagery products that were up to twenty years old as of 2002 before CGIA and the United States Geological Survey (USGS) began a cost-share program to support updating counties' outdated imagery products. Even with the cost-share assistance provided by the state, many counties could not maintain the four-year recommended refresh cycle for orthoimagery. Since 2010, PSAPs can now rely on up-to-date orthoimagery with very high spatial accuracy. With location being at the center of every call to a PSAP, the statewide orthoimagery program has put a system in place to ensure a consistent, high-resolution tool for visualizing these locations at all areas of the state.

Through the investment of the NC 911 Board and its vision to freely distribute the final imagery products to every citizen of North Carolina, there have been tremendous ancillary benefits across the state in both public and private sectors. The orthoimagery products prepared and delivered through the statewide orthoimagery program have contributed to a wide range of efforts across the state. For example, orthoimagery has played a major role in emergency planning and response, such as with Hurricanes Florence and Michael in 2018. Other uses include transportation planning, floodplain mapping, urban and regional planning, economic development, property tax re-evaluations, agriculture and forestry operations, civil engineering construction and design, land surveying, environmental impact analysis, utility mapping and many others.

Contracted Buy-Up Product	Funding Organization	Area of Interest/Products
3-inch Orthoimagery	City of Jacksonville	Jacksonville including Camp Lejeune
	City of High Point	High Point
	Davie County	Bermuda Run, Cooleemee, and Mocksville
	Town of Boone	Boone including Appalachian State University
Color Infrared Imagery	NC Dept. of Agriculture/ Henderson County	Henderson County, Dupont State Forest, and Headwaters State Forest CIR
Planimetrics and/or Elevation/Topographic Data	Town of Boone	Boone Elevation Contours
	East Carolina University	ECU and ECU Hospital properties in Greenville, NC
	City of Greensboro	Greensboro Impervious Surfaces/planimetrics
	Winston-Salem University	Winston-Salem State Univ. planimetrics/topo. data

Table 2: Local and County buy-up projects that resulted from the Statewide Orthoimagery Program.

Along with the variety of additional applications, many county and local governments were also able to take advantage of cost-savings by contracting with the acquisition contractors that flew their area as part of the orthoimagery program and collect/develop additional derived products. These products included higher-resolution 3-inch imagery, color infrared imagery, elevation data, and planimetric data such as roads, building footprints, and utility data. The table below summarizes the local and county governments that purchased additional products beyond the standard 6-inch, 3-band (RGB) imagery products created as part of the orthoimagery projects from the past 4-year statewide cycle.

In summary, the Statewide Orthoimagery Program serves as a foundation for many public and private initiatives across North Carolina. The total return on investment to the state is difficult to assess due to the wide range of end uses. However, the past two statewide orthoimagery cycles demonstrated the value of digital aerial imagery as a fundamental, mission critical dataset for PSAPs in responding to emergencies. As the number of calls from mobile phones continues to increase and as NG911 is implemented, orthoimagery will continue to be a critical tool for providing situational awareness and for validating the other necessary GIS layers.

Level of Effort and Cost

The table below provides the level of effort required to complete all four phases of the program from 2020 through 2023 based on the set of tasks described in this proposal. The four-phase refresh of orthoimagery requires an investment of $15,369,097 over the next four years without including the CIR product. If the CIR option is selected, the total required investment will be $15,637,919 over the next four years.

Item	Phase 1	Phase 2	Phase 3	Phase 4	Total
CGIA Labor	$350,000	$350,000	$350,000	$350,000	$1,400,000
Private Contractors	$3,186,065	$3,231,706	$2,912,215	$2,679,611	$12,009,597
Information Technology	$30,000	$30,000	$30,000	$30,000	$120,000
NCDOT-Photogrammetry	$155,000	$170,000	$155,000	$155,000	$635,000
NCDPS-NC Geodetic Survey	$205,000	$205,000	$205,000	$205,000	$820,000
NCDCR	$0	$0	$0	$40,000	$40,000
VOICE (QC Service Provider)	$75,000	$75,000	$75,000	$75,000	$300,000
Travel and Miscellaneous	$4,000	$3,500	$5,000	$7,000	$19,500
ESRI	$25,000	$0	$0	$0	$25,000
Total without optional CIR	**$4,030,065**	**$4,065,206**	**$3,732,215**	**$3,541,611**	**$15,369,097**
CIR Option Cost	$78,674	$76,000	$61,970	$52,178	$268,822
Total with optional CIR	**$4,108,739**	**$4,141,206**	**$3,794,185**	**$3,593,789**	**$15,637,919**

Table 3: Projected budget per phase and overall for the 2020-2023 Statewide Orthoimagery Cycle.

Assumptions

- CGIA Labor line item is calculated at $84 per hour starting July 1, 2019.
- Information Technology line item cost includes storage and backup fees for the eastern data center server.
- Software for serving imagery is likely to require some expense for customization, upgrades, training, and other maintenance. This is accounted for in the ESRI line item.
- The Virtual Online Inspection, Checking and Editing (VOICE) application used for the past two cycles will be continued.

A detailed schedule of each phase is presented in the Scope of Work. This schedule illustrates the concurrency across phases. The statewide orthoimagery business plan is based on a four-year refresh rate. To meet this requirement, phases of the Program must be managed with overlap. As a result, CGIA emphasizes sound project management practice to ensure major blocks of tasking within each phase are delivered on time and within budget. As an example, the most demanding period of the program occurs during the period between July and December. Technical staffing is focused on quality review; simultaneously the CGIA project team is leading QBS and startup of the next phase. CGIA has demonstrated proficiency through the lifecycle of the past two statewide cycles in managing the complexity of concurrent phases of the Program. Additionally, over the past few projects, investments in computer hardware and implementation of more efficient workflows have facilitated delivery of final imagery products to PSAPs six weeks ahead of previous project delivery timelines. The team hopes to continue this trend by seeking additional efficiencies in the project timeline. The remainder of this proposal includes a scope of work that repeats for four phases, each representing a quarter of the state.
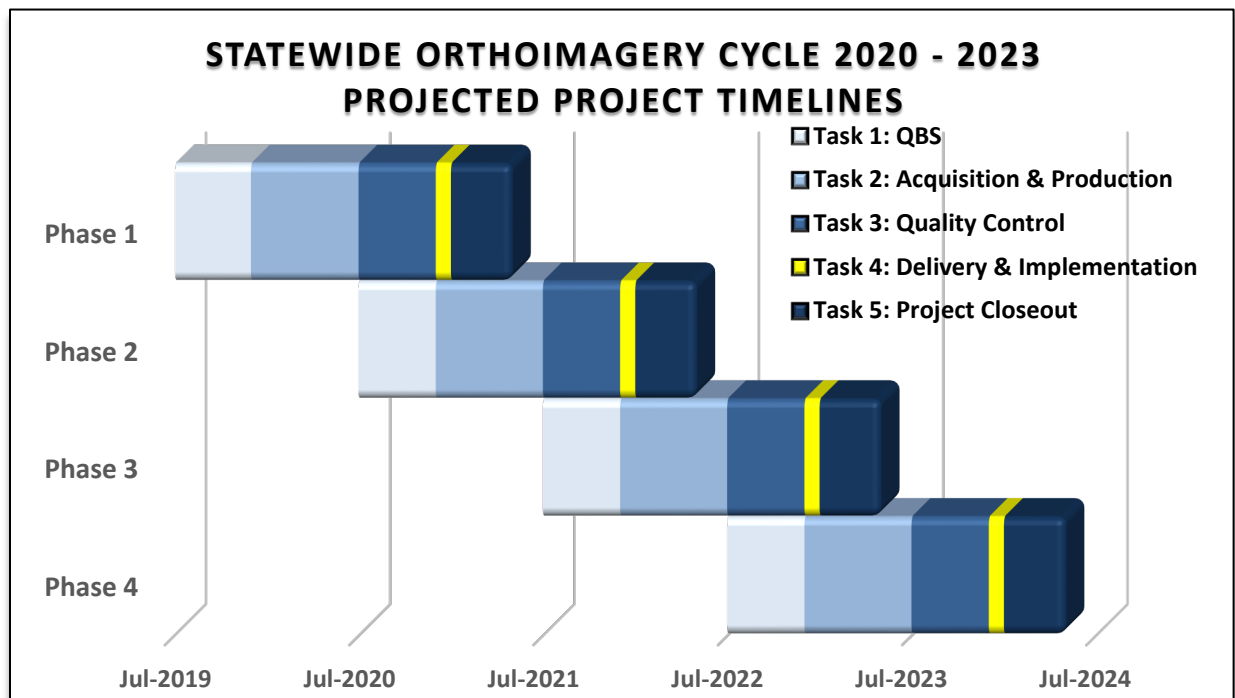
Figure 10: Statewide Cycle 2020 – 2023 Lifecycle showing overlap between projects.

Scope of Work

The scope of work consists of five distinct tasks performed by a combination of the state project team and private sector contractors.

Task 1: Qualifications-Based Selection and Procurement (July – December)

The purpose of this task is to develop contracts with public and private sector project partners and to begin other administrative tasks in preparation for orthoimagery acquisition. Specific activities under this task include:

1. Develop a statement of work, develop and execute a contract between CGIA and the NC 911 Board, and develop contracts between CGIA and the NCDOT Photogrammetry Unit and the NCDPS-NC Geodetic Survey, respectively.

2. Develop and release an RFQ and manage a QBS process for qualifying private sector contractors.

3. Select private sector contractors as a result of the QBS process and negotiate actual cost.

4. Initiate project planning, meet with project partners, and begin outreach activities with stakeholders.

5. Conduct kickoff and planning workshops with all applicable parties including project partners, contractors, and the Geographic Information Coordinating Council, Working Group for Orthoimagery and Elevation.

6. Develop core data required to support the project, develop project websites, initiate open lines of communication, and implement the project SharePoint site.

7. Finalize extents and requirements for 'true orthoimagery' development process in built-up urban areas in the project area to facilitate contract requirements for private sector contractors.

Deliverables:
- Contract between CGIA and the NC 911 Board
- Contracts between CGIA and NCDOT Photogrammetry and NCDPS-NC Geodetic Survey
- Contracts between CGIA and private sector contractors
- Project website and project SharePoint site

Task 2: Imagery Acquisition and Production (January – July)

The purpose of this task is to acquire leaf-off imagery and to perform and document all post-processing activities prior to product delivery. Prior to the flying season, the team must plan the technical details of the project, finalize technical requirements, and develop, engage, review, and approve quality compliance documentation. The flying season is driven by sun angle and vegetation per the *North Carolina Technical Specifications for Digital Orthophoto Base Mapping*, the state standard. The goals are to minimize shadows, snow, and vegetative cover that would obscure infrastructure. CGIA and the state project team, including NCDOT, NC Secretary of State, and NCDPS-NC Geodetic Survey, mandates adherence by subcontractors to the *North Carolina Technical Specifications for Digital Orthophoto Base Mapping* and invests a detailed focus on photogrammetric compliance. Specific activities under this task include:

1. Acquisition Planning. Validate digital sensors using NC's validation range and procedures. Produce and review and finalize detailed flight plans. Design and implement ground control and survey planning.

2. Review planning compliance documentation.

3. Finalize imagery specifications to facilitate consistent radiometric deliverables across varying land classifications and contractor study areas.

4. Conduct flights, acquire orthoimagery, and verify images captured meet state specifications.

5. Perform all post processing activities required to develop a tile-based orthorectified product.

6. Deliver acceptance documentation for acquisition and all post processing submittals.

7. Develop and procure agreement with the VOICE quality control application contractor.

8. Quality Control Application: Update the VOICE application based on the previous projects' user experience. The VOICE application receives the delivery of orthoimagery tiles and facilitates three levels of visual quality control (Levels 2-4 where Level 2 is a 30% quality review by NCDOT, Level 3 is a 5% review by CGIA, and Level 4 is an independent review by PSAP and local government end-users).

9. Confirm software readiness to support quality review process. Acquire hardware to facilitate receipt of processed data. Plan hosting services and software updates to accommodate online access to imagery.

10. Outreach: Perform outreach and conduct training programs for PSAPs and local government points of contact to perform quality review during the Production stage. CGIA will work with the NC 911 Board to identify the appropriate contacts.

Deliverables:
- Detailed requirements for imagery products
- Quality Review Training programs
- Reports verifying images captured meet state specifications

Assumptions
- To account for weather and leaf-off conditions, flight terms vary depending on geographic areas.

Task 3: Quality Control (August – December)

The purpose of this task is to perform the following four primary tasks:

- Complete a full circle quality review on the image deliverable product (including review, issues submittal, resolution, resolution submittal review, and signoff).
- Develop secondary image format of 3-band (RGB) images after satisfactory signoff and delivery of the TIFF product.
- Develop additional imagery products of false-color color infrared images from delivered TIFF product.
- Implement DIT hosting services and procurement and initiate data loading onto NC OneMap.
- Open communications for final delivery.

Specific activities under this task include:

1. Finalize and secure DIT hosting services and perform initial image data loading onto DIT servers.

2. Conduct Level 1 quality review by imagery processing contractors to assure the imagery meets state specifications and is free of systematic error or systematic visual quality issues and to verify the quality and completeness of the product.

3. Conduct Level 2-4 quality review through the VOICE application, identify valid issues, and submit and receive revised imagery from imagery processing contractors.

4. Develop a MrSID format 20:1 compression file for each 3-band (RGB) tile in the county and a 50:1 compression format that represents an entire county mosaic. CGIA will request feedback from PSAP and local government end-users to determine exceptions to the delivered compression format.

5. If the CIR option is selected, develop a MrSID format 20:1 compression file for each 4-band (CIR) tile in the county and a 50:1 compression format that represents an entire county mosaid of the CIR product.

6. Complete horizontal quality control and review process.

7. Work with Primary PSAP contacts to set and schedule early December delivery meetings.

8. Package imagery products on portable disk drives to include delivery of final imagery in GeoTIFF format, MrSID compressed format, metadata, and other applicable documentation. This also includes the logistics to maintain master copies of the GeoTIFF tiles, MrSID tiles and mosaics, finalize metadata files, assemble neighbor imagery, and collect other applicable data relevant to the primary county.

Deliverables:

- Quality control reports per county

Assumptions

- GeoTIFF product release by the processing contractor(s) will occur no later than seven months after completion of flights.

- The Public Safety Answering Points and the local government GIS representatives perform early quality review of the product as part of the Level 4 quality review through the VOICE application.

- 4-band CIR tasks are dependent on NC 911 Board approval of budget option for developing that product.

Task 4: Implementation (December – March)

The purpose of this task is to deliver the final orthoimagery product to each PSAP including prior phase data as well as imagery seven miles into Georgia, South Carolina, Tennessee, and Virginia, implement release of data on NC OneMap, and evaluate each county's quality review (60-day evaluation period).

1. Product Delivery: This task includes the distribution of data to each PSAP.

2. NC OneMap Implementation: CGIA will load the imagery into the NC OneMap database for public access as imagery services and as downloadable compressed imagery. The storage and maintenance will be continuous through the four cycles of quarter-state imagery acquisition.

3. 60-Day Evaluation: Each PSAP and county GIS office will evaluate the delivered product(s) during a period of 60 days to validate completeness or defectiveness or the existence of quality issues.   CGIA will work with PSAPs to deliver exceptions and/or resolve outstanding data with contractors.

Deliverables:
- Final orthoimagery in GeoTIFF and MrSID formats
- NC OneMap release

Assumptions
- States of Georgia, South Carolina, Tennessee, and Virginia will supply data either directly or through their respective county governments

Task 5: Project Closeout (March – May)

The purpose of this task is to perform project management and other activities relevant to project closeout and procurement. This includes evaluating final contractor invoices and issuing final payment after state acceptance of all deliverables. This task also involves resolving and accepting final delivery of outstanding documentation, including final and lessons learned reports by acquisition contractors, to finalize contractor performance evaluations, conclude contractor agreements, to develop and deliver the final project report, and to perform project management closeout.

Deliverables:
- Final Report

Summary of Deliverables

Technical
1. Orthoimagery, true color RGB with 0.5-foot resolution in 5,000 by 5,000-foot tiles (equivalent to a mapping scale of 1 inch – 200 feet) in GeoTIFF and MrSID (20:1 compression ratio) formats, as well as a derived single file per county MrSID mosaic (50:1 compression ratio) format.
2. If the CIR Option is selected, orthoimagery, false color CIR with 0.5-foot resolution in 5,000 by 5,000-foot tiles (equivalent to a mapping scale of 1 inch – 200 feet) in GeoTIFF and MrSID (20:1 compression ratio) formats, as well as a derived single file per county MrSID mosaic (50:1 compression ratio) format.
3. Imagery will be consistent with the *North Carolina Technical Specifications for Digital Orthophoto Base Mapping*, Land Records Management Section, North Carolina Department of the Secretary of State.
4. Metadata in txt, HTML, and XML for (one record per format per county)

5. Statewide and county tile index
6. Elevation data if modified
7. NC OneMap image services

Reports and Requirements

1. Weekly status meeting minutes and contractors' status reports
2. Monthly invoicing, status, accomplishments, and plans
3. Distribution schedules
4. Reports include Flight Planning, Survey Control, Imagery Acquisition Compliance, Exploitation Image Post Processing, Airborne GPS Post Processing, Aerotriangulation, Orthoimagery Delivery, Quality Review Resolutions and Final Report.

Schedule

Table 4 outlines the schedule for the first of four phases. It assumes that approval to proceed is granted by the NC 911 Board in May 2019. The subsequent phases will follow the same schedule as demonstrated in Figure 11.

Task	Begin	End
1: Qualifications-Based Selection and Procurement	July 2019	December 2019
2: Imagery Acquisition and Production	January 2020	July 2020
3: Quality Control	July 2020	December 2020
4: Delivery	December 2020	December 2020
5: Project Closeout	March 2021	May 2021

Table 4: Project Schedule for Phase 1
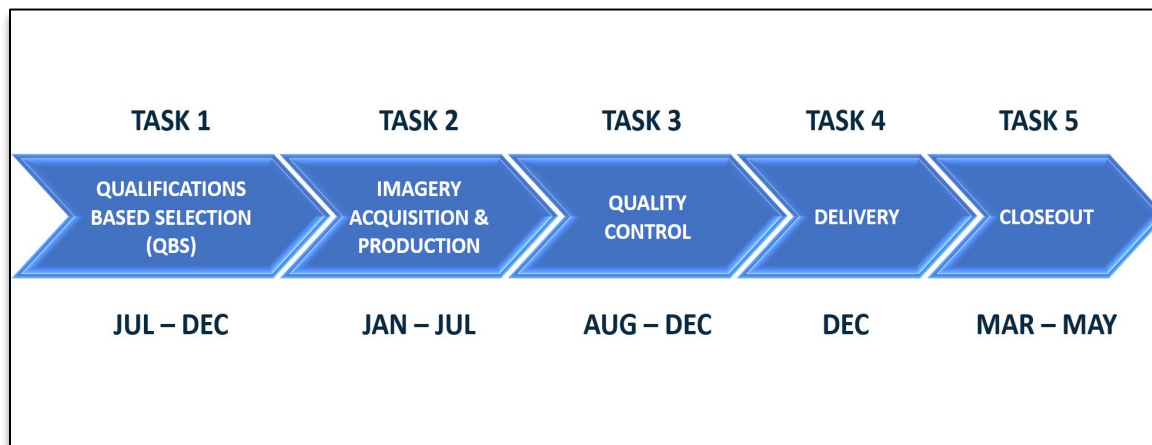
Figure 11: Standard Orthoimagery Project Lifecycle

Roy Cooper, Governor
Erik A Hooks, Secretary

Michael A. Sprayberry, Director

MEMORANDUM

DATE: March 18, 2019

TO: Tim Johnson
               Director, Center for Geographic Information and Analysis
               NC Department of Information Technology

THRU: Michael A. Sprayberry, Director   *MAS 3/19/18*
               North Carolina Division of Emergency Management

FROM: Gary Thompson
               Chief, North Carolina Geodetic Survey (NCGS)
               North Carolina Emergency Management

SUBJECT: North Carolina Geodetic Survey's role in the 2020-2023 imagery project

NCGS supports the project proposal and we look forward to being part of the project team in completing this critical project for the 911 call centers and the State of North Carolina.

NCGS will perform the following tasks in the 2020-2023 statewide aerial imagery project:

A. Serve on the project's management team and attend management team meetings

B. Assist contractors

C. Review proposals and make recommendations as part the Qualifications-Based Selection (QBS) selection team

D. Operate and maintain the North Carolina Continuously Operating Reference Station (CORS) Network and the North Carolina Real-Time Network (RTN)

E. Manage and perform field horizontal quality control (QC) surveys by independent state and/or private contractors

F. Maintain the camera validation range located near Mount Airy, NC

MAILING ADDRESS
4218 Mail Service Center
Raleigh NC 27699-4218
www.ncfloodmaps.com

OFFICE LOCATION
4105 Reedy Creek Rd.
Raleigh, NC 27607
Telephone: (919) 715-5711
Fax: (919) 715-0408

An Equal Opportunity employer

For a more detailed description on tasks D-F, please read the following:

D. Operate and maintain the North Carolina CORS Network and the North Carolina RTN

   o Upgrade the Global Navigation Satellite System (GNSS) receiver, which can receive signals from the U.S. GPS satellites and the Russian GLONASS satellites, at each CORS site when the equipment has reached the end of its useful technology lifecycle [i.e. not repairable or there is an upgrade that could receive signals from the Chinese BeiDou (Compass) satellites or the European Union's Galileo satellites]

   o Maintain the latest version of software/maintenance in each CORS and RTN network server and the latest firmware in each GNSS receiver

   o Add CORS sites to the network when needed to support the project, regardless of whether or not these sites meet the National Geodetic Survey (NGS) minimum spacing requirement, in order to fill any coverage voids

   o Operate and maintain the two FTP servers (main and backup) to store the CORS data files that are collected hourly for post-processing applications

   o Provide CORS data to the NGS for use in the Online Positioning User Service (OPUS) application as well as their User Friendly CORS (UFCORS) download site

E. Manage and perform field horizontal quality control (QC) surveys by independent state and/or private contractors

   o Utilize a QBS process to qualify firms to perform the horizontal QC surveys

   o Determine the location of new QC points

      ▪ Provide information packages to the contractors

      ▪ Review and manage the field data collection phase performed by the contractors

      ▪ Review and manage the field data collection phase performed by NCGS staff

      ▪ Analyze the aerial imagery utilizing the horizontal QC data

      ▪ Produce the following reports that would be signed and sealed by a Professional Land Surveyor (PLS):

         – Final consolidated report for each project phase

         – Will contain a QC report for each county in project phase

F. Maintain the camera validation range located near Mount Airy, NC

   o Inspect each aerial target and perform maintenance on any target that has been damaged or is no longer visible

   o Replace any QC point that has been destroyed or is no longer visible

March 22, 2019

Mr. Tim Johnson, GISP
Director
NC Center for Geographic Information & Analysis
20322 Mail Service Center
Raleigh, NC 27699-0322

Subject: NCDOT Photogrammetry Unit Support for Proposed 2020-2023 E911
             Orthoimagery Program

Dear Mr. Johnson:

NCDOT Photogrammetry is excited for the opportunity to continue its role providing advisory and technical services to CGIA on the 2020-2023 E911 Orthoimagery Program. The following is a brief overview of the services NCDOT Photogrammetry proposes to provide along with an estimated fee schedule.

Since NCDOT Photogrammetry owns and operates much of the same equipment and software that the production vendors use to deliver orthoimagery, it is uniquely qualified as the state's subject matter expert in photogrammetric processes including flight and control planning, aerial photography acquisition, image post processing, GPS-IMU post processing, aerotriangulation, digital terrain models, and orthoimagery generation. Photogrammetry Unit staff will provide technical support to CGIA for project planning, qualifications development, RFQ development, qualification based vendor selection, scope of work development, and assessment and formal evaluation of vendor performance for the above cited photogrammetric processes. Photogrammetry Unit staff will also support CGIA in developing the project review tile schema, landcover image samples, and image post processing guidelines. NCDOT Photogrammetry will also review at least 30% of the orthoimagery image tiles and provide MrSID conversion for all orthoimagery tiles.

Reviewing the evolution of the E911 Orthoimagery Program between 2012-2019 the NCDOT Photogrammetry Unit has expanded and refined its ability to assess and document vendor performance in photogrammetric processes. This improved capability is reflected in the December 11, 2014 NC Technical Specifications for Digital Orthophoto Base Mapping standard which most likely will be used as the core specification for the 2020-2023 E911 Orthoimagery Program. As such, the proposed costs to E911 and CGIA for the 2020-2023 projects have been refined to account for these revised specifications. Since much of the review process and reporting has been automated and standardized, NCDOT Photogrammetry is now able to lower the

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NC DEPARTMENT OF TRANSPORTATION
PHOTOGRAMMETRY UNIT
1585 MAIL SERVICE CENTER
RALEIGH, NC 27699-1585

Telephone: (919) 707-7090
Fax: (919) 250-4176

Customer Service: 1-877-368-4968
Website: www.ncdot.gov

Location:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

advisory services hours of higher paid staff and keep similar hours for the technical services staff.

NCDOT labor rates are based on all the individuals in the NCDOT (not just in the Photogrammetry Unit), so these rates significantly fluctuate and change quarterly. There has also been salary increases across all positions in the NCDOT that were effective late 2018. With these factors in mind, NCDOT Photogrammetry proposes the following estimated cost to perform advisory and technical services for the 2020-2023 E911 Orthoimagery Program.

Year	Estimated Cost for NCDOT Photogrammetry Unit Advisory & Technical Services
2020	$155,000.00
2021	$170,000.00
2022	$155,000.00
2023	$155,000.00
TOTAL	$635,000.00

Sincerely,

Keith Johnston, PE, PLS
State Photogrammetric Engineer

KJ:ns

cc: Mr. Bill Kincannon, PE – Acting NCDOT Technical Services Division Administrator
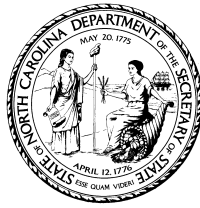
18 March 2019

Tim Johnson, GISP
Director, Center for Geographic Information and Analysis
20322 Mail Service Center
Raleigh NC 27699-0322

Mr. Johnson:

As the holder of Orthophotographic Standards in the state, the North Carolina
Department of the Secretary of State is interested in continuing its relationship
with the Center for Geographic Information and Analysis (CGIA) as a member of
the team overseeing the statewide orthophotography acquisition program renewing
in 2020.

Assisting the various counties across the State of North Carolina with their base
maps is one of the major duties of the NC Department of the Secretary of State's
Land Records Management Program. We see working with the CGIA to oversee
the orthophotography program as one of our key responsibilities to accomplish that
duty.

Sincerely,

Richard A. Elkins, GISP
State Land Records Manager
North Carolina Secretary of State

PO Box 29626
Raleigh, NC 27626-0626
Voice: 919-814-5457
relkins@sosnc.gov
www.sosnc.gov

Tab 7 *(10 Minutes)*
Education Committee Report
Mike Reitz/Angie Turbeville

7 a)
TC Training and Standards Stakeholder Summit Follow Up

7 b)
General Report

Tab 8 *(15 Minutes)*
Funding Committee Report
David Bone/Marsha Tapler

8 a)
Funding Position Policy (Base Seat Count)
(Vote Required)

Funding Position Policy

G.S. 143B-1406 requires distributions to primary PSAPs on a monthly basis to fund eligible operations and expenses of such operations. PSAP staffing, and work duty assignments, are made by local governments. It is the policy of the 911 Board to provide funding to primary PSAPs for achieving call taking metrics established by applicable rules and standards. Primary PSAPs may, from time to time, need to increase the number of personnel assigned, the number of call taking positions, or other changes impacting positions within the primary PSAP. Non call taking duties shall not be considered when determining staffing or positions. It is the further policy of the 911 Board to enable necessary changes by allocating funds as permitted by law for such necessary position changes.

A "position" refers to the workstation and other associated workspace attributes.

A primary PSAP may request funding associated with changes in the number of positions.

Prioritization of factors identified shall be determined by the Funding Committee and identified

Factors for consideration of such requests include:

a) demonstration of staffing needs and the PSAP's analysis of the staffing needs as shown by industry recognized methods (e.g. as published by APCO, NENA, etc.), see e.g. 9 NCAC 06C.0208.

b) comparison of similar PSAPs' staffing, operations, levels of service, see e.g. 9 NCAC 06C.0211(a)(5).

c) only call taking duties shall be considered when determining positions, see e.g. 9 NCAC 06C.0208(c), 06C.0208(e).

d) PSAPs must demonstrate that staffing changes are necessary to meet the call taking rule; e.g. 09 NCAC 06C.0209(a) requires answering 90% of calls within ten seconds or less.

e) other factors consistent with G.S. 143B-1406, 911 Board rules, and applicable laws.

8 b)
FY 2020 NC 911 Board Budget
(Vote Required)

911 Board FY2020 Budget Roll-up	Approved Budget SFY2019	Proposed Budget SFY2020
Int/Div on Investments	$720,000	$1,571,379
Admin Fund 1% Estimated Revenue	$810,700	$824,649
Admin Fund 1% Use of Fund balance	$1,071,619	$716,511
Total	$1,882,319	$1,541,160
Operational Cost - Admin Fund 1%		
Personnel Services	$1,085,835	$912,982
Contractual Services	$531,000	$340,500
Operational Services	$30,749	$46,193
Travel - Staff	$104,100	$105,000
Travel-Subsistence - Board Member	$33,850	$35,000
Other Purchased Services	$81,285	$88,985
Equipment	$15,500	$12,500
Total	$1,882,319	$1,541,160
Revenue/Expenditures balance	$0	$0
CMRS Estimated Budget Revenue	$6,837,109	$7,028,210
PSAP Estimated Budget Revenue	$73,521,690	$75,630,806
Total	$80,358,799	$82,659,016
Statutory Expense		
CMRS Statutory Distribution/911	$4,000,000	$4,000,000
PSAP Statutory Distribution/911	$55,000,000	$56,000,000
Total	$59,000,000	$60,000,000
Revenue/Expenditures balance	$21,358,799	$22,659,016
Grant - PSAP Transfer Fund Balance	$14,954,366	$22,659,016
Grant Fund Balance	$9,903,830	$8,421,999
Total	$24,858,196	$31,081,015
Proposed Awards Expenditure		$6,000,000
Grant Encumbered Award Expenditure	$24,858,196	$25,081,015
Revenue/Expenditures balance	$0	$0
NG 911 Fund		
NG 911 10% Estimated Revenue	$9,018,000	$9,270,100
NG 911 10% Use of Fund balance	$13,962,778	$11,434,505
Subtotal	$22,980,778	$20,704,605
NG 911 Fund Expenditures		
ESInet	$21,432,641	$18,962,198
GIS	$440,000	$400,272
NMAC	$1,108,137	$1,342,135
Revenue/Expenditures balance	$0	$0

	Approved Budget SFY2018	Proposed Budget SFY2019
TRS FUND (Pass thru)		
TRS Revenue	$12,800,000	$10,000,000
TRS Revenue Interest	$8,000	$18,000
	$12,808,000	$10,018,000
TRS Expenditure	$12,800,000	$10,000,000

NC 911 BOARD BUDGET FY2020

Chart showing NC 911 Board Budget FY2020 with categories Operations, CMRS, PSAP, Grant, ESInet, GIS, NMAC. Y-axis ranges from 0 to 80,000,000.

Legend: ■ Expenditures ■ Revenue ■ Fund Balance Appropriation

ADMINISTRATIVE EXPENDITURES	Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
SPA-Reg Salaries	778,352	723,127	657,999	*9 Full-time Employees*
EPA&SPA Longevity Pay	10,000	11,379	5,657	
Social Sec Contrip-Recpt	65,700	58,693	50,770	
Reg Retire Contrib Recpt	147,117	128,603	113,684	
Med Ins Contrib-Recpt	65,826	66,949	59,842	
UNEMP Comp Payments to DE	1,000	0	1,000	
Flexible Spending	2,000	1,411	3,000	
NONTAX Emp Cell Ph Reimb	840	1,932	1,487	
Lapsed Salaries	15,000	5,333	19,543	
Personnel Services Total	**$ 1,085,835**	**$ 997,427**	**$ 912,982**	
Legal Services	40,000	38,979	36,500	*DOJ*
Finan/Audit Services	45,000	65,000	65,000	
Other Information Technology Services	5,000		5,000	Contract personnel costs for analyzing, designing, and/or implementing support for a system or systems modification. *Programming data entry.*
Software Subscriptions	140,000	128,000	0	
IT Project Management/Analysis Services	50,000	9,000	30,000	*DIT/Proj Mgr - Board projects*
Admin Services - Temp Agency	75,000		75,000	*911 Special Projects - Board Minutes*
ADM Background Check	500	200	500	
Security Services Agreement	500		500	
Miscellaneous Contractual Service	75,000	32,000	75,000	
Miscellaneous - Training	15,000		15,000	*PSAP Training*
Workshop/Conf-Exp (Contractual)	75,000	64,000	30,000	*PSAP Managers Meetings/ Board workshop*
Workshop/Conf-Room Rental	10,000	7,497	8,000	*PSAP Managers Meetings/ Board workshop*
Contractual Services Total	**$ 531,000**	**$ 344,676**	**$ 340,500**	
Rent/Lease Motor Vehicle	29,549	28,993	44,993	*5 FTE (.27 per mile over 1050 + fuel & 35.00 per each insurance-maint. & $230 base fee)*
Rent/Lease-Voice Comm Equip	1,200	250	1,200	
Operational Services Total	**$ 30,749**	**$ 29,243**	**$ 46,193**	
				Travel expenses - 9 FTE
Trans Air-Out State	10,000	3,300	10,000	*NENA, NASNA, APCO, 911 Goes to Washington & regular travel*
Transp-Grnd In-State	11,000	6,800	11,000	
Trans Grnd-Out In State	800	800	1,200	
Transp Other In State	1,200	700	1,200	
Transp-Other Outstate	600	200	600	
Lodging In-State	40,000	24,600	40,000	
Lodging Out-State	15,000	10,737	15,000	
Meals- In State	22,500	5,508	22,500	
Meals-Out state	3,000	2,800	3,500	

ADMINISTRATIVE EXPENDITURES	Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
Travel - Staff Total	$ 104,100	$ 55,445	$ 105,000	
BD/Non-Emply Transp	7,500	3,500	7,500	*Reviewer/Board Travel*
BD/Non-Emply Subsis	20,000	16,200	20,000	*Reviewer/Board Travel*
BD/Workshops-Conference Expense	6,350	6,100	7,500	*Board Meeting, Standards, NG911, Funding, Education, PSAP Mgrs Mtg*
Board Member Total	$ 33,850	$ 25,800	$ 35,000	
Telephone Service	7,560	3,500	7,560	
Telecommun Data Charge	2,800		2,800	
Teleconference charges	2,000	1,200	2,000	
Cellular Phone Services	3,000	3,500	4,500	
Email and Calendaring	500	400	550	
Electronic Services	5,600	2,400	5,600	
Managed Desktop Services	20,000	19,103	24,000	
Pos, FR&DEL Postal Meter	75		75	
Pos, FR&DEL Postal Meter	300	80	300	
Pos, FR&DEL Postal Meter	300	250	300	
Print, Bind, Duplicate	2,000		2,000	*Public Education Materials*
Advertising	15,000		15,000	*Public Education*
Property Insurance	100	25	100	
Registration Fees	9,100	7,300	9,100	
Training	4,000		4,000	
Membership Fees	4,000		4,000	*NENA/APCO, Next Gen 911, NSANA*
Supplies	4,000	4,000	6,000	
Gasoline	350	400	500	
Diesel Fuel	600	400	600	
Other Purchased Services Total	$ 81,285	$ 42,558	$ 88,985	
Furn-Office	2,000	2,000	4,000	*veridesk*
Computer and Printer Purchases	3,500	500	3,500	
Oth Equip Audio/Visual	10,000	250	5,000	*Microsoft*
Equipment Total	$ 15,500	$ 2,750	$ 12,500	
TOTAL OPERATING BUDGET	$ 1,882,319	$ 1,497,899	$ 1,541,160	

CMRS Cost Recovery & PSAP Expenditur	Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
CMRS Statutory Distri/911	4,000,000	2,009,640	4,000,000	Cost Recovery
PSAP Statutory Distri/911	55,000,000	54,663,601	56,000,000	PSAP Distribution/Reconsiderations/Secondary PSAPs
	$ 59,000,000	$ 56,673,241	$60,000,000	

Grants	Approved Budget SFY2019	Proposed Budget SFY2020	COMMENTS
PSAP Transferred Funds End of Fiscal Year	14,954,366	22,659,016	**Estimated Remaining PSAP fund balance transferred during 1st quarter FY2020**
Encumbered for Open Awards:	24,858,196	25,081,015	*This amount is subject to change due to payments made after budget approval.*
	$ 39,812,562	$ 47,740,031	

Current Status of Grants Contracts:	Possible Carry Forward FY2020	COMMENTS
Statewide Grants (ongoing)		
ECaTs Call Tracking System (04/30/2015)	972,253	
Interpretive Services	230,000	
IMAGE 18	535,191	
IMAGE 19	2,940,377	
CRM	200,000	
Total $	4,877,821	
Public Safety Answering Point Grants:		
Graham 911 Relocation & Tech Refresh	1,220,976	
Richmond Co Communications Consolidatio	1,277,795	
Forsyth G2017-3	544,543	
Lincoln G2017-6	1,221,403	
Martin G2017-7	3,646,413	
Mitchell G2017-9	1,839,106	
Pasquotank G2017-11	314,774	
Franklin G2018B-4	216,664	
Iredell G2018B-3	1,907,110	
Robeson 2018B-4	50,666	
Pender G2019-02	361,760	
Greene G2019-03	841,964	
Wayne G201-04	1,530,693	
Rutherford G2019-05	1,161,548	
Halifax G2019-06	4,067,780	
Total $	20,203,194	

Revenue	Actuals SFY2014	Actuals SFY2015	Actuals SFY2016	Actuals SFY2017	Actuals FY2018	Estimated Ending Balances FY2019	Proposed Budget SFY2020 Surcharge
CMRS Revenue	8,911,847	9,036,276	8,541,707	6,593,721	6,388,573	7,028,210	7,028,210
PSAP Fund:							
Wireless (Derived from CMRS Receipts)	35,647,391	36,078,711	34,166,831	33,042,740	36,201,913	39,726,528	39,606,528
Wireline Receipts	16,369,002	15,003,835	12,693,888	11,191,741	9,922,239	10,972,000	11,000,000
VOIP Receipts	9,338,461	9,401,001	11,431,637	11,427,524	11,878,346	12,028,800	12,502,872
Prepaid Wireless Receipts	4,826,568	8,445,064	10,516,404	8,882,699	11,834,541	12,903,478	12,903,478
Total CMRS/PSAP Fund	75,093,269	77,964,887	77,350,467	71,138,426	76,225,611	82,659,016	83,041,088
Next Generation 911 Fund 10%							
NG 911 Revenue	0	0	4,924,125	8,135,565	8,521,393	9,270,100	9,312,100
Admin Fund:							
Administrative 1%	750,933	787,118	800,660	718,570	769,904	824,649	824,649
TOTAL Surcharge Collection	**$75,844,202**	**$78,752,005**	**$83,075,251**	**$79,992,561**	**$85,516,908**	**$92,753,765**	**$93,177,837**

INTEREST	Approved SFY2019	Estimated Ending Balances FY2019	Proposed Budget SFY2020 Interest
INTEREST EARNED:			
Interest/div Invest/Plan CMRS	70,000	104,989	125,000
Interest/div Invest/Plan PSAP	120,000	187,000	200,000
Interest/div Invest/Plan Admin.	30,000	25,291	30,000
Interest/div Invest/Plan Grant	250,000	598,232	616,179
Interest/div Invest/Plan NG 911	250,000	174,972	600,200
Total	**720,000**	**1,090,484**	**1,571,379**

**Interest amount is provided by Office State Treasury

ESINET--Expenditures		Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
Intnl/Systems Imple/Inte		97,625	22,872	92,625	Encumbered $47,667
Server Support		2,800,000		2,800,000	Encumbered $1,647,618
IT Proj Mgmt Analysis Svc		255,840	140,712	255,840	
Misc Contractual Service		14,159,474	31,000	50,000	Encumbered $18,661
WAN Support Services		1,250,901	221,500	10,767,292	ATT MRC installed PSAPs
	Subtotal	$18,563,840	$416,084	$13,965,757	

NG911-ATT ESINet-NR (non-recurring initial special construction)

Other Info Technology Svc		1,693,405		1,693,405	Includes NRC for Special Construction & NRC installation of Hosted/ESINET
WAN Support Services				2,107,640	NRC initial install cost ATT Contract
	Subtotal	$1,693,405	$0	$3,801,045	

NG911-ATT ESINet-NRP (non-recurring post install special construction)

IT Proj Mgmt & Analysis		150,000		30,000	FE Services
Communication Cable Contracts-Construction Equip.		75,000		100,000	PSAP circuit diverse access and outside conduit/wiring placement
	Subtotal	$225,000	$0	$130,000	

NG911-ATT ESINet-CR (customized reporting development fees)

Other Info Technology Svc				50,000	CRM and Reprorting/Monitoring agregation software
Managed Server Support Svc				25,000	NMAC servers for data capure and video output
	Subtotal	$0	$0	$75,000	

NG911-DIT ESINet-NR (non-recurring initial special construction/wiring)

Engineering Services				10,000	Design work for wiring infrastructure
Communication Cable Contracts-Constructed Bldg				30,000	PSAP in building wiring and conduit
	Subtotal	$0	$0	$40,000	

NG911-ESINet-Custom (customized PSAP equipment/services)

Voice Communications Equipment		937,096		937,096	ESINET NRC-Supporting applications e.g.
	Subtotal	$937,096	$0	$937,096	

NG911-DIT ESINet-Travel (staff travel in support of ESINet implementaion)

Trans Air-Out State		1,600		1,600	
Transp-Grnd In-State		2,500		2,500	
Trans Grnd-Out of State		300		300	
Transp Other In State		300		300	
Transp-Other Outstate		300		300	
Lodging In-State		2,500		2,500	
Lodging Out-State		3,000		3,000	
Meals- In State		2,000		2,000	

Meals-Out state	800		800
Subtotal	$13,300	$0	$13,300
Total ESINET Budget	$21,432,641		$18,962,198

Total 2920 FUND budget

NMAC ADMINISTRATIVE EXPENDITURES			Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
NG911-GIS-CRMR (Geo-spatial info services call routing monthly recurring)						
Subtotal			$0		$0	
NG911-GIS-CRNR (call routing non-recurring initial database construction & implementation)						
IT Proj Mgmt & Analysis	292063001	532149	425,000	41,114	107,000	GIS partial year cost one time cost
Subtotal			$425,000	$41,114	$107,000	
NG911-GIS-CR-Pro (professional services for ongoing PSAP/localalities GIS support)						
Other Information Technology Services	290063002	532140	0		232,722	Vendor provided monthly cost each PSAP converted
Subtotal			$0		$232,722	
NG911-GIS-Services (subscription based job tools)						
Misc Contractual services	290063003	532199	15,000		25,000	GIS contract services for service turnup.
Computer Data Processing Svc	290063003	532821			25,000	GeoComm data repository hosting
Subtotal			$15,000	$0	$50,000	
NG911-GIS-Travel-Training (training, travel to PSAPs, etc)						
Transp-Grnd In-State	290063004	532714		250	3,000	Mileage and car rental fees, gas, tolls.
Lodging In-State	290063004	532721		500	4,500	Two staff for 20 nights out
Meals- In State	290063004	532724		400	2,300	two staff with three meals for 30 days of travel
Educational supplies	290063004	533720			750	On-line training as required
Personnel Services Total			$0	$1,150	$10,550	
Total GIS Budget			$440,000		$400,272	

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NMAC	Approved Budget SFY2019	JUNE 30, 2019 Expenses	Proposed Budget SFY2020	COMMENTS
SPA-Reg Salaries	80,000	20,000	195,000	*2 FTE's*
EPA&SPA Longevity Pay			2,588	
Social Sec Contrip-Recpt	6,120	1,530	15,116	
Reg Retire Contrib Recpt	13,704	3,426	33,847	
Med Ins Contrib-Recpt	11,968	2,992	11,969	
UNEMP Comp Payments to DE			1,000	
Flexible Spending			2,000	
NONTAX Emp Cell Ph Reimb			1,300	
Lapsed Salaries			5,170	
Personnel Services Total	**$111,792**	**$27,948**	**$267,990**	
IT Subscription Support	0		20,000	*Overhead cost allocation- NMAC Area*
Other Information Technology Services	50,000		60,000	Costs for Internet access and firewalls and information streaming services
IT Project Management/Analysis Services	20,000		20,000	Professional services for Federal Eng and PM support
Security Services Agreement	375,000		433,840	Estimated cost for PSAP security assessments
Miscellaneous Contractual Service	364,325		364,325	GIS contract services for service turnup--Contractual Network Personnel
Contractual Services Total	**$809,325**	**$0**	**$898,165**	
Trans Air-Out State	1,200		1,200	
Transp-Grnd In-State	2,400		4,800	
Trans Grnd-Out In State	0		300	
Transp Other In State	500		500	*Rental car expense*
Transp-Other Outstate	0		300	
Lodging In-State	1,000		1,000	
Lodging Out-State	600		1,800	*Conferences NASNA, NENA, NGTW, GIS*
Meals- In State	1,200		1,200	
Meals-Out state	300		500	
Travel - Staff Total	**$7,200**	**$0**	**$11,600**	
Telephone Service	450	450	2,160	
Telecommun Data Charge	24,000		24,000	AT&T data services 8 months @$3k per month
Teleconference charges	6,000		6,000	Teleconference bridges-$500 per month
Cellular Phone Services	4,500		3,600	Staff cellular plans for on call 4 @ $75 per month
Email and Calendaring	8,000		8,000	
Electronic Services			500	*Electronic Document Management per seat cost*
Managed Desktop Services	3,870		3,870	*per seat cost*
Supplies	1,000		1,000	
Gasoline			250	*For rental car use*
Other Purchased Services Total	**$47,820**	**$450**	**$49,380**	

Furn-Office	40,000		40,000	*PSAP consoles and office furniture*
Computer and Printer Purchases	10,000	10,000	25,000	*Server apps for monitoring services. Plotting printer*
Oth Equip Audio/Visual	40,000		40,000	*Video wall application development*
Carpentry - Upfit	40,000	39,952	0	
Server software		3,000	3,000	
Security software			5,000	
Other computer software	2,000	250	2,000	
Equipment Total	**$132,000**	**$53,202**	**$115,000**	
TOTAL OPERATING BUDGET	**$1,108,137**		**$1,342,135**	

TRS FUND			Approved Budget SFY2019	ESTIMATED JUNE 30, 2019 Expenses	Approved Budget SFY2020	COMMENTS
TRS Expenditure	538125	29102600	$ 12,800,000	$ 8,750,345	$ 10,000,000	Pass through to DHHS
TRS Revenue Interest	433110	29102600	$ 18,000	$ 16,426	$ 18,000	RATE change
TRS Revenue	435500	29102600	$ 12,800,000	$ 8,750,345	$ 10,000,000	

Interest Determined by Office State Treasury

8 c)
ESInet Migration Related Funding Distribution Realignment (Vote Required)

8 d)
General Report

Tab 9 *(10 Minutes)*
Finance Team Report
Marsha Tapler

Tab 10 *(10 Minutes)*
Grant Committee Report
Heather Campbell/Pokey Harris

10 a)
2020 Grant Program
Application Due May 31, 2019

10 b)
General Report

Tab 11 *(10 Minutes)*
Standards Committee Report
Donna Wright/Tina Gardner

11 a)
Current PSAP Managers Course

Tab 12 (15 Minutes)
Technology Committee Report
Jeff Shipp/Gerry Means

12 a)
ESInet/HCH Migration/Deployment

12 b)
NMAC Status

12 c)
Geospatial Call Routing

12 d)
General Report

12 3)
Committee Member Recognitions
Pokey Harris

Tab 13 (10 Minutes)
911 Regional Coordinator Reports
Tina Gardner/Angie Turbeville

Tab 14 (2 Minutes)
Other

Adjourn

MAY 2019 COMMITTEE MEETINGS
Phillips Building Training Room, 109 East North Street, Raleigh
(Unless otherwise noted.)
❖ May 06 – Education Committee
❖ May 07 – Technology Committee
❖ May 08 – Standards Committee
❖ May 09 – Funding Committee

MAY 2019 BOARD MEETING
Friday, May 17, 2019 – Jacksonville, NC

LOGISTICS FOR FUTURE BOARD MEETINGS ARE UNDERWAY - WATCH INBOX AND/OR WEBSITE FOR DETAILS

NC
DIT
911 Board