



NORTH CAROLINA 911 BOARD MEETING

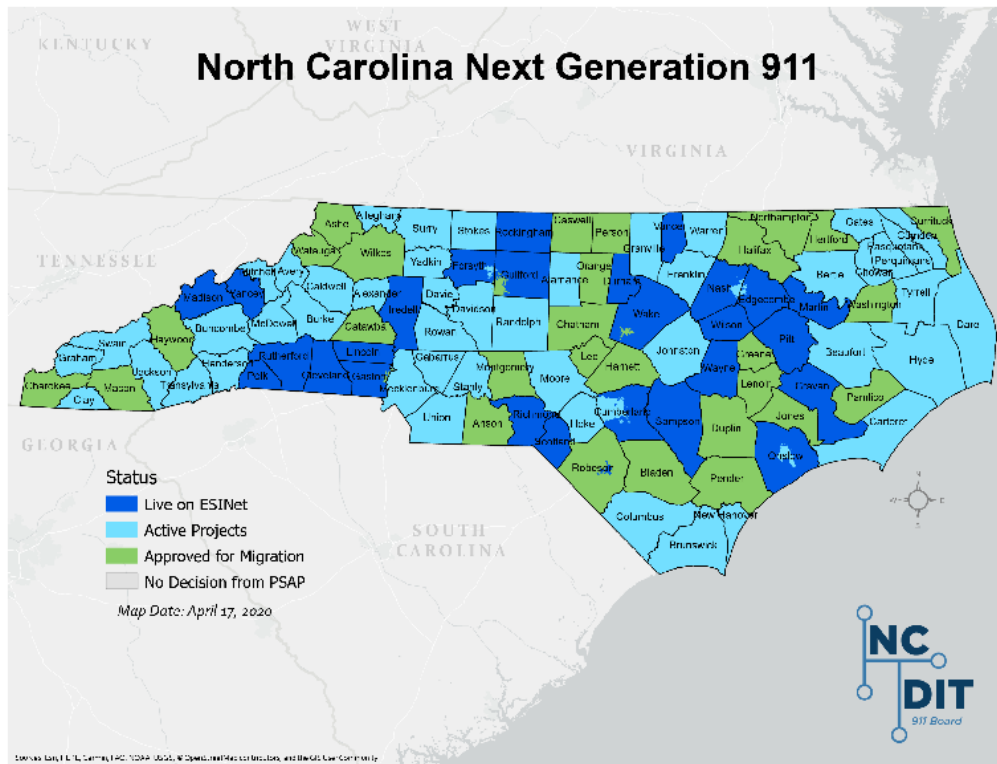
Friday, March 27, 2020

Via Microsoft Teams Meeting

[Join Microsoft Teams Meeting](#)

[984-204-1487](tel:984-204-1487) Conference ID: 785 259 301#

10:00 AM – Noon



#NexGen911isNowGen911inNC

Call to Order
Eric Boyette

Roll Call
Pokey Harris

Tab 1
Chair's Opening Remarks
Eric Boyette

Tab 2

Ethics Awareness/Conflict of Interest Statement

Eric Boyette

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

Public Comment

Eric Boyette

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

Consent Agenda

Pokey Harris

(Consent Vote Required)

Tab 4 a)

Minutes of Meeting –

March 27, 2020

North Carolina 911 Board Meeting
MINUTES
Via Microsoft Teams Meeting
Friday, March 27, 2020
10:00 AM – 12:00 PM

<u>Members Present</u>	<u>Staff Present</u>	<u>Guests</u>
Secretary Eric Boyette, (NC CIO) Board Chair	Richard Bradford, (DOJ) NC 911 Board Legal Counsel	Rob Main, DIT
David Bone, (NCACC) Martin County Manager	Ronnie Cashwell, NC DIT/NC 911 Board Staff	
Greg Coltrain, (LEC) Wilkes Communication Sprint	Stephanie Conner, DIT/NC 911 Board Staff	
Bo Ferguson, (NCLM) City of Durham	Kristen Falco, DIT/NC 911 Board Staff	
Greg Foster, (NC Association of Rescue EMS) Alexander County Director of Communications	Tina Gardner, DIT/NC 911 Board Staff	
Stacey Gonyer, (CMRS) Sprint	Pokey Harris, NC DIT/NC 911 Board Staff	
Chuck Greene, (LEC) AT&T	Jesus Lopez, NC DIT/NC 911 Board PM	
J.D. Hartman, (NC Sheriff's Association) Davie County	Gerry Means, NC DIT/NC 911 Board Staff	
Buddy Martinette, (NCSFA) Fire Chief, Wilmington	Stanley Meeks, NC DIT/NC 911 Board Staff	
John Moore, (VoIP) Spectrum Communications	David Newberry, NC DIT/NC 911 Board Staff	
Jude O'Sullivan, (CMRS) Carolina West	Marsha Tapler, NC DIT/NC 911 Board Staff	
Jeff Shipp, (LEC) Star Telephone	Angie Turbeville, NC DIT/NC 911 Board Staff	
Earl Struble, (CMRS) Verizon Sprint		
Donna Wright, (NENA) Richmond Co Emergency Services	<u>Staff Absent</u>	
	Rick Blumer, NC DIT/NC 911 Board Staff	
	Tamiaka Bryant, NC DIT/NC 911 Board Staff	
<u>Members Absent</u>	Chris Carlin, NC DIT/NC 911 Board Staff	
Jeff Ledford, (NCACP) City of Shelby PD	James Covington, NC DIT/NC 911 Board Staff	
	Don Rice, NC DIT/NC 911 Board Contract Staff	

Call to order — Chairman Boyette called the meeting to order at 10:01 AM and thanked telecommunicators and first responders for their dedication and hard work during this unprecedented time. He then asked Ms. Harris to call the roll of attendees.

1. Chair's Opening Remarks — Skipped due to time restraints.

2. Ethics Awareness/Conflict of Interest Statement — Chairman Boyette read the Ethics Awareness/Conflict of Interest statement printed in the agenda. No conflicts were identified.

3. Public Comment — Chairman Boyette extended the invitation for public comment. No one had preregistered to speak, and no one virtually present had comments.

4. Consent Agenda — Chairman Boyette asked Ms. Harris to proceed with the consent agenda.

a) Minutes of Previous Meeting – February 28, 2020

b) NG 911 Financial Reporting

February 2020 Month-End Balance \$67,774,099

February 2020 Disbursement \$703,194

c) CMRS Financial Reporting

February 2020 Month-End Balance \$7,745,838

February 2020 Disbursement \$0

d) PSAP Financial Reporting

February 2020 Month-End Balance \$10,639,815

February 2020 Disbursement \$4,209,707

e) Grant Statewide/PSAP Financial Reporting

February 2020 Month-End Balance \$7,469,838

February 2020 Grant Funds Encumbered \$21,834,191

f) Grant Project Updates per Reports

i. Monthly Reports per PSAP

ii. Martin County Grant Extension

iii. Rutherford County Grant Extension

Mr. Shipp put forward the motion to accept the consent agenda as presented, with the motion being seconded by Ms. Wright and passing unanimously.

5. Executive Director Report

a) COVID-19 Update – Ms. Harris reported that most of the staff is teleworking and have been since March 11. The NMAC staff continues to report to work daily as they must be present at the NMAC to monitor the network and systems. They are taking the advised precautions of social distancing and extra cleaning of their workstations per shift. Also, the regional coordinators, Ms. Harris, and Mr. Meeks are activated virtually with ESF2/PSAP Coordination with the State EOC. They are monitoring between the hours of 7AM and 7PM with no indication the hours will extend. On March 17 an email was sent advising of the suspension of on-site PSAP NextGen and ESInet activities for a period of 60 days due to COVID-19. Ms. Harris then read the email that was sent. The regional coordinators have been reaching out daily to PSAPs to discern if they are experiencing issues with staffing levels that could impact their call-taking abilities and discussing pre-planning options for alternate call routing or policy routing across the ESInet. Staff also held two Continuity of Operations Plans (COOP) webinars on Teams which were well attended and received a lot of positive feedback. Staff remains poised to assist during this event in maintaining contact with PSAPs, Board members, and committee members with on-going activities.

b) Cybersecurity Assessment Vendor Selection – Ms. Harris reported that the Technology Committee met, and the evaluation team made a recommendation. The Committee accepted that recommendation. As directed by the Board at the February meeting, Ms. Harris was authorized to move forward with the procurement process for awarding the contract and statement of work. She advised End to End Computing was awarded the contract for \$1,118,974.72. In the coming weeks more information will be shared as planning for the project is put in place.

c) Ransomware Attacks – Durham City/County, City of Shelby – Ms. Harris gave the floor to Mr. Ferguson who provided a high-level overview of the recent City of Durham cyber incident which coincided

with a likewise incident that occurred at Durham County. Mr. Ferguson outlined the impact of the incident saying that all data systems in the city were impacted. The incident brought to bear cybersecurity and IT resources from the State, Federal, and local entities. Mentioned were the FBI, SBI, State EOC, National Guard, vendor partners, 911 Board staff, NCLGSA, DIT SRO, and many others. The event began on Friday March 6. Mr. Ferguson mentioned that he was alerted on his way to work that the event was unfolding. Durham City staff responded by disconnecting critical infrastructure, but the virus spread could not be readily halted from further spread across the network. The impact to the City was major including public safety IP infrastructure. However, the 911 services provided by the State ESInet and hosted call solution were not impacted, and no 911 calls were lost. The City did lose the use of their CAD (Computer Aided Dispatch) system for several days but it is back online. Mr. Ferguson stated that the PSAP backup center is still in the process of recovery. The event and its remediation lasted for two weeks. Mr. Ferguson indicated that the event generated many “lessons learned.” He reiterated that regardless of what electronic defenses are present, user training is critical due to the attack likely begin caused by opening a malicious email or a visit to an unsafe website. It was also stated that the need to determine “patient zero” is imperative to determine the source and start of the attack sequence.

Ms. Harris then asked Mr. Means to reflect on the event. Mr. Means stated that the design of the ESInet and hosted call handling from the inception of the NG911 project has had a keen focus on cybersecurity. The value of that focus was born out at both the Durham and Shelby events. The design seeks to separate the NG911 call function from local networks. In both cases, Board staff directed AT&T to disconnect the gateway interface, which is not IP based, from the local entity CAD systems. In both incidents CAD systems were compromised. The NG911 gateway interface prevents the jump between the networks and the extra step was taken to have the connections physically disconnected during the events. The events also make the case for the hosted solution being a better security alternative. In PSAPs with ESInet only connections, it is likely the call handling equipment and the CAD systems would be compromised whereby calls would have to be redirected. Mr. Means also mentioned the importance of knowing patient zero as it provides the best restoration point information.

Ms. Harris then asked DIT Deputy State Risk Officer Rob Main for any additional comments. He reiterated that identification of patient zero is a critical function of incident response. He said any cyber-related issues that occur in local government, counties, municipalities or towns is reported through county EM to Public Safety Emergency Management, which kicks off mobilization of Federal, vendor, and state partners in scoping out the exact issue affecting that government agency. He stressed that it is never a bad idea to overcommunicate if you think your agency is being cyber-attacked and engage your County EM and DPS EM immediately to start the incident response and recovery efforts. He noted common vectors of attack are email and malicious websites.

d) PSAP Manager’s Program Graduation – Tentatively rescheduled for May with information to be provided once confirmed.

6. Funding Committee Report

a) Funding Reconsideration Policy Revision – Mr. Bone brought forth a policy correction recommendation from the Committee. There are two methods by which a PSAP’s funding distribution may be modified – adjustment to the monthly distribution and request for additional distribution. Both are identified as funding reconsiderations. February 28 has historically been the deadline for reconsiderations involving the monthly distribution. However, there was a typo in a policy that was previously approved that inadvertently created an April 1 deadline. The Board is asked to establish the deadline of February 28 for funding reconsiderations for monthly distributions. The Funding Committee voted unanimously to approve the staff recommendation and brought this forward as a motion. Chairman Boyette presented the motion to accept the policy as recommended by the Committee, and it passed unanimously. Mr. Bone noted the submission date for reconsiderations for additional distributions remains August 31.

b) Boone PD Funding Reconsideration – The request involves \$36,665.11 in additional funding for a phone lease. An email was included in the Board packet from Amy Davis, the Finance Director for the Town of Boone, explaining the situation. Financial Analyst Marsha Tapler conducted a multi-year review in 2019, which helped bring the situation to light. For several years 911 eligible items were omitted from the annual PSAP reports. This resulted in an overstatement of fund balance and a reduction in expenditures, which led to a decrease of annual funding. The reconsideration request involves a “fix” for the error. Staff recommendation was to approve the request. The Funding Committee voted unanimously

to approve the staff recommendation and brought this forward as a motion. Chairman Boyette presented the motion to accept the Committee recommendation, and it passed unanimously.

c) 911 Board FY2020 Budget Amendments – Ms. Tapler presented figures for budget amendments for receipts in order to realign them with different accounts based on the current legislation. Mr. Bone made a motion to amend the receipts in the budget as presented, with the motion being seconded by Mr. Greene, and passing unanimously.

7. Grant Committee Report

a) 2021 PSAP Grant Program Application – Mr. Shipp reported the 2021 Grant Cycle is underway as planned. The grant workshop was held March 24 with over 32 registered PSAPs, four consultants and several Board members participating in the webinar. The grant application will be posted online on April 1 with a submission deadline of June 1.

8. Other — Ms. Harris said in regard to COVID-19, Committee meetings in the near future will be held via Microsoft Teams, adhering to the schedule as much as possible. Should there be meeting changes, notices will be sent. Mr. Bone asked if the Teams platform would also be used for PAT Team visits and Ms. Harris answered in the affirmative.

The next Board meeting will be held on Friday, April 24, via Microsoft Teams.

Adjourn — Chairman Boyette adjourned the meeting at 10:56 AM.

DRAFT

Tab 4 b – e)

b) NG 911 Financial Reporting	
March 2020 Month End Balance	\$ 65,653,980
March 2020 Disbursement	\$ 3,492,057
c) CMRS Financial Reporting	
March 2020 Month End Balance	\$ 7,756,999
March 2020 Disbursement	\$ 0
d) PSAP Financial Reporting	
March 2020 Month End Balance	\$ 12,674,257
March 2020 Disbursement	\$ 4,209,707
e) Grant Statewide/PSAP Financial Reporting	
March 2020 Month End Balance	\$ 9,116,317
Grant Fund Encumbered	\$ 21,585,967

NG 911 FUND

FY2020 beginning Fund Balance:	\$44,749,221.82								
	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020
Revenue	\$734,474.29	\$873,803.90	\$805,234.27	\$1,155,665.13	\$1,138,185.19	\$1,186,956.11	\$1,218,552.94	\$1,133,424.68	\$1,274,275.27
Interest allocation	\$75,178.79	\$78,596.00	\$108,991.56	\$101,651.90	\$108,419.48	\$105,053.85	\$106,071.96	\$104,965.54	\$97,662.42
Grant Fund Transfer-IN		\$16,162,172.00	\$0.00						
NG 911 Disbursement	-\$21,085.01	-\$687,515.79	-\$108,831.74	-\$27,680.92	-\$483,975.31	-\$86,813.29	-\$53,423.60	-\$703,194.37	-\$3,492,056.58
NG 911 Fund Balance	\$45,537,789.89	\$61,964,846.00	\$62,770,240.09	\$63,999,876.20	\$64,762,505.56	\$65,967,702.23	\$67,238,903.53	\$67,774,099.38	\$65,653,980.49

CMRS FUND

FY2020 beginning Fund Balance:	\$7,170,087.41								
	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020
CMRS Revenue	\$640,474.96	\$624,531.55	\$610,275.75	\$544,846.45	\$524,639.06	\$583,723.66	\$572,880.09	\$559,622.37	\$0.00
Interest allocation	\$12,045.76	\$13,263.93	\$8,481.51	\$8,683.72	\$9,869.57	\$9,971.61	\$10,838.93	\$11,200.80	\$11,161.75
Grant Fund Transfer-OUT		-\$3,000,000.00							
CMRS Disbursement	-\$137,613.04	-\$500,809.07	-\$78,524.26	-\$89,750.24	-\$213,308.42	\$0.00	-\$149,594.37	\$0.00	\$0.00
CMRS Fund Balance	\$7,684,995.09	\$4,821,981.50	\$5,362,214.50	\$5,825,994.43	\$6,147,194.64	\$6,740,889.91	\$7,175,014.56	\$7,745,837.73	\$7,756,999.48

PSAP FUND

FY2020 beginning Fund Balance:	\$20,324,987.06								
	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019	January 2020	February 2020	March 2020
PSAP Revenue	\$3,629,358.02	\$3,539,012.09	\$3,458,229.18	\$3,087,463.16	\$2,972,954.72	\$3,307,767.44	\$3,246,320.54	\$3,171,193.47	\$3,536,245.83
Wireline Revenue	\$651,001.04	\$763,761.15	\$879,875.62	\$635,037.11	\$591,475.12	\$595,066.30	\$651,442.82	\$485,936.78	\$594,382.37
VOIP Revenue	\$456,928.78	\$1,779,813.51	\$1,089,001.59	\$958,352.07	\$1,001,973.89	\$975,367.60	\$962,702.90	\$905,725.47	\$969,988.58
Prepaid Wireless Revenue	\$1,166,402.91	\$1,078,474.33	\$1,137,254.99	\$933,418.58	\$974,915.16	\$863,957.58	\$1,060,931.45	\$862,004.01	\$1,128,199.90
Interest allocation	\$34,146.02	\$37,814.50	\$2,148.12	\$5,495.85	\$8,137.84	\$9,965.62	\$12,358.49	\$14,689.75	\$15,331.97
Subtotal	\$5,937,836.77	\$7,198,875.58	\$6,566,509.50	\$5,619,766.77	\$5,549,456.73	\$5,752,124.54	\$5,933,756.20	\$5,439,549.48	\$6,244,148.65
Grant Fund Transfer-OUT		-\$23,677,269.00							
PSAP Distribution	-\$4,353,456.68	-\$4,209,706.59	-\$4,394,082.08	-\$4,209,706.59	-\$4,209,706.59	-\$4,209,706.59	-\$4,209,706.59	-\$4,209,706.59	-\$4,209,706.59
PSAP Fund Balance	\$21,909,367.15	\$1,221,267.14	\$3,393,694.56	\$4,803,754.74	\$6,143,504.88	\$7,685,922.83	\$9,409,972.44	\$10,639,815.33	\$12,674,257.39

PSAP Grant-Statewide 911 Projects Fund

		Total Disbursed	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Remaining Expenditures Grant Balance
		YTD										
		\$23,414,561.43	\$23,038,414.95	\$32,825,508.31	\$30,397,544.51	\$30,012,741.54	\$30,331,955.29	\$30,227,337.69	\$30,190,431.37	\$30,508,334.83		
FY2016	Award Amount											
Graham County G2016-01 (039)	3,401,528.00	-2,619,530.85							-245,390.45			536,606.70
FY2017	Award Amount											
Lincoln G2017-6 (047)	2,000,000.00	-671,150.72			-1,328,849.28							0.00
Martin G2017-7 (048)	5,196,315.00	-3,621,771.07			-860,710.16			-242,303.30				471,530.47
Mitchell G2017-9 (049)	3,163,000.00	-2,480,935.37		-51,791.63	-65,504.20				-102,299.03		-24,833.73	437,636.04
Pasquotank G2017-11 (051)	1,010,779.00	-856,567.83	-73,210.00								-36,600.33	44,400.84
FY2018	Award Amount											
Franklin G2018B-4 (062)	1,204,482.00	-1,026,749.90				-177,732.10						0.00
Iredell G2018B-3 (063)	2,361,230.00	-1,937,280.49										423,949.51
FY2019	Award Amount											
Pender G2019-02 (067)	361,760.00	0.00										361,760.00
Greene G2019-03 (069)	841,964.00	0.00										841,964.00
Wayne G2019-04 (070)	1,530,693.00	0.00										1,530,693.00
Rutherford G2019-05 (071)	1,161,548.00	0.00				-505,062.41						656,485.59
FY2020												
Davie G2020-01	232,767.00	0.00										232,767.00
NC State Highway Patrol G2020-02	1,102,933.00	0.00										1,102,933.00
Pender G2020-03	45,873.00	0.00										45,873.00
Currituck G2020-04	583,655.00	0.00										583,655.00
Franklin G2020-05	3,958,873.00	0.00										3,958,873.00
Cumberland G2020-06	2,251,387.00	0.00										2,251,387.00
Chatham G2020-07	2,339,608.00	0.00										2,339,608.00
STATEWIDE PROJECTS:	Award Amount											
E-CATS II (012)	1,458,380.00	-252,120.00	-252,120.00								93,750.00	1,047,890.00
Interpretive Services (042)	785,646.00	-487,106.06	-19,619.25	-19,140.75	-19,833.75	-20,000.25	-21,036.75	-19,045.50	-19,211.25	-19,194.00	-17,211.00	124,247.44
Ortho Project III Image 19 (061)	3,273,555.00	-1,298,460.82	-49,355.40	-696,826.10	-210,360.70	-57,448.76	-11,064.28	-191,476.80	-45,149.19	-35,411.97	-4,823.21	673,177.77
Ortho Project III Image 20 (073)	4,108,739.00	0.00					-18,816.00	-34,245.58	-6,237.63	-5,482.25	-258,496.80	3,785,460.74
CRM Statewide One-time Development	250,000.00	-26,390.00	-21,178.34	-8.34	-443.34	-1,224.55	-3,198.34	-3,053.34	-12,479.10	-46,946.55	-9.10	135,069.00
from PSAP & CMRS			26,677,269.00									
Transfer out to NG 911 Fund			-16,162,172.00									
Interest			39,336.51	39,763.18	57,737.63	49,226.64	50,843.31	49,202.68	48,603.68	47,129.78	43,962.49	
Revenue 5%						327,438.46	322,485.81	336,304.24	345,256.65	377,808.45	398,211.02	
Total Ending Fund Balance		\$23,414,561.43	\$23,038,414.95	\$32,825,508.31	\$30,397,544.51	\$30,012,741.54	\$30,331,955.29	\$30,227,337.69	\$30,190,431.37	\$30,508,334.83	\$30,702,284.17	

CASH BASIS REPORTING

OSC Certified

Committed:
Grant Fund Total

\$21,585,967.10
\$9,116,317.07

Tab 4 f)

Grant Project Updates per Reports



Chatham County Emergency Communications

297 West Street • Pittsboro, NC 27312

Office 919.545.8163
24-hour Warning Point 919.542.2911
www.chathamnc.org

April 1, 2020

Attn: L. V. Pokey Harris, Executive Director

N.C. 911 Board

P.O. Box 17209

Raleigh, NC 27609

Reference: Chatham County FY2020 Grant Report

Ms. Harris:

No significant updates occurred during the month of March. No grant funds have been expended for this project as of this date.

Regards:

A handwritten signature in black ink that reads "Mike Reitz". The signature is fluid and cursive.

Mike Reitz

Director



Franklin County, NC Grant Report – March 2020

Activities – March 2020

- Conducted site visit for selected architectural firm – March 4
- Reviewed fee proposal from selected architectural firm
- Held budget discussion regarding fee proposal – March 26
- Negotiated fee with selected architectural firm – March 26
- Received revised fee proposal – March 26

Anticipated Activities – April 2020

- Seek approval from Commissioners to enter into contract with selected architectural firm
- Enter into contract with selected firm
- Determine preliminary programming meeting date (COVID-19-dependent)
- Communicate regularly with project team (ongoing)

Franklin County, NC Grant Report – March 2020

The tasks listed below will be tracked throughout the project duration and will be updated monthly. New additions are shown in the salmon highlighted rows. At this time, the project remains on schedule.

Work Plan

Task	Projected Timeframe ¹	Actual	Completed
Contract for project oversight	Months 1-2	November 2019	x
Issue RFQ for architectural services	Months 2-3	December 2019	x
Select architect and contract for services	Months 4-5 (February – March 2020)	Selection: February 2020	x
Negotiate fee with architect	Months 5-6 (March – April 2020)	March 2020	x
New: Receive Commissioners' approval to proceed with contract for architectural services	Month 6 (April 2020)		
New: Enter into contract for architectural services	Month 6 (April 2020)		
Define technology needs in conjunction with building design	Months 3-12 (January – October 2020)		

¹ As the grant agreement was signed in late October 2019, month 1 is considered November 2019.

Franklin County, NC Grant Report – March 2020

Task	Projected Timeframe ¹	Actual	Completed
Facility design and construction document process	Months 6-16 ² (April 2020 – February 2021)		
Establish lead times for major technology systems, including NG911			
Bid and award construction project	Months 17-19 ³ (March 2021 – May 2021)		
Proceed with construction, including coordination with migration to the State ESInet NG911 network	Months 20-32 (June 2021 – June 2022)		
Procure new technology and furnishings	Months 26-30 ⁴		
Substantial completion of construction, address any facility punch list issues	Month 30 (April 2022)		
Install, test, and accept new technology: existing equipment and the CAD system will be relocated to the new site prior to and during go-live to ensure that the old and new center remain operational until the transition is complete	Months 30-34 (April – July 2022)		
Go-live / Physically transition the Halifax County primary PSAP to the new facility and the State ESInet NG911 system	Months 34-36 (July – September 2022)		

² Represent revised dates submitted with work plan in December 2019

³ Ibid.

⁴ Ibid.

Franklin County, NC Grant Report – March 2020

Task	Projected Timeframe ¹	Actual	Completed
Monitor systems post cutover	Months 32-36 (May – September 2022)		

Greene County, NC

911 Facility Relocation

MCP Project Number 18-128

Monthly Progress Report – March, 2020

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none"> Programming efforts underway Detail specifications for facility being collected 	<ul style="list-style-type: none"> Start detailed design Begin discussions on changes to current facility
2. Permits	<ul style="list-style-type: none"> None in this period 	<ul style="list-style-type: none"> None expected in this period
3. Construction	<ul style="list-style-type: none"> None in this period 	<ul style="list-style-type: none"> None expected in this period
4. Communications Systems	<ul style="list-style-type: none"> Begin assessment and migration strategy discussions 	<ul style="list-style-type: none"> Continue to assess needs and migration strategy
5. Other Activity	<ul style="list-style-type: none"> MCP participated in routine check-in points and the initial programming effort. These routine meetings will continue. 	<ul style="list-style-type: none"> Continue to participate in routine project planning and working meetings to facilitate the next steps of the project.



Iredell County PSAP Enhancement and Regional Backup Initiative

PSAP Grant Project

MCP Project Number 16-114

Monthly Progress Report – March, 2020

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none">• No actions required	<ul style="list-style-type: none">• No actions expected
2. Permits	<ul style="list-style-type: none">• No actions required	<ul style="list-style-type: none">• No actions expected
3. Construction	<ul style="list-style-type: none">• No action required	<ul style="list-style-type: none">• No actions expected
4. Communications Systems	<ul style="list-style-type: none">• No action required	<ul style="list-style-type: none">• No actions expected
5. Other Activity	<ul style="list-style-type: none">• Finalize grant reimbursements	<ul style="list-style-type: none">• Close out grant



Martin County PSAP and Regional Backup Facility, NC

PSAP Consolidation Project – Phase II – Grant Project
 Monthly Progress Report – March, 2020

MCP Project Number 16-184

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> No action expected
2. Permits	<ul style="list-style-type: none"> No additional permits required 	<ul style="list-style-type: none"> No additional permits required
3. Construction	<ul style="list-style-type: none"> No additional actions required 	<ul style="list-style-type: none"> No additional actions required
4. Communications Systems	<ul style="list-style-type: none"> Continue working with Bertie County technology needs Continue working with Pasquotank on any backup needs Work paused due to COVID-19 	<ul style="list-style-type: none"> Continue coordination with Bertie and Pasquotank on facility / technology needs
5. Other Activity	<ul style="list-style-type: none"> MCP conducted periodic conference calls with the clients 	<ul style="list-style-type: none"> MCP will participate in as-needed project team meetings with the clients

Mitchell County, NC

PSAP Construction and Regional Backup
 Monthly Progress Report – March 2020

MCP Project Number 16-173

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No further activity
2. Permits	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> No further activity
3. Construction	<ul style="list-style-type: none"> Continued remediation of punch list items 	<ul style="list-style-type: none"> Remediate punch list items Begin civil engineering work, weather-dependent Conduct site review (COVID-19-dependent)
4. Communications Systems	<ul style="list-style-type: none"> Continued installation of network equipment 	<ul style="list-style-type: none"> Test AT&T Virtual Private Network (VPN) wide area network (WAN) and local area network (LAN) Test technologies, including radio system, prior to go-live (COVID-19-dependent)
5. Other Activity	<ul style="list-style-type: none"> Continued to track grant spending Updated budget tracking spreadsheet 	<ul style="list-style-type: none"> Regular communications with project team, as needed Track grant budget (ongoing)

Due to grading deficiencies at the site and other civil engineering work, the County has not issued a certificate of occupancy (CO) for the new public safety answering point (PSAP). Due to the wet weather and site conditions, civil engineering work is pending still. The cutover date remains May 20, 2020, at this time.

Pasquotank County PSAP, NC

PSAP Consolidation Project

MCP Project Number 16-185

Monthly Progress Report – March, 2020

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none"> No action required 	<ul style="list-style-type: none"> No action expected
2. Permits	<ul style="list-style-type: none"> No action 	<ul style="list-style-type: none"> No action
3. Construction	<ul style="list-style-type: none"> No actions required 	<ul style="list-style-type: none"> No action expected
4. Communications Systems	<ul style="list-style-type: none"> Continue biweekly meetings with AT&T on hosted call handling Continue coordination of admin lines and data circuits for Martin Backup facility Continue discussions on migration of equipment to new backup site Install and test radio consoles and supporting infrastructure 	<ul style="list-style-type: none"> Continue biweekly coordination calls with AT&T Continue to participate in equipment migration planning and documentation Continue to evaluate needs at the Martin Backup facility Continue radio console installation
5. Other Activity	<ul style="list-style-type: none"> MCP conducted periodic project communications with the stakeholders 	<ul style="list-style-type: none"> MCP will conduct periodic communications with the stakeholders

Rutherford 911

Monthly Progress Report

Current Activity

April 2020

Rutherford PSAP Relocation / Enhancement

Rutherford County **Commissioners** accepted the low bid for the 911 relocation project in its April meeting.

- A motion to allow the **County Manager** and **County Attorney** to enter into an agreement with **Morrison Construction**, of Shelby, NC to renovate 153 Sparks Drive was presented and – Approved.
- Rutherford County **Finance Director, Paula Roach**, presented a budget amendment to the Capital Facilities Project Fund for the remaining monies needed to complete the Rutherford911 Relocation. – Approved.
- **Planning Director Danny Searcy and Lt. Greg Dotson** have been working with **County Attorney Richard Williams** and plans are to present a contractors agreement this period.
- **Morrison Construction** is slated to begin work this period.

Next Month's Activity

May 2020

Rutherford PSAP Relocation / Enhancement

- Action items for this period will be determined after the contractor starts the project.
- Budget Performance Reports will be completed.

Wayne County, NC

911 New Facility

MCP Project Number 18-117

Monthly Progress Report – March, 2020

Activity	This Period	Next Period
1. Design	<ul style="list-style-type: none"> No additional activities 	<ul style="list-style-type: none"> No additional activities expected
2. Permits	<ul style="list-style-type: none"> No actions required 	<ul style="list-style-type: none"> No actions expected
3. Construction	<ul style="list-style-type: none"> Walls framed Wall electrical rough-in Duct-work 95% complete Waiting for insulation for duct Plumbing rough-in Framing soffits and bulkheads Mechanical / electrical work overhead 	<ul style="list-style-type: none"> Sheetrock begins Glass arriving Rough-in's completed Roofing at 100% Sewer main will be installed Grading work begins Begin parking lots
4. Communications Systems	<ul style="list-style-type: none"> Finalize review of dispatch furniture Begin planning for install of structured cabling Received approval to procure UPS and data center cabinets Continued discussions with radio vendor planning for new facility needs Continued technology coordination meetings 	<ul style="list-style-type: none"> Begin planning install of dispatch furniture Begin scheduling for cabling and other facility needs Continue radio coordination meetings Begin schedule for technology implementation Start on migration strategy
5. Other Activity	<ul style="list-style-type: none"> MCP held routine meetings with the County for project coordination 	<ul style="list-style-type: none"> Continue monthly meetings with design team and general contractor MCP to continue routine meetings for project coordination tasks



April 17, 2020

L.V. Pokey Harris
Executive Director
North Carolina 911 Board

This status report is the first for Cycle 3, Phase 1 of the Statewide Orthoimagery Program, funded by the NC 911 Board. The project will be referred to as the Coastal 2020 Orthoimagery Project. This report summarizes the project status for the first quarter of 2020: January 1 through March 31, 2020.

Accomplishments

The accomplishments by the project team during the period include the following items organized by team member:

CGIA

- Monitored acquisition beginning in late January and continued until March 9th when all imagery was collected.
- Coordinated with military installations in the project area to include USMCAS Cherry Point, USMCB Camp Lejeune, USAF Dare Bombing Range, US Coast Guard Base Elizabeth City, Harvey Point, and the US Army Military Ocean Terminal Sunny Point. This included coordinating access to restricted airspace in and around these installations.
- Received and analyzed flight logs and documentation from each flight to ensure compliance and to assess re-flight requirements.
- Reviewed and evaluated weather conditions and acquired image samples to make determinations on re-flight requirements.
- Received one image sample from each contractor to assess radiometry balancing across the project area. These samples were adjusted by the project team and provided back to the contractors as guidelines for color balancing going forward.
- Developed and submitted contract to the online QC contractor (VOICE).
- Submitted requisition for VOICE purchase order.
- Initiated DIT exception request process for sole source contracting for the VOICE contract.
- Obtained signatures and fully executed agreement with VOICE QC contractor.
- Held project kickoff meeting to outline requirements and development timeline for the VOICE online QC platform.
- Created and organized GIS data and delivered this data to VOICE contractor to initiate database creation.
- Received imagery tile samples from contractors at tie locations between contractors to assess color balancing and consistency across all study areas.
- Held Ortho Generation Workshop on March 31 with project team and all contractors to discuss next steps after acquisition and to assess color balancing across the project area



through regional samples provided by contractors. This workshop was held virtually due to the coronavirus stay at home order.

- Received and evaluated compliance documentation Attachments from contractors, to include validation range flights, control surveys, and Imagery Acquisition compliance documentation.
- Continued development of the project website and project SharePoint site for sharing documents among the project team and for receiving contracted deliverables from contractors.
- Coordinated with state partners in South Carolina and Virginia to receive latest imagery products to be incorporated in final deliveries to PSAPs in the fall.
- Other tasks included regular team meetings and ongoing outreach to federal, state and local partners.

NC Department of Transportation (NCDOT)

- Evaluated and performed detailed analysis of submitted flight plans from contractors.
- Received and evaluated flight logs and Exterior Orientation files from contractors for every flight to determine whether flight specifications were being met.
- Evaluated submitted validation range reports for new cameras to the project.
- Received and evaluated compliance documentation attachments from contractors, to include control surveys and Imagery Acquisition compliance documentation.
- Provided guidance on any technical issues resulting from the review of compliance documentation.
- Evaluated and performed Photoshop adjustments on radiometry samples from all five contractors to create color balancing guidelines going into the production phase of the project.
- Attended Ortho Generation Workshop virtually on March 31.
- Provided technical support for project planning.
- Attended weekly status meetings with project team.

NC Department of Public Safety: NC Geodetic Survey (NCGS)

- Attended team strategy meetings.
- Performed maintenance to validation range site that is used to evaluate new cameras on the project.
- Evaluated submitted validation range reports for new cameras to the project.
- Received and evaluated all Attachment C-1: Control Surveys Reports to ensure surveying activities were being done to project specifications for horizontal accuracy.
- Attended project kickoff meeting on December 12, 2019.
- Purchased necessary equipment to support the project and renewed software licenses



necessary to support the project.

- Performed Geodetic Control upgrades to Continuously Operating Reference Stations in project area to ensure availability to contractors during flights.

Acquisition Contractors

This section summarizes the accomplishments of the five prime acquisition contractors selected through the Qualifications-Based Selection (QBS) process. The selected contractors are Atlas Geographic Data, Quantum Spatial, Sanborn Map Company, Spatial Data Consultants, and Surdex Corporation. The fully executed contracts were awarded on December 30, 2019. Each of the contracts consists of six primary tasks as follows:

- Task 1 – Flight Planning
- Task 2 – Imagery Acquisition
- Task 3 – Aerotriangulation and Ortho Generation
- Task 4 – Product Delivery and Data Acceptance
- Task 5 – Quality Review and Resolutions Reporting
- Task 6 – Closeout

For the 1st Quarter 2020 reporting period, the status of all tasks is listed below:

Task	Reported Percent Complete (as of latest invoice)				
	Atlas Geographic Data	Quantum Spatial	Sanborn Map Company	Spatial Data Consultants	Surdex Corporation
Task 1: Flight Planning	93%	98%	99%	100%	55%
Task 2: Acquisition	90%	65%	58%	84%	50%
Task 3: Aerotriangulation and Ortho Generation	2%	0%	0%	6%	1%
Task 4: Product Delivery and Data Acceptance	0%	0%	0%	0%	0%
Task 5: Quality Review Resolutions	0%	0%	0%	0%	0%
Task 6: Closeout	0%	0%	0%	0%	0%

[Acquisition of imagery for all 27 counties was completed on March 9, 2020.]



Schedule

The following represents the project’s core deliverables milestones for plan and actual status:

Task	Item	Planned Start	Planned Finish	Actual Finish/Percent Complete
1	Project Initiation	7/1/2019	12/31/2019	
	Issue RFQ for Orthoimagery QBS	7/31/2019	7/31/2019	7/31/2019
	Closing date for RFQ responses	8/26/2019	8/26/2019	8/26/2019
	Contract NCGS and NCDOT	8/1/2019	8/1/2019	10/21/2019
	Host workshop for selected applicants	9/24/2019	9/24/2019	9/24/2019
	Technical and cost proposals due	10/8/2019	10/8/2019	10/8/2019
	Negotiate with selected applicants	10/28/2019	10/28/2019	10/28/2019
	Issue Purchase Orders	11/22/2019	11/22/2019	12/30/2019
	Conduct Kickoff Meeting	12/12/2019	12/12/2019	12/12/2019
	Contract QC Service Provider	1/1/2020	1/1/2020	2/7/2020
2	Planning and Design	10/15/2019	4/30/2020	
	CORS Upgrades	10/15/2019	3/1/2020	1/16/2020
	Validation Range	10/15/2019	1/14/2020	1/14/2020
	RTN Maintenance	10/15/2019	Ongoing	
	Control Surveys and Attachment C-1: Control Surveys Report	12/12/2019	4/2/2020	4/2/2020
3A	Acquisition	1/20/2020	4/27/2020	
	Acquire Imagery for 27 Counties	1/20/2020	3/15/2020	3/9/2020
	Attachment D: Imagery Acquisition Compliance Report	2/1/2020	4/27/2020	
3B	Acquisition Post-Processing	2/1/2020	5/21/2020	
	Attachment E: GNSS-IMU Post Processing & Aerotriangulation Report	3/1/2020	5/15/2020	
	Ortho Generation Workshop	3/24/2020	3/24/2020	3/31/2020
	Study Area Web Map Service	4/1/2020	5/21/2020	
4	Quality Review Production and Product Delivery	5/21/2020	10/17/2020	
	QC Production Cycle	5/21/2020	10/17/2020	
5	Implementation	11/16/2020	1/29/2021	
	Product Delivery	11/16/2020	11/20/2020	
	Implement the NC OneMap Geospatial Portal solution	12/1/2020	Ongoing	
	60 day End-User Evaluation	11/20/2020	1/29/2021	
6	Project Closeout	12/1/2020	4/31/2021	
	Final Data Packaging and Final Reports	12/1/2020	4/31/2021	
	Project Closeout	4/1/2021	4/31/2021	



Budget

The expenditures for the project are summarized below. Note the current reporting period represents January 1, 2020 – March 31, 2020. The total budget for the project is \$4,108,739.

Item	This Reporting Period	Cumulative to Date	Percent Expended to Date
CGIA			
CGIA Labor	\$26,922.00	\$54,684.00	15.6%
ITS Hosting and Information Technology	\$0.00	\$0.00	0.0%
CGIA Travel	\$233.97	\$549.60	13.7%
CGIA Reimbursable Expenses	\$0.00	\$0.00	0.0%
CGIA Total	\$27,155.97	\$55,233.60	13.5%
Subcontractors			
NCDPS-NCGS	\$137,414.12	\$153,351.92	74.8%
NCDOT	\$9,666.09	\$24,949.87	16.1%
Atlas Geographic Data	\$39,012.30	\$39,012.30	5.8%
Quantum Spatial	\$0.00	\$0.00	0.0%
Surdex Corporation	\$26,847.00	\$26,847.00	4.2%
Sanborn Map Company	\$0.00	\$0.00	0.0%
Spatial Data Consultants	\$74,755.50	\$74,755.50	11.0%
VOICE	\$0.00	\$0.00	0.0%
Subcontractor Total	\$287,695.41	\$318,916.99	9.9%
Total (for Project)	\$314,851.38	\$374,150.59	9.1%

Major Tasks Identified for 2nd Quarter of 2020

CGIA

- Continue to receive and evaluate compliance documentation for Attachments D and E.
- Receive and evaluate Task 3.8 preliminary imagery online web services from contractors to finalize all project radiometry balancing.
- Create online map for project team to evaluate preliminary imagery web services from contractors.
- Begin to update and organize validation database and workflows for receiving final deliverables in the fall.
- Research and test imagery products to be created for final deliveries in the fall, to include the new Color Infrared 4th band imagery products.
- Begin VOICE application beta testing and finalize platform prior to online QC beginning in the summer.
- Hold bi-weekly project status meetings.
- Other tasks include regular team meetings and ongoing outreach to federal, state and local partners.



NCDOT

- Attend weekly project meetings.
- Continue to evaluate submitted compliance documentation for Acquisition and Post-Processing tasks.
- Participate in VOICE application beta testing process.
- Attend bi-weekly project meetings.
- Continue technical support for project planning.

NCGS

- Attend weekly project meetings.
- Perform CORS maintenance when needed in the project area.
- Post quality control RFQ.
- Begin formulating horizontal control plan for check points throughout project area.

Project Issues

There are no financial or technical issues to prevent the team from completing the project on time and within budget.

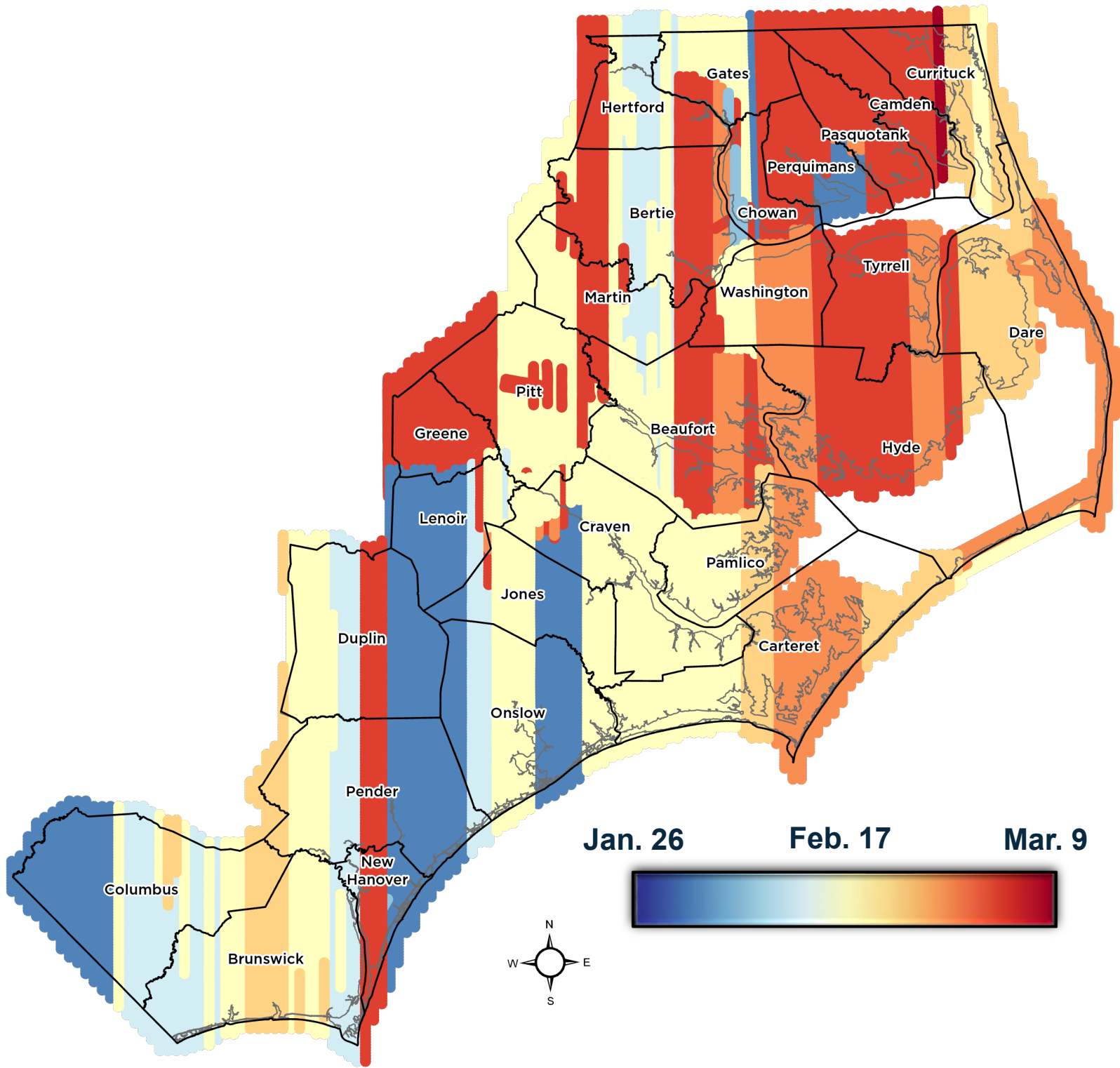
Please contact me by phone at (919) 754-6588 or email at tim.johnson@nc.gov if you have questions about this report or about contractual or administrative aspects of the project. Contact Ben Shelton of CGIA at (919) 754-6377 or email at ben.shelton@nc.gov regarding technical matters related to the project.

Sincerely,

A handwritten signature in black ink that reads "Tim Johnson".

Tim Johnson, GISP
Director
Center for Geographic Information and Analysis

2020 Imagery Acquisition Results



ACCOUNTS PAYABLE

287,695.01																
FUND	CENTER	ACCOUNT	PAY ENTITY	CTRL NO	PAYMENT DATE	CHECK NO	INVOICE NO	AMOUNT PAID	VENDOR NO	VENDOR GROUP	VENDOR NAME	INVOICE DATE	LINE ITEM DESCRIPTION	PO NUMBER	PO LINE NO	REMIT MESSAGE
7115	1082	532199	41PT	2035	1/30/2020	141201	AGD-C020-901	15,154.00	203251160	01	ATLAS GEOGRAPHIC DATA INC	1/8/2020	PLANNING, ACQUISITIO	NC10562917	1	AGD-C020-901
7115	1082	532199	41PT	2035	1/30/2020	141222	90731501	1,865.06	566000967	Y	NC DEPT OF TRANSPORTATION	1/9/2020	IMAGE20 - FY19-20	NC10546123	1	#90731501
7115	1082	532199	41PT	2035	1/30/2020	141218	C020-01	21,413.95	561963091	02	SPATIAL DATA CONSULTANTS	1/2/2020	PLANNING, ACQUISITIO	NC10562921	1	#C020-01
7115	1082	532199	41PT	2042	2/20/2020	141523	AGD-C020-902	23,858.30	203251160	01	ATLAS GEOGRAPHIC DATA INC	2/7/2020	PLANNING, ACQUISITIO	NC10562917	1	AGD-C020-902
7115	1082	532199	41PT	2042	2/20/2020	141547	90733531	7,801.03	566000967	Y	NC DEPT OF TRANSPORTATION	2/10/2020	IMAGE20 - FY19-20	NC10546123	1	#90733531
7115	1082	532199	41PT	2042	2/20/2020	208051	S-512	137,414.12	300712287	13	NC DPS GENERAL OPERATIONS	2/12/2020	IMAGE20 - FY19-20	NC10550604	1	#S-512
7115	1082	532199	41PT	2042	2/20/2020	141545	C020-02	53,341.55	561963091	02	SPATIAL DATA CONSULTANTS	2/3/2020	PLANNING, ACQUISITIO	NC10562921	1	#C020-02
7115	1082	532199	41PT	2042	2/20/2020	141531	4763	26,847.00	430690641	B	SURDEX CORPORATION	2/5/2020	PLANNING, ACQUISITIO	NC10562920	1	#4763

LABOR

DIT - CGIA
Staff Billing Report

Activity: January 2020

	Client	Activity Date	Product/Service	Memo/Description	Rates	Duration	Billable	Amount
Ben Shelton								
	IMAGE20	01/03/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	01/06/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	01/07/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	01/08/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	01/09/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	01/10/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	01/13/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	01/14/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	01/15/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	01/15/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	01/17/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	01/21/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	6	Yes	504.00
	IMAGE20	01/21/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	01/22/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	01/22/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	01/23/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	01/23/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	01/24/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	01/27/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	01/28/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	01/29/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	01/29/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00

DIT - CGIA
Staff Billing Report

Activity: January 2020

	IMAGE20	01/30/2020	Services:55	Project Management	84.00	5 Yes	420.00
	IMAGE20	01/31/2020	Services:55	Project Management	84.00	1 Yes	84.00
Total for Ben Shelton						82	\$ 6,888.00
Matthew McLamb							
	IMAGE20	01/15/2020	Services:15	Consulting	84.00	2 Yes	168.00
	IMAGE20	01/22/2020	Services:15	Consulting	84.00	1.5 Yes	126.00
	IMAGE20	01/29/2020	Services:15	Consulting	84.00	1 Yes	84.00
Total for Matthew McLamb						4.5	\$ 378.00
Tim Johnson							
	IMAGE20	01/02/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/06/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/07/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/08/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/09/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/15/2020	Services:15	Consulting	84.00	1.5 Yes	126.00
	IMAGE20	01/17/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/22/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/23/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/24/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/29/2020	Services:15	Consulting	84.00	1 Yes	84.00
	IMAGE20	01/30/2020	Services:15	Consulting	84.00	0.5 Yes	42.00
	IMAGE20	01/31/2020	Services:15	Consulting	84.00	0.5 Yes	42.00
Total for Tim Johnson						12.5	\$ 1,050.00
TOTAL						99	\$ 8,316.00

DIT - CGIA
Staff Billing Report
Activity: February 2020

	Client	Activity Date	Product/Service	Memo/Description	Rates	Duration	Billable	Amount
Ben Shelton								
	IMAGE20	02/03/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	02/04/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	02/05/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/05/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	02/06/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/07/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/10/2020	Services:55	Project Management	84.00	7	Yes	588.00
	IMAGE20	02/11/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/12/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	02/12/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	02/13/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/14/2020	Services:55	Project Management	84.00	8	Yes	672.00
	IMAGE20	02/17/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	02/18/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	02/19/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	02/19/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	02/20/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	02/20/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	02/22/2020	Services:55	Project Management	84.00	1	Yes	84.00
	IMAGE20	02/23/2020	Services:55	Project Management	84.00	1	Yes	84.00
	IMAGE20	02/24/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	02/25/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	02/25/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	02/26/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	02/26/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	02/27/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	02/27/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	02/28/2020	Services:55	Project Management	84.00	2	Yes	168.00
Total for Ben Shelton						98		\$ 8,232.00
Matthew McLamb								
	IMAGE20	02/06/2020	Services:15	Consulting	84.00	0.5	Yes	42.00
	IMAGE20	02/13/2020	Services:15	Consulting	84.00	0.5	Yes	42.00
	IMAGE20	02/19/2020	Services:15	Consulting	84.00	1.5	Yes	126.00
	IMAGE20	02/20/2020	Services:15	Consulting	84.00	0.5	Yes	42.00
	IMAGE20	02/26/2020	Services:15	Consulting	84.00	1.5	Yes	126.00

DIT - CGIA
Staff Billing Report
Activity: February 2020

Total for Matthew McLamb								4.5	\$ 378.00
Tim Johnson									
	IMAGE20	02/11/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/13/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/18/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/19/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/20/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/26/2020	Services:15	Consulting		84.00	1	Yes	84.00
	IMAGE20	02/27/2020	Services:15	Consulting		84.00	1	Yes	84.00
Total for Tim Johnson							7		\$ 588.00
TOTAL								109.50	\$ 9,198.00

DIT - CGIA
Staff Billing Report

Activity: March 2020

	Client	Activity Date	Product/Service	Memo/Description	Rates	Duration	Billable	Amount
Ben Shelton								
	IMAGE20	03/02/2020	Services:55	Project Management	84.00	7	Yes	588.00
	IMAGE20	03/03/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	03/04/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	03/04/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	03/05/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	03/06/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	6	Yes	504.00
	IMAGE20	03/09/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	1	Yes	84.00
	IMAGE20	03/11/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	03/13/2020	Services:55	Project Management	84.00	5	Yes	420.00
	IMAGE20	03/16/2020	Services:55	Project Management	84.00	2	Yes	168.00
	IMAGE20	03/17/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	03/18/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	03/18/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	03/19/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/20/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/23/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/24/2020	Services:55	Project Management	84.00	3	Yes	252.00
	IMAGE20	03/25/2020	Services:55	Project Management	84.00	4	Yes	336.00
	IMAGE20	03/25/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	2	Yes	168.00
	IMAGE20	03/26/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/27/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/30/2020	Services:55	Project Management	84.00	6	Yes	504.00
	IMAGE20	03/31/2020	Services:40	Presentations/Demonstrations/Meetings	84.00	3	Yes	252.00
	IMAGE20	03/31/2020	Services:55	Project Management	84.00	2	Yes	168.00
Total for Ben Shelton						97		\$ 8,148.00
Matthew McLamb								
	IMAGE20	03/05/2020	Services:15	Consulting	84.00	2.5	Yes	210.00
	IMAGE20	03/18/2020	Services:15	Consulting	84.00	1.5	Yes	126.00
	IMAGE20	03/25/2020	Services:15	Consulting	84.00	1.5	Yes	126.00

DIT - CGIA
Staff Billing Report

Activity: March 2020

	IMAGE20	03/31/2020	Services:15	Consulting	84.00	1.5	Yes	126.00
Total for Matthew McLamb						7		\$ 588.00
Tim Johnson								
	IMAGE20	03/12/2020	Services:15	Consulting	84.00	0.5	Yes	42.00
	IMAGE20	03/13/2020	Services:15	Consulting	84.00	1.5	Yes	126.00
	IMAGE20	03/18/2020	Services:15	Consulting	84.00	2	Yes	168.00
	IMAGE20	03/19/2020	Services:15	Consulting	84.00	1	Yes	84.00
	IMAGE20	03/26/2020	Services:15	Consulting	84.00	1	Yes	84.00
	IMAGE20	03/30/2020	Services:15	Consulting	84.00	0.5	Yes	42.00
	IMAGE20	03/31/2020	Services:15	Consulting	84.00	1.5	Yes	126.00
Total for Tim Johnson						8		\$ 672.00
TOTAL						112		\$ 9,408.00

APPROVED INVOICES



INVOICE

Bill To
Center for Geographic Information and Analysis Attn: Tim Johnson 3700 Wake Forest Rd. Raleigh, NC 27609


Order Information	
Invoice Number	AGD-CO20-901
CGIA Contract Number	IMAGE20-04
Purchase Order Number	NC10562917
Invoice Amount	\$15,154.40
Invoice Date	January 08 2020
Performance Period	Dec. 1 thru Dec. 31, 2019

Remit To
Issuing Vendor Firm: Atlas Geographic Data, Inc. Issuing Vendor Fiscal Division: A Issuing Vendor Address: 215 Racine Drive, Suite 201, Wilmington, NC 28403

Contact Information
Issuing Vendor Administrator: Larry Kirkpatrick Issuing Vendor Email: kirkpatrick@atlasgeodata.com hlambert@atlasgeodata.com Issuing Vendor Phone: 910 256 9892 Issuing Vendor Fax: 910 256 9979

Invoice Summary (per Primary Task)		
Task	Item Description	Amount
1.	Flight planning	\$ 15,154.40
	Total	\$ 15,154.40

APPROVED



Digitally signed by Tim Johnson
Date: 2020.01.17 11:40:23 -05'00'

AP Shorted payment by \$0.40.

Will be rectified on future invoice

RECEIVED
By Ben Shelton at 11:25 am, Jan 13, 2020



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

Invoice

Bill To:
ITS-CGIA
ATTN: TIM JOHNSON
PO Box 17209
RALEIGH NC 27609-7209

Order Information
Customer Number: 67549
Invoice Number: 90731501
Purchase Order #: 006474-001_8188_000
Purchase Order Date: 08/29/2019
Sales Order Number: 655160
Payment Terms: Net due 30 days
Billing Date: 01/09/2020
Due Date: 02/08/2020

NC10546123

Remit To:
North Carolina Department of Transportation
Fiscal Section - Accounts Receivable Unit
1514 Mail Service Center
Raleigh, North Carolina 27699-1514

Contact Person: Stephanie Benson
Phone: (919)707-4208 Ext. 00
Fax: (919)715-8718
Internet: sbenson@ncdot.gov

Invoice Details

Item	Description	Quantity	Unit Price	Amount
0010	NC State Agency Participation Reim. INTERAGENCY REIMBURSEMENT AGREEMENT EXECUTED ON 8/29/19 WITH THE NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY CENTER FOR GEOGRAPHIC INFORMATION AND ANALYSIS CONSISTING OF PROVIDING ORTHOIMAGERY ADVISORY AND TECHNICAL SERVICES FOR THE DIGITAL COASTAL ORTHOIMAGERY 2020 PROJECT IN 27 COUNTIES OF NORTH CAROLINA, TOTALING APPROXIMATELY 15,678 SQUARE MILES AND 17,483 ORTHOIMAGERY TILES (THE STUDY AREA). COSTS INCURRED FOR THE MONTH OF DECEMBER 2019 TOTAL \$1,865.06 PER ATTACHED EMAIL AND DOCUMENTATION RECEIVED FROM RANDY DILLARD OF NCDOT'S PHOTOGRAMMERY UNIT.	1 EA	1,865.06	1,865.06
Total Amount Due				\$ 1,865.06

APPROVED

Digitally signed
by Tim Johnson
Date:
2020.01.17
11:52:25 -05'00'

Please return the attached copy of this invoice to ensure proper credit for your payment. Remittances should be made payable to N.C. Department of Transportation. According to State Cash Management G.S. 25-3-506, a \$35.00 fee may be imposed for a check on which payment has been refused.

RECEIVED
By Ben Shelton at 8:40 am, Jan 09, 2020



1008 Hutton Lane, Suite 109
 High Point, NC 27262
 Phone: (336) 841-1247
 Fax: (336) 841-1248
www.spatialdc.com

INVOICE

Bill To
Center for Geographic Information and Analysis Attn: Tim Johnson, GISP 3700 Wake Forest Rd. Raleigh, NC 27609


Remit To
Spatial Data Consultants, Inc. 1008 Hutton Lane, Suite 109 High Point, NC 27262

Order Information	
Invoice Number	CO20-02
CGIA Contract Number	IMAGE20-06
Purchase Order Number	NC10562921
Invoice Amount	\$53,341.55
Invoice Date	02/03/20
Performance Period	01/01/20 through 01/31/20

Contact Information
Susan L. Schall, President, CEO sschall@spatialdc.com (336) 841-1247 (office) (336) 906-3261 (cell) (336) 841-1248 (fax)

Invoice Summary (per Primary Task)		
Task	Item Description	Amount
1	Flight Planning	\$53,341.55
	Invoice Total	\$53,341.55

APPROVED



Digitally signed
 by Tim Johnson
 Date: 2020.02.14
 16:12:03 -05'00'

RECEIVED
 By Ben Shelton at 10:54 am, Feb 07, 2020




INVOICE

Bill To
Center for Geographic Information and Analysis Attn: Tim Johnson 3700 Wake Forest Rd. Raleigh, NC 27609

Order Information	
Invoice Number	AGD-CO20-902
CGIA Contract Number	IMAGE20-04
Purchase Order Number	NC10562917
Invoice Amount	\$23,858.30
Invoice Date	February 07 2020
Performance Period	Jan. 1 thru Jan. 31, 2020

Remit To
Issuing Vendor Firm: Atlas Geographic Data, Inc. Issuing Vendor Fiscal Division: A Issuing Vendor Address: 215 Racine Drive, Suite 201, Wilmington, NC 28403

Contact Information
Issuing Vendor Administrator: Larry Kirkpatrick Issuing Vendor Email: kirkpatrick@atlasgeodata.com hlambert@atlasgeodata.com Issuing Vendor Phone: 910 256 9892 Issuing Vendor Fax: 910 256 9979

Invoice Summary (per Primary Task)		
Task	Item Description	Amount
1.	Flight planning	\$ 23,858.30
<div data-bbox="527 1501 803 1690" data-label="Text"> <p>APPROVED </p> </div>		
<div data-bbox="812 1438 1096 1753" data-label="Text"> <p>Digitally signed by Tim Johnson Date: 2020.02.14 16:08:22 -05'00'</p> </div>		
	Total	\$ 23,858.30

RECEIVED
By Ben Shelton at 10:50 am, Feb 07, 2020



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

Invoice

Bill To:
ITS-CGIA
ATTN: TIM JOHNSON
PO Box 17209
RALEIGH NC 27609-7209

Order Information
Customer Number: 67549
Invoice Number: 90733531
Purchase Order #: 006474-001_8188_000: **NC10546123**
Purchase Order Date: 08/29/2019
Sales Order Number: 656967
Payment Terms: Net due 30 days
Billing Date: 02/10/2020
Due Date: 03/11/2020

Remit To:
North Carolina Department of Transportation
Fiscal Section - Accounts Receivable Unit
1514 Mail Service Center
Raleigh, North Carolina 27699-1514

Contact Person: Stephanie Benson
Phone: (919)707-4208 Ext. 00
Fax: (919)715-8718
Internet: sbenson@ncdot.gov

Invoice Details

Item	Description	Quantity	Unit Price	Amount
0010	<p>NC State Agency Participation Reim.</p> <p>INTERAGENCY REIMBURSEMENT AGREEMENT EXECUTED ON 8/29/19 WITH THE NORTH CAROLINA DEPARTMENT OF INFORMATION TECHNOLOGY CENTER FOR GEOGRAPHIC INFORMATION AND ANALYSIS CONSISTING OF PROVIDING ORTHOIMAGERY ADVISORY AND TECHNICAL SERVICES FOR THE DIGITAL COASTAL ORTHOIMAGERY 2020 PROJECT IN 27 COUNTIES OF NORTH CAROLINA, TOTALING APPROXIMATELY 15,678 SQUARE MILES AND 17,483 ORTHOIMAGERY TILES (THE STUDY AREA).</p> <p>COSTS INCURRED FOR THE MONTH OF JANUARY TOTAL \$7,801.03 PER ATTACHED EMAIL AND DOCUMENTATION RECEIVED FROM RANDY DILLARD OF NCDOT'S PHOTOGRAMMERY UNIT.</p>	1 EA	7,801.03	7,801.03
Total Amount Due				\$ 7,801.03

APPROVED
Tim Johnson
Digitally signed by Tim Johnson
Date: 2020.02.14 16:02:59 -05'00'

Please return the attached copy of this invoice to ensure proper credit for your payment. Remittances should be made payable to N.C. Department of Transportation. According to State Cash Management G.S.25- 3-506, a \$35.00 fee may be imposed for a check on which payment has been refused.

RECEIVED
By Ben Shelton at 12:02 pm, Feb 10, 2020

Invoice






North Carolina Geodetic Survey
 4298 Mail Service Center
 Raleigh, NC 27699-4298
 919-733-3836

Date	Invoice #
2/12/2020	S-512

Bill To
NC Department of Information Technology CGIA Attn: Tim Johnson 20322 Mail Service Center Raleigh, N.C. 27699-0322

P.O. No.	Terms	Project
NC10550604	Net 30	Coastal Orthoimagery 2020

Quantity	Description	Rate	Amount		
	2020 Coastal Project				
20	Task 2.2.1 (range maintenance) November 6, 7 2019 BD	46.77	935.40		
38	Task 2.2.1 (range maintenance) January 15 through 30, 2020 BD	46.77	1,777.26		
11	Task 2.1.1 (CORS upgrade) January 8, 9, 2020 RS	46.77	514.47		
8.5	Task 2.1.1 (CORS upgrade) January 13 through 15, 2020 RS	46.76941	397.54		
11	Task 2.1.1 (CORS upgrade) January 13, 14, 2020 WK	46.77	514.47		
	Validation range supplies (Task 2.2.1) October 29, 2019	50.18	50.18		
	Five (5) Trimble Alloy GNSS receivers with antenna (task 2.1.1) December 19, 2019	81,145.00	81,145.00		
	Compass Data software (Task 3.1.4) January 9, 2020	499.00	499.00		
	CORS/RTN Pivot software maintenance (Task 2.1.2) January 27, 2020	51,580.80	51,580.80		
<table border="1"> <tr> <td style="padding: 5px;"> <p>APPROVED</p>  </td> <td style="padding: 5px;"> <p>Digitally signed by Tim Johnson Date: 2020.02.14 15:59:00 -05'00'</p> </td> </tr> </table>		<p>APPROVED</p> 	<p>Digitally signed by Tim Johnson Date: 2020.02.14 15:59:00 -05'00'</p>		
<p>APPROVED</p> 	<p>Digitally signed by Tim Johnson Date: 2020.02.14 15:59:00 -05'00'</p>				
Total			\$137,414.12		

RECEIVED
 By Ben Shelton at 9:51 am, Feb 13, 2020



1008 Hutton Lane, Suite 109
 High Point, NC 27262
 Phone: (336) 841-1247
 Fax: (336) 841-1248
www.spatialdc.com

INVOICE

Bill To
Center for Geographic Information and Analysis Attn: Tim Johnson, GISP 3700 Wake Forest Rd. Raleigh, NC 27609


Remit To
Spatial Data Consultants, Inc. 1008 Hutton Lane, Suite 109 High Point, NC 27262

Order Information	
Invoice Number	CO20-02
CGIA Contract Number	IMAGE20-06
Purchase Order Number	NC10562921
Invoice Amount	\$53,341.55
Invoice Date	02/03/20
Performance Period	01/01/20 through 01/31/20

Contact Information
Susan L. Schall, President, CEO sschall@spatialdc.com (336) 841-1247 (office) (336) 906-3261 (cell) (336) 841-1248 (fax)

Invoice Summary (per Primary Task)		
Task	Item Description	Amount
1	Flight Planning	\$53,341.55
	Invoice Total	\$53,341.55

APPROVED



Digitally signed
 by Tim Johnson
 Date: 2020.02.14
 16:12:03 -05'00'

RECEIVED
 By Ben Shelton at 10:54 am, Feb 07, 2020



INVOICE

Bill To
Center for Geographic Information and Analysis Attn: Tim Johnson 3700 Wake Forest Rd. Raleigh, NC 27609


Order Information	
Invoice Number	4763
CGIA Contract Number	IMAGE20-03
Purchase Order Number	NC10562920
Invoice Amount	\$26,847.00
Invoice Date	February 5, 2020
Performance Period	December 12, 2019- January 31, 2020

Remit To
Surdex Corporation Accounts Receivable 520 Spirit of St. Louis Blvd. Chesterfield, MO 63005

Contact Information
Harold Feldman Haroldf@surdex.com 636-368-4400 636-368-4401

Invoice Summary (per Primary Task)		
Task	Item Description	Amount
1	Flight Planning	26,847.00
	Total	\$ 26,847.00

APPROVED



Digitally signed by Tim Johnson
Date: 2020.02.14 16:15:02 -05'00'

RECEIVED
By Ben Shelton at 10:57 am, Feb 07, 2020

Tab 5

Executive Director Report

Pokey Harris

Tab 5 a)

National Public Safety

Telecommunicator Week

April 12-18

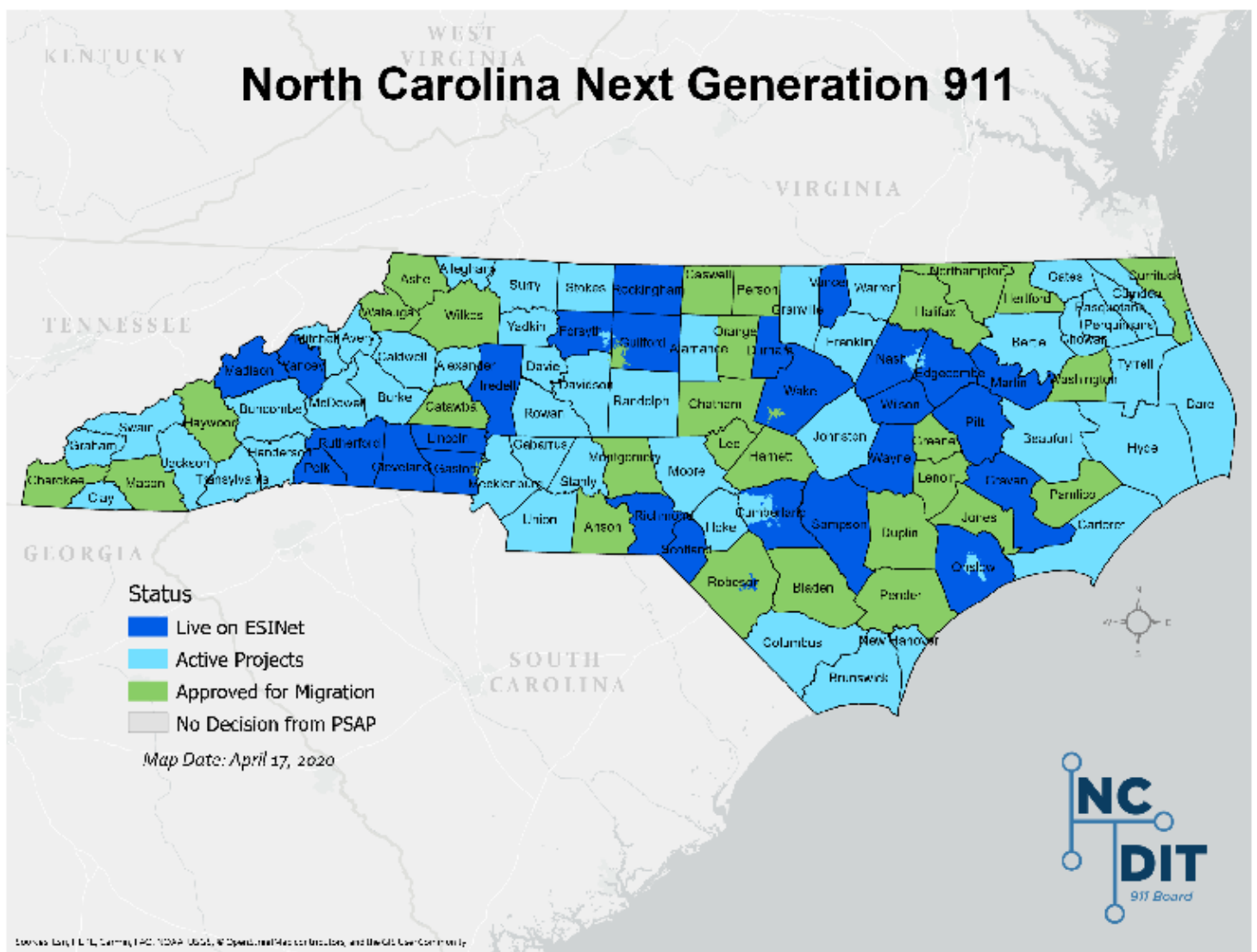
Tab 5 b)

COVID-19 Update

Tab 5 c)

NextGen 911 Migration Status

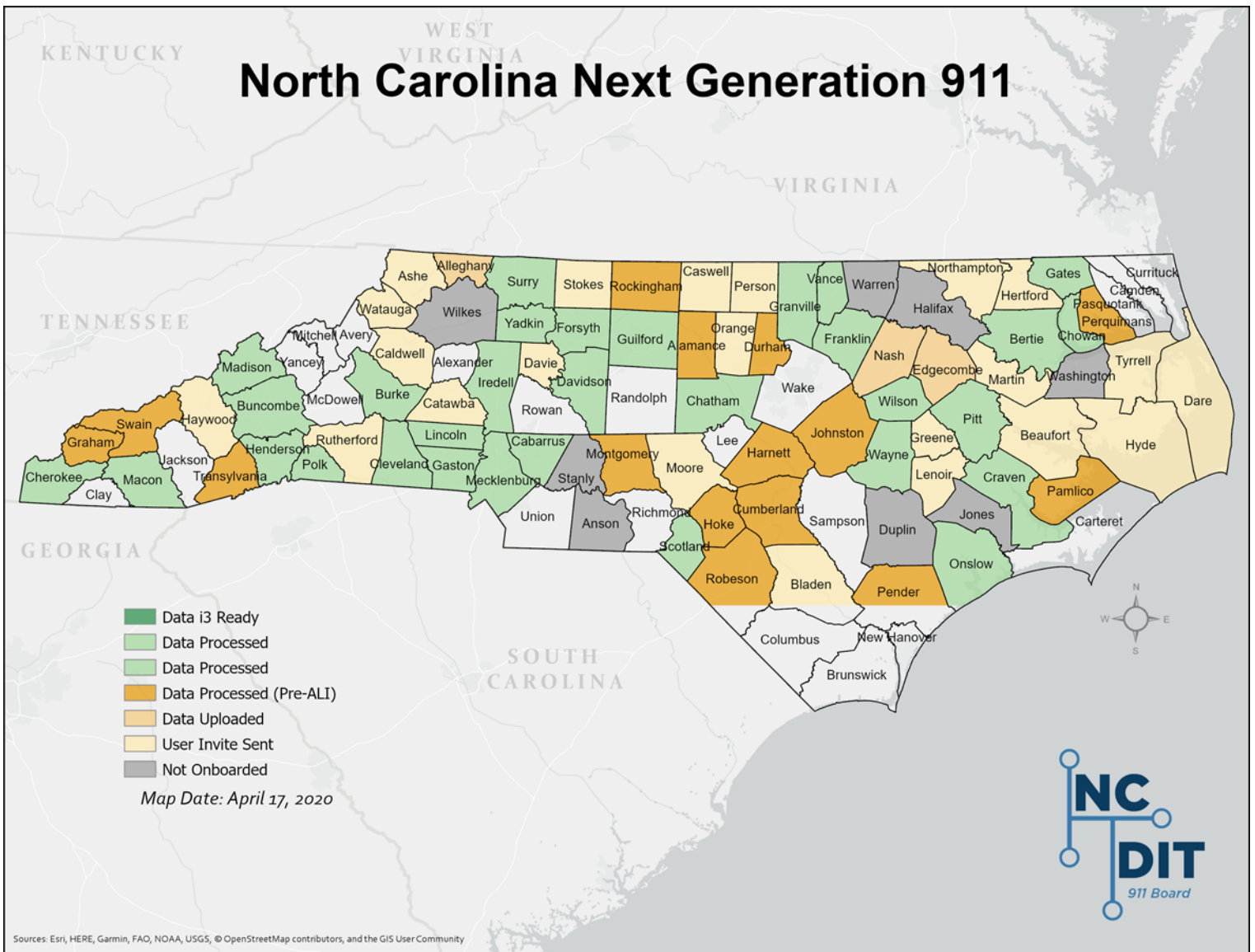
NC NG911 Migration Status



Tab 5 d)

NextGen 911 GIS Status

NC NG911 GIS Status



Tab 5 e)

**Military Installation ESInet
Interface**

Tab 6

**CGIA 2020-2023 Cycle/
Eastern Piedmont 2021 Proposal
Pokey Harris**

Tab 6 a)

Presentation

Tim Johnson/Ben Shelton



March 13, 2020

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:

The NC Center for Geographic Information and Analysis (CGIA) is pleased to submit the attached proposal for the Eastern Piedmont 2021 Orthoimagery Project. This project will continue the progress of refreshing orthoimagery across North Carolina based on your approval of the 2020-2023 cycle last year.

The Eastern Piedmont project consists of 26 counties including the Fort Bragg, Camp Mackall, and Seymour Johnson military installations. It also includes the Raleigh-Durham urban area. The project directly benefits 31 primary PSAPs in the project area by providing fresh orthoimagery prepared to state standards and quality checked by state and local government partners. The project team continues to find ways to compress the schedule and deliver the orthoimagery to the PSAP community. Flights will occur early in 2021 followed by end-user quality control throughout the summer with final delivery as early in November as possible.

The Eastern Piedmont 2021 project will be completed at a total cost of \$3,723,908 which is significantly lowered than the projected cost of \$4,141,206 expressed in the 2020-2023 proposal submitted to you last spring. The lower cost is based on a downward trend in negotiated costs for orthoimagery production services that the team has seen since the four-year proposal was prepared.

I look forward to briefing you and the Board on this proposal at the March 27 Board meeting.

Sincerely,

A handwritten signature in black ink that reads "Tim Johnson".

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

attachment

Eastern Piedmont Orthoimagery *2021*

Tim Johnson
Ben Shelton

Center for Geographic Information & Analysis

April 24, 2020





Agenda

- **Current Project Status**
- **Project Overview**
- **Project Team**
- **Project Approach**
- **Schedule**
- **Budget and Costing Approach**



CO20 Project Area

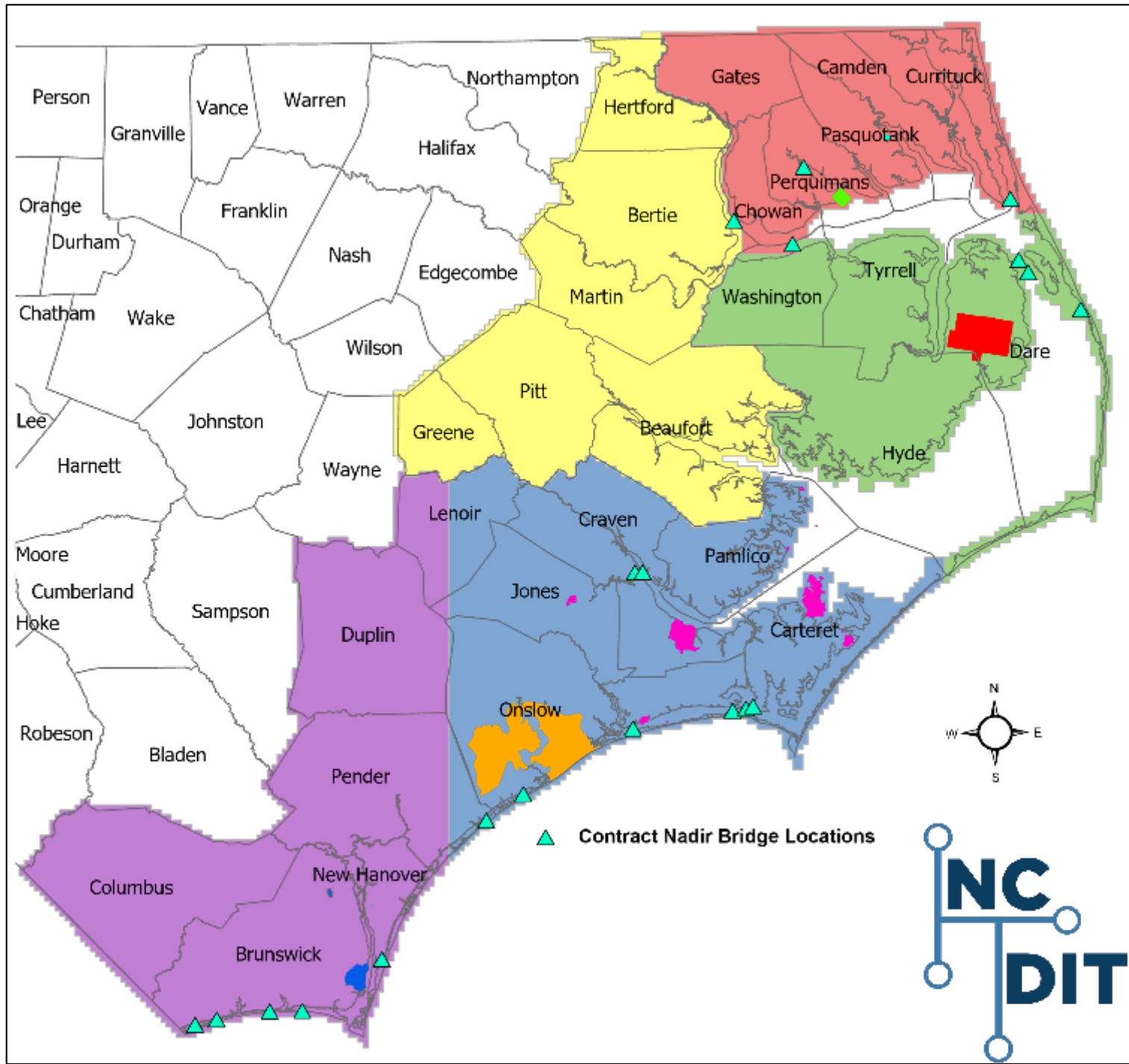
- 27 counties
- 15,678 square miles
- 17,483 tiles (5,000' by 5,000')
- Nadir Orthoimagery AOI:
 - Wilmington
 - Greenville
 - 18 major bridges
- Coordination with Military Operations:

Military Boundaries

- Harvey Point
- US Coast Guard Base Elizabeth City
- USAF Dare Bombing Range
- USMCB Camp Lejeune
- USMCAS Cherry Point
- US Army Military Ocean Terminal Sunny Point

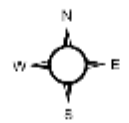
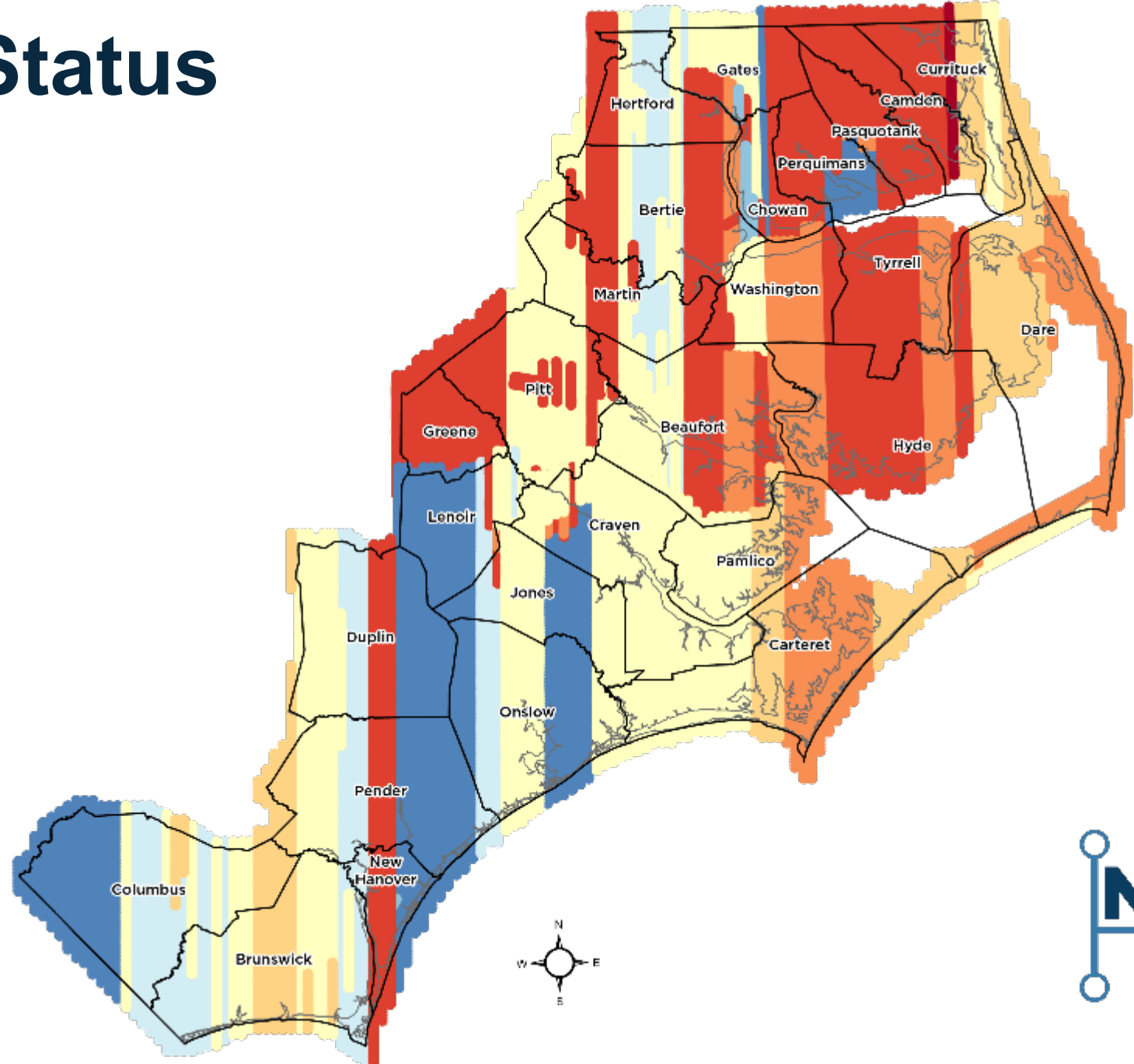
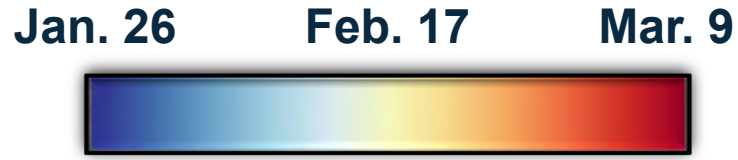
Study Area

- SA1 - Quantum Spatial
- SA2 - Surdex Corporation
- SA3 - Sanborn Map Company
- SA4 - Atlas Geographic Data
- SA5 - Spatial Data Consultants





2020 Project Status





CO20 Project Timeline



Current Orthoimagery Program Cycle

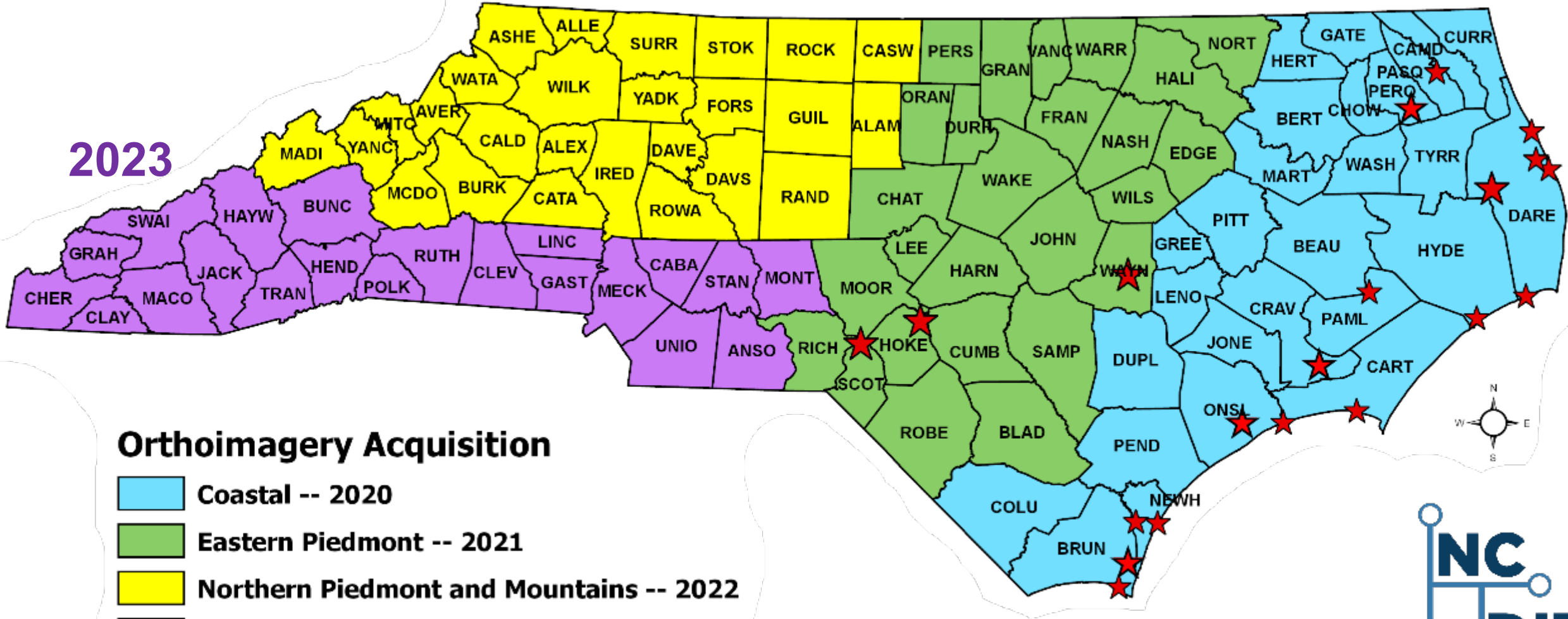
4-Year Cycle

2022

2021

2020

2023



Orthoimagery Acquisition

- Coastal -- 2020
- Eastern Piedmont -- 2021
- Northern Piedmont and Mountains -- 2022
- Southern Piedmont and Mountains -- 2023
- Military Installation Locations





4-Year Refresh





4-Year Refresh





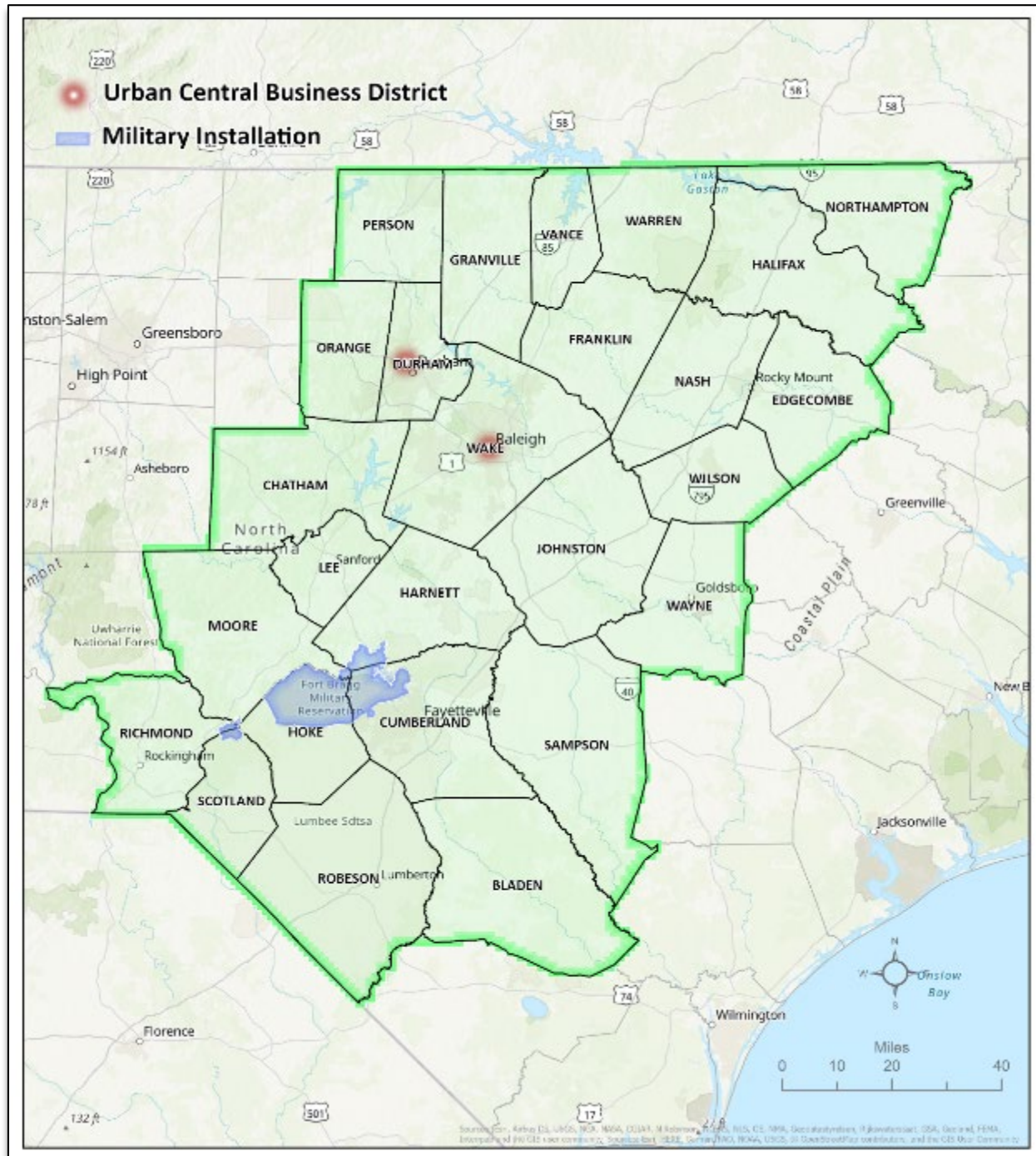
4-Year Refresh



2021 Project Area

PHASE 2 – Eastern Piedmont

Project Begin	July 2020
Project End	November 2021
Cost	\$3,723,908





Military Partnerships

Coordination includes:

- **U.S. Army - Fort Bragg and Camp Mackall**
- **U.S. Air Force Base Seymour Johnson**

- **Accessing air space**

- **Access for contractors to perform surveys for ground control in and around installations**

- **Authorization for release of final products to PSAPs**



Collaboration

Project Team Diagram



Framework

Ortho Business Plan



Business Plan for Orthoimagery in North Carolina

Statewide Mapping Advisory Committee

Working Group for Orthophotography Planning

October 2010



North Carolina
Geographic Information Coordinating Council

State Standards for Orthoimagery



State of North Carolina
Department of the Secretary of State

ELAINE F. MARSHALL
SECRETARY OF STATE

Order Adopting North Carolina Orthophotography Standards For Base Mapping

WHEREAS, the Department of the Secretary of State (Department) is required by G.S. §102-17 and §147-54.3 to adopt technical standards and detailed specifications for base mapping to be used to achieve a greater degree of statewide standardization for use in land records, and

WHEREAS, over the past year the Department has worked extensively and cooperatively with stakeholders to produce a set of revised standards for Orthophotography, and

WHEREAS, the North Carolina Geographic Information Coordinating Council has recommended the adoption of the revised standards, and

WHEREAS, I have considered the recommendations of the staff of the Department of the Secretary of State, as well as the recommendation of the North Carolina Geographic Information Coordinating Council,

NOW, THEREFORE, IT IS HEREBY ORDERED AND DECREED that pursuant to the authority granted me by G.S. §102-17 and §147-54.3(c), effective on this date, I hereby adopt the revised Orthophotography Standards for use to achieve a greater degree of statewide standardization of land mapping for use in land records in the State of North Carolina.

A copy of the adopted Orthophotography Standards is posted on the Land Records Management page of the Department's website at <http://www.secretary.state.nc.us/land/ThePage.aspx> or may be obtained by contacting the Department at:

Land Records Manager
N.C. Department of the Secretary of State
P.O. Box 29626
Raleigh, NC 27626-0626
By Facsimile: (919) 807-2285
By Email: trorgan@sosnc.com

This the 11th day of December, 2014.


Elaine F. Marshall
North Carolina Secretary of State



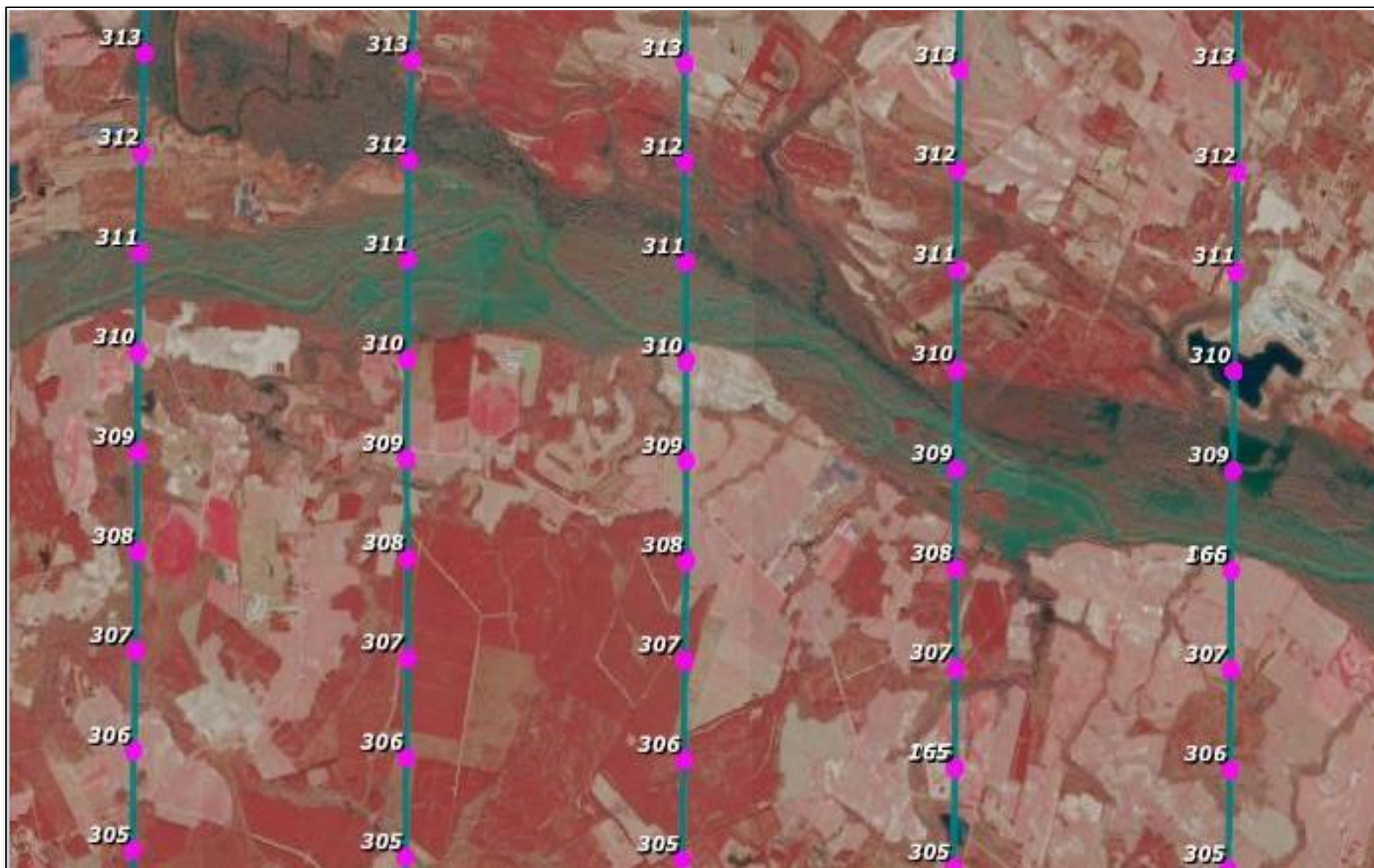


Project Approach **Color Infrared**





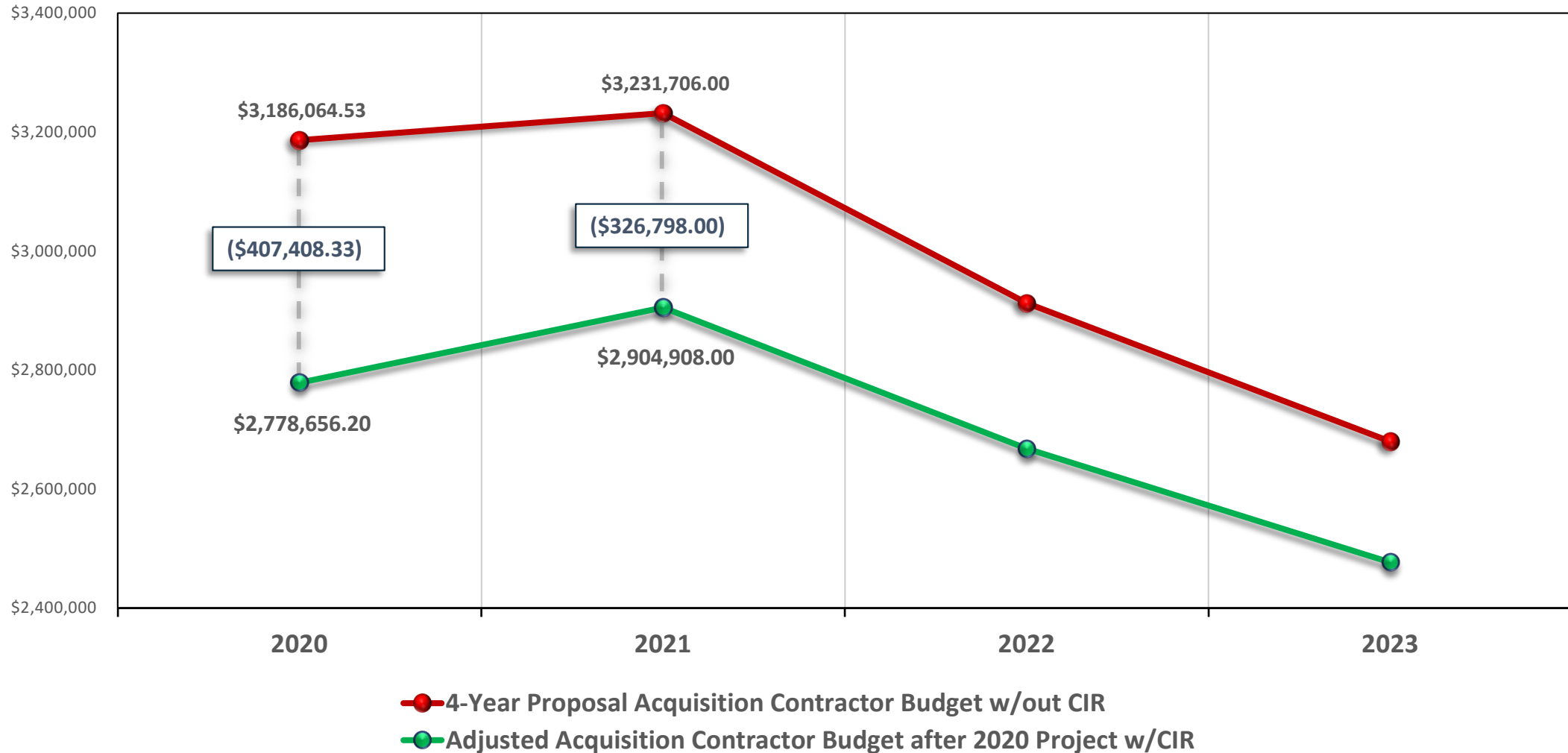
Project Approach Color Infrared





Budget and Costing Approach

ACQUISITION CONTRACTOR COST PER PROJECT YEAR
4-YEAR PROPOSAL COMPARED TO CURRENT TREND



Budget and Costing Approach

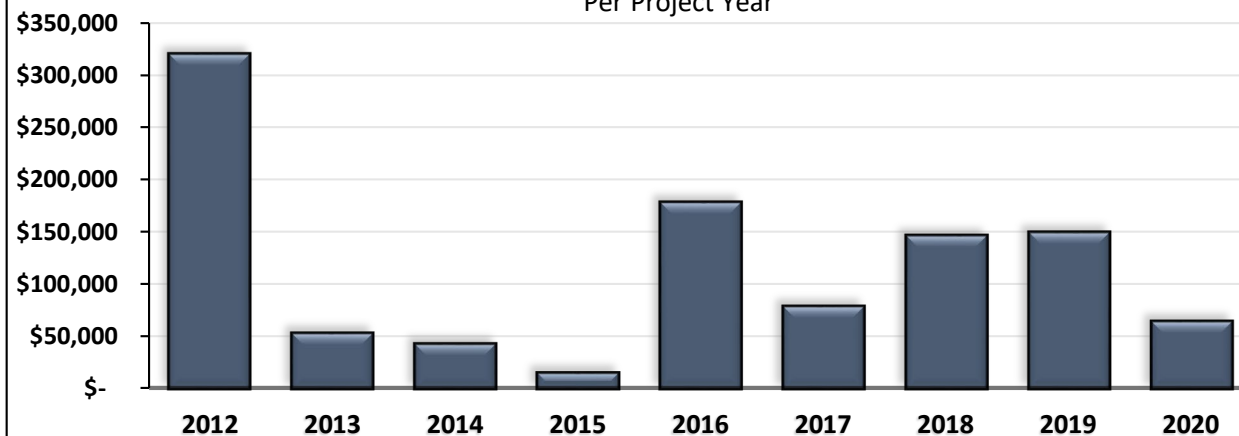
Item	Phase 2
CGIA Labor	\$350,000
Private Contractors	\$2,904,908
Information Technology	\$15,000
NCDOT-Photogrammetry	\$170,000
NCDPS-NC Geodetic Survey	\$205,000
VOICE (QC Service Provider)	\$75,000
Travel and Miscellaneous	\$4,000
Total	\$3,723,908

Analysis Includes:

- Focus on per tile actuals from past projects
- Difficulty of Project Area
- Labor Actuals
- Contractor Negotiations during Qualifications-Based Selection Process
- Economic Factors such as
 - Jet Fuel Prices
 - Technology trends
 - Delivery Hardware

Acquisition Contractors Negotiated Savings

Per Project Year





2021 Project Timeline





Summary

- **Collaborative approach to program**
- **Focus on quality and horizontal accuracy**
- **4-year refresh of imagery base map**
- **Cost-savings through economies of scale and negotiations**
- **Color Infrared Products for additional value**



Contact Info

Tim Johnson

Director

Tim.Johnson@nc.gov

Ben Shelton

Project Manager

Ben.Shelton@nc.gov



STATEWIDE ORTHOIMAGERY PROGRAM

Phase 2

Eastern Piedmont

Orthoimagery Acquisition, Processing and Distribution



Prepared for
North Carolina 911 Board

Prepared by
North Carolina Center for Geographic Information and Analysis

Submitted on
March 13, 2020

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Contents

Overview 4

Project Team Roles and Responsibilities 6

Project Approach..... 8

Costing Approach..... 13

Level of Effort and Cost 14

Schedule 15

Scope of Work..... 16

Overview

The availability of current, high-accuracy orthoimagery is essential for effective response to emergencies, especially with the wide-spread use of mobile phones. According to the North Carolina 911 Board website, over 77% of calls to NC Primary Safety Answering Points (PSAPs) in 2019 were from wireless devices. Having consistent orthoimagery products with a high degree of spatial accuracy provides positioning and situational awareness necessary to effectively respond to these calls. Since the first statewide orthoimagery project in 2010, the quality and reliability of the orthoimagery available to every PSAP in the state has consistently improved due to the investment of the NC 911 Board.

Beginning in 2012 with the first four-year cycle of the NC Statewide Orthoimagery Program, the NC Center for Geographic Information and Analysis (CGIA) has served as the overall project manager through two statewide cycles. CGIA’s approach to each project is to emphasize quality control that ensures that the board’s investment produces the best possible imagery products for use in the Computer Aided Dispatch (CAD) systems employed by PSAPs. In addition to stringent quality control measures, a focus on continually refining the imagery products and processes has improved the final deliverables, shortened the delivery timeline, and reduced costs for the board. Since 2012, CGIA has delivered over 100,000 square miles of high-resolution orthoimagery products to every Primary PSAPs in all 100 counties.

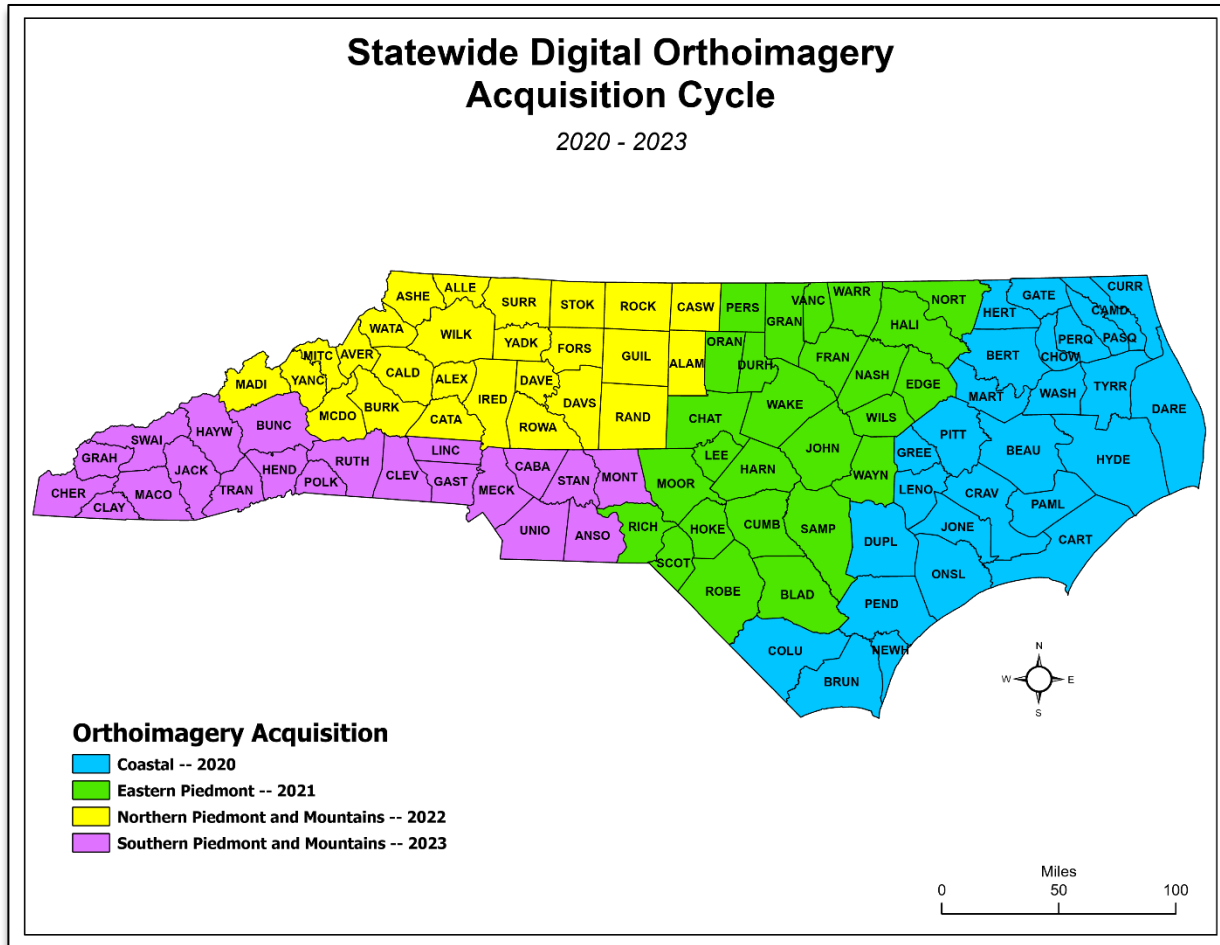


Figure 1: Current Four-Year Statewide Orthoimagery Cycle

To continue to sustain this mission-critical dataset, CGIA proposed the third statewide cycle of orthoimagery projects beginning in January 2020 and continuing through 2023 (See Figure 1). The NC 911 Board approved this proposed cycle in March of 2019, with funding approved for the first phase of the four-year cycle, which is currently underway for 27 counties in the coastal region of the state. The subject of this proposal is Phase 2, which covers 15,141 square miles and 26 counties in the Eastern Piedmont region. The unique challenges included in this project area are the Raleigh-Durham urban districts, as well as the inclusion of the Fort Bragg and Camp Mackall military installations (See Figure 2). Close coordination with stakeholders and a strict implementation of quality control measures is necessary to successfully complete the project in the narrow schedule proposed for such a large area.

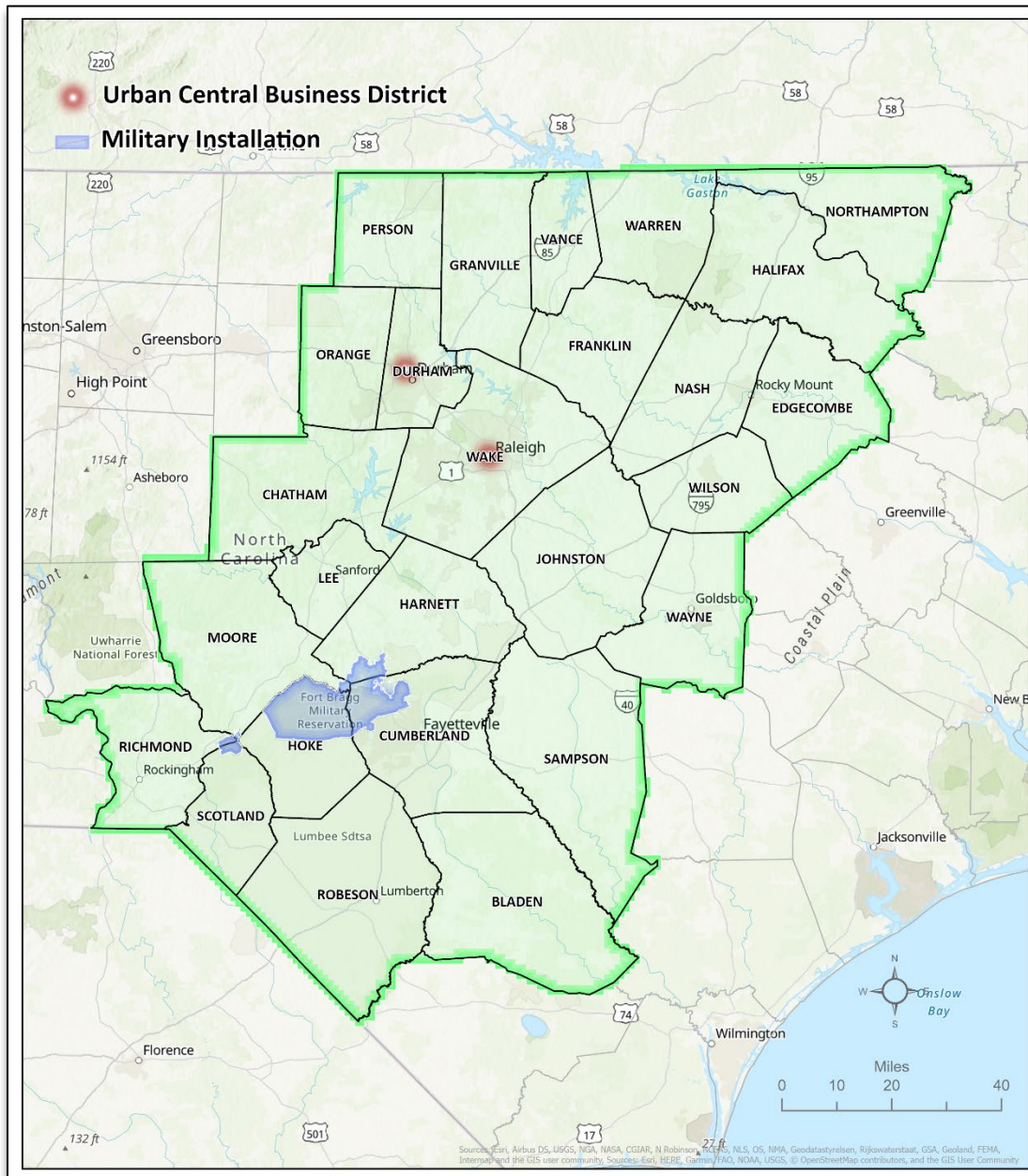


Figure 2: 2021 Orthoimagery Project Area

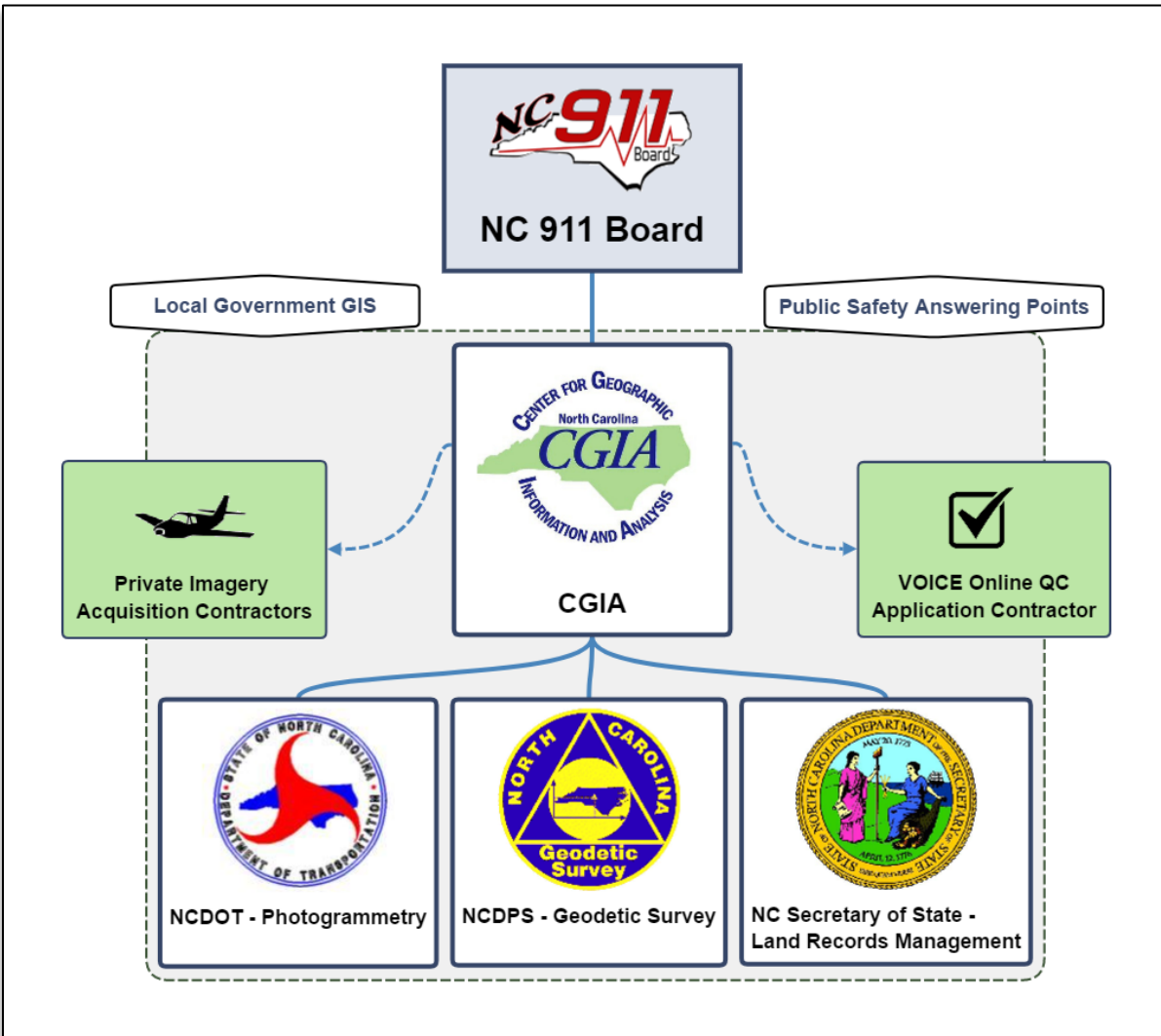


Figure 3: Project Team

As the overall project manager, CGIA must take all the distinctive challenges for each project into consideration when developing requirements and oversight. Each project is a collaborative effort among many different state agencies and external stakeholders. Each organization plays a role in creating the best final product possible. Figure 3 demonstrates the level of stakeholder involvement in each project that contributes to the success of each project.

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.

Project 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.

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 various 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 and conditions 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 4 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

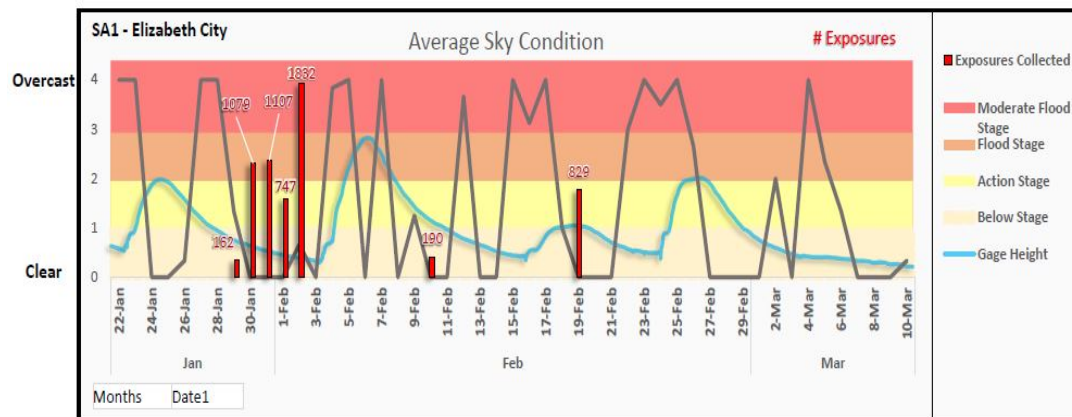


Figure 4: Acquisition Weather Analysis used in Contractor Performance Evaluations

before leaf-on conditions. Incorporating this analysis into the contractor performance evaluation contributes a measure of accountability in selecting firms for subsequent projects.

Throughout each phase of the program, oversight and accountability of private contractors has been achieved primarily 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.

Beginning with the 2020 project, the project team implemented more stringent standards for horizontal accuracy, following updated positional accuracy standards set forth by the American Society for Photogrammetry and Remote Sensing (ASPRS). Previous projects achieved a high-level of accuracy in the final products. However, with advancements in imaging and GNSS-IMU technology even higher levels of spatial accuracy can be achieved without additional cost to the program. The horizontal accuracy achieved in the final products allows for a level of confidence in 911 response, as well as validates the spatial accuracy of many of the GIS datasets being used for CAD mapping and call routing. Many local and county GIS organizations rely on the imagery from this program to create and maintain addresses, street centerlines, and other spatial data that now directly impact the Next-Generation 911 (NG911) system.

Another tool that can be leveraged by county and local GIS organizations to create and maintain NG911 spatial data is color infrared (CIR) imagery. CIR has many uses for a variety of industries, but in terms of 911, 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 5. 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 or path is in dense forest, swamp, or other



Figure 5: Color Infrared Imagery Example

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 clearly against the red tree and vegetation features.



Figure 6: Color Infrared Imagery Assessment of Flood-Impacted Ground Conditions

In the current 2020 orthoimagery project, CIR has also proved beneficial to post-flight imagery assessments. An important task after each flight is for the vendors to examine the collected images to determine if all ground conditions meet the state specifications. If the collected images contain snow cover, flooding, or other adverse ground conditions as outlined by the State Standard, the area must be collected again once conditions are more suitable. Evaluating the collected imagery quickly and efficiently is key to ensuring these areas are identified and there is opportunity enough to re-collect problem areas. Figure 6 demonstrates how CIR highlights the extent of flooding in an area by clearly outlining the dark region and blue water extending outward from the river in the example. The vendor can then quickly identify the flight lines and exposures that will require additional acquisition once waters recede.

In recent years, the costs associated with this additional product have been drastically reduced due to lower prices for computer processing hardware and storage. The cost of CIR in the 2020 project amounted to 1.8% of the acquisition contractors' proposed budgets, which is less than the amount of reduced costs achieved through negotiations during vendor selection. The project team anticipates this trend to continue in the 2021 project.

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.

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

Table 1: Imagery Extent Requirements

outlines the current requirements related to the coverage of the imagery delivered to each county. 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 7 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 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. 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.

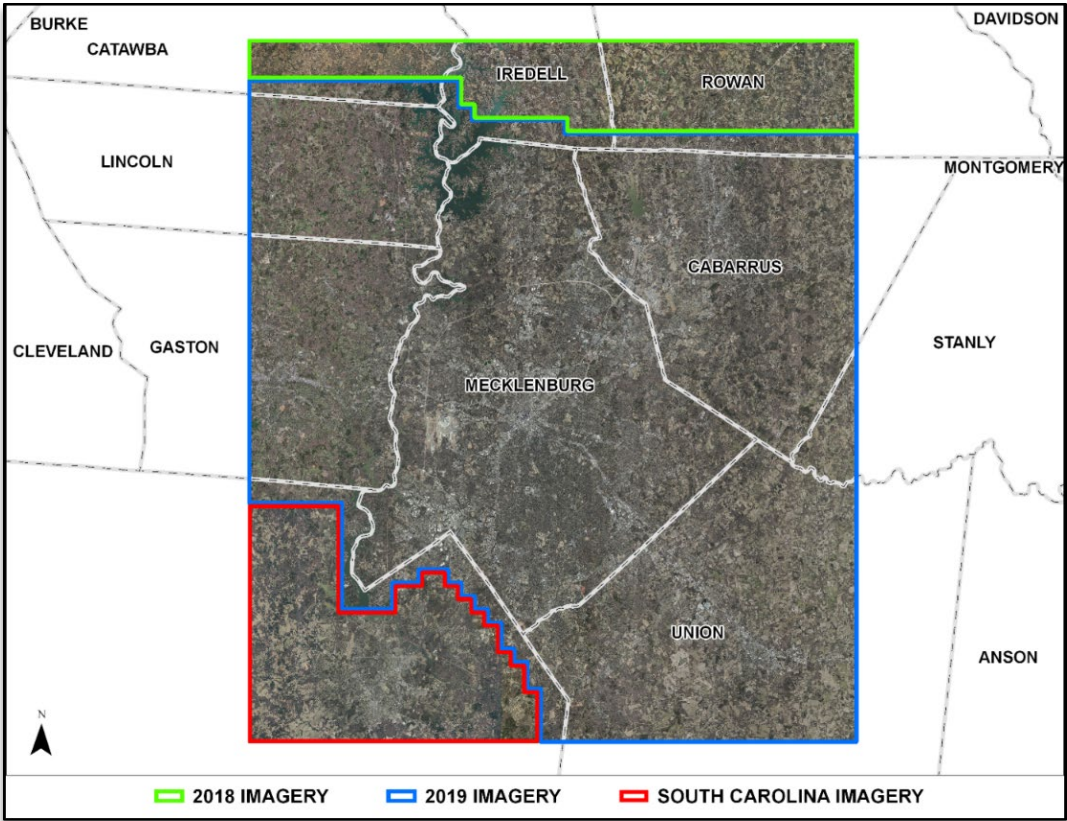


Figure 7: Single File Deliverable Extent for Mecklenburg County for the 2019 project

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 in 2018, and for Asheville and Charlotte in 2019, 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 8. By implementing a new processing approach that requires additional workflows and three-dimensional modeling, the orthoimagery product shown in the right of Figure 8 eliminates all building lean so that sidewalks, roads, and ingress/egress routes surrounding the structure are clearly visible. This approach to downtown areas will be implemented for the Raleigh and Durham central business districts in the 2021 project.



Figure 8: Typical Nadir Orthoimagery (Left) compared with new processing requirements for tall structures (Right)

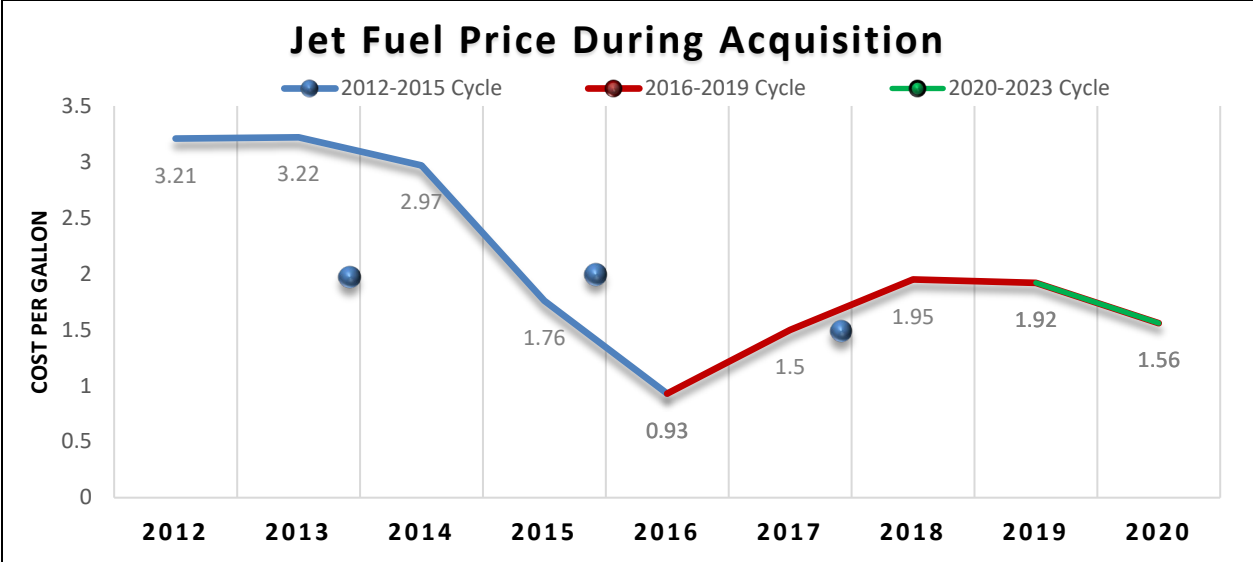


Figure 9: Jet Fuel Price Analysis

Costing Approach

Over seventy-five percent of the proposed project budget is dedicated for contracting with private firms to fly the aircraft and produce the imagery. CGIA places a major emphasis on analyzing multiple factors that go into the contractor costs for each project. The makeup of the project area directly impacts the expected costs due to several factors. The degree of elevation change, presence of military installations and restricted airspace, and amount of built-up urban areas all directly impact the cost to acquire and process imagery. The project team factors in all these variables as part of a detailed cost analysis, along with economic factors, such as overall inflation and the cost of jet fuel when budgeting for each phase. Figure 9 shows the variability in jet fuel prices for the acquisition season in each project year over the life of the program. This cost is a major impact on the cost of contracting for the project.

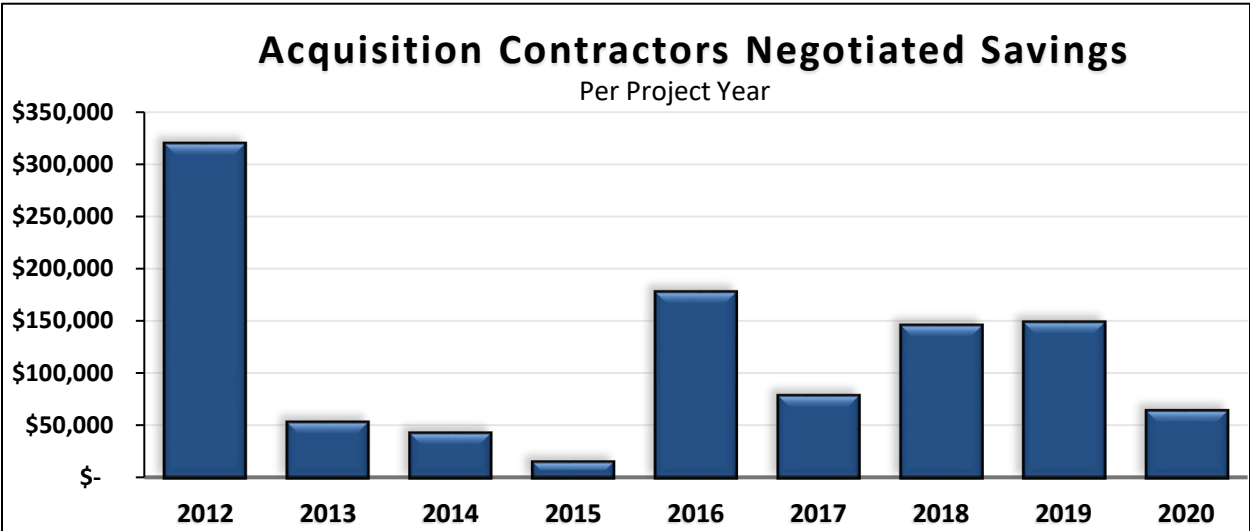


Figure 10: Projected Acquisition Contractor Budget per Project

Once the project team determines the anticipated project budget based on the factors above, a stringent analysis of cost proposals from selected vendors from the qualifications-based selection process allows for a calculated approach to negotiations. Over the history of the entire program beginning in 2012, negotiations with acquisition contractors has reduced costs by over \$1,000,000. Figure 10 shows the amount of savings achieved from contract negotiations for each of the past nine projects in the NC Statewide Orthoimagery Program.

Overall, CGIA takes great care to ensure 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 \$2,000,000 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. Also, of note for the 2021 project, CGIA has eliminated the \$20,000 typically allocated for server hosting due to organizational changes with NC OneMap image hosting.

Level of Effort and Cost

The table below provides the level of effort required to complete the 2021 project based on the set of tasks outlined in the scope of work.

Item	Phase 2
CGIA Labor	\$350,000
Private Contractors	\$2,904,908
Information Technology	\$15,000
NCDOT-Photogrammetry	\$170,000
NCDPS-NC Geodetic Survey	\$205,000
VOICE (QC Service Provider)	\$75,000
Travel and Miscellaneous	\$4,000
Total	\$3,723,908

Table 3: Budget.

Assumptions

- CGIA Labor line item is calculated at \$84 per hour starting July 1, 2020.
- Information Technology line item cost includes hardware for processing and delivering final products to all Primary PSAPs in the project area.
- The Virtual Online Inspection, Checking and Editing (VOICE) application used for the past two cycles will be continued.

Schedule

Table 4 outlines the schedule for the second phase of the orthoimagery cycle. It assumes that approval to proceed is granted by the NC 911 Board in May 2020.

Task	Begin	End
1: Qualifications-Based Selection and Procurement	July 2020	December 2020
2: Imagery Acquisition and Production	February 2021	June 2021
3: Quality Control	June 2021	November 2021
4: Delivery	November 2021	November 2021
5: Project Closeout	February 2022	April 2022

Table 4: Project Schedule for Phase 2

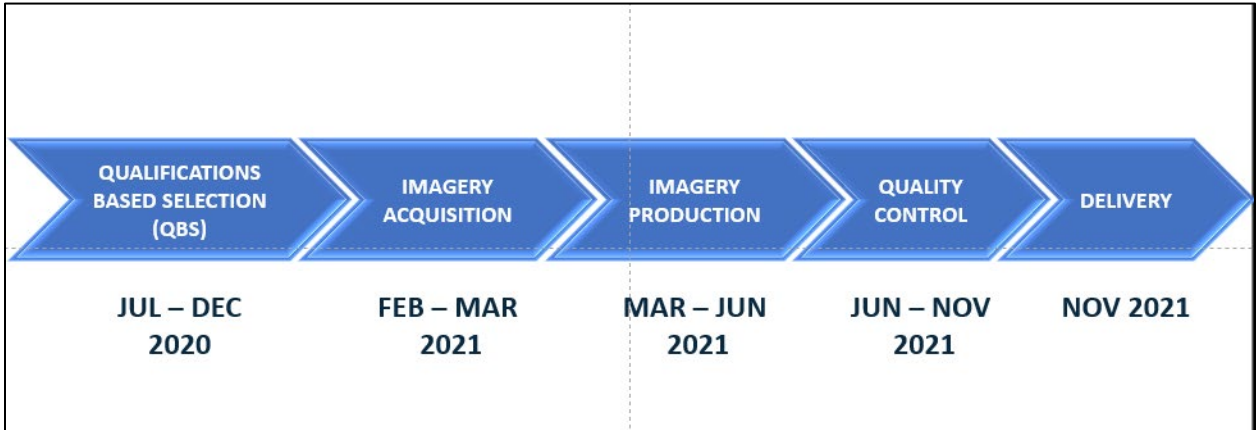


Figure 11: Expedited Orthoimagery Project Lifecycle

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 – June)

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 (July – November)

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 Cloud hosting services and initiate data loading onto NC OneMap.
- Open communications for final delivery.

Specific activities under this task include:

1. Finalize and secure Cloud hosting services and perform initial image data loading onto 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. 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 mosaic of the CIR product.
6. Complete horizontal quality control and review process.
7. Work with Primary PSAP contacts to set and schedule November 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.

Task 4: Implementation (November – February)

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 South Carolina 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 South Carolina and Virginia will supply data either directly or through their respective county governments

Task 5: Project Closeout (February – April)

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. 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.

Tab 6 b)

**Proposal Consideration and
Recommendation
*(Vote Required)***

Tab 7

**Education Committee Report
*Chuck Greene/Angie Turbeville***

Tab 8

**Funding Committee Report
*David Bone/Marsha Tapler***

Tab 8 a)

**Gates County 911
Funding Reconsideration
*(Vote Required)***

North Carolina 911 Board

PSAP Name: Gates County 911
 Contact Name: Billy Winn
 Contact Address: PO Box 148
 City: Gateville NC
 Zip:
 Contact Email: bwinn@gatescountync.gov

Instructions: All requests for review of PSAP Distribution amount must use this form with each request. Please do not change block descriptors, formulas or formatting. *PLEASE SEE INSTRUCTIONS tab for further details*** All requests are due by Aug.6, 2019. Email this form and all supporting documentation to marsha.tapler@nc.gov. If you have questions regarding this form or filing a request, please call Marsha Tapler at 919-754-6344 or email at marsha.tapler@nc.gov.**

June 30, 2019 Emergency Telephone System Fund Balance: \$ -

SOFTWARE	FY2020 Requested Increase Amount ONE-TIME Capital Purchase Cost	FY2020 Requested Increase Amount Recurring MONTHLY Cost	FY2020 Requested Increase Amount Recurring ANNUAL Cost	Comments
Dispatch Protocols (Law, Fire, Medical)			\$ 2,400.00	Priority Dispatch (EMD Renewal - 1st year)
Software Maintenance			\$ 150.00	Increased cost with Southern Software
TOTAL	\$ -	\$ -	\$ 2,550.00	

Items below this cell are to be completed by 911 Board Staff

APPROVED FY2019 FUNDING	\$ 126,439.00
Operating Expenditures Budgeted (no funds available)	\$ 12,259.57
FY2019 Anticipated Annual Recurring	\$ 2,550.00
10% fund balance (procedure for reconsiderations)	\$ 9,331.92
Requested FY2019 Funding	\$ 150,580.49
Maximum allowable carry forward 20%	\$18,663.84

Requested increase \$24,141.49

Account Id	Account Description
22-2910-599	E911 System Fund Balance (Balance line)
22-3255-410	TELEPHONE SURCHARGE
22-3831-494	INTEREST ON INVESTMENTS
Fund 22 Revenue Total	
22-4325-321	TELEPHONE <i>CenturyLink: Avg. Monthly Bill - \$2,144.43</i> <i>DIT: Avg. Monthly Bill - \$950.40</i>
22-4325-440	MAINTENANCE CONTRACT <i>Router Service Contract: Yearly</i> <i>EMD Renewal: Yearly</i> <i>Southern Software: Yearly</i> <i>CAD</i> <i>AMS (Address Management System)</i> <i>Hardware</i> <i>MDS (Mapping Display System)</i> <i>Paging</i> <i>Edge One (Revcord): Yearly</i> <i>(16 Channel- Primary Center, 8 Channel - Backup Center)</i> <i>Gately Radio Service Agreement: Yearly</i> <i>Motorola EM Vista: Yearly</i> <i>One Time Repair - Wireless Communications Error on Screen</i>
22-4325-510	CAPITAL OUTLAY - EQUIPMENT <i>10,000 for fund balance</i>
22-4325-693	911 DATABASE ADDRESSING <i>Database Addressing</i>
22-4325-694	911 DATABASE PROVISIONING <i>Database Provisioning</i>
Fund 22 Expenditure Total	

FY20 Budget		Actual 2019 Revenue/Expenses		Est. FY20 Yearly Cost	
\$	9,691.00			\$	-
\$	126,439.00	\$	110,600.37		
\$	-	\$	1,907.20		
\$	136,130.00	\$	112,507.57	\$	-
\$	36,000.00				
		\$	28,003.41	\$	25,733.16
		\$	11,404.80	\$	11,404.80
\$	56,000.00				
		\$	-	\$	353.64
		\$	-	\$	2,400.00
		\$	8,344.00	\$	8,344.00
		\$	1,171.00	\$	1,171.00
		\$	5,421.00	\$	5,529.00
		\$	2,109.00	\$	2,151.00
		\$	790.00	\$	790.00
		\$	5,778.00	\$	4,948.00
		\$	10,045.12	\$	10,045.12
		\$	21,698.62	\$	21,698.62
		\$	125.00	\$	-
		\$	-	\$	-
\$	-	\$	51,516.00		
\$	22,880.00	\$	22,000.00	\$	22,880.00
\$	21,250.00	\$	22,000.00	\$	21,250.00
\$	136,130.00	\$	190,405.95	\$	138,698.34

\$ (108.00)
\$ (42.00)

TEMPLATE

FY2020 Funding Reconsideration Worksheet:

PSAP Name:

Gates Co 911

FY2019 Ending Fund Balance	\$0.00
PSAP Funding Distribution for FY2020	\$126,438.77
Approved Budgeted Operational for fiscal year.	\$138,698.34
Approved Budgeted Capital for fiscal year.	\$0.00
Fund balance before carry forward:	-\$12,259.57

10% allowable carryforward: \$9,331.92

Total Remaining Fund Balance for Use: -\$21,591.49

If fund balance remains, apply funding reconsideration expenditure request against total to determine if additional funding is necessary.

Medical Priority Consultants, Inc. dba Priority Dispatch Corp.
 110 South Regent Street, Suite 500, Salt Lake City, Utah, 84111, United States
 Phone: (801) 363-9127 Fax: (801) 746-5879
 Email: accounting@prioritydispatch.net
www.prioritydispatch.net

INVOICE

Invoice Number	SIN215418
Invoice Date	28 Feb 2019
Agency ID	10821

Billing Address

Gates County 911
 202 Court St
 Gatesville, North Carolina 27938
 United States

Shipping Address

Gates County 911
 202 Court St
 Gatesville, North Carolina 27938
 United States

Customer Reference	Quote #	PO #	Invoice Currency	Due Date
	Q-38973	invoice	USD	10/30/2019

Product Name	Quantity	Total
Priority Dispatch System ESP EMD License Renewal, Service & Support for ProQA, AQUA, Cardsets, Technical Support and Upgrades 4/30/2019 - 4/29/2020	2	2,400.00

Net Total	2,400.00
Tax Total	161.99
Invoice Total	2,561.99

Payment Detail

Please make checks payable to Priority Dispatch in US Dollar (USD). Contact Accounting@prioritydispatch.net with any questions regarding this invoice.

From: koutland@gatescountync.gov
To: [Tapler, Marsha](#)
Cc: "[Billy Winn](#)"; [Amanda Ward](#)
Subject: FW: [External] PSAP Reconsideration
Date: Friday, January 17, 2020 2:36:47 PM
Attachments: [image001.png](#)
[image002.png](#)
[FY2020_PSAP_FUNDING_RECONSIDERATION_REQUEST_01.17.20.xlsx](#)

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report_spam@nc.gov

Marsha,

Billy has provided additional information below in red for the parts I could not answer yesterday. Please let me know if you need any additional information.

Hope you have a great weekend.

Kimberly Outland, MBA
Gates County Finance Officer
PO Box 148
200 Court Street
Gatesville, NC 27938
(P) (252) 357-1251
(F) (252) 357-0073

Hello Kimberly,

In speaking with my Director, it was discussed that the reconsideration did not come in before the deadline, so the following questions need to be answered.

1. The grant for Gates was 2015, so why is it now an urgent need to purchase the equipment outside the date of the reconsideration policy and not for the FY2021 cycle?

The issues related to our emergency reconsideration are due to expending a portion of our fund balance during the 2015 grant period when we started our backup project. At the time we committed to using fund balance money to make the project "sell" better, and honestly, we had quite a sizable sum and thought it would be prudent to spend some of it down. In 2018, following the guidance to become EMD certified, the questions were asked to the "then supervisor" Herman Weiss, to ensure everything was an eligible expense and to complete a funding reconsideration if he needed to. Only 1 part of that was completed. He found out that the software and training was eligible however he did not get the funding piece taken care of.

2. What is causing this request to be an emergency issue?

We erroneously moved ahead with the equipment and training, fully depleting the fund balance and actually dipping into county coffers to make it all work out at a cost of \$50,000.

All that to say this, We agree that the Radio Capitol project could/should wait until the 2021 reconsideration or Grant process however there is a demonstrated deficit in the allocated funds for

2020 and the projected expenses for 2020. (FY 2020 final approved funding distribution \$ 126, 438.77 – Projected expenses \$139,000) We also feel like we need to request some funds to begin establishing a fund balance in case an emergency capital purchase or repair arises. (\$10,000) So We would propose that the reconsideration be for \$32,500 for fees associated with EMD renewal, contract changes and fund balance regeneration.

Question as they relate to the reconsideration:

1. Radio quote notes WIN7 platform. Why as WIN7 will not be supported (line 17)?
2. Also, the total list is not eligible in full. Only 2 positions are eligible at the primary, so the cost for the 3rd would not be eligible. Please provide quote with correct seat amount.

We would like to remove the radio capital purchase from the emergency reconsideration. The radio issue will be evaluated and a 2021 reconsideration or grant will be completed to account for these issues.

Thank you.

Marsha

Marsha Tapler
Financial Analyst
919.754.6344 office
marsha.tapler@nc.gov



Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: koutland@gatescountync.gov <koutland@gatescountync.gov>

Sent: Wednesday, November 27, 2019 3:48 PM

To: Tapler, Marsha <marsha.tapler@nc.gov>

Cc: 'Billy Winn' <bwinn@gatescountync.gov>; Amanda Ward <award@gatescountync.gov>

Subject: [External] PSAP Reconsideration

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report_spam@nc.gov

Please the attached Reconsideration request for Gates County. The justification is listed on the instructions tab in red font. The itemized budget detail is also on the spreadsheet.

Let me know if you need additional information.

Thanks,

Kimberly Outland, MBA
Gates County Finance Officer
PO Box 148
200 Court Street
Gatesville, NC 27938
(P) (252) 357-1251
(F) (252) 357-0073

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Tab 8 b)

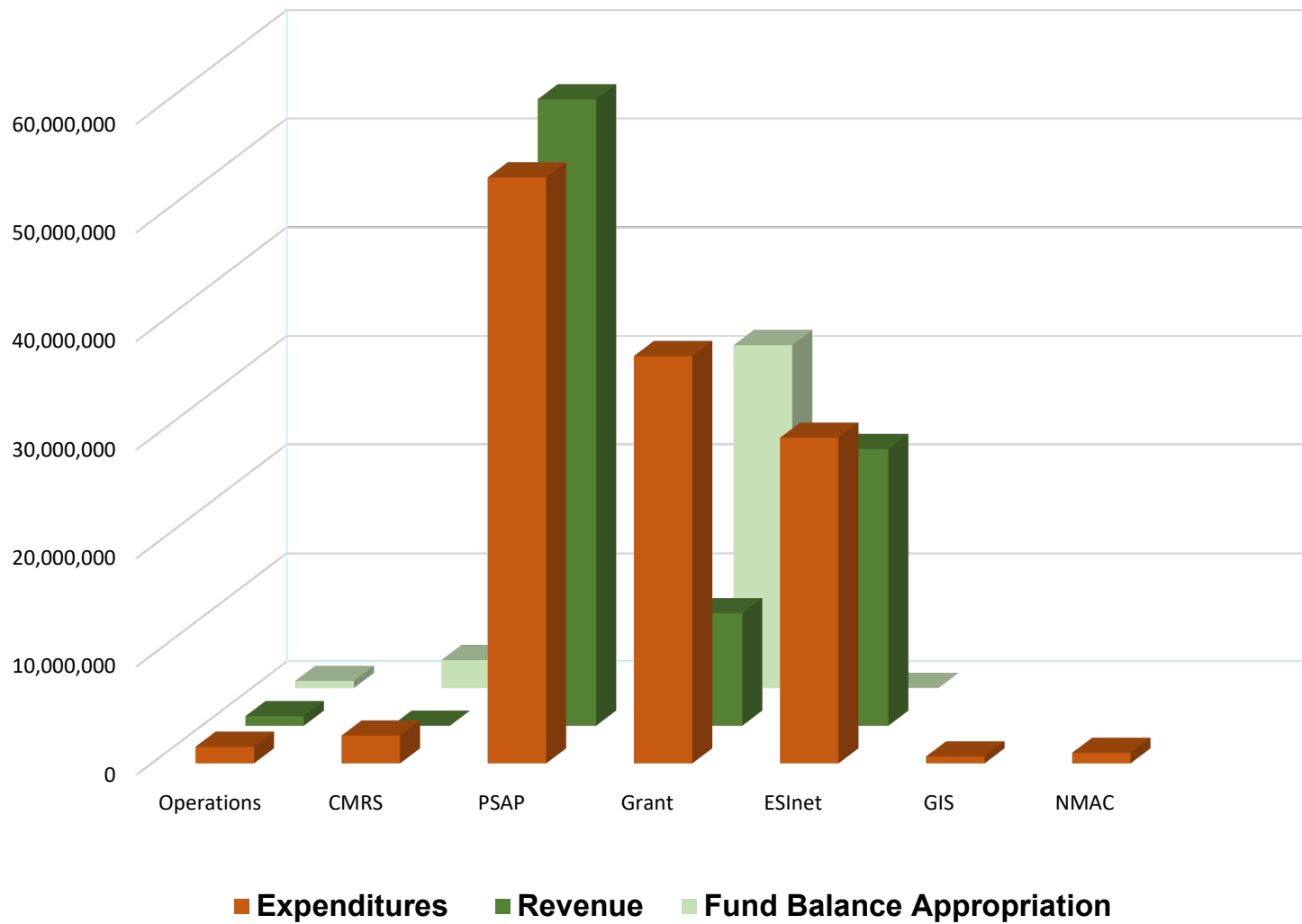
FY 2021 NC 911 Board Budget

(Vote Required)

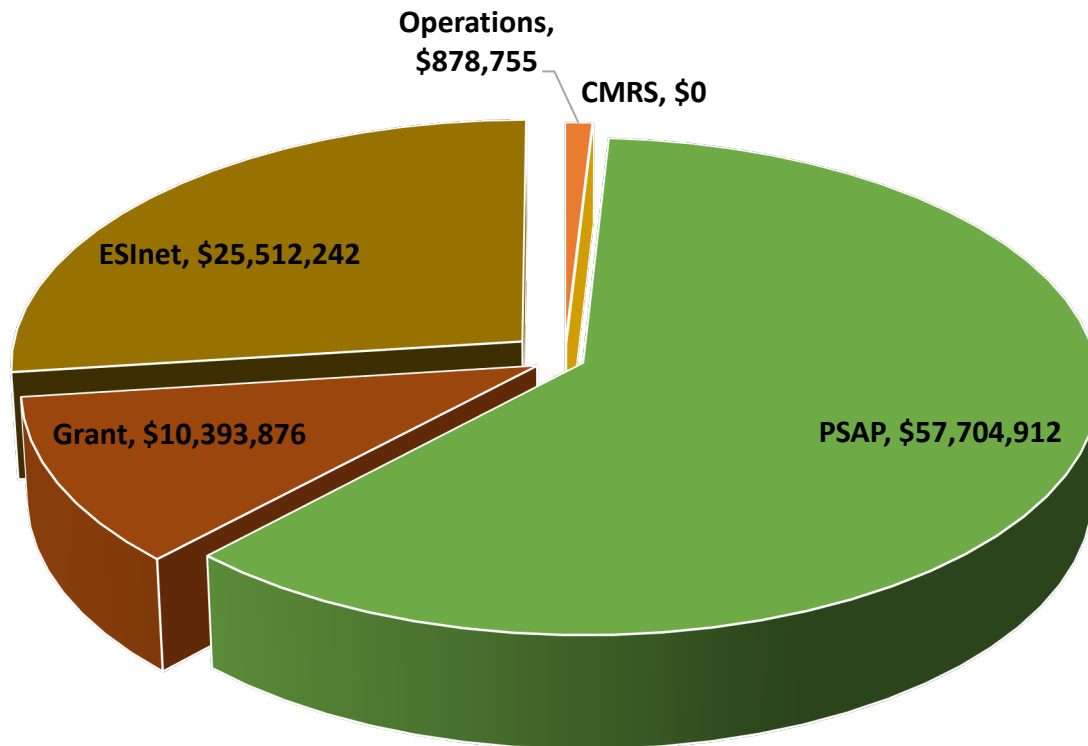
PROPOSED 911 Board FY2021 Budget Roll-up	Approved Budget SFY2020	Proposed Budget SFY2021
Int/Div on Investments	\$1,571,379	\$2,156,179
Admin Fund 1.5% Service Charge Revenue	\$824,649	\$878,755
Admin Fund Use of Fund balance	\$716,511	\$655,617
Total	\$1,541,160	\$1,534,372
Operational Cost - Admin Fund 1.5%		
Personnel Services	\$912,982	\$997,053
Contractual Services	\$340,500	\$321,752
Operational Services	\$46,193	\$31,000
Travel - Staff	\$105,000	\$69,300
Travel-Subsistence - Board Member	\$35,000	\$32,500
Other Purchased Services	\$88,985	\$59,267
Equipment	\$12,500	\$23,500
Total	\$1,541,160	\$1,534,372
Revenue/Expenditures balance	\$0	\$0
CMRS Service Charge Revenue	\$6,837,109	\$0
CMRS Cost Recovery Use of Fund Balance		\$2,574,506
CMRS Cost Recovery Reimbursement	\$4,000,000	\$2,574,506
Revenue/Expenditures balance	\$2,837,109	\$0
PSAP Service Charge Revenue	\$73,521,690	\$57,704,912
PSAP Statutory Distribution/911	\$55,000,000	\$54,000,000
Revenue/Expenditures balance	\$18,521,690	\$3,704,912
PSAP_StateWide Projects Service Charge Revenue	\$0	\$10,393,876
FY-EOY Estimated Transfer (IN) Balance	\$22,659,016	\$10,000,000
Grant Fund Balance	\$8,421,999	\$31,586,631
Total	\$31,081,015	\$51,980,507
Proposed PSAP/Statewide Grant Expenditure	\$22,659,016	\$17,000,000
Grant Encumbered Award Expenditure	\$8,421,999	\$20,548,976
Revenue/Expenditures balance	\$0	\$14,431,531
**Grant Encumbered will be adjusted by PSAP year-end accruals.		
NG 911 Fund		
NG 911 Service Charge Revenue	\$9,018,000	\$25,512,242
FY-EOY Estimated Transfer (IN) Balance	\$0	\$7,784,795
NG 911 Use of Fund balance	\$13,962,778	\$0
Total	\$22,980,778	\$33,297,037
NG 911 Fund Expenditures		
ESInet	\$21,432,641	\$30,029,566
GIS	\$440,000	\$641,800
NMAC	\$1,108,137	\$980,073
Total	\$22,980,778	\$31,651,439
Revenue/Expenditures balance	\$0	\$1,645,598

	Approved Budget SFY2020	Proposed Budget SFY2021
TRS FUND (Pass thru)		
TRS Revenue	\$10,000,000	\$10,000,000
TRS Revenue Interest	\$18,000	\$21,000
	<u>\$10,018,000</u>	<u>\$10,021,000</u>
TRS Expenditure	<u>\$10,018,000</u>	<u>\$10,000,000</u>

NC 911 BOARD PROPOSED BUDGET FY2021

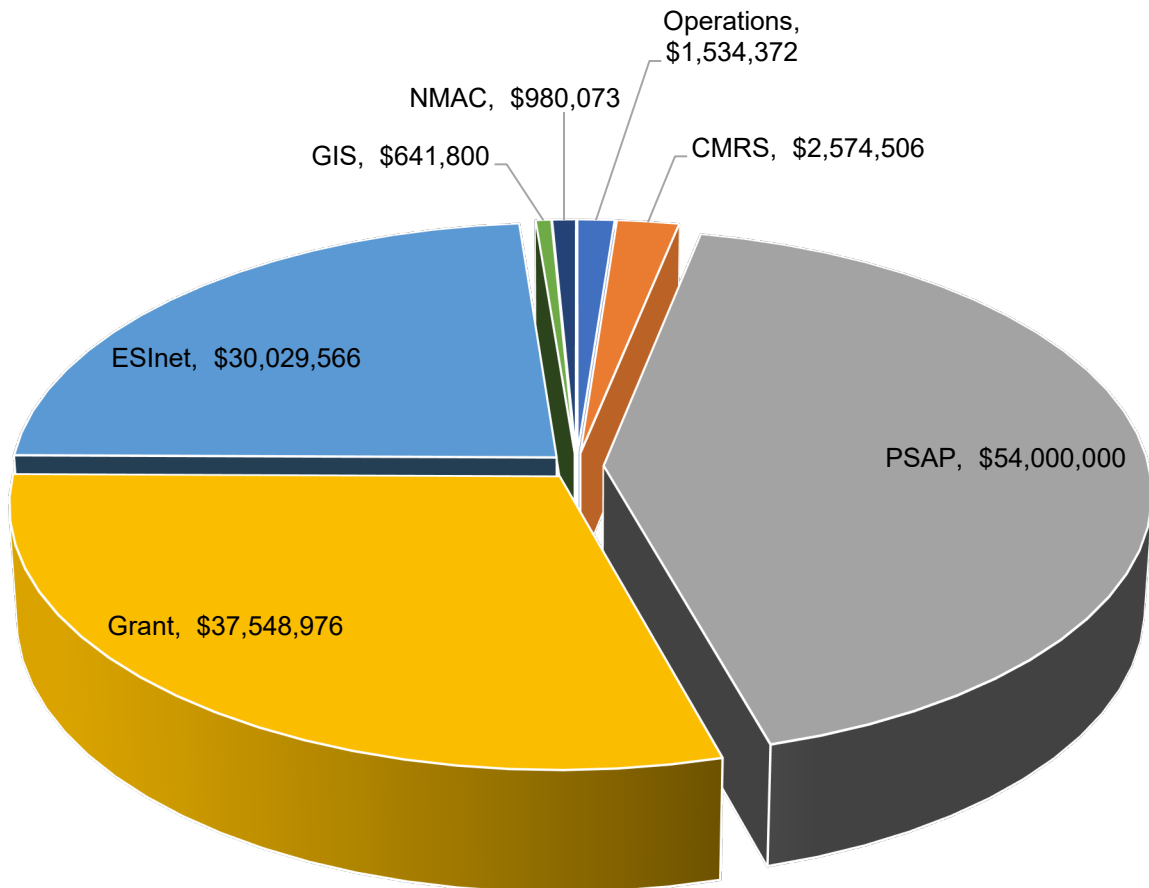


911 Board Estimated FY2021 Service Charge Revenue



■ Operations ■ CMRS ■ PSAP ■ Grant ■ ESInet

911 Board Estimated FY2021 Expenditures



■ Operations ■ CMRS ■ PSAP ■ Grant

Tab 9

Finance Team Report

Marsha Tapler/Kristen Falco

Tab 10

Standards Committee Report

Donna Wright/Tina Gardner

Tab 11

Technology Committee Report

Jeff Shipp/Gerry Means

Tab 12

**911 Regional Coordinator
Reports**

**Conner/Gardner/Newberry/
Turbeville**

Tab 13

Other

Adjourn

****Please reference the 2020 master calendar and NC 911 Board website for upcoming Committee and Board meetings. Notices will be sent prior to all meetings.****

