

TOWN OF SWANSBORO FIRE DEPARTMENT

Proposal for Advanced Life Support First Responder Agency
Designation – Comprehensive Outline



Onslow County – Camp Lejeune EMS System – Peer
Review Committee
August 6, 2024

July 15, 2024

Norman Bryson, Emergency Services Director
Onslow County
1180 Commons Drive South
Jacksonville, NC 28540

Re: Request for Advanced Life Support Capabilities – Peer Review Committee

Dear Mr. Bryson,

The Town of Swansboro Fire Department remains committed to providing our residents and visitors with the highest standard of emergency medical care. As our community continues to grow and the demand for medical services increases, our services must evolve to meet the needs effectively. We respectfully request approval to transition to a paramedic-level service, which we believe will significantly enhance our ability to provide equitable access to advanced life-saving interventions.

We aim to improve patient outcomes by offering advanced care practices within minutes to one of the farthest regions of Onslow County from definitive care facilities, potentially saving more lives. As an Onslow County—Camp Lejeune EMS system agency, we strive to remain an integral part of the partnership that serves not only the Town of Swansboro but also Onslow County. We are confident that the proposed transition to a paramedic-level service will continue to strengthen the system's ability to provide citizens and guests with the highest standard of care.

We respectfully request your consideration and support of our proposal. We look forward to discussing the proposal further with the Peer Review Committee on Tuesday, August 6, 2024. Please do not hesitate to contact me if you require further information or task(s) on our behalf. Thank you for your time and consideration on this matter.

Respectfully,

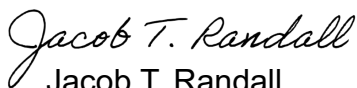

Jacob T. Randall
Fire Chief

TABLE OF CONTENTS

Executive Summary	3
Purpose	3
Objectives	3
Summary	3
Introduction	5
The Community	5
The Agency	5
Needs Assessment	6
Response Time	6
Low System Resources	6
Distance to Definitive Care	7
Call Frequency	7
Justification	7
Implementation	8
Program Development	8
Key Positions	8
Roles & Responsibilities	8
Phase I – Planning & Approval	9
Phase II – Service Initiation	10
Phase III – Service Completion & Evaluation {Continuous}	10
Operations	11
Scope of Services	11
Location of Services	11
Provider Access	11
Hours of Coverage	12
Communications	12
Apparatus	13
Software	13
Agency Enhancements (Policies & Procedures)	13
Onslow County Peer Review Committee	14

System Evaluation	15
Operational Performance	15
System Transparency	15
Quality Assurance & Improvement	15
Training & Education Components	16
System Performance Metrics	16
Appendices	18
Appendix I – Swansboro Fire Department Primary Response District	19
Appendix II – Distance to Definitive Care {Onslow Memorial Hospital}	20
Appendix III - Distance to Definitive Care {Naval Medical Center Camp Lejeune}	21
Appendix IV – Distance to Definitive Care {Carteret Healthcare}	22
Appendix V – Distance to Definitive Care {Carolina East Medical Center}	23
Appendix VI – Onslow County EMS Zone 5 Heat Map {2020 – 2023}	24

Executive Summary

Purpose

To enhance the Town of Swansboro Fire Department's Emergency Medical Services (EMS) to the Paramedic level, providing for a higher quality of service and strengthening the overall response capabilities of the Onslow County—Camp Lejeune EMS system. By upgrading to Paramedic-level services, we seek to improve patient outcomes and ensure that all residents and visitors of Onslow County have equitable access to the highest standard of care.

Objectives

The primary objectives of strengthening the Town of Swansboro Fire Department's EMS capabilities to the Paramedic level are to improve patient outcomes by delivering advanced medical care, expand our EMS capabilities to perform critical life-saving interventions and increase the availability of system resources to serve the community better. Additionally, this improvement aims to strengthen the overall response capabilities of the Onslow County - Camp Lejeune EMS system, ensure equitable access to high-quality pre-hospital care for all residents and visitors, and improve operational efficiency by optimizing response times and resource allocation. Through these objectives, we seek to amplify our contributions to the Onslow County – Camp Lejeune EMS System through these objectives.

- I. Improve Patient Outcomes*
- II. Enhance Provider Capabilities*
- III. Strengthen System Resource Availability & Response*
- IV. Support Equitable Access to Care*
- V. Amplify Operational Efficiency*

Summary

The Town of Swansboro Fire Department provides first responder capabilities through EMT Basic-certified personnel deployed on fire apparatus, responding to all levels of Emergency Medical Dispatch (EMD) incidents. Our team strives for rapid response times, with a target 90th percentile response time benchmark of 4.5 minutes

district-wide. Despite these efforts, system resource shortfalls often impact advance provider arrival times or consist of a unit with an equal level of certification responding, further complicated by an increasing overlapping call percentage, highlighting the need for enhanced EMS capabilities to serve better our community's growing and evolving emergency medical needs.

The Town of Swansboro Fire Department aims to strengthen the Onslow County—Camp Lejeune EMS system by augmenting our EMS capabilities to include Paramedic-level care. Adding advanced life support (ALS) resources will enable our first responders to initiate critical interventions on-scene, reducing care delays promptly. The amplification of services also aims to bolster the regional EMS system by alleviating pressure on existing resources, improving patient outcomes through timely and effective advanced care, and ensuring that all residents and visitors in Onslow County have rapid and continuous access to the highest standard of emergency medical services.

Introduction

The Town of Swansboro, a picturesque coastal community in the Northeastern portion of Onslow County, is known for its rich history, charming downtown, and vibrant waterfront. Serving this flourishing town is the Swansboro Fire Department, a dedicated and professional organization committed to providing high-quality service. The Swansboro Fire Department provides 24-hour Fire, Rescue, and emergency medical services (non-transport) through trained EMT Basic-certified personnel. Operating with efficiency and dedication, our first responders utilize fire apparatus to deliver essential pre-hospital care despite facing challenges related to system resource shortfalls that impact on-scene times. The department's commitment to excellence and community-focused service fosters a culture conducive to our efforts to enhance and improve our operations continually.

The Community

The Town of Swansboro, North Carolina, has an estimated permanent population of 3,744, encompassing roughly 2.421 square miles of incorporated city limits. Swansboro boasts a diverse demographic mix that includes families, retirees, and young professionals. The town has experienced a steady growth rate, highlighted by the development of numerous housing projects catering to diverse residents. Additionally, Swansboro is home to two 24-hour senior care facilities and various commercial occupancies. The Town is divided by the major thoroughfare of NC Highway 24, known as West Corbett Ave, contributing to a significant influx in a transient population.

The Agency

The Swansboro Fire Department (SFD) is a legally established agency defined in the Town of Swansboro Unified Development Ordinance (UDO). Staffed 24 hours per day, our agency comprises 44 individuals. The SFD is an all-hazards response agency providing Fire, Rescue, and first responder services to the incorporated city limits of Swansboro and the unincorporated area of Onslow County, known as the White Oak River Fire District. SFD answered 1,221 calls for service in 2023, a 50.2% increase in volume from 2022 incidents, totaling 813. The department holds an Insurance Services Office (ISO) rating of 4/9e.

Needs Assessment

The SFD operates with EMT Basic-certified personnel, providing first responder services as an approved basic life support agency of the Onslow County—Camp Lejeune EMS System. However, an aging population, increasing complexity of medical emergencies, and identified system resource shortfalls reinforce the need to expand services to become an Advanced Life Support (ALS) first responder agency.

Response Time

The SFD has set a 90th-percentile benchmark response time of 4.5 minutes throughout our primary response districts. Across the county, the EMS system maintained an average response time of 10 minutes and 33 seconds (2023), and Zone 5 exceeded that average by over two minutes. An inequality of such highlights the need for enhancement to provide the closest appropriate resource for all emergencies, especially those of a time-sensitive nature. Allowing the SFD to provide rapid emergency response while underscoring the urgent need for our department to enhance its capabilities to include ALS services potentially improves patient outcomes. Further, it supports the overall emergency medical response framework in Onslow County, offering a tiered response component that can aid the improvement of system-wide ALS unit response times.

Low System Resources

Our goal is to strengthen the EMS system. We understand that Onslow County is not immune to national issues, and it often faces significant challenges in providing consistent and high-quality emergency medical care due to low system resources and provider shortages. In such situations, EMTs often have to wait for 12-lead EKGs to be interpreted by supervisors or another ALS unit responding, causing critical delays in patient care and further straining resources. Likewise, incidents frequently move into pending status when system resources are depleted, units are awaiting to clear other traffic, or assistance from outside agencies is required. On-scene and response times are further exacerbated when the closest responding unit is dispatched from Jacksonville, extending an already above-average time to our area.

Distance to Definitive Care

Swansboro's unique geographical location means transporting patients to hospitals or specialized care centers often involves significant travel times {Appendix II}, which can critically impact patient outcomes in emergencies. Providing a paramedic in Swansboro is underscored by the critical need for rapid access to ALS in a relatively distant community from definitive care facilities, highlighted in time-sensitive emergencies, with diminished chances of survival and recovery for patients experiencing life-threatening conditions such as cardiac arrests, severe trauma, and strokes.

Call Frequency

Swansboro is characterized by an aging population, contributing to the high demand for emergency medical services. We also have two senior care facilities, numerous doctor offices, and clinics, further exacerbated by a major thoroughfare with a significant daily influx of transients and travelers. Data from 2020 to 2023 shows that Swansboro houses two significant "hot spots" for the zone 5 district. The rising call volume, especially with the aging population, is potentially accompanied by increased health disparities that more frequently may require ALS capabilities. SFD's station is centrally located between both "hot spots," providing for a rapid response.

Justification

The need for an ALS presence in the Swansboro area is critical to enhancing the local emergency medical services and supporting the broader Onslow County-Camp Lejeune EMS system. An ALS unit stationed in Swansboro would ensure that advanced medical care is readily available, reducing the reliance on distant resources and minimizing delays caused by provider shortages. This strategic positioning would allow for quicker response to critical incidents, reducing the time patients wait for lifesaving interventions. Additionally, a Swansboro-based paramedic can provide crucial support to surrounding areas, filling in gaps when system resources are low and extending the reach of high-quality care throughout the Northeastern area of Onslow County.

By integrating paramedics into the SFD, we can ensure that all regional residents and visitors receive consistent, advanced medical care. The enhancement would benefit

Swansboro and strengthen the overall emergency response framework across Onslow County, ensuring that high standards of care are maintained even during peak demand and resource limitations.

Implementation

Program Development

The Swansboro Fire Department aims to implement a comprehensive phased program over three years to aid in financial planning and the ability to seek alternative funding sources. In the initial phase, we will begin with a hybrid staffing model combining full-time and part-time paramedics, sustaining round-the-clock coverage while maintaining flexibility and managing costs.

As the program progresses, the department will incrementally increase the number of full-time paramedics, reducing reliance on part-time staff. A gradual transition will be strategically planned to ensure no disruption. By the third year, SFD aims to transition to a staff composed entirely of full-time paramedics, solidifying provider consistency.

Key Positions

Embarking on this transformative three-year phased program to fully integrate Paramedic-Level services full-time will rely on several key positions to ensure a smooth transition and sustain high-quality emergency medical care.

- Assistant Chief – EMS (Full-Time)

- Paramedic (Full-Time)

- Paramedic (Part-Time)

- Firefighter/Paramedics

Roles & Responsibilities

The roles and responsibilities within the proposed Swansboro Fire Department's EMS Division have been thoroughly crafted to ensure compliance with all local (System), state, and federal standards while maintaining the highest quality of uninterrupted services. Together, these roles create a robust framework that upholds the integrity and

compliance of the EMS division, ensuring that the Swansboro Fire Department provides superior, uninterrupted emergency medical services to the community.

Assistant Chief of EMS

The Assistant Chief of EMS will manage the EMS division's planning, implementation, and operational oversight, ensuring the service delivery standards are met. The primary role encompasses managing budgets and grants, developing comprehensive training programs, overseeing daily operations, provider staffing, quality assurance, inventory management, and system compliance.

Paramedics

Paramedics will provide rapid advanced life support response, acting as the first line of medical intervention in emergencies. Their primary responsibilities include quickly assessing and stabilizing patients, coordinating with other emergency services, and ensuring continuity of care until additional support arrives, enhancing the department's immediate response capabilities.

Firefighter Paramedics

Firefighter Paramedics will serve dual roles, offering firefighting and advanced medical care during emergencies. Their responsibilities include responding to fire incidents, performing rescue operations, and providing paramedic-level medical care. Versatility ensures comprehensive emergency response and maximizes the efficiency and effectiveness of services. The Firefighter/Paramedic position also allows an additional provider within the district.

Phase I – Planning & Approval

Phase I of the Swansboro Fire Department's service level enhancement will include securing necessary approvals and laying the groundwork to begin advanced life support services.

- A) Presentation of Intent – July 15, 2024
- B) Peer Review Committee Presentation – August 6, 2024
- C) Approval to Proceed – August 6, 2024

- D) Further Steps as Required by Onslow County – Camp Lejeune Peer Review Committee – TBD
- E) Begin Recruitment, Training, and System Clearance – September 2024
- E) Obtain Equipment and Appropriate DEA/DHHS Licensing – October 11, 2024
- F) Obtain Permit/Licensing NCOEMS – December 1, 2024
- H) Begin ALS response – January 4, 2025

Phase II – Service Initiation

The second phase will involve initiating advanced life support care, with a target start date of January 4, 2025. Phase II will also initiate the planning for expansion, transitioning from the hybrid staffing model to full-time service. The task will include but not be limited to:

- A) Begin ALS First Responder Services – January 4, 2025
- B) Planning and Budgeting for Expansion – July 1, 2025
- C) Apply for the FEMA Staffing for Adequate Fire and Emergency Response (SAFER) Grant. – April 2025
- D) Initial Program Evaluation – Continuous

Phase III – Service Completion & Evaluation {Continuous}

The final phase will remain continuous after the final benchmark of the final transition to a fully staffed, full-time QRV paramedic service. The continuous benchmark for program evaluation strengthens our ability to adjust to evolving needs based on systematic performance metrics while sustaining 24-hour coverage and operation excellence.

- A) Complete Full-Time Staffing Matrix – {July 1, 2026}
- B) Quarterly Operational Evaluations – {Continuous}
- C) Annual System Evaluation – {Continuous}
- D) Long-Range Planning – {Continuous}
- E) Training Program Development – {Continuous/Data-Driven}

Operations

Scope of Services

The proposed Paramedic enhancement by the Swansboro Fire Department aims to elevate emergency medical services to a comprehensive Paramedic Level, ensuring advanced care and timely response to medical emergencies within the community and surrounding areas. The scope of services would include but not limited to:

- A) Advanced Life Support (ALS) Response - Paramedic
 - Quick Response Vehicle
 - Fire Apparatus
- B) Onslow County – Camp Lejeune EMS System – Mutual Aid
 - ALS support to other districts as needed or requested
- C) Incident Rehab
 - Dedication ALS provider for Fire Incident Rehab – Resource Reduction
- D) Mobile Integrated Health/Community Paramedicine Initiatives
 - Coordinated Efforts with OCEMS Community Paramedic Program

Location of Services

The Town of Swansboro Fire Department is at 609 West Corbett Avenue, Swansboro, North Carolina 28584. The proposed services of this enhancement will be provided from this location to the primary response districts defined as 17A, the incorporated city limits of Swansboro (Swansboro Fire District), and 17B, the unincorporated area of Onslow County and Swansboro ETJ (White Oak River Fire District). The services would also be available to the Onslow County – Camp Lejeune EMS system as needed, ensuring equitable access to all citizens.

Provider Access

Accessing advanced life support (ALS) services provided by the Swansboro Fire Department's Paramedic team is straightforward and efficient, ensuring timely response and high-quality care for the community. The public can access these critical services through multiple channels.

The Swansboro Fire Department utilizes the Onslow County Emergency Communication Center as our primary Public Safety Answering Point (PSAP). Once the call has been received, SFD is paged utilizing Motorola voice pagers, an 800mHz radio system, a station alerting system, report faxing, and a mobile phone app integrated with our RMS system. For non-emergency incidents or items requiring direct access, our facility is staffed 24 hours a day, barring emergency incidents. The public can call a non-emergency number (910)326-5908 or stop by.

Hours of Coverage

The Swansboro Fire Department ensures round-the-clock coverage and aims to continue this with available paramedic services 24 hours a day. Each paramedic shift will be scheduled for the full 24-hour period, with a minimum staffing level of one paramedic per shift. The department aims to consistently staff two paramedic providers per day shift to enhance response capabilities and ensure comprehensive emergency medical coverage. When only one primary paramedic provider is on duty for a shift, attempts to respond will be made by a capable Chief Officer who will be designated to answer second-out or overlapping incidents. Response from an on-duty Engine company will be provided at the BLS for all incidents, ensuring a credentialed provider arrives to initiate patient care.

Communications

The Swansboro Fire Department operates on the Onslow County Radio system as its primary communication platform and will continue to utilize it to ensure seamless coordination during emergency responses. In case of communication system failure or disruption, the NC VIPER system is a reliable backup to maintain essential communication channels. A dedicated duty phone will be assigned to the on-duty paramedic to facilitate effective communication with hospitals and ensure timely medical direction if needed. Furthermore, the department will work to improve interoperability by reprogramming current radios to incorporate area hospital channels into the radio systems used by paramedics.

Apparatus

SFD will re-designate one of our current apparatus as a primary Quick Response Vehicle (QRV). Fire apparatus will be deployed as secondary vehicles for an emergency response to provide support/personnel assisting the QRV. Recognizing the strategic need and current equipment constraints for brush operations, the department is actively exploring acquiring and implementing a dual-service unit. The future dual-service unit will serve primarily as a QRV but will also be a designated brush/service company. The apparatus will be equipped and staffed to provide EMS response at the ALS level. Doing so will assist with crucial functions and components for improving our Insurance Services Office (ISO) credit ratings. Secondary functions include wildfire suppression and rescue services to reduce fire risks and enhance community safety.

Software

The Swansboro Fire Department utilizes FirstDue, a comprehensive report management system (RMS) designed for fire and EMS reporting, inventory, and data management. Additionally, SFD utilizes the Knox Company for our Secured Key Access program. The Knox Company offers a MedVault for controlled substance security. Utilizing this program, we can audit and regulate provider access to controlled substances to conform with DEA and NC DHHS controlled substance processes.

Agency Enhancements (Policies & Procedures)

The Swansboro Fire Department accepts that transitioning to the ALS level will require comprehensive alterations and a thorough review of our current operational guidelines and procedures. We are committed to making these adjustments to uphold our operational standard, remain compliant with the Onslow County – Camp Lejeune EMS System, and create a definitive methodology for accountability. Listed below, but not limited to, are operational policies that will be added or revised.

- I. Vehicle Operations
- II. Infection Control
- III. Privacy Compliance
- IV. Patient Care Documentation (Data Exchange)
- V. Provider Rights & Privileges (Roles & Responsibilities)

- VI. Controlled Substances
- VII. Training (Provider)
- VIII. Position Requirements (Including Professional Development)
- IX. NC OEMS & Onslow County – Camp Lejeune EMS System Compliance
- X. Inventory Management
- XI. Quality Assurance & Improvement

Onslow County Peer Review Committee

When approved to transition to an ALS provider, the SFD respectfully requests representation on the Onslow County Camp Lejeune EMS System Peer Review Committee. Our involvement will ensure that we can collaboratively maintain and enhance the quality of emergency medical services across our community. We are committed to upholding the highest standards of care and believe that our active participation in the committee will benefit all stakeholders.

System Evaluation

Operational Performance

The Swansboro Fire Department is steadfast in its commitment to upholding the highest operational performance standards, especially when transitioning to an Advanced Life Support (ALS) department. A pivotal step in our advancement underscores our dedication to providing superior emergency medical services to our community. We will rigorously evaluate our processes and outcomes through continuous, systematic assessments, ensuring that every aspect of our operations meets and exceeds ALS standards. Our commitment to excellence in operations is not just a goal but a fundamental expectation that drives us to optimize efficiency, effectiveness, and reliability in all we do.

System Transparency

Transparency is integral to our approach. We pledge to maintain clear, open communication channels regarding our performance metrics and evaluation outcomes throughout and beyond this transition. By fostering an environment of transparency, we hold ourselves accountable and build trust with our community, partners, and team members. Our commitment to transitioning to an ALS department will set a new benchmark for operational excellence and service quality, reflecting our dedication to safeguarding the health and well-being of those we serve.

Quality Assurance & Improvement

Our organization is committed to establishing a rigorous Quality Assurance and Improvement (QA&I) program that is fundamentally people-centered and designed to build a culture focused on enhancing quality rather than "catching" clinicians. Developing this program emphasizes collaboration, support, and continuous improvement, ensuring that all team members are empowered to provide the highest standard of care.

At the core of our QA&I program are defined performance objectives that set clear, measurable standards aligned with best practices and evidence-based guidelines. The

program will leverage comprehensive, data-driven insights to monitor performance in real-time, allowing us to identify areas for improvement promptly. By using key performance indicators (KPIs) and benchmarking against industry standards, we can pinpoint best practices and areas for growth. By fostering an environment of transparency, collaboration, and positive reinforcement, our QA&I program aims to enhance the quality of care and build a supportive network of professionals dedicated to excellence.

Training & Education Components

Educational components are integral to our performance program. We will provide targeted training programs based on data-driven insights, focusing on areas where providers can benefit the most. Continuous learning is always encouraged through workshops, seminars, and continuing education courses, ensuring our personnel stay current with today's advancements. Furthermore, overall performance metrics and system-wide changes will reinforce our educational programs. Aiming to ensure the education provided is relevant, timely, and aligned with the broader goals of our agency and, ultimately, the Onslow County – Camp Lejeune EMS system. Integrating performance metrics with educational initiatives creates a cohesive framework where learning is directly linked to improving patient outcomes and operational efficiency.

System Performance Metrics

The importance of system performance metrics, benchmarks, and overall evaluation in emergency services cannot be overstated. These tools are essential for understanding how well we are meeting our goals, identifying areas for improvement, and ensuring the highest standards of care. Performance metrics provide quantitative data that will aid our agency in measuring efficiency, effectiveness, and outcomes, while benchmarks allow us to compare our performance against industry standards and best practices. Overall evaluation combines these elements, comprehensively assessing our operations and guiding strategic decision-making. By prioritizing these aspects, we strive for continuous improvement, enhanced patient outcomes, and uphold a culture of excellence within our agency.

To ensure continuous improvement in our quality of service and agency performance, we will define metrics in numerous areas of operations and outcomes, including but not limited to the following critical areas.

Agency Operational Performance Standards

- i. Call Handling
- ii. Unit Turnout
- iii. Unit Response
- iv. On Scene to Transport/Transfer of Care
- v. Overlapping Incident Handling

Provider Operational Performance Standards

- i. On Scene to First Intervention
- ii. 12 – Lead Interpretation Accuracy
- iii. Notification Times (Stroke, STEMI, Trauma)

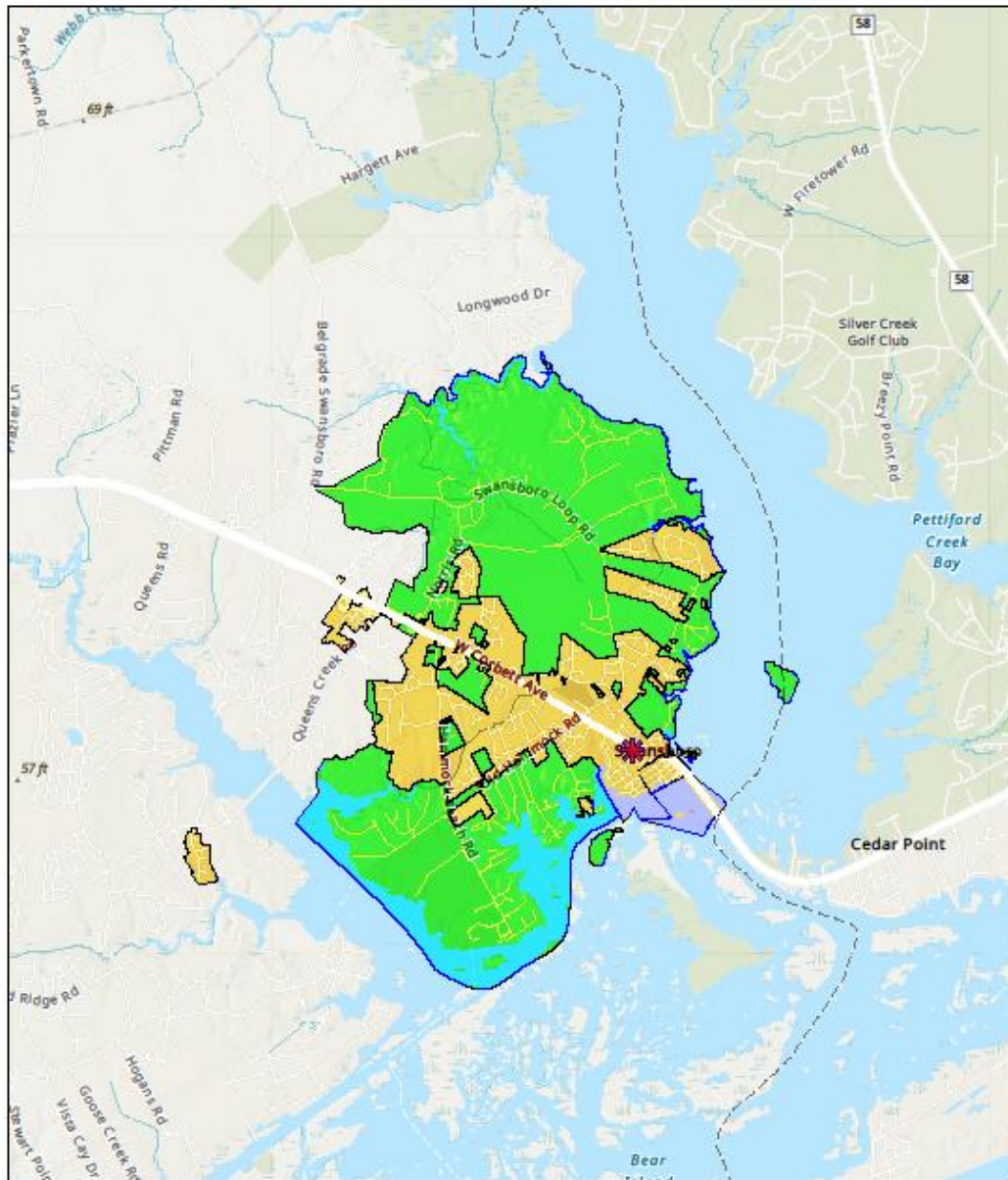
Patient Outcome Performance Standards

- i. High Chest Compression Fractions
- ii. Shorter Pre- & Post- Defibrillation Pauses
- iii. Stroke Assessment/Triage
- iv. Trauma Assessment/Triage

Appendices

Appendix I – Swansboro Fire Department Primary Response District

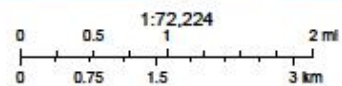
Swansboro Fire Primary Response District



6/28/2024

- Swansboro Fire District
- White Oak River Fire District

World Hillshade



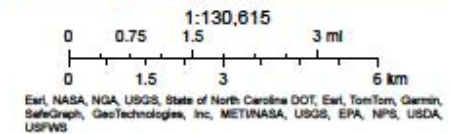
Esri, NASA, NOAA, USGS, FEMA, State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METANASA, USGS, EPA, NPS, USDA, USFWS

Appendix II – Distance to Definitive Care {Onslow Memorial Hospital}

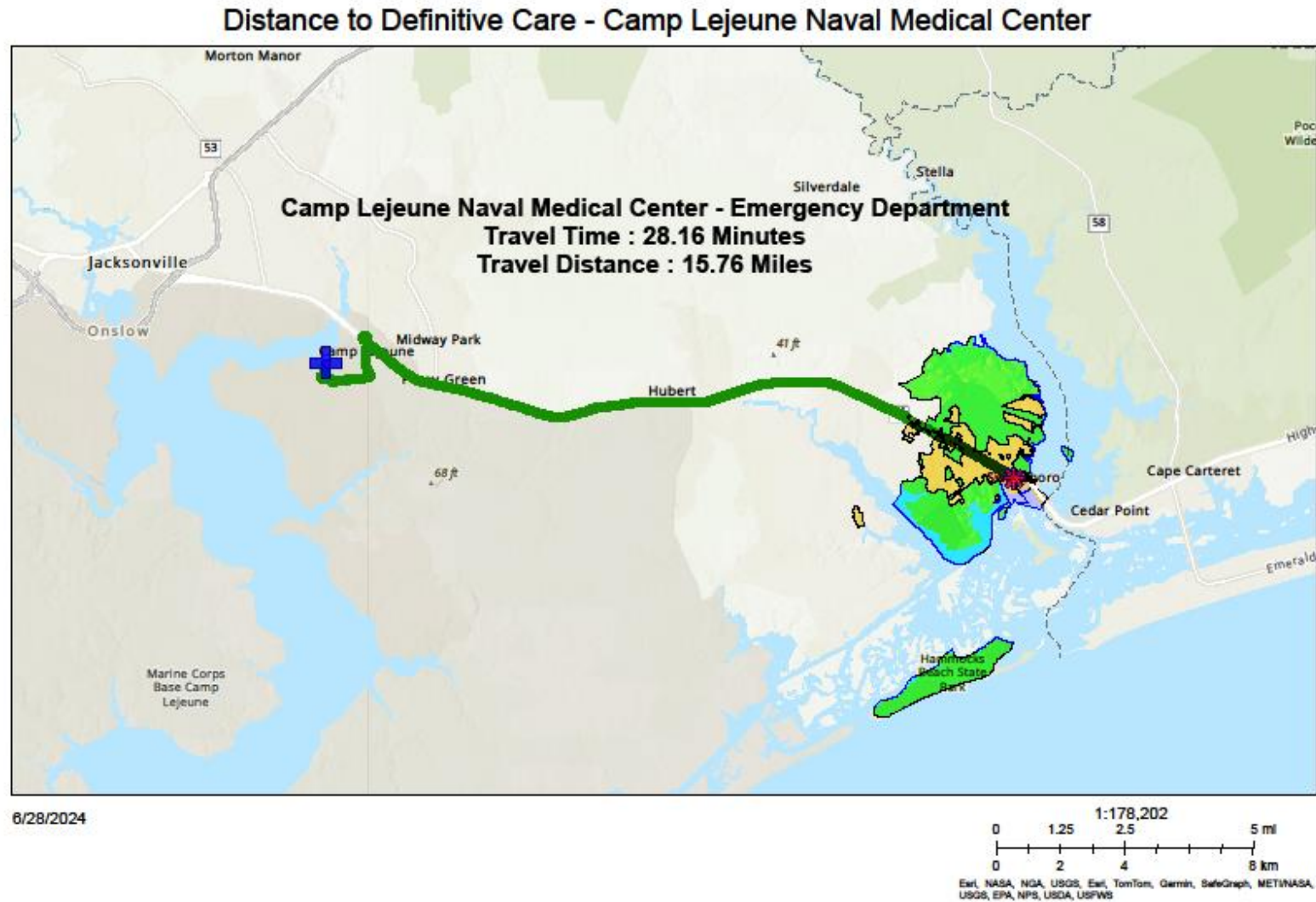
Distance to Definitive Care - Onslow Memorial



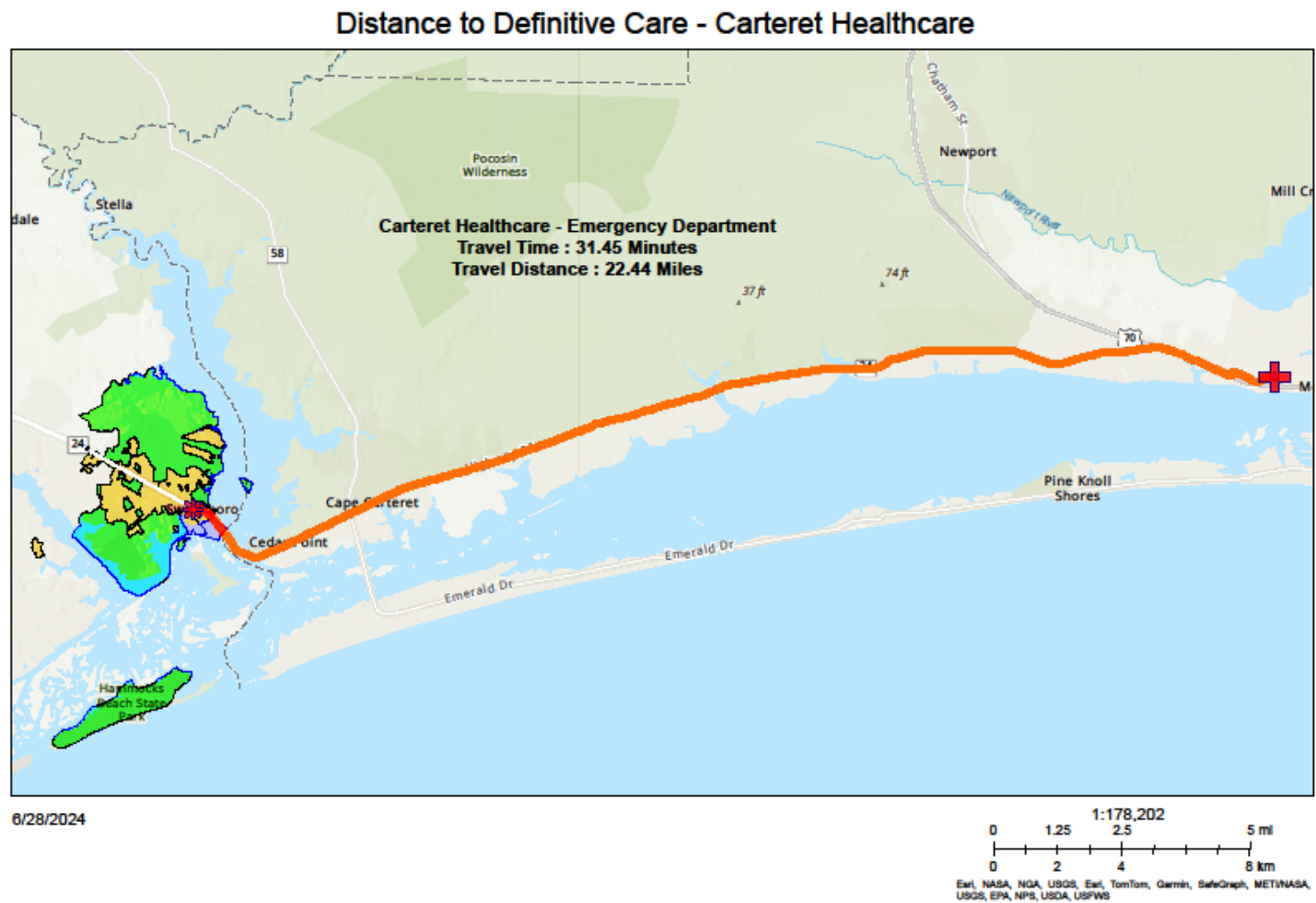
6/28/2024



Appendix III - Distance to Definitive Care {Naval Medical Center Camp Lejeune}

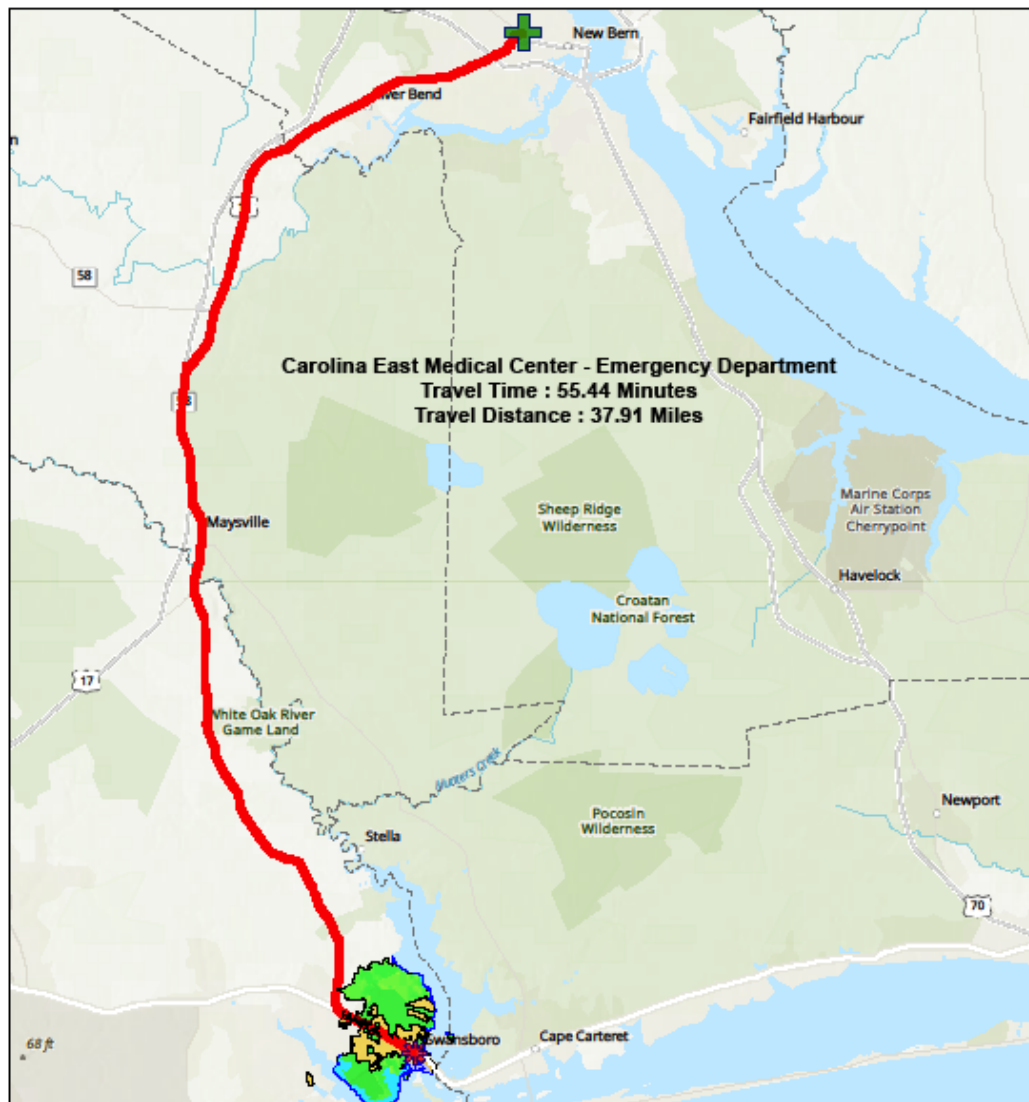


Appendix IV – Distance to Definitive Care {Carteret Healthcare}

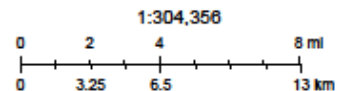


Appendix V – Distance to Definitive Care {Carolina East Medical Center}

Distance to Definitive Care - Carolina East Medical Center



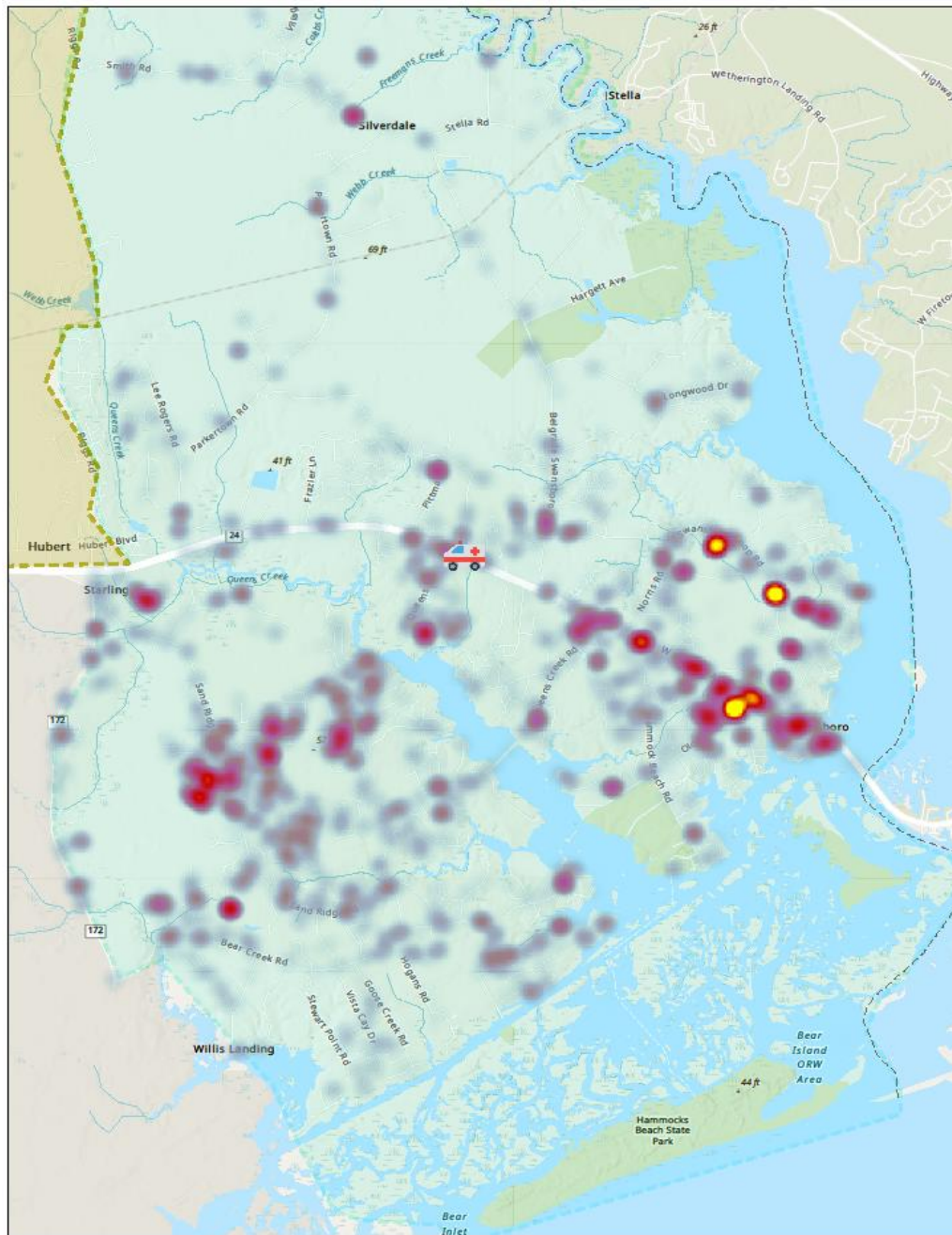
6/28/2024



Esri, NASA, NOAA, USGS, Esri, TomTom, Garmin, SafeGraph, FAO, METV
NASA, USGS, EPA, NPS, USFWS

Appendix VI – Onslow County EMS Zone 5 Heat Map {2020 – 2023}

Zone 5 - Total Incidents (2020-2023)



5/14/2024

Zone 5 - Heat Map (2020-2023) {Total Incidents}

Sparse
Dense

World Hillshade

1:65,227
0 0.5 1 2 mi
0 0.75 1.5 3 km

Esri, NASA, NGA, USGS, FEMA
State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph,
GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA,
USFWS