





# **TEST REQUIREMENTS**

# FOR INTEROPERABILIITY

Revision History						
Revision	Description	Date	Ву	Check	Approve	
0	Issued for Review	26-Mar-25	EJW	LSC	JMM	

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### 1. Introduction

The National Emergency Number Association (NENA) i3 "standard" for Next Generation 9-1-1 (NG-911) requirements have been ratified by the American National Standards Institute (ANSI) and is largely recognized internationally as the single standard for NG-911. NENA has developed and provided non-proprietary, consensus-based, universally used, and universally recognized 9-1-1 standards for over thirty years.

Vendors may interpret the i3 standard differently; therefore, one NG911 i3-compliant system may not be able to interoperate with another. Currently, there is limited testing available to certify the conformance of a single system to the i3 standard, as well as the interoperability of two NG911 solutions, and the end-to-end interoperability of multiple platforms.

The integration of multiple NG-911 technologies required to establish "enterprise" solutions is complex and challenging. The successful delivery of an enterprise-based NG-911 solution requires that interoperability be independently verified and validated before these technologies are procured and deployed into an operational environment.

# 2. Charter

Interoperability testing will be completed by an independent interoperability lab capable of testing for both cybersecurity readiness and interoperability. As an independent lab, the lab shall have no direct or indirect ownership affiliation with any technology vendor tested. As part of the interoperability testing, the independent lab will complete testing, adjudicate test results with all concerned parties, and provide validation of interoperability capabilities as appropriate. As an artifact of the testing, the independent lab shall produce a test results report, including cybersecurity findings, for the sponsor.

#### 3. Process

The following diagram outlines the testing process:



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### 4. Testing Artifacts

The independent lab will deliver to the sponsor a cybersecurity test results report that captures all identified findings associated with the product being tested. Cybersecurity testing will use the National Institute of Standards and Technology (NIST) baseline for cybersecurity testing, as recommended by the Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) for PSAP cybersecurity requirements.

Upon the successful conclusion of cybersecurity testing, interoperability testing will begin. The independent lab will produce an interoperability test results report capturing all identified findings regarding the system being tested and its association with the NG-911 testbed. Test plans are based on validating functional capabilities as specified in the NENA i3 standard.

## 5. Conclusion

Mitigating the risks associated with the acquisition and fielding of NG-911 capabilities must be a priority for local, state, and federal jurisdictions. These jurisdictions are accountable for how grant money is being spent and must be able to deliver with confidence that newly acquired systems and technologies will interoperate when fielded. This enables the jurisdiction to acquire new NG-911 systems and technologies without having to account for schedule delays and cost overruns caused by interoperability and cybersecurity issues at the time of fielding.