



Alarm Monitoring Company to Emergency Communications Center (ECC) Computer - Aided Dispatch (CAD) Automated Secure Alarm Protocol (ASAP)

APCO/TMA ANS 2.101.3-2021



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FOREWORD

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**APCO/TMA ANS 2.101.3-2021: Alarm Monitoring Company to Emergency Communications Center (ECC)
Computer-Aided Dispatch (CAD) Automated Secure Alarm Protocol (ASAP)**

EXECUTIVE SUMMARY

The Automated Secure Alarm Protocol (ASAP) is a successfully proven data exchange that has demonstrated efficiency and effectiveness in streamlining alarm notifications between alarm monitoring companies and public safety Emergency Communications Centers since 2009.

This standard is the product resulting from the joint effort by APCO and The Monitoring Association (TMA) formerly known as the Central Station Alarm Association (CSAA).

The version 3.4 updates include the renaming in the title of the co-Standards Development Organizations (SDO) from “APCO/CSAA” to “APCO/TMA”, a renaming of “Public Safety Answering Point (PSAP)” to “Emergency Communications Center (ECC)”, the introduction of schema version 3.4 including new data fields and message types available to the users of this standard and critical to the mission of public safety. An emphasis on address verification/synchronization between the alarm companies and the ECCs is included. New alarm event types are also introduced as well as methods to indicate that an alarm has been verified positively as a real-life crime, fire, or emergency medical event.

For the purposes of this document, except when providing historical background, the term ECC will be used instead of PSAP. The term ECC is interchangeable with PSAP in terms of meaning and function. ECC is the term predominantly used in the industry today.

Chapter One

INTRODUCTION

1.1 PURPOSE

- 1.1.1 The purpose of the APCO/TMA ANS 2.101.3-2021, also known as ASAP 3.4, documentation is to provide a mechanism to electronically transmit information between an Alarm Monitoring Company and an ECC formerly known as PSAP. There are five primary uses for this IEPD:
- 1.1.2 Transmission of an address verification by an alarm monitoring company to an ECC
- 1.1.3 Initial notification of an alarm event by an alarm monitoring company to an ECC
- 1.1.4 Update of status by the ECC's CAD system to the alarm monitoring company
 - 1.1.4.1 Alarm Notification Accepted, call-for-service created
 - 1.1.4.2 Alarm Notification Rejected due to invalid alarm location address, invalid event type, or other reason
 - 1.1.4.3 Address verification Accepted, valid address
 - 1.1.4.4 Address verification Rejected, invalid location
- 1.1.5 Bi-directional update of other events between an alarm monitoring company and an ECC
 - 1.1.5.1 Requests for cancellation by the alarm monitoring company
 - 1.1.5.2 ECC responses to cancellation requests from the alarm monitoring company
 - 1.1.5.3 Updates from the alarm monitoring company concerning:
 - Key-holder information
 - Response to requests from the ECC
 - Confirmation of the verified alarm
 - A URL providing a link to a video server to share video from the alarm location
 - Additional information of value to first responders
 - 1.1.5.4 Updates from the ECC telecommunicator or field resource requesting additional information such as an estimated time of arrival for the key-holder
 - 1.1.5.5 Update acknowledgements that an Update was accepted or rejected

- 1.1.6 Notice by the ECC that the primary response agency has been dispatched
 - 1.1.6.1 Notice by the ECC that the primary response agency has arrived on scene
 - 1.1.6.2 Notice by the ECC that the event has been closed (with a disposition if applicable)
- 1.1.7 Heartbeat requests and heartbeat acknowledgements

1.2 Project Sponsor

- 1.2.1 The development of the Automated Secure Alarm Protocol (formerly External Alarm Exchange) IEPD, version 3.0, was sponsored by the Public Safety Data Interoperability (PSDI) Program, funded by the Bureau of Justice Assistance (BJA) and co-managed by APCO and the IJIS Institute.
- 1.2.2 The overall Public Safety Data Interoperability (PSDI) Program was intended to encompass multiple projects, and was focused on advancing standards-based information sharing to support the emergency communications domains – police, fire, and EMS – and other relevant homeland security domains. The goal of this project is to improve the real time information sharing capabilities in the emergency response environment. This includes development of high value information exchanges (IEPDs) related to Local Communication Centers/ECCs.
- 1.2.3 The PSDI Project Committee was composed of 16 representatives from APCO, Law Enforcement, Fire Services, EMS, Industry, Emergency Management, Transportation, and BJA. The initial project was funded by the Bureau of Justice Assistance’s Edward Byrne Memorial Discretionary Grants Program. BJA is a component of the Office of Justice Programs of the U.S. Department of Justice. The mission of the BJA is to provide leadership and services in grant administration and criminal justice policy development to support local, state, and tribal justice strategies to achieve safer communities. One of the BJA's goals is to improve the functioning of the criminal justice system. To achieve these goals, BJA programs emphasize enhanced coordination and cooperation of federal, state, and local efforts. (<http://www.ojp.usdoj.gov/BJA>)
- 1.2.4 The effort to upgrade the Automated Secure Alarm Protocol IEPD, version 3.4, was funded by The Monitoring Association (TMA) and co-managed by APCO and TMA. TMA’s mission is to promote and advance professional monitoring to consumers and first responders through education, advocacy, and the creation of standards. TMA’s vision is a safer world through professional monitoring.

- 1.2.5 TMA is the trade association representing the professional monitoring industry. Its membership community includes companies spanning all industry sectors, including monitoring centers, systems integrators, service providers, installers, consultants, and product manufacturers. TMA is dedicated to the advancement of the professional monitoring industry through education, advocacy, standards, and public safety relationships.
- 1.2.6 TMA was incorporated on November 30, 1950 in Illinois as the Central Station Electrical Protection Association (CSEPA). In 1989, the Association formally changed its name to the Central Station Alarm Association (CSAA). In 2017, the Association was renamed “The Monitoring Association (TMA).”
- 1.2.7 Since its founding in 1950, TMA has worked to foster and improve relations between its members and various related groups—law enforcement and fire officials, the insurance industry, equipment suppliers and government/regulatory agencies.
- 1.2.8 Some of TMA’s major goals are:
 - 1.2.8.1 To reduce false alarms
 - 1.2.8.2 To develop industry standards for optimum monitoring center performance levels
 - 1.2.8.3 To enact telecommunications laws and regulations that promote fair competition
- 1.2.9 In addition, TMA recognizes other goals essential to the well-being of its members, including, but not limited to:
 - 1.2.9.1 Working with law enforcement, fire and insurance industry officials;
 - 1.2.9.2 Working with and serving on National Fire Protection Association committees;
 - 1.2.9.3 Involving TMA with the Alarm Industry Communications Committee (AICC), which lobbies Congress and the FCC on behalf of members’ interests;
 - 1.2.9.4 Investigating, involving itself with, and reporting on potential future technologies; and
 - 1.2.9.5 Conducting annual meetings, seminars, legislative conferences and other gatherings of benefit to the industry. (www.tma.us)

1.3 Project Management

- 1.3.1 The IJIS Institute is a non-profit corporation funded mostly through grants from DOJ's Office of Justice Programs, Bureau of Justice Assistance (BJA). The Institute assists "national scope" efforts related to information sharing in justice and public safety. The Institute comprises a membership of approximately 200 companies active in supplying information technology products and services to justice and public safety agencies. The IJIS Institute achieves its mission of advancing information sharing through the development and endorsement of standards, and by providing assistance to local, tribal, and state agencies. (www.ijis.org)
- 1.3.2 The Monitoring Association (TMA) ASAP Program committee represents the ASAP to ECC program for cad-to-cad communications between the monitoring centers and the correct responding ECCs. It oversees the budget, communications, outreach and implementation of the program, and acts as the TMA representative for the corresponding Related Organizations for fluid evolvement and mission correctness. (www.tma.us)
- 1.3.3 The Association of Public Safety Officials (APCO) has a strong cadre of senior management executives, technical staff, and enthusiastic committee structure that is perfectly positioned to support the IJIS Institute and affiliated organizations to undertake and successfully complete the objectives of this project. APCO has a long history of providing leadership in a myriad of public safety projects and initiatives. Through the 70-plus-year history of APCO it has been at the forefront of projects dedicated to the safeguarding of our citizens and improving public safety communications. APCO's qualified staff champions projects with goals to standardize processes, procedures, and services. (www.apcointl.org)
- 1.3.4 Subcontractor
 - 1.3.4.1 Waterhole Software Inc. created all the technical artifacts contained in the IEPD and contributed significantly to this overview document. (www.waterholesoftware.com)

1.4 Background / History

- 1.4.1 APCO International established the CAD-to-CAD Interconnectivity Project, Project 36, in August 2000 to explore the interconnectivity between different CAD systems. In August 2004, APCO International encouraged the expansion and spin-off of Project 36 with the inclusion of voice and data exchange between PSAPs and third-party call center operators such as Central Station Alarm Association member companies. The APCO International Board of Officers assigned the expanded version of this data exchange development program between PSAPs and Central Station Alarm Association (CSAA) member companies to a new Third Party Call Center Group, which included the CSAA.
- 1.4.2 The Association of Public-Safety Communications Officials (APCO) International and the CSAA formerly announced on January 4, 2005 a partnership to join forces to develop an exchange that will be consistently used by Computer-Aided-Dispatch (CAD) providers and Central Station Alarm Companies for PSAPs to increase efficiency and decrease errors.
- 1.4.3 The first beta site selected for the initial test project to conduct tests between PSAPs and a Central Alarm Monitoring Station member company over the Internet was York County, Virginia, Department of Fire & Life Safety, Emergency Communications Division. Vector Security was selected as the CSAA member company to participate in the electronic alarm exchange. On October 22, 2004, the first data template was successfully completed following this collaboration. The XML standard was used for this initiative.
- 1.4.4 An Alerts Working Team was formed and met in Daytona Beach, Florida in February 2006 to begin the External Alert 2.0 Information Exchange Package Document (IEPD) development. This working team was formed by the IJIS Public Safety Technical Standards Committee (IPSTSC) to create external alerts and requests-for-service IEPDs using the GJXDM standard.
- 1.4.5 Following a two year development effort which included extensive testing, the Alarm Interface Exchange 2.0 between York County & Vector Security went live on July 15, 2006. The initial exchange included only Burglar and Hold-Up alarms. The exchange was conducted via the Internet with all necessary security in place at Vector Security and York County. A web service was implemented by GE Security. In order to protect the CAD System from vulnerability and exposure to the Internet, a middleware application was created to allow a server sitting on York County's DMZ to be responsible for all traffic between the CAD System and the alarm company. The average turn-around time from the time that the alarm company operator transmitted the alarm to the PSAP until the final Accept or Reject was 45 seconds. It is the policy that each alarm monitoring company operator would initiate a call to the PSAP if no response was received within 45 seconds.

- 1.4.6 The City of Richmond's Police Division of Emergency Communications authorized a development partnership with York County since both localities were using the same CAD System. This partnership included APCO and the CSAA. APCO and the CSAA were anxious to collect as much data as possible surrounding the outcome of the alarm exchange interface and requested that the City of Richmond participate in the pilot. The alarm interface exchange went live between the City of Richmond and Vector Security on August 4, 2006 using the business process flow described above. The initial phase of the pilot was so successful that Fire and Medical alarms became part of the pilot on October 24, 2006.
- 1.4.7 On September 11, 2007, the City of Richmond implemented a new Intergraph CAD System to replace the CAD system that had been written in-house and utilized for 27 years. Intergraph was tasked to continue with the alarm interface exchange seamlessly. This endeavor was successful.
- 1.4.8 In the spring of 2007, discussions began with NLETS, the International Justice and Public Safety Network, APCO, the Virginia State Police, and Vector Security to study the feasibility of routing all alarm interface exchange transactions via a VPN arrangement between Vector Security and NLETS. NLETS has all of the necessary security in place and a private circuit to each state including the State of Virginia. All parties agreed to perform a proof of concept and the necessary security and network NAT rules were put into place. On November 27, 2007, all alarm interface exchange traffic between Vector Security and the two Virginia PSAPs began being routed through NLETS and the State of Virginia switch.
- 1.4.9 On February 18, 2008, the External Alert 2.0 schema was implemented at the City of Richmond bringing the pilot to another milestone in achieving conformance with the Global Justice (GJXDM) model. GE Security implemented an enhancement to streamline the delivery of alarm data to the ECC.
- 1.4.10 Because of the secure transmission path via NLETS and the State of Virginia switch, vulnerability and exposure to the Internet is no longer an issue. The middleware continues to facilitate traffic between the ECCs and the alarm company, but no longer needs to reside on the DMZ. The new average turn-around time from the time that the alarm company operator transmitted the alarm to the ECC until final the final Accept or Reject is 15 seconds or less.
- 1.4.11 After being in operation for two years, over 4,200 alarm exchanges have been transmitted between Vector Security and the two Virginia ECCs. The benefit resulting from these 4,200 exchanges include:
- 1.4.11.1 4,200 less telephone calls to the two PSAPs, eliminating the need for the alarm monitoring company operator to converse with the PSAP call-taker.

- 1.4.11.2 Elimination of miscommunication between the alarm company operator and the PSAP call-taker.
 - 1.4.11.3 A decrease in response times to alarm-related calls-for-service with an increase in law enforcement apprehensions made, fires more quickly extinguished, and lives saved.
- 1.4.12 In 2012, the External Alarm Information Exchange was renamed the Automated Secure Alarm Protocol or more commonly known as ASAP.

Chapter Two

Information Exchange Package Documentation (IEPD)

2.0 SCOPE

A NIEM IEPD is a package that describes the construction and content of a NIEM information exchange. It contains all of the schemas necessary to represent and validate the data content of the exchange. It is also contains supplemental artifacts, such as documentation, business rules, search and discovery metadata, and sample instances.

2.1 Versioning

<u>Date</u>	<u>Version</u>	<u>APCO ANS</u>
September 15, 2006	2.0 (GJXDM 3.0.3)	N/A
September 9, 2008	3.0 (NIEM 2.0)	N/A
January 15, August 5, 2009	3.1	APCO/CSAA ANS 2.101.1-2008
February 19, 2010	3.2	
December 12, 2013	3.3	APCO/CSAA ANS 2.101.2-2014
August 13, 2020	3.4	APCO/TMA ANS 2.101.3-202x

2.2 Change Logs

- 2.3.1 Change logs for version upgrades 2.0 to 3.0, 3.0 to 3.1, 3.1 to 3.2, and 3.2 to 3.3 can be found in Appendix Six.

2.3 Change Log (upgrade from 3.3 to 3.4)

- 2.3.2 Include a message transmission date and timestamp for all XML examples (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityDate/nc:DateTime)
- 2.3.3 Added new transmission type of **Heartbeat** (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityCategoryText)
- 2.3.4 Added new element **Alert Expiration Date/Time** (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/

- apco-alarm:AlertExpirationDateTime) to provide a date/time by which the message is considered expired. This is intended to only be used with Heartbeat messages.
- 2.3.5 Added a new Status Code (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityStatus/nc:StatusText) of **AlarmClose**. When this status is utilized the ECC should include disposition details in the two new elements within **Alarm Close Disposition** (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition). These elements are the **Disposition Reason Code** (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition/apco-alarm:AlarmCloseDispositionReasonCodeText) and Disposition Description Text (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition/apco-alarm:AlarmCloseDispositionDescriptionText)
 - 2.3.6 Added a new status code of **CancelRequest** which is transmitted by the Alarm Company to the ECC when the Alarm Company has a need to initiate an alarm cancellation request. The example instances include the **CancelRequestResponse** from the ECC.
 - 2.3.7 Added **Address Verification Single** and **Address Verification Bulk** to assist ECCs in prioritizing verification processing. Existing transmission type of Address Verification should be treated as a Address Verification Bulk message. As part of this modification, added **Requesting Discipline Text** (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:RequestingDisciplineText) which will be used to describe the disciplines requesting the verification.
 - 2.3.8 For alarms that are verified through video/audio, etc., added example XML (scenario1_new_alarm.xml and scenario5_update_from_alarm_company.xml) that indicates that the alarm was confirmed (apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmConfirmationText).
 - 2.3.9 Added new data element **Alarm Scoring Metric Text** to capture a standardized alarm scoring metric that the alarm industry will provide at the time they send a new or updated alarm and used to estimate the validity of an alarm event and assist public safety departments that opt-in with their alarm response policies. Location is “apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmScoringMetricText”.
 - 2.3.10 Expanded the list of possible alarm types

2.4 Standards and Codes Utilized

- 2.4.1 External Alert 2.0 was used as the baseline set of requirements.
- 2.4.2 No code lists were created as part of this development effort

2.5 Logical Data Requirements Model

- 2.5.1 The logical domain model captures data requirements from a user perspective. It is meant to visually describe the data requirements of an IEPD. The editable model diagram is available in the Support Documentation folder (“Logical Data Element Requirements.xmind”).

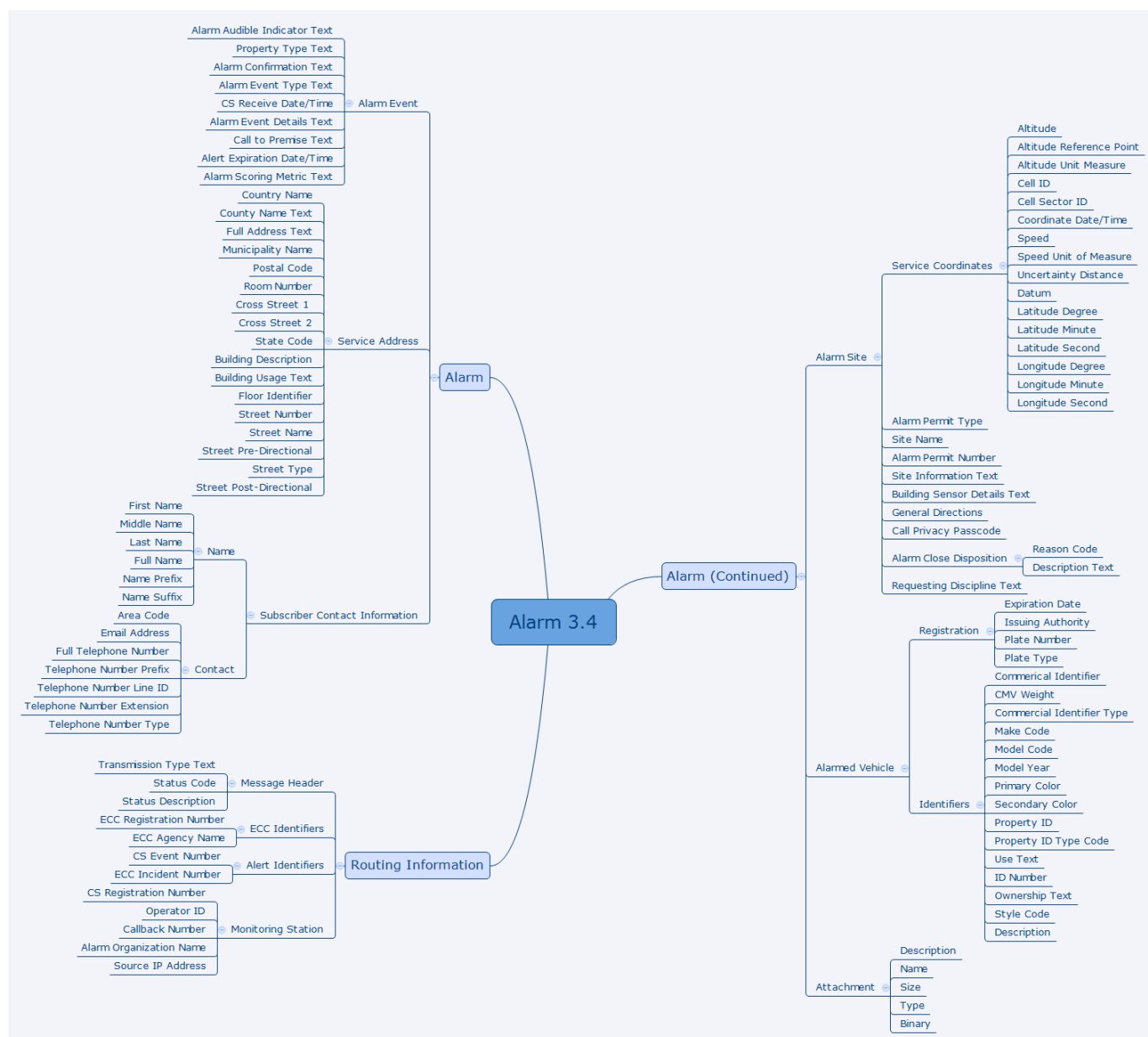


Figure 1 - Logical Data Requirements Model

2.6 Component Mapping Spreadsheet (CMT)

- 2.6.1 The CMT is an excel file that cross-references the data requirements in the exchange to the specific elements within either NIEM or the locally extended file. The file is available in the Supporting Documentation folder (“External Alarm 3.4 Mappings.xls”).

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
<u>Alarm Close Disposition</u>		New in APCO 1.4, used to document disposition details when an alarm event is updated with AlarmClose as the status code. There can be multiple dispositions indicated for each Alarm	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition	Used to document disposition details when an alarm event is updated with AlarmClose as the status code		One to many dispositions may be indicated when the status code is indicated as AlarmClose
Alarm Close Disposition	Disposition Reason Code	This is used when an alarm event has been closed. Alarm companies and ECCs should seek to utilize codes from APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data Exchange. Both the code and definition from the ACCO code list should be included, separated by a pipe delimiter.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition/apco-alarm:AlarmCloseDispositionReasonCodeText	Alarm companies and ECCs should seek to utilize codes from APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data Exchange	niem-xsd:string	Mandatory when status code is indicated as AlarmClose
Alarm Close Disposition	Disposition Description Text	Used to provide additional details about an alarm incident resulting in a closed alarm. Examples may include that the alarm event was weather related	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmCloseDisposition/apco-alarm:AlarmCloseDispositionDescriptionText	Used to provide additional details about an alarm incident resulting in a closed alarm. Examples may include that the alarm event was weather related	niem-xsd:string	
Alarm Confirmation						
Alarm Confirmation	Alarm Confirmation Text	General mechanism used to confirm the validity of the alarm. e.g., observed video, live audio, guard verified, call to premises etc. If the alarm is confirmed through a call to the premise, then the details of this call are indicated in the Call to Premise text field. The alarm verification information may change the priority of the response.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmConfirmationText	General mechanism used to confirm the validity of the alarm. e.g., observed video, live audio, guard verified, call to premises etc. If the alarm is confirmed through a call to the premise, then the details of this call are indicated in the Call to Premise text field	niem-xsd:string	
Alarm Confirmation	Alarm Confirmation Link	A Uniform Resource Locator (URL) that can be used to access additional information such as video that confirms a valid alarm event.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmConfirmationURI	A Uniform Resource Locator (URL) that can be used to access additional information such as video that confirms a	niem-xsd:anyURI	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
Alarm Confirmation	Alarm Scoring Metric Text	Captures a standardized alarm scoring metric that the alarm industry will provide at the time they send a new or updated alarm and used to estimate the validity of an alarm event and assist public safety departments that opt-in with their alarm response policies	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmScoringMetricText	valid alarm event. Captures a standardized alarm scoring metric that the alarm industry will provide at the time they send a new or updated alarm and used to estimate the validity of an alarm event and assist public safety departments that opt-in with their alarm response policies	nc:TextType	
Alarm Confirmation	Call Privacy Passcode	The code allows the ECC or monitoring station to bypass any call screening and directly reach the alarm subscriber.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventCallPrivacyBypassCode	A code necessary to access the sites phone system.	nc:TextType	
Alarm Confirmation	Call to Premise Text	This field represents the results of the actions taken by the alarm company to attempt to reach someone at the premise before notifying the ECC.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:CallToPremiseText	This field represents the results of the actions taken by the alarm company to attempt to reach someone at the premise before notifying the ECC.	niem-xsd:string	Mandatory for New Events
Alarm Event						
Alarm Event	Alarm Audible Indicator Text	Description of whether the alarm is audible or silent.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmAudibleDescriptionText	This is a text (string) field, possible values "AUDIBLE", "SILENT", or left blank.	niem-xsd:string	
Alarm Event	Building Sensor Details Text	Provides additional details from a building sensor CAP message in a free-text format.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:BuildingSensorDetailsText	Text description of alert information from a building sensor.	niem-xsd:string	
Alarm Event	Alarm Event Details Text	Additional details about the event. e.g., indicating the specific location of an alarm, mechanism that potentially triggered the alarm (such as keypad).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventDetailsText	Additional details about the alarm event.	nc:TextType	
Alarm Event	Alarm Event Type Text	Text describing the type of the event. Some of the possible values may include: •BURGLARY •HOLDUP/PANIC/DURESS/EMERGE	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventCategoryText	A kind of alarm event.	nc:TextType	Mandatory for New ALARM Events

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
		<p>NCY - (Recommend that the <em:AlarmEventLocationCategoryText> element be examined for RESIDENTIAL or COMMERCIAL and encode map this to the appropriate Agency Event Type. For example: Residential would be a PANIC/DURESS alarm, and COMMERCIAL would be HOLDUP)</p> <ul style="list-style-type: none"> ▸DURESS ▸DURESS/PANIC ▸FIRE - HEAT ▸FIRE - KEYPAD ▸FIRE - PULL STATION ▸FIRE - SMOKE ▸FIRE - TROUBLE/TAMPER/SUPERVISORY (Indicates potential equipment problem or someone tampering with equipment) ▸FIRE - WATERFLOW/SPRINKLER ▸FIRE (This is assumed to be a general fire alarm if not otherwise categorized) ▸GAS – CARBON DIOXIDE ▸GAS – CARBON MONOXIDE ▸GAS – NATURAL ▸GAS – PROPANE ▸GAS (Not Listed Above or not specified, See Comments) 				
		<ul style="list-style-type: none"> ▸HOLDUP ▸MEDICAL - Medical Alarm ▸MEDICAL - DEFIBRILLATOR (Defibrillator Alarm Activation) ▸OPEN/CLOSE (Treated as a Burglary) ▸PANIC ▸PANIC/DURESS ▸PHONE LINE (Communications Failure - Treated as a Burglary) ▸RESET/CANCEL (Treated as a Burglary) ▸RESTORE (Treated as a Burglary) 				

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
		▶ TAMPER (Treated as a Burglary) ▶ TROUBLE (Treated as a Burglary) ▶ TROUBLE - FIRE (Treated as a Fire Alarm) See Appendix 2.1 for a complete list of alarm event type text enumerations.				
Alarm Event	Message Transmission Date/Time	The date and time the message was transmitted. <i>This field should be populated for all messages.</i>	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityDate/nc:DateTime	A full date and time.	niem-xsd:dateTime	Mandatory for all Messages
Alarm Event	Dispatch Agency Event Number		apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmEventDispatchActivity/nc:ActivityIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Alarm Event	Alert Expiration Date/Time	Assigned by the requestor, this is the date/time after which the Heartbeat message is considered expired and the responder should not respond to this message.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlertExpirationDateTime	A full date and time.	niem-xsd:dateTime	
Alarm Event	Monitoring Station Event Number		apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	Mandatory for all Messages
Alarm Event	Alarm Reject Reason	A six digit number corresponding to a uniform list of Reject messages. A 01 in the first two digits would be used to identify the set of codes reserved for the CSAA message broker. Other values would represent other elements. For instance a ECC might be a 02.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmRejectReasonText	A coded reference to a list of Reject messages.	nc:TextType	
Alarm Event	Alarm Reject Source Name	Source of the Reject message. Possible values include: ▶ CSAA Message Broker ▶ ECC	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmRejectSourceName	A name of the source of the Reject message.	nc:TextType	
Alarm Event	Alarm Accept Reason Text	Description of the actions taken upon receipt of an alarm.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:AlarmAcceptReasonText	Description of the actions taken upon receipt of an alarm.	nc:TextType	
Alarm Permit						
Alarm Permit	Alarm Permit Number	The alarm permit number for the site.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventPermit	A value that identifies something.	niem-xsd:string	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
			/em:PermitIdentification/nc:IdentificationID			
Alarm Permit	Alarm Permit Type	In conjunction with the permit number, this indicates the type of alarm (e.g. fire, burglarly)	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventPermit/em:PermitCategoryText	A kind of permit.	nc:TextType	
Attachment						
Attachment	Attachment Binary	Additional information in binary/base64 etc	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Attachment/nc:BinaryObject/nc:BinaryBase64Object	A binary encoding of data.	niem-xsd:base64Binary	
Attachment	Attachment Size		apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Attachment/nc:BinarySizeValue	A size of a binary object in kilobytes.	nc:NonNegativeDecimalType	
Attachment	Encoding Type	base64, mime, hex etc	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Attachment/nc:BinaryFormatID	An identifier for a file format or content type of a binary object.	niem-xsd:string	
Attachment	Attachment Description		apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Attachment/nc:BinaryDescriptionText	A description of a binary object.	nc:TextType	
Attachment	Attachment Name	e.g., file name + extension.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Attachment/nc:BinaryID	An identifier that references a binary object.	niem-xsd:string	
Contact						
Contact	Telephone Number Extension	Additional numbers to be entered after a call connects to be directed to the appropriate place.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactTelephoneNumber/nc:TelephoneNumberRepresentation/nc:NANPTelephoneNumber/nc:TelephoneSuffixID	Additional numbers to be entered after a call connects to be directed to the appropriate place.	niem-xsd:string	
Contact	Telephone Number Line ID	Last 4 digits of a phone number.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactTelephoneNumber/nc:TelephoneNumberRepresentation/nc:NANPTelephoneNumber/nc:TelephoneLineID	A portion of a telephone number that identifies the individual circuit within an exchange.	niem-xsd:string	
Contact	Telephone Number Prefix	AKA NXX Refers to the exchange which is the three digits following the area code	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactTelephoneNumber/nc:TelephoneNumberRepresentation/nc:NANPTelephoneNumber/nc:TelephoneExchangeID	A portion of a telephone number that usually represents a central telephone switch.	niem-xsd:string	
Contact	Telephone Number Type	Cell Phone, Fax, Land Line etc	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactInformationDescriptionText	A description of the methods available to contact a person or organization.	nc:TextType	
Contact	Full Telephone Number	A full telephone number.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactTelephoneNumber/nc:TelephoneNumberRepresentation/nc:FullTelephoneNumber/nc:TelephoneNumberFull	A complete telephone number.	niem-xsd:string	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
Contact	Area Code	Number Plan Area	IID apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactTelephoneNumber/nc:TelephoneNumberRepresentation/nc:NANPTelephoneNumber/nc:TelephoneAreaCodeID	A dialing code for a state or province for phone numbers in the USA, Canada, Mexico, and the Caribbean.	niem-xsd:string	
Contact	E-Mail Address	An electronic mailing address by which a person or organization may be contacted.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:ContactInformation/nc:ContactEmailID	An electronic mailing address by which a person or organization may be contacted.	niem-xsd:string	
Location Augmentation						
Location Augmentation	General Directions	Directions to the site.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/em:AlarmEventLocationAugmentation/em:LocationDirectionsText	Directions to the location.	nc:TextType	
Location Augmentation	Property Type Text	Type of property that has been alarmed (e.g. commercial, residential). Determines how alert is broadcast (e.g. holdup alarm if commercial, duress alarm if residential).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventLocationCategoryText	A kind of location at which an alarm event occurs.	nc:TextType	
Location Augmentation	Site Information	Necessary information about the site. Alert information that may be provided to the responder. e.g., electrified fence, dogs on property, loft apartment, multi-storied building, multiple warehouses on site, hazardous material etc.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/em:AlarmEventLocationAugmentation/em:LocationInformationText	Necessary information about a location.	nc:TextType	
Message Header						
Message Header	Status Code	Status of the call for service request: Accept: Indicates that the ECC accepted the request for dispatch Reject: Indicates that the ECC rejected the request for dispatch (e.g. if address cannot be validated) Update: New information regarding the alarm or the ECC response. May originate from the ECC or alarm company. UPD Accept: An Update message from the alarm company to the ECC has been accepted by the ECC. UPD Reject: An Update message from the alarm company to the ECC has been rejected by the ECC.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityStatus/nc:StatusText	A status or condition of something or someone.	nc:TextType	Mandatory for All Response and Update Messages

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
		<p>CADUpdate: Automatic updates from the CAD system notifying that the primary agency has been dispatched, has arrived on scene</p> <p>AlarmClose: The call for service has been closed out</p> <p>CancelRequest: Used to cancel an alarm</p> <p>CancelRequestResponse: Used by the ECC to confirm that an alarm has been cancelled in response to a CancelRequest message.</p> <p>The Status Description text field should be used to provide additional details about the status code.</p>				
Message Header	Status Description		apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityStatus/nc:StatusDescriptionText	A description of a status or condition of something or someone.	nc:TextType	Mandatory for All Response and Update Messages
Message Header	Transmission Type Text	<p>A code identifying the type of message. Enumerations include:</p> <p>►Address Verification (will assume Bulk if not specified)</p> <p>►Address Verification Bulk or Address Verification Single</p> <p>►Heartbeat</p> <p>►Notification Only</p> <p>►Test Message</p> <p>►Update</p>	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityCategoryText	A kind of activity.	nc:TextType	Mandatory for New Events & Updates from the Alarm Monitoring Company.
Message Header	Requesting Discipline Text	When requesting an address verification, describes the discipline that the verification is requested for (i.e., Law, Fire, EMS, Animal Control). A request for multiple disciplines should be captured in separate elements.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/apco-alarm:AlarmEventAugmentation/apco-alarm:RequestingDisciplineText	When requesting an address verification, describes the discipline that the verification is requested for (i.e., Law, Fire, EMS, Animal Control). A request for multiple disciplines should be captured in separate elements.	nc:TextType	
Monitoring Station						
Monitoring Station	Callback Number	The phone number of the monitoring station.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmMonitoringStation/apco-alarm:AlarmMonitoringStationAugmentation			Mandatory for New Events

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
			ion/nc:PersonCurrentEmploymentAssociation/nc:EmploymentContactInformationReference/s:ref			
Monitoring Station	Source IP Address	The IP Address of the Monitoring Station server that transmitted the message to the ECC. Used to verify identity of the alarm company.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmMonitoringStation/apco-alarm:AlarmMonitoringStationAugmentation/nc:SourceIDText	A number or string set by a data provider so that information that is sent can be retraced back to its source.	nc:TextType	Mandatory
Monitoring Station	Operator ID	May be name, employee id, initials, or terminal id etc.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmMonitoringStation/apco-alarm:AlarmMonitoringStationAugmentation/nc:PersonCurrentEmploymentAssociation/nc:EmployeeIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	Mandatory for New Events
Monitoring Station	Organization ID	A unique number assigned to Central Station Monitoring Companies	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmMonitoringStation/nc:OrganizationIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Monitoring Station	Organization Name	The name of the dispatch requesting agency (typically an alarm central station). Organization Name has to be unique across all requestors if we want to use it as an identifier. Otherwise a separate Organization Id will have to be used.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmMonitoringStation/nc:OrganizationName	A name of an organization.	nc:TextType	
Service Company		The service company is an organization that installs an alarm, may or may not monitor that alarm and may be financially responsible for any fines associated with a false alarm.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceOrganization		nc:OrganizationType	
Service Company	Callback Number	The phone number of the alarm service company.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceOrganization/nc:OrganizationPrimaryContactInformation/nc:ContactTelephoneNumber/nc:FullTelephoneNumber/nc:TelephoneNumberFullID			
Service Company	Organization ID	A unique identifier assigned to an alarm service company.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceOrganization/nc:OrganizationIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Service Company	Organization Name	The name of agency that services the alarm system and holds responsibility for their customers' alarm systems.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceOrganization/nc:OrganizationName	A name of an organization.	nc:TextType	
Name						
Name	First Name	A first name of a person.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName	A first name of a person.	nc:PersonNameTextType	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
			ncName/nc:PersonGivenName			
Name	Full Name	A complete name of a person.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonFullName	A complete name of a person.	nc:PersonNameTextType	
Name	Last Name	A last name or family name of a person.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonSurName	A last name or family name of a person.	nc:PersonNameTextType	
Name	Middle Name	A middle name of a person.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonMiddleName	A middle name of a person.	nc:PersonNameTextType	
Name	Name Prefix	A title or honorific used by a person.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonNamePrefixText	A title or honorific used by a person.	nc:TextType	
Name	Name Suffix	A term appended after the family name that qualifies the name.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonNameSuffixText	A term appended after the family name that qualifies the name.	nc:TextType	
ECC						
ECC	Organization ID	An alphanumeric that uniquely identifies a ECC.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventDispatchAgency/nc:OrganizationIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
ECC	Organization Name	The name of the agency being requested to respond to an alarm (typically a police or fire department or central dispatch point) or responder. Organization Name has to be unique across all requestors and responders if we want to use it as an identifier. Otherwise a separate Organization Id will have to be used.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/em:AlarmEventDispatchAgency/nc:OrganizationName	A name of an organization.	nc:TextType	Mandatory for New Events
Registration						
Registration	Expiration Date	Date a registration expires.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ConvoyanceRegistrationPlateIdentification/nc:IdentificationExpirationDate/nc:YearMonth	A year and month.	niem-xsd:gYearMonth	
Registration	Issuing Authority	Organization that is authorized to issue vehicle registration	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ConvoyanceRegistrationPlateIdentification/nc:IdentificationSourceText	A person, organization, or locale which issues an identification.	nc:TextType	
Registration	Plate Number	Number that uniquely identifies a vehicle registration. May be complete or partial	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ConvoyanceRegistrationPlateIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Registration	Plate Type	e.g. temporary plates, manufacturer, tail number, dealer plates, hull number.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ConvoyanceRegistrationPlateIdentification/nc:IdentificationTypeText	A kind of identification.	nc:TextType	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
			eyanceRegistrationPlateIdentification/nc:IdentificationCategoryText			
Service Address						
Service Address	Building Usage Text	Describes the usage of the building, e.g. Gun Shop, Nuclear Power Plant	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationDescriptionText	A description of a location.	nc:TextType	
Service Address	Cross Street 1	This is the closest cross street to the alarm.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationCrossStreet/nc:CrossStreetDescriptionText	A description of a street intersection.	nc:TextType	Cross-street1 and Cross-street2 may be included if no street address and no geo-coordinates are available.
Service Address	Cross Street 2	If two cross streets are indicated, this indicates the second.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationCrossStreet/nc:CrossStreetDescriptionText	A description of a street intersection.	nc:TextType	Cross-street1 and Cross-street2 may be included if no street address and no geo-coordinates are available.
Service Address	Site Name	The name of the site.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationName	A name of a location.	nc:ProperNameTextType	Mandatory for a New Event
Service Address	Building Description	The name or number of a building.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:AddressBuildingText	A physical structure at an address.	nc:TextType	
Service Address	Country Name	A country, territory, dependency, or other such geopolitical subdivision of a location.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationCountry/nc:LocationCountryName	A country, territory, dependency, or other such geopolitical subdivision of a location.	nc:ProperNameTextType	
Service Address	County Name Text	A county, parish, vicinage, or other such geopolitical subdivision of a state.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationCounty/nc:LocationCountyName	A county, parish, vicinage, or other such geopolitical subdivision of a state.	nc:ProperNameTextType	Mandatory for new events if no Municipality name is indicated.
Service Address	Floor Identifier	Indicates a floor or level of a multi-story structure	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:AddressSecondaryUnitText	A particular unit within a larger unit or grouping at a location.	nc:TextType	
Service Address	Full Address Text	A complete address. May include a PO Box if appropriate.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:Location	A complete address.	nc:TextType	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
Service Address	Municipality Name	A name of a city or town.	Address/nc:AddressFullText apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationCityName	A name of a city or town.	nc:ProperName TextType	Mandatory for New Events if No County Name is supplied.
Service Address	Postal Code	An identifier of a post office-assigned zone for an address. Useful for cross referencing to a master street address guide which is predicated on having a postal code.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationPostalCode	An identifier of a post office-assigned zone for an address.	niem-xsd:string	Mandatory for New Events
Service Address	Room Number	Free form text field describing a location e.g. apartment 218, Suite 312.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:AddressSecondaryUnitText	A particular unit within a larger unit or grouping at a location.	nc:TextType	
Service Address	State Code	A state, commonwealth, province, or other such geopolitical subdivision of a country.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationState/nc:LocationStateName	A state, commonwealth, province, or other such geopolitical subdivision of a country.	nc:ProperName TextType	Manadatory for New Events
Service Address	Street Name	A name of a street.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationStreet/nc:StreetName	A name of a street.	nc:ProperName TextType	Mandatory for New Events Unless geo-coorindates have been specified.
Service Address	Street Number	A number that identifies a particular unit or location within a street.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationStreet/nc:StreetNumberText	A number that identifies a particular unit or location within a street.	nc:TextType	Mandatory for New Events Unless geo-coorindates have been specified.
Service Address	Street Post Directional	A direction that appears after a street name.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationStreet/nc:StreetPostdirectionalText	A direction that appears after a street name.	nc:TextType	
Service Address	Street Pre Directional	A direction that appears before a street name.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationStreet/nc:StreetPredirectionalText	A direction that appears before a street name.	nc:TextType	
Service Address	Street Type	A kind of street. e.g. Ave., St., Blvd.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddress/nc:StructuredAddress/nc:LocationStreet/nc:StreetCategoryText	A kind of street.	nc:TextType	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
Service Coordinates						
Service Coordinates	Altitude	The altitude measure of the location.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAltitudeMeasure/nc:MeasureValue/nc:MeasurePointValue	A specific measurement value.	nc:MeasurePointValueType	
Service Coordinates	Altitude Reference Point	e.g. ground level, sea level.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAltitudeMeasure/nc:MeasureValue/nc:MeasureText	A measurement value.	nc:TextType	
Service Coordinates	Altitude Unit Measure	The units of measure for the altitude (e.g. feet, miles, meters)	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAltitudeMeasure/nc:MeasureUnitText	A unit that qualifies the measurement value.	nc:TextType	
Service Coordinates	Cell ID	Text that specifically identifies a particular cell tower.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/apco-alarm:CellLocationService/apco-alarm:CellID/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Service Coordinates	Cell Sector ID	Text that specifically identifies a particular cell sector.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/apco-alarm:CellLocationService/apco-alarm:CellSectorID/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Service Coordinates	Coordinate Date/Time	Date/time that the coordinates were recorded by the device in UTC.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/apco-alarm:LocationCaptureDateTime	The time at which the location was captured	niem-xsd:dateTime	
Service Coordinates	Datum	Indicates the Lat/Long system, UTM and projection year. Specifies the map projection and coordinate system recommended for the display of logitude and latitude coordinates.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicDatumCode	A spatial reference system.	nga:DatumCodeType	Mandatory if geo-coordinates are provided.
Service Coordinates	Latitude Degree	A value that specifies the degree of a latitude. The value comes from a restricted range between -90 (inclusive) and +90 (inclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLatitude/nc:LatitudeDegreeValue	A value that specifies the degree of a latitude. The value comes from a restricted range between -90 (inclusive) and +90 (inclusive).	nc:LatitudeDegreeType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
Service Coordinates	Latitude Minute	A value that specifies a minute of a degree. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLatitude/nc:LatitudeMinuteValue	A value that specifies a minute of a degree. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	nc:AngularMinuteType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.
Service Coordinates	Latitude Second	A value that specifies a second of a minute. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLatitude/nc:LatitudeSecondValue	A value that specifies a second of a minute. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	nc:AngularSecondType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.
Service Coordinates	Longitude Degree	A value that specifies the degree of a longitude. The value comes from a restricted range between -180 (inclusive) and +180 (exclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLongitude/nc:LongitudeDegreeValue	A value that specifies the degree of a longitude. The value comes from a restricted range between -180 (inclusive) and +180 (exclusive).	nc:LongitudeDegreeType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.
Service Coordinates	Longitude Minute	A value that specifies a minute of a degree. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLongitude/nc:LongitudeMinuteValue	A value that specifies a minute of a degree. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	nc:AngularMinuteType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.
Service Coordinates	Longitude Second	A value that specifies a second of a minute. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationTwoDimensionalGeographicCoordinate/nc:GeographicCoordinateLongitude/nc:LongitudeSecondValue	A value that specifies a second of a minute. The value comes from a restricted range of 0 (inclusive) to 60 (exclusive).	nc:AngularSecondType	Mandatory if geo-coordinates are provided and no street address or cross-streets are included.
Service Coordinates	Speed	Speed that the coordinates recording device was moving.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/nc:SpeedMeasure/nc:MeasureValue/nc:MeasurePointValue	A specific measurement value.	nc:MeasurePointValueType	
Service Coordinates	Speed Unit of Measure	The units for the speed value (e.g. miles/hour, km/hour, ft/sec, knots)	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/nc:SpeedMeasure/nc:SpeedUnitCode	A unit of measurement of speed.	niem-xsd:string	
Service Coordinates	Uncertainty Distance	A confidence measure derived from the number of cell sites, distance of the coordinates recorded from the cell site, accuracy of measurement of the coordinates and is typically expressed	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/apco-alarm:AlarmServiceLocationAugmentation/apco-	A measurement value.	nc:TextType	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
		in meters.	alarm:PositionAccuracyDistanceMeasure/nc:MeasureValue/nc:MeasureText			
Service Coordinates	Full Latitude Value	Geo-coordinate latitude of an alarm location expressed in decimal form	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationMapLocation/nc:MapHorizontalCoordinateText			
Service Coordinates	Full Longitude Value	Geo-coordinate longitude of an alarm location expressed in decimal form	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationMapLocation/nc:MapVerticalCoordinateText			
Subscriber						
Subscriber	Role Of Person Reference	Provides a link to the person object id for a subscriber	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:Subscriber/nc:RoleOfPersonReference/s:ref			
Vehicle Identifiers						
Vehicle Identifiers	Commercial Identifier	A number that uniquely identifies a commercial carrier.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:VehicleIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Vehicle Identifiers	Commercial Identifier Type	Describes the type of number that uniquely identifies a commercial carrier (e.g. US DOT, state, etc.)	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:VehicleIdentification/nc:IdentificationCategory/nc:IdentificationCategoryText	A kind of identification.	nc:TextType	
Vehicle Identifiers	Make Code	A manufacturer of a vehicle.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:VehicleMakeCode	A manufacturer of a vehicle.	fbi:VMACodeType	
Vehicle Identifiers	Model Code	A specific design or class of vehicle made by a manufacturer.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:VehicleModelCode	A specific design or class of vehicle made by a manufacturer.	fbi:VMOCCodeType	
Vehicle Identifiers	Model Year	A year in which an item was manufactured or produced.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemModelYearDate	A year in which an item was manufactured or produced.	niem-xsd:gYear	
Vehicle Identifiers	Primary Color	A color of the majority of a conveyance	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemColor/nc:ConveyanceColorPrimaryText	A single, upper-most, front-most, or majority color of a conveyance.	nc:TextType	
Vehicle Identifiers	Property ID	Alphanumeric unique identifier	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemOtherIdentification/nc:IdentificationID	A value that identifies something.	niem-xsd:string	
Vehicle Identifiers	Property ID Type Code	Indicates the property id type. e.g. Serial Number, Owner applied number	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemOtherIdentification/nc:IdentificationCategory/nc:IdentificationCategoryText	A kind of identification.	nc:TextType	
Vehicle Identifiers	CMV Weight	Loaded weight of vehicle	apco-alarm:ExternalAlarm/apco-	A specific	nc:MeasurePoin	

<u>Class Name</u>	<u>Property Name</u>	<u>Property Definition</u>	<u>NIEM Mapping Path</u>	<u>NIEM Definition</u>	<u>Target Element Base Type</u>	<u>Comments</u>
			alarm:AlarmPayload/nc:CommercialVehicle/nc:VehicleCurrentWeightMeasure/nc:MeasureValue/nc:MeasurePointValue	measurement value.	tValueType	
Vehicle Identifiers	Vehicle Description	A description of a vehicle	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemDescriptionText	A description of an item.	nc:TextType	
Vehicle Identifiers	Vehicle ID Number	A Vehicle Identification Number Analysis; a combination of a vehicle make and model information.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:VehicleVINAText	A Vehicle Identification Number Analysis; a combination of a vehicle make and model information.	nc:TextType	
Vehicle Identifiers	Vehicle Ownership Text	Describes the entity that owns the vehicle	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemOwnershipCategoryText	A kind of ownership of an item.	nc:TextType	
Vehicle Identifiers	Vehicle Secondary Color	A lower-most or rear-most color of a two-tone vehicle or a lesser color of a multi-colored vehicle.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemColor/nc:ConveyanceColorSecondaryText	A lower-most or rear-most color of a two-tone conveyance or a lesser color of a multi-colored conveyance.	nc:TextType	
Vehicle Identifiers	Vehicle Style Code	A style of a vehicle.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemStyle/nc:VehicleStyleCode	A style of a vehicle.	fbi:VSTCodeType	
Vehicle Identifiers	Vehicle Use Text	A manner or way in which a vehicle is used.	apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Vehicle/nc:ItemUsageText	A manner or way in which an item is used.	nc:TextType	

2.7 Methodology

- 2.7.1 Version 3.1 of the External Alarm Interface Exchange IEPD started by using the baseline requirements previously identified for the Alert 2.0 exchange. The following methodology was used in the development of the External Alarm Interface Exchange 3.1 IEPD:
 - 2.7.1.1 Create initial logical data model based on Alert 2.0 requirements.
 - 2.7.1.2 Met with Subject Matter Experts (SMEs) to identify missing elements and clarify definitions of some elements.
 - 2.7.1.3 Create physical model based on data requirements and specified standard
 - 2.7.1.4 Map elements identified in physical model and distribute mappings to SMEs for feedback.
 - 2.7.1.5 Create Schema Subset based on mappings.
 - 2.7.1.6 Create Document/Extension schema based on mappings.
 - 2.7.1.7 Create XML Instance document.
 - 2.7.1.8 Create XSL Stylesheet.
- 2.7.2 Version 3.3 of the Automated Secure Alarm Protocol IEPD was updated from version 3.1 IEPD using the following methodology:
 - 2.7.2.1 Met with the ASAP Technical Committee Subject Matter Experts (SMEs) to identify requirements and definitions for additional elements.
 - 2.7.2.2 Updated the logical data model and physical model based on data requirements and specified standard.
 - 2.7.2.3 Mapped elements identified in physical model and distribute mapping to SMEs for feedback.
 - 2.7.2.4 Updated Schema Subset based on mappings.
 - 2.7.2.5 Updated Document/Extension schema based on mappings.
 - 2.7.2.6 Updated XML instance document.
 - 2.7.2.7 Updated XSL Stylesheet.
- 2.7.3 Version 3.4 of the Automated Secure Alarm Protocol IEPD was updated from version 3.3 IEPD using the following methodology:
 - 2.7.3.1 APCO formed the Standards Development Committee ASAP to ECC Writing Group Committee. The committee consisted of a balanced representation from the alarm industry and public safety communications.
 - 2.7.3.2 The ASAP to ECC Committee met twice a month on average.
 - 2.7.3.3 Updated the logical data model based on data requirements and specified standard.
 - 2.7.3.4 Mapped elements identified in physical model and distribute mapping to SMEs for feedback.

- 2.7.3.5 Updated Schema Subset based on mappings.
- 2.7.3.6 Updated Document/Extension schema based on mappings.
- 2.7.3.7 Updated XML instance document.
- 2.7.3.8 Updated XSL Stylesheet.

2.8 Implementation Recommendations

- 2.8.1 Rules and procedures by which alarm monitoring companies may be required either by policy or local ordinance(s) to attempt contact with someone at the alarm site prior to the delivery of an electronic alarm exchange to the ECC will not change and the process is unaffected by this IEPD. This work flow is often referred as “Call Verification” or “Enhanced Call Verification”.
- 2.8.2 Implementation sites should consider including the following performance measures to focus project goals and to measure implementation success.
 - 2.8.2.1 Number of telephone calls from alarm monitoring companies to the ECC (Is there a reduction?)
 - 2.8.2.2 Overall processing time for alarm-based calls-for-service (Is there a reduction?)
 - 2.8.2.3 Number of errors in delivery and processing of alarm and calls-for-service by eliminating voice delivery and ECC call taker CAD re-entry (Is the number decreased?)
 - 2.8.2.4 Progress toward a standard for interfaces between alarm monitoring companies and ECCs to reduce cross-agency and cross-provider data exchange development time and cost (Any measurable savings of time and cost?)
- 2.8.3 Alarms and requests-for-service will be transmitted to ECCs per normal procedures even when a catastrophic event (e.g. hurricane) or mass alarming event (e.g. wind or electrical storm) causes the ECC choose to not respond. This places the ECCs in control of filtering requests and provides for historical information in their CAD or front-end processing engine. As part of a fully featured CAD ASAP solution, CAD vendors shall provide a mechanism to enable authorized ECC staff; e.g. CAD Administrator or Communications Supervisor, the ability to suspend the receipt of all alarms or selectively certain types of alarms. The staff member invoking this feature must be able to configure a message to be returned to the alarm company when the alarm is rejected during one of these catastrophic events; e.g. “This agency is not accepting alarms at the present time due to the current weather situation”, or similar language that would be appropriate and meaningful to the alarm companies.
- 2.8.4 Fusion Center and/or other Department of Homeland Security information needs will be met via the CAD and or ECC systems and processes. These

needs will likely not be met directly by creating exchanges between the alarm monitoring companies and these DHS systems.

2.8.5 The Alarm Interface Exchange includes primary message types:

2.8.5.1 Address verification request: Message type "Address Verification"

2.8.5.2 New Alarm event: Message type "Alarm"

2.8.5.3 ECC's Response to an Address Verification or New Alarm event:
Message types "Accept" or "Reject"

- Status Update messages initiated by the ECC that provide additional information about the alarm event:
- First unit has been dispatched (generated automatically by the CAD System): Message type "CADUpdate".
- First unit has arrived on scene (generated automatically by the CAD system): Message type "CADUpdate".
- All units have cleared and call is closed (generated automatically by the CAD system): Message type "AlarmClose". The AlarmClose message may include disposition information.

2.8.5.4 Updates from the alarm companies providing additional information about the alarm event or responding to requests from the ECC that must be presented to the CAD user controlling the event and often to the mobile CAD user (generated by an alarm operator): Message type "UPDATE".

2.8.5.5 Updates from the ECC requesting information; e.g. need for a keyholder to respond, or questions about the alarm event that must be presented to an alarm operator by the automation (generated by a CAD or Mobile user: Message type "UPDATE".

2.8.5.6 Status acknowledgements from the system receiving the UPDATE messages that identify if the UPDATE was Accepted or Rejected:
Message types UPD Accept or UPD Reject.

2.8.5.7 Alarm cancellation requests may be initiated by the alarm companies to include a valid reason why the cancellation is requested. Message type "UPDATE", Status Text "CancelRequest".

2.8.5.8 Alarm cancellation request responses may be initiated by the ECCs to include the action taken by the ECC for a cancellation request. Message type "UPDATE", Status Text "CancelRequestResponse".

2.8.5.9 The on-line status can be determined through the use of a new Heartbeat message. The originator of the message will send Heartbeat Request and the receiver will respond with a Heartbeat Acknowledgement. Message type "Heartbeat", Status Text "REQ" for the request and StatusText "ACK" for the acknowledgement.

2.8.6 This IEPD does not include any other message type within the scope of this project. For example, alarm operators and ECC members cannot send each

other a message unless there is an active event. All messages that reference an active event must be formulated using the appropriate message type described above.

- 2.8.7 Alarm monitoring companies will not take ownership of indicating high-risk or target locations since no standard criteria of what constitutes a high risk or target property currently exists. It is believed that most ECCs and CAD Systems will provide such functionality and ownership. Asking alarm monitoring companies to add this information could cause a conflict-of-interest and would likely create confusion.
- 2.8.8 ASAP is a highly successful, trusted and proven service that bypasses the call-taking process completely. The by-passing of the call-taker action and having the initial call-for-service appear in the appropriate radio operators' pending call queues is encouraged and recommended. Whereas a CAD vendor may have the ability to route an alarm call-for-service to a call-taker for review before forwarding the call-for-service to a Telecommunicator for dispatch, this practice is highly discouraged as it may delay the dispatch of public safety resources in a timely manner.
- 2.8.9 NENA and US Postal Service standards will be utilized for addressing since these standards are typically utilized by ECCs and CADs. References:
 - 2.8.9.1 NENA Standard Data Formats for 9-1-1 Data Exchange & GIS Mapping
NENA 02---010
 - 2.8.9.2 US Postal Service Publication 28, Appendix C
 - 2.8.9.3 General implementation guidelines and suggestions:
 - 2.8.9.4 Each participating alarm monitoring company should assign a liaison to coordinate implementation both internally and externally with the ECC and the alarm monitoring software provider.
 - 2.8.9.5 Each participating ECC should assign a liaison to coordinate implementation both internally and externally with the alarm monitoring company and the ECC's CAD system provider.
 - 2.8.9.6 Response plans that dictate which emergency services will respond to an event and how many First Responders are business decisions of the ECC and not within the scope of this IEPD.
 - 2.8.9.7 Once an exchange has been developed end to end by the CAD provider and the alarm monitoring software provider, and has been approved for production use, it shall be required that the alarm monitoring company trigger an Address Validation request for each alarm address within the ECC's response area(s). This will facilitate the identification of problem addresses that need to be massaged or reallocated to a different ECC. This process shall also apply post implementation to new

accounts added and changed accounts when any address component has been edited. Alternate address validation processes may be proposed by the alarm monitoring company to replace the current process. If an address fails the validation, the account shall be marked as not eligible for an ASAP dispatch until the address is successfully validated. Alarm companies shall not transmit an alarm for any fixed address that has not been validated by the ECC's CAD system, unless the ECC agrees to an alternative method.

2.8.9.8 If the CAD system is capable, geo-coordinates in decimal degrees and/or degrees, minutes and seconds with the appropriate DatumID shall be included in an ACCEPT message in response to an Address Verification request from an alarm company for a fixed address. The alarm company's automation shall add the geo-data to the alarm company's account for the location address. Alarm monitoring companies shall implement a procedure to call the ECC if an acknowledgement is not returned from the ECC within "x" number of seconds. It is recommended that "x" equal 60 seconds or less.

2.8.9.9 Whenever possible, alarm monitoring companies should include the latitude and longitude of the alarm site address in their alarm customer database so that the geo-coordinates are included in the electronic exchange delivery. CAD providers should configure the CAD systems to validate an address based on the following order:

- By street address if a street address is present
- Critical Note: The base location fixed address (street number, street direction, street name, street type, street post-direction/suffix) must be a literal match exactly at the very least in concert with the correct community name and county name when applicable. Because this process is automated, the use of Soundex algorithms are prohibited as incorrect results could be returned to the alarm company. Some ECCs may require the CAD to also match on secondary addresses such as apartment and suite numbers. This is an ECC decision.
- By geo-coordinates if geo-coordinates are present, and if no street address is present or if the street address cannot be validated
- By intersection if two cross-streets are provided, and if no street address is present and no geo-coordinates are present. This should be a rare situation.

2.8.9.10 The ECC will decide on the event types that will be accepted by the ECC's CAD system. As one example, some ECC's may dispatch for only a single discipline such as police-only communications center that accept law enforcement-type alarms only and will not accept fire and/or EMS alarms, or vice-versa. ECC's may also decide to accept

certain types of alarms within a single discipline but reject others; e.g. a police-only dispatch center may decide to accept burglary, holdup, panic, and duress alarms but may decide to not accept tamper alarms. This shall be controlled through the use of a configurable alarm event to CAD nature event translation table that is under the control of the ECC. Alarm monitoring company alarm notifications must adhere to a standard list of event types that is provided in this IEPD. (See Appendix 2)

- 2.8.9.11 The ECC will work with the CAD system provider to decide how each data element sent by the alarm company will be mapped to the call-for-service record.
- 2.8.9.12 The AlarmClose may include no disposition if a disposition does not exist, or it may include multiple dispositions and additional notes to clarify each disposition such as an offense report number, a person's name found on scene, etc. To be conformant to this standard, CAD providers are expected to provide a disposition code mapping, similar to the alarm event to CAD nature code translation mapping, and map each of the ECC's disposition codes to the APCO Standardized disposition codes. The equivalent APCO common disposition code(s) with added comment as applicable should be sent to the alarm company. (See APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data Exchange)
<https://www.apcointl.org/standards/standards-to-download/#>
- 2.8.10 A standardized list of rejection/acceptance codes and definitions, known as the ASAP Master Information list, are included in this IEPD.
- 2.8.11 Alarms triggered based on RFID data elements will require additional definition and research. These type alarms are not considered within scope of this IEPD release.
- 2.8.12 Data elements such as Patient Name or Incarcerated Person Name may be included in free-text notes section versus having a pre-define field since RFID and Defibrillator Alarms are still evolving.
- 2.8.13 (CRITICAL NOTE) Once the initial new alarm record is sent by the Alarm Monitoring Company, all subsequent Update transmissions to the ECC must utilize the element name <StatusDescriptionText>. Most ECCs do NOT want certain fields updated automatically by an external source such as an update to the address. Automatic updates to an address could trigger a different response plan. Instead, this IEPD has provided a single thread for all Updates to be sent to the CAD system. It is expected that the CAD System will add the Update to the call-for-service as an additional Comment or Note that will be

seen by the radio operator. It shall be the radio operator's responsibility to review each Comment sent as an Update message by the Alarm Monitoring Company and process the Update accordingly. Examples of an Update may include:

2.8.14 A Request to Cancel the Event

- Alarm cancellation requests may be initiated by the alarm companies to include a valid reason why the cancellation is requested. Message type "UPDATE", Status Text "CancelRequest". The <StatusDescriptionText> must contain a valid message from the ASAP Master Information list. An additional <Status Description Text> can provide further clarification by the alarm operator. The "CancelRequest" message must include the original alarm event type that was sent by the alarm company.
- Alarm cancellation request responses may be initiated by the ECCs to include the action taken by the ECC for a cancellation request. Message type "UPDATE", Status Text "CancelRequestResponse". The <StatusDescriptionText> must contain a valid message from the ASAP Master Information list. Action(s) taken by the ECC are within the control of the ECC and the ECC's policies and procedures. Note: If ECC policies permit, the CAD system may be configured to automatically take appropriate action and respond to a "CancelRequest". As an example, if a "CancelRequest" has been sent by the alarm company to the ECC to request a cancellation for a Burglary alarm at a Residential location, and the alarm has not been dispatched to a field resource, the CAD system could close the CAD event and remove the event from the pending queue.

2.8.15 An estimated time of arrival (ETA) for the key holder

2.8.16 An individual on the premise of the alarm site who has been contacted but does not know the proper pass code

2.8.17 A change to one or more data elements originally sent as a component within the new call event

2.8.18 Other items of importance

2.8.19 While Telematics data transmission is not a primary purpose of this exchange, the exchange does include basic vehicle descriptor data elements to support vehicle alarm notifications by alarm monitoring central stations.

2.8.20 Every message shall include the date and time that the message was transmitted.

2.8.21 Telephone Number Structure in ASAP

2.8.22 In an ASAP Exchange of alarm information between an alarm monitoring company and an ECC there are fields defined for a telephone number. The purpose of supplying telephone numbers is to allow ECC personnel to

contact when necessary, via voice conversation, the alarm subscriber at the monitored premises and the monitoring alarm monitoring center. A telephone number may be provided for an alarm service company that is different from the alarm monitoring center. During the workflow of an active alarm call-for-service, the ECC will generally have no need to contact the alarm service company as any conversation should occur between the ECC and the alarm monitoring center. The contact information for an alarm service company should be stored in the CAD call-for-service record for follow-up when necessary by the ECC and/or false alarm administrators after the call-for-service has been closed.

- 2.8.23 The telephone number, at a minimum is presented to the ECC personnel to initiate a call via manual dialing. However, this is not a restriction to prevent the ECC from utilizing the provided number within an integrated telephony interface. ECC personnel are still encouraged to use the ASAP Update messaging feature to contact the alarm monitoring company while the reported alarm call-for-service remains active.
- 2.8.24 The NIEM IEPD defines a telephone number to be a text field with unlimited length. This technical definition, though accurate, is too broad to be practical. Consequently the standard defines the following requirements for telephone numbers in an ASAP exchange.
- 2.8.25 The North American Numbering Plan (NANP), which controls phone number structure, defines a telephone number as a ten-digit string. However in many circumstances more information must be provided beyond only a main number. Additional dialing information such as telephone extensions and auto-attendant menu selections maybe needed to reach the proper end point.
- 2.8.26 Consequently, the telephone number field shall be limited to the following:
 - 2.8.26.1 Allowable characters include:
 - Digits “0 through 9” inclusive, asterisk, “*” and number sign “#” - representing the digits in the NANP dialing
 - Left parenthesis “(”, right Parenthesis “)”, dash “-” and spaces for visual formatting of the number and are ignored for dialing purposes
 - The comma “,” and semicolon “;” which can be used by some phone systems to delay or hold for operator control, digit transmission
 - 2.8.26.2 The total length of the field shall be a maximum of 24 characters. This will allow concatenation of digits and other characters to allow ECC operators to contact the appropriate party
 - 2.8.26.3 The initial ten digits, plus any formatting characters, of the supplied string shall be a number to initiate a call. The number must always include the NPA Area Code as the first three digits.

- 2.8.26.4 The alarm monitoring company shall not format a domestic long distance line selection character, a leading “1”, in the telephone number. The ECC CAD/phone system must determine the proper way to dial the ten digit telephone number from the location.
- 2.8.26.5 In general, international numbers should be avoided. However, if it is necessary to provide an international number the, “011” dialing prefix for international long distance line selection shall be inserted before the telephone number. The telephone number must be inclusive of all country, region and city codes as appropriate for the number.
- 2.8.26.6 The “,” and “;” are provided as informational to the ECC. The comma “,” indicates a three second delay and the semicolon “;” indicates a hold to operator action. The ECC systems can choose to utilize or ignore these characters.
- 2.8.26.7 The CAD system has a responsibility to preserve the information in the telephone number field in the ASAP transfer to allow the ECC operator to correctly dial the provided number.
- 2.8.27 Once an alarm has been transmitted by an alarm company to an ECC, received by the ECC’s CAD system, and meets the criteria for a successful call-for-service creation, CAD vendors shall ensure that the call-for-service is successfully created first before responding to the alarm company with the “ACCEPT” message. The “ACCEPT” message shall include the ECC’s incident number.

2.9 Example Supported Exchanges

1	Exchange	Medical Alert info
	Examples of Triggering Events	<ul style="list-style-type: none"> • Allergic Reaction • Breathing Problem • Burn • Chest Pain / Heart Problem • Choking • Diabetic Problem • Fall • Seizure • Other Life Threatening Problems
	Sample Scenario(s)	<p>An elderly person living alone subscribes to an alarm monitoring service and wears a device that allows the individual to trigger a signal to the alarm company when experiencing a life-threatening medical problem. The individual begins to experience chest pains (or encounters any one of the triggering events listed above) and activates the device. The alarm monitoring company receives a notification signal that a Medical Alarm has been activated. The automation (software application and the associated database) utilized by the alarm monitoring company indicates the proper 9-1-1 ECC responsible for the dispatch of First Responder personnel to the premise address associated to the alarm. The alarm company operator initiates the electronic transmission of Medical Alert information to the correct ASAP-enabled 9-1-1 ECC. Data transmitted to the 9-1-1 ECC includes the alarm company's event number, address of the alarm subscriber, the type of alarm, detailed information about the premise, and detailed information about the individual that will assist First Responders in locating the premise and be familiar with the patient's history before their arrival. Upon receipt of this data, the 9-1-1 ECC's Computer-Aided Dispatch (CAD) System validates the address within the ECC's jurisdiction and creates a Call-for-Service. First Responders are immediately dispatched to the premise. Sensitive information about the individual typically will be sent to the First Responders' mobile data computer (MDC). The CAD System transmits an electronic acknowledgement to the alarm company that references the alarm company's event number and includes the ECC's event number(s) and an indication that the Call-for-Service has been sent to the dispatch queue to be dispatched to Emergency First Responders. Additional information relating to the event may be originated by the alarm company or the ECC and transmitted to the other entity electronically.</p>
	Sample Business Rule(s)	<ul style="list-style-type: none"> • Depending on governing laws of the jurisdiction affected, the alarm company may attempt to reach someone at the premise before initiating the electronic exchange. • The alarm location for a fixed address must have been validated as a pre-requisite prior to the sending of an alarm. If the alarm location address suddenly cannot be validated for some reason by the CAD and Latitude/Longitude coordinates are present in the data exchange, the CAD System will attempt to validate using geo-coordinates. • If the address and geo-coordinates (if present) cannot be validated, an electronic Rejection message will be returned by the ECC to the alarm company. The alarm company operator is expected to take action according to alarm company procedures. • First Responders dispatched may include EMS plus a combination of Fire and/or Law Enforcement depending on local ECC agency procedures, • Sensitive information about the individual typically may be sent to the First Responders' mobile data computer (MDC). • If the alarm has been verified to be an actual alarm, the alarm company can send alarm verification information to the ECC at the time the new alarm is transmitted to the ECC or after the alarm is sent using the Update message type. Examples include but are not limited to: <ul style="list-style-type: none"> ○ Alarm operator has made contact with the patient or someone else with the patient who has confirmed the presence of a medical emergency. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. ○ The alarm operator can observe via video that the patient is having a medical emergency. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. The alarm operator is also able to send a URL to the ECC to enable the ECC staff and first responder staff to observe the video seen by the alarm operator.

2	Exchange	Fire Alarm info
	Examples of Triggering Events	<ul style="list-style-type: none"> • Smoke / Heat Detector • Manual Pull Station/Keypad • Sprinkler/Waterflow Detector • Other fire-related events
	Sample Scenario(s)	<p>A fire begins inside a structure and is spotted by an individual. The individual pulls the manual pull station to summon the fire department and sound an alarm for others to evacuate. A signal is transmitted to the alarm company.</p> <p>A fire begins inside a structure and causes the sprinkler system to activate. A sprinkler/waterflow activation signal is transmitted to the alarm company.</p> <p>A fire begins inside a structure and is sensed by a smoke or heat detector. A signal is transmitted to the alarm company.</p> <p>An alarm monitoring service receives a signal that a Fire Alarm has been activated via one of the trigger examples above. The automation (software application and the associated database) utilized by the alarm monitoring company indicates the proper 9-1-1 ECC responsible for the dispatch of First Responder personnel to the premise address associated to the alarm. The alarm company operator initiates the electronic transmission of Fire Alarm information to the correct ASAP-enabled 9-1-1 ECC. Data transmitted to the 9-1-1 ECC includes the alarm company's event number, address of the alarm subscriber, the type of alarm including the triggering method, and detailed information about the premise including commercial versus residential, detailed directions, hazardous materials stored at the facility, etc, that will assist First Responders in locating the premise and be familiar with any dangers that could be presented to the First Responders upon their arrival. Upon receipt of this data, the 9-1-1 ECC's Computer-Aided Dispatch (CAD) System validates the address within the ECC's jurisdiction and creates a Call-for-Service. First Responders are immediately dispatched to the premise. The CAD System transmits an electronic acknowledgement to the alarm company that references the alarm company's event number and includes the ECC's event number(s) and an indication that the Call-for-Service has been sent to the dispatch queue to be dispatched to Emergency First Responders. Additional information relating to the event may be originated by the alarm company or the ECC and transmitted to the other entity electronically. A notification from CAD to Traffic web sites and Intelligent Transportation Systems could be sent when the amount of responding fire apparatus is significant and traffic in the area of the emergency could be affected.</p>
	Sample Business Rule(s)	<ul style="list-style-type: none"> • Depending on governing laws of the jurisdiction affected, the alarm company may attempt to reach someone at the premise if the premise type is RESIDENTIAL before initiating the electronic exchange. • The alarm location for a fixed address must have been validated as a pre-requisite prior to the sending of an alarm. If the alarm location address suddenly cannot be validated for some reason by the CAD and Latitude/Longitude coordinates are present in the data exchange, the CAD System will attempt to validate using geo-coordinates. • If the address and geo-coordinates (if present) cannot be validated, an electronic Rejection message will be returned by the ECC to the alarm company. The alarm company operator is expected to take action according to alarm company procedures. • First Responders dispatched may include Fire plus a combination of EMS and/or Law Enforcement depending on local ECC agency procedures, Law enforcement could be typically dispatched for traffic and crowd control purposes. • If the alarm has been verified to be an actual alarm, the alarm company can send alarm verification information to the ECC at the time the new alarm is transmitted to the ECC or after the alarm is sent using the Update message type. Examples include but are not limited to: <ul style="list-style-type: none"> ○ Alarm operator has made contact with the security guard or someone else at the alarm location who has confirmed the presence of an actual fire. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. ○ The alarm operator can observe via video that there is a fire at the alarm location. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. The alarm operator is also able to send a URL to the ECC to enable the ECC staff and first responder staff to observe the video seen by the alarm operator.

3	Exchange	Gas Detector Alarm info
	Examples of Triggering Events	<ul style="list-style-type: none"> • Natural Gas Detector • Carbon Monoxide Detector • Propane Gas Detector • Other Gas Detection Events
	Sample Scenario(s)	<p>A natural gas pipe breaks inside of a structure and triggers a natural gas detector alarm signal.</p> <p>The vent on a furnace becomes clogged, causes carbon monoxide to build up inside of a structure, and subsequently triggers a carbon monoxide alarm signal.</p> <p>An alarm monitoring service receives a signal that a Gas Detector Alarm has been activated via one of the trigger examples above. The automation (software application and the associated database) utilized by the alarm monitoring company indicates the proper 9-1-1 ECC responsible for the dispatch of First Responder personnel to the premise address associated to the alarm. The alarm company operator initiates the electronic transmission of Gas Detector Alarm information to the correct 9-1-1 ECC. Data transmitted to the 9-1-1 ECC includes the alarm company's event number, address of the alarm subscriber, the type of alarm including the triggering method, and detailed information about the premise including commercial versus residential, detailed directions, hazardous materials stored at the facility, etc., that will assist First Responders in locating the premise and be familiar with any dangers that could be presented to the First Responders upon their arrival. Upon receipt of this data, the 9-1-1 ECC's Computer-Aided Dispatch (CAD) System validates the address within the ECC's jurisdiction and creates a Call-for-Service. First Responders are immediately dispatched to the premise. The CAD System transmits an electronic acknowledgement to the alarm company that references the alarm company's event number and includes the ECC's event number(s) and an indication that the Call-for-Service has been sent to the dispatch queue to be dispatched to Emergency First Responders. Additional information relating to the event may be originated by the alarm company or the ECC and transmitted to the other entity electronically. A notification from CAD to Traffic web sites and Intelligent Transportation Systems could be sent when the amount of responding fire apparatus is significant and traffic in the area of the emergency could be affected.</p>
	Sample Business Rule(s)	<ul style="list-style-type: none"> • Depending on governing laws of the jurisdiction affected, the alarm company may attempt to reach someone at the premise before initiating the electronic exchange. • The alarm location for a fixed address must have been validated as a pre-requisite prior to the sending of an alarm. If the alarm location address suddenly cannot be validated for some reason by the CAD and Latitude/Longitude coordinates are present in the data exchange, the CAD System will attempt to validate using geo-coordinates. • If the address and geo-coordinates (if present) cannot be validated, an electronic Rejection message will be returned by the ECC to the alarm company. The alarm company operator is expected to take action according to alarm company procedures. • First Responders dispatched may include Fire plus a combination of EMS and/or Law Enforcement depending on local ECC agency procedures, Law enforcement could be typically dispatched for traffic and crowd control purposes. • If the alarm has been verified to be an actual alarm, the alarm company can send alarm verification information to the ECC at the time the new alarm is transmitted to the ECC or after the alarm is sent using the Update message type. Examples include but are not limited to: <ul style="list-style-type: none"> ○ Alarm operator has made contact with the security guard or someone else at the alarm location who has confirmed the presence of an odor of gas. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. ○ The alarm operator can hear what sounds to be hissing sound at the alarm location. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate.

4	Exchange	Burglar Alarm info
	Examples of Triggering Events	<ul style="list-style-type: none"> • Burglar Alarm • Tamper Alarm (Someone tampering with equipment) • Restore Signal (Alarm Restored but no prior alarm received) • Phone Line Failure (Someone has possibly cut phone line) • Open / Close Signal (Someone disarming system without permission) • Reset / Cancel (Someone disarming system without permission)
	Sample Scenario(s)	<p>A residence is broken into and the suspect's movement is detected by a motion detector.</p> <p>Someone is attempting to disable the premise alarm equipment.</p> <p>The alarm company receives an alarm restore message but no prior alarm was received.</p> <p>Someone attempts to cut the telephone line.</p> <p>Someone attempts to disarm the alarm system without the proper security code.</p> <p>An alarm monitoring service receives a signal that an alarm has been activated via one of the trigger examples above. The software application and the associated database utilized by the alarm monitoring company indicates the proper 9-1-1 ECC responsible for the dispatch of Law Enforcement First Responder personnel to the premise address associated to the alarm. The alarm company operator initiates the electronic transmission of Burglar Alarm information to the correct 9-1-1 ECC. Data transmitted to the 9-1-1 ECC includes the alarm company's event number, address of the alarm subscriber, the type of alarm including the triggering method (motion detector, glass breakage, etc.) and specific location of the triggering device (rear door, front hall, etc.), and detailed information about the premise including commercial versus residential, detailed directions, hazardous materials stored at the facility, etc., that will assist Law Enforcement First Responders in locating the premise and be familiar with any dangers that could be presented to the First Responders upon their arrival. Upon receipt of this data, the 9-1-1 ECC's Computer-Aided Dispatch (CAD) System validates the address within the ECC's jurisdiction and creates a Call-for-Service. Law Enforcement First Responders are immediately dispatched to the premise. The CAD System transmits an electronic acknowledgement to the alarm company that references the alarm company's event number and includes the ECC's event number(s) and an indication that the Call-for-Service has been sent to the dispatch queue to be dispatched to Law Enforcement First Responders. Additional information relating to the event may be originated by the alarm company or the ECC and transmitted to the other entity electronically. Additional information may consist of a cancellation request from the alarm company, information about the key-holder from the alarm company, status changes by responding Law Enforcement officers, and situation found information as denoted by the Law Enforcement Officer(s) on scene.</p>
	Sample Business Rule(s)	<ul style="list-style-type: none"> • Depending on governing laws of the jurisdiction affected, the alarm company may attempt to reach someone at the premise before initiating the electronic exchange. • The alarm location for a fixed address must have been validated as a pre-requisite prior to the sending of an alarm. If the alarm location address suddenly cannot be validated for some reason by the CAD and Latitude/Longitude coordinates are present in the data exchange, the CAD System will attempt to validate using geo-coordinates. • If the address and geo-coordinates (if present) cannot be validated, an electronic Rejection message will be returned by the ECC to the alarm company. The alarm company operator is expected to take action according to alarm company procedures. • If the alarm has been verified to be an actual alarm, the alarm company can send alarm verification information to the ECC at the time the new alarm is transmitted to the ECC or after the alarm is sent using the Update message type. Examples include but are not limited to: <ul style="list-style-type: none"> ○ Alarm operator has made contact with the security guard or someone else at the alarm location who has confirmed the presence of a break-in in progress. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. ○ The alarm operator can observe via video that there is a break-in in progress at the alarm location. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. The alarm operator is also able to send a URL to the ECC to enable the ECC staff and first responder staff to observe the video seen by the alarm operator.

5	Exchange	Hold-up/Panic/Duress Alarm (Robbery in progress) info
	Examples of Triggering Events	<ul style="list-style-type: none"> • Hold-up Alarm • Panic / Duress Alarm
	Sample Scenario(s)	<p>A jewelry store is being robbed and a store employee manages to trigger a push button signaling device to initiate a Hold-up alarm.</p> <p>A home invasion occurs and the homeowner manages to trigger a signaling device to initiate a Panic / Duress alarm.</p> <p>An alarm monitoring service receives a signal that an alarm has been activated via one of the trigger examples above. The software application and the associated database utilized by the alarm monitoring company indicates the proper 9-1-1 ECC responsible for the dispatch of Law Enforcement First Responder personnel to the premise address associated to the alarm. The alarm company operator initiates the electronic transmission of alarm information to the correct 9-1-1 ECC. Data transmitted to the 9-1-1 ECC includes the alarm company's event number, address of the alarm subscriber, the type of alarm, and detailed information about the premise including commercial versus residential, detailed directions, hazardous materials stored at the facility, etc, that will assist Law Enforcement First Responders in locating the premise and be familiar with any dangers that could be presented to the First Responders upon their arrival. Upon receipt of this data, the 9-1-1 ECC's Computer-Aided Dispatch (CAD) System validates the address within the ECC's jurisdiction and creates a Call-for-Service. Law Enforcement First Responders are immediately dispatched to the premise. The CAD System transmits an electronic acknowledgement to the alarm company that references the alarm company's event number and includes the ECC's event number(s) and an indication that the Call-for-Service has been sent to the dispatch queue to be dispatched to Law Enforcement First Responders. Additional information relating to the event may be originated by the alarm company or the ECC and transmitted to the other entity electronically. Additional information may consist of a cancellation request from the alarm company, additional details concerning the event from the alarm company, status changes by responding Law Enforcement officers, and situation found information as denoted by the Law Enforcement Officer(s) on scene.</p>
	Sample Business Rule(s)	<ul style="list-style-type: none"> • Depending on governing laws of the jurisdiction affected, the alarm company may attempt to reach someone at the premise before initiating the electronic exchange. • The alarm location for a fixed address must have been validated as a pre-requisite prior to the sending of an alarm. If the alarm location address suddenly cannot be validated for some reason by the CAD and Latitude/Longitude coordinates are present in the data exchange, the CAD System will attempt to validate using geo-coordinates. • If the address and geo-coordinates (if present) cannot be validated, an electronic Rejection message will be returned by the ECC to the alarm company. The alarm company operator is expected to take action according to alarm company procedures. • ECCs generally will treat an alarm notification as a "Hold-up" Alarm if the premise type is Commercial. Otherwise the event type is generally treated as a "Panic / Duress" alarm when the premise type is residential. This is controller via the alarm event to CAD nature code translation list configured in each CAD system. • If the alarm has been verified to be an actual alarm, the alarm company can send alarm verification information to the ECC at the time the new alarm is transmitted to the ECC or after the alarm is sent using the Update message type. Examples include but are not limited to: <ul style="list-style-type: none"> ○ Alarm operator has made contact with the security guard or someone else at the alarm location who has confirmed a robbery in progress. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. ○ The alarm operator can observe via video that there is a robbery in progress at the alarm location. The alarm operator is able to select a message within the automation to indicate that the alarm has been verified to be legitimate. The alarm operator is also able to send a URL to the ECC to enable the ECC staff and first responder staff to observe the video seen by the alarm operator.

2.10 Exchange Detail

ID	Exchange Description	Representative Instance
1	<p><u>Address Verification</u></p> <p>Each Alarm Monitoring Company must pre-validate each address with the ECC's CAD System to allow the address to be sent as an alarm. This routinely is done in two situations: (1) when the Alarm Monitoring Company has collaborated with an ECC and will send all addresses using the "Address Verification Bulk" message type, and (2) when the Alarm Monitoring Company is live with the ECC and adds a new alarm address to its automation database, or makes a change to an address, the automation will send as an "Address Verification Single" message type.</p> <p><u>Alarm Event</u></p> <p>The Alarm Monitoring Company receives an alarm notification and may attempt to make contact with someone at the alarm site if required (depending on alarm type, local laws, business process rules, etc). If the Alarm Monitoring Company operator determines that the ECC must be notified, the operator will initiate the transmission of an alarm notification via the Automated Secure Alarm Protocol to Emergency Communications Center (ASAP to ECC) service.</p>	<p>/schema/xml/scenario1(a)_address_verification_bulk_request</p> <p>/schema/xml/scenario1(b)_address_verification_single_request</p> <p>/schema/xml/scenario1_new_alarm.xml</p>
2	<p><u>Address Verification Acceptance</u></p> <p>Upon receipt of an address verification from the Alarm Company, the ECC's CAD system will validate the structured address coupled with the city and county names. If the address is verified to be a valid address within the ECC's response jurisdiction, the CAD system will return an "Accept" message that will include geo-coordinate data if the ECC's CAD is capable of providing this data. The Alarm Company's automation will flag the address as eligible to be sent as an alarm via the ASAP Service and add the geo-coordinate data to the account..</p> <p><u>Alarm Acceptance</u></p> <p>Upon receipt of new alarm data by the ECC, the ECC's CAD system takes ownership of the data and is responsible for the attempt to process the new alarm data as a call-for-service. The CAD will attempt to validate the address provided and ensure that mandatory elements have been provided. If this process is successful and the criteria to generate a call-for-service has been met, the CAD will assemble a call-for-service record and then generate an "Accept" response to be passed back to the Alarm Monitoring Company. The operator who triggered the alarm exchange to the ECC receives the "Accept" response from the ECC within seconds of the original transmission and is aware that a call-for-service has been placed in the pending call queue for dispatch to Public Safety personnel.</p>	<p>/schema/xml/scenario2(a)_accepted_address_verification_only.xml</p> <p>/schema/xml/scenario2_accepted_alarm.xml</p>
3	<p><u>Address Verification Rejection</u></p> <p>When an address verification is initiated (see scenario 1), the ECC's CAD system will attempt to validate the address provided. If this process is not successful, the CAD will generate a "Reject" response to be returned to the Alarm Monitoring Company for appropriate action.</p> <p><u>Alarm Rejection</u></p> <p>Upon receipt of new alarm data by the ECC, the ECC's CAD system takes ownership of the data and is responsible for the attempt to process the new alarm data as a call-for-service. The CAD will attempt to validate the address provided and ensure that mandatory elements have been provided. If this process is not successful and/or the criteria to generate a call-for-service has not been met, the CAD will generate a "Reject" response to be passed back to the Alarm Monitoring Company. CAD Systems may also be programmed to "Reject" all new alarm events when the ECC is overwhelmed such as a hurricane situation and is refusing all alarm event requests. The operator who triggered the alarm exchange to the ECC receives the "Reject" response from the ECC within seconds of the original transmission and is aware that the requested call-for-service has been rejected by the ECC and the reason why. The operator will invoke backup procedures, identify the reason for the rejection, and take appropriate action by calling the ECC via telephone.</p>	<p>/schema/xml/scenario3_reject(addressverifications_and_alarms).xml</p>
4	<p><u>Update from ECC</u></p> <p>As various statuses change during the event at the ECC level, CAD System users may initiate the sending of an Update transaction to the Alarm Monitoring Company. Examples that can trigger an Update message at the ECC level may optionally include any notes added by the radio operator or field personnel during the course of the event intended to be brought to the attention of the alarm operator such as a request for a keyholder to respond to the scene or questions for the alarm company.. The CAD system expects an UPD_ACCEPT or UPD_REJECT in return. See scenarios 6 and 7.</p>	<p>/schema/xml/scenario4_update_from_ECC.xml</p>

5	<p><u>Update from Alarm Company</u></p> <p>After the initial new alarm event has been triggered by the Alarm Monitoring Company and Accepted by the ECC, the Alarm Monitoring Company may encounter additional information related to the event that must be shared with the ECC. The Alarm Monitoring Company operator can send additional information to the ECC in the form of an Update message. Examples of an Update may include: (1) an estimated time of arrival (ETA) for the key holder, (2) an individual on the premise of the alarm site who has been contacted but does not know the proper pass code, (3) a change to one or more data elements originally sent as a component within the new call event, and (4) other note worthies. Note: All Updates including changes to one or more data elements must utilize the element name <StatusDescriptionText> as demonstrated in the example scenario instance to hold the Updated information. Most ECCs do NOT want certain fields updated automatically by an external source such as an update to the address. Automatic updates to an address could trigger a different response plan. Instead, this IEPD has provided a single thread for all Updates to be sent to the CAD system. It is expected that the CAD System will add the Update to the call-for-service as an additional Comment or Note that will be seen by the radio operator. It shall be the radio operator's responsibility to review each Comment sent as an Update message by the Alarm Monitoring Company and process the Update accordingly. Upon receipt of an UPDATE message, the CAD System must assemble an Update Response message using the same format as the Update message but with an indicator in the Status field of "UPD Accept" or "UPD Reject" to indicate that the CAD has either Accepted or Rejected the Update. The alarm company's automation expects an UPD_ACCEPT or UPD_REJECT in return. See scenarios 6 and 7.</p>	/schema/xml/scenario5_update_from_alarm_company.xml
6	<p><u>Update Accept</u></p> <p>Upon receipt of an UPDATE message from an ECC or an alarm company, the receiving automation must return an UPD ACCEPT message to the originator which is an indication that the UPDATE message was successfully received by the automation, and applied to the appropriate event.</p>	<p>/schema/xml/scenario6(a)_update_accepted_from ECC</p> <p>/schema/xml/scenario6(a)_update_accepted_from alarm company</p>
7	<p><u>Update Reject</u></p> <p>Upon receipt of an UPDATE message from an ECC or an alarm company, the receiving automation must return an UPD REJECT message to the originator which is an indication that the UPDATE message was not successfully applied by the automation to the event. An example is when the UPDATE was sent by the alarm company to the ECC but the call-for-service has been closed and no update is possible.</p>	<p>/schema/xml/scenario6(a)_update_accepted_from ECC</p> <p>/schema/xml/scenario6(a)_update_accepted_from alarm company</p>
8	<p><u>CADUpdate</u></p> <p>As various statuses change during the event at the ECC level, the CAD System may send a CADUpdate transaction to the Alarm Monitoring Company. Examples that can trigger a CADUpdate message at the ECC level may include: (1) the Dispatch of First Responders to the alarm site, and (2) Arrival of First Responders at the alarm site. Generally these automated notices would not be presented to an alarm operator but written to event history instead. The CAD System expects nothing in return.</p>	<p>/schema/xml/scenario8_CADUpdate_from_ECC(Agency Dispatched)</p> <p>/schema/xml/scenario8(a)_CADUpdate_from_ECC(Agency Arrived on Scene)</p>
9	<p><u>Heartbeat</u></p> <p>Periodically, after a period of inactivity has been detected or on demand, the originator can determine the on-line status of an ECC's CAD system by sending a Heartbeat REQ to the ECC. The message will include an Expiration Date/Timestamp. Upon receipt of the Heartbeat REQ by the CAD system, the CAD will respond with a Heartbeat ACK message and the originator will assume the ECC's CAD system is on-line. If the ECC's CAD system does not respond to the Heartbeat REQ, the originator may initiate additional Heartbeat REQs before concluding that the ECC's CAD system is off-line. The originator will then take appropriate action such sending an email notice to the ECC's contacts on file with the ASAP Service and log that the ECC is off-line. In manual mode, the Heartbeat message may be initiated by an alarm company, the ASAP Service or a ECC.</p>	<p>/schema/xml/scenario9(a)_heartbeat_request</p> <p>/schema/xml/scenario9(b)_heartbeat_ack</p>

10	<p><u>Alarm Closure</u></p> <p>When the last resource/unit clears from the alarm location, an AlarmClose message is sent from the ECC's CAD system to the alarm company. The AlarmClose may include no disposition if a disposition does not exist, or it may include multiple dispositions and additional notes to clarify each disposition such as an offense report number, a person's name found on scene, etc. To be conformant to this standard, CAD providers are expected to provide a disposition code mapping, similar to the alarm event to CAD nature code translation mapping, and map each of the ECC's disposition codes to the APCO Standardized disposition codes. The equivalent APCO common disposition code(s) with added comment as applicable should be sent to the alarm company. (See APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data Exchange)</p> <p>https://www.apcointl.org/standards/standards-to-download/#</p>	/schema/xml/scenario10(alarm_close_from_ECC
11	<p><u>Cancel Request & Cancel Request Response</u></p> <p>An alarm company may send an alarm cancellation request to an ECC that includes one or more reasons for the request and supporting information from the alarm company. Depending on agency policies, the ECC may honor the cancellation request, or not, but must return a Cancel Request Response to indicate the ECC's decision. ECCs do have the option, policy permitting, to have the CAD vendor automatically cancel an unassigned event for certain alarm types such a Burglary alarm at a Residential location.</p>	<p>/schema/xml/scenario11(a)_cancel_request_from_alarm_company</p> <p>/Schema/xml/scenario11(b)_cancel_request_response_from_ECC</p>
12	For future implementation consideration, Building Sensor alerts sent via a CAP message can be accommodated with this IEPD.	/schema/xml/scenario1_new_alarm.xml

Appendix One

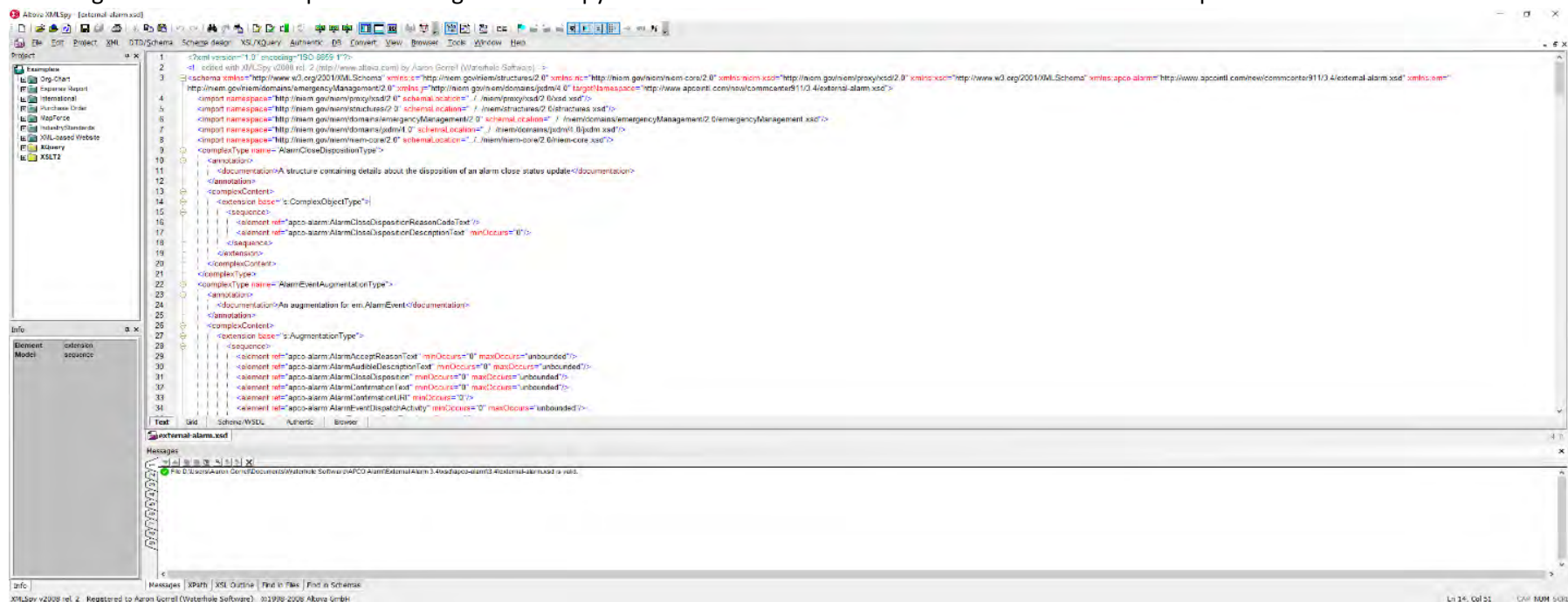
Appendix 1: XML Schema Definition

SCOPE

XSD (XML Schema Definition), a recommendation of the World Wide Web Consortium (W3C), specifies how to formally describe the elements in an Extensible Markup Language (XML) document. It can be used by programmers to verify each piece of item content in a document. They can check if it adheres to the description of the element it is placed in.

Appendix 1.1 XML VALIDATION

The image below is a screen print indicating that XML Spy was used to ensure that the IEPD met XML validation requirements.



APCO/TMA ANS 2.101.3-2021: Alarm Monitoring Company to Emergency Communications Center (ECC) Computer-Aided Dispatch (CAD) Automated Secure Alarm Protocol (ASAP)

Appendix 1.2 EXTERNAL-ALARM XSD

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!-- edited with XMLSpy v2008 rel. 2 (http://www.altova.com) by Aaron Gorrell (Waterhole Software) -->
<schema xmlns="http://www.w3.org/2001/XMLSchema" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:niem-xsd="http://niem.gov/niem/proxy/xsd/2.0" xmlns:xsd=
"http://www.w3.org/2001/XMLSchema" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j="http://niem.gov/niem/domains/jxdm/4.0"
targetNamespace="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd">
  <import namespace="http://niem.gov/niem/proxy/xsd/2.0" schemaLocation="../../niem/proxy/xsd/2.0/xsd.xsd"/>
  <import namespace="http://niem.gov/niem/structures/2.0" schemaLocation="../../niem/structures/2.0/structures.xsd"/>
  <import namespace="http://niem.gov/niem/domains/emergencyManagement/2.0" schemaLocation=
    "../../niem/domains/emergencyManagement/2.0/emergencyManagement.xsd"/>
  <import namespace="http://niem.gov/niem/domains/jxdm/4.0" schemaLocation="../../niem/domains/jxdm/4.0/jxdm.xsd"/>
  <import namespace="http://niem.gov/niem/niem-core/2.0" schemaLocation="../../niem/niem-core/2.0/niem-core.xsd"/>
  <complexType name="AlarmCloseDispositionType">
    <annotation>
      <documentation>A structure containing details about the disposition of an alarm close status update</documentation>
    </annotation>
    <complexContent>
      <extension base="s:ComplexObjectType">
        <sequence>
          <element ref="apco-alarm:AlarmCloseDispositionReasonCodeText"/>
          <element ref="apco-alarm:AlarmCloseDispositionDescriptionText" minOccurs="0"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <complexType name="AlarmEventAugmentationType">
    <annotation>
      <documentation>An augmentation for em:AlarmEvent</documentation>
    </annotation>
    <complexContent>
      <extension base="s:AugmentationType">
        <sequence>
          <element ref="apco-alarm:AlarmAcceptReasonText" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:AlarmAudibleDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:AlarmCloseDisposition" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:AlarmConfirmationText" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:AlarmConfirmationURI" minOccurs="0"/>
          <element ref="apco-alarm:AlarmEventDispatchActivity" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:AlertExpirationDateTime" minOccurs="0"/>
          <element ref="apco-alarm:AlarmRejectReasonText" minOccurs="0"/>
          <element ref="apco-alarm:AlarmRejectSourceName" minOccurs="0"/>
          <element ref="apco-alarm:AlarmScoringMetricText" minOccurs="0"/>
          <element ref="apco-alarm:BuildingSensorDetailsText" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:CallToPremiseText" minOccurs="0" maxOccurs="unbounded"/>
          <element ref="apco-alarm:RequestingDisciplineText" minOccurs="0" maxOccurs="unbounded"/>
        </sequence>
      </extension>
    </complexContent>
  </complexType>
  <complexType name="AlarmEventType">
```

```

<annotation>
  <documentation>A structure containing details
    about an alarm event.</documentation>
</annotation>
<complexContent>
  <extension base="em:AlarmEventType">
    <sequence>
      <element ref="apco-alarm:AlarmEventAugmentation" minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
  </extension>
</complexContent>
</complexType>
<complexType name="AlarmMonitoringStationAugmentationType">
  <annotation>
    <documentation>An augmentation that applies
      to AlarmMonitoringStationType</documentation>
  </annotation>
  <complexContent>
    <extension base="s:AugmentationType">
      <sequence>
        <element ref="nc:PersonCurrentEmploymentAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:SourceIDText" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<complexType name="AlarmMonitoringStationType">
  <annotation>
    <documentation>A structure containing details
      about an alarm monitoring station.</documentation>
  </annotation>
  <complexContent>
    <extension base="nc:OrganizationType">
      <sequence>
        <element ref="apco-alarm:AlarmMonitoringStationAugmentation" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>
<complexType name="AlarmPayloadType">
  <annotation>
    <documentation>A structure containing details
      about an alarm.</documentation>
  </annotation>
  <complexContent>
    <extension base="s:ComplexObjectType">
      <sequence>
        <element ref="j:ActivityLocationAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="apco-alarm:AlarmEvent" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="apco-alarm:AlarmMonitoringStation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="apco-alarm:AlarmServiceLocation" minOccurs="0" maxOccurs="unbounded"/>
      </sequence>
    </extension>
  </complexContent>
</complexType>

```

```

        <element ref="apco-alarm:AlarmServiceOrganization" minOccurs="0"/>
        <element ref="nc:Attachment" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:CommercialVehicle" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:ContactInformation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:Person" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:PersonActivityInvolvementAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:PersonContactInformationAssociation" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="apco-alarm:Subscriber" minOccurs="0" maxOccurs="unbounded"/>
        <element ref="nc:Vehicle" minOccurs="0" maxOccurs="unbounded"/>
    </sequence>
    <attribute name="alarmVersion"/>
</extension>
</complexContent>
</complexType>
<complexType name="AlarmServiceLocationAugmentationType">
    <annotation>
        <documentation>An augmentation with details
            about an alarm event location.</documentation>
    </annotation>
    <complexContent>
        <extension base="s:AugmentationType">
            <sequence>
                <element ref="apco-alarm:CellLocationService" minOccurs="0" maxOccurs="unbounded"/>
                <element ref="apco-alarm:LocationCaptureDateTime" minOccurs="0" maxOccurs="unbounded"/>
                <element ref="apco-alarm:PositionAccuracyDistanceMeasure" minOccurs="0" maxOccurs="unbounded"/>
                <element ref="nc:SpeedMeasure" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<complexType name="CellLocationServiceType">
    <annotation>
        <documentation>A structure containing details
            about a cell location service</documentation>
    </annotation>
    <complexContent>
        <extension base="s:ComplexObjectType">
            <sequence>
                <element ref="apco-alarm:CellID" minOccurs="0" maxOccurs="unbounded"/>
                <element ref="apco-alarm:CellSectorID" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<complexType name="ExternalAlarmType">
    <annotation>
        <documentation>A structure containing both
            metadata and payload information about
            an alarm</documentation>
    </annotation>
    <complexContent>

```

```

        <extension base="nc:DocumentType">
            <sequence>
                <element ref="apco-alarm:AlarmPayload" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<complexType name="LocationType">
    <annotation>
        <documentation>A structure containing details
            about a physical location.</documentation>
    </annotation>
    <complexContent>
        <extension base="nc:LocationType">
            <sequence>
                <element ref="em:AlarmEventLocationAugmentation" minOccurs="0" maxOccurs="unbounded"/>
                <element ref="apco-alarm:AlarmServiceLocationAugmentation" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<complexType name="SubscriberType">
    <annotation>
        <documentation>A role of a person who is
            a client of an alarm company service.</documentation>
    </annotation>
    <complexContent>
        <extension base="s:ComplexObjectType">
            <sequence>
                <element ref="nc:RoleOfPersonReference" minOccurs="0" maxOccurs="unbounded"/>
            </sequence>
        </extension>
    </complexContent>
</complexType>
<element name="AlarmAcceptReasonText" type="nc:TextType">
    <annotation>
        <documentation>Details about the response to an alarm that has been accepted</documentation>
    </annotation>
</element>
<element name="AlarmAudibleDescriptionText" type="niem-xsd:string" abstract="false" nillable="true">
    <annotation>
        <documentation>This is a text (string)
            field, possible values "AUDIBLE", "SILENT",
            or left blank.</documentation>
    </annotation>
</element>
<element name="AlarmCloseDispositionDescriptionText" type="niem-xsd:string" abstract="false" nillable="true">
    <annotation>
        <documentation>Used to provide additional details about an alarm incident resulting in a closed alarm. Examples
            may include that the alarm event was weather related</documentation>
    </annotation>

```

```

</element>
<element name="AlarmCloseDispositionReasonCodeText" type="niem-xsd:string" abstract="false" nillable="true">
  <annotation>
    <documentation>This is a required field when an alarm event has been closed. Alarm companies and ECCs should seek
      to utilize codes from APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data
      Exchange</documentation>
  </annotation>
</element>
<element name="AlarmConfirmationText" type="niem-xsd:string" abstract="false" nillable="true">
  <annotation>
    <documentation>General mechanism used to
      confirm the validity of the alarm. e.g.,
      observed video, live audio, guard verified,
      call to premises etc. If the alarm is confirmed
      through a call to the premise, then the
      details of this call are indicated in the
      Call to Premise text field</documentation>
  </annotation>
</element>
<element name="AlarmConfirmationURI" type="niem-xsd:anyURI">
  <annotation>
    <documentation>A Uniform Resource Locator (URL) that can be used to access additional information such as video
      that confirms a valid alarm event.</documentation>
  </annotation>
</element>
<element name="AlarmCloseDisposition" type="apco-alarm:AlarmCloseDispositionType">
  <annotation>
    <documentation>Used to document disposition details when an alarm event is updated with AlarmClose as the status
      code</documentation>
  </annotation>
</element>
<element name="AlarmEvent" type="apco-alarm:AlarmEventType" abstract="false" nillable="true">
  <annotation>
    <documentation>Details about an alarm event.</documentation>
  </annotation>
</element>
<element name="AlarmEventAugmentation" type="apco-alarm:AlarmEventAugmentationType" abstract="false" nillable="true">
  <annotation>
    <documentation>An augmentation for em:AlarmEvent</documentation>
  </annotation>
</element>
<element name="AlarmEventDispatchActivity" type="nc:ActivityType" abstract="false" nillable="true">
  <annotation>
    <documentation>Activity details about a
      dispatch in response to an alarm</documentation>
  </annotation>
</element>
<element name="AlarmMonitoringStation" type="apco-alarm:AlarmMonitoringStationType" abstract="false" nillable="true">
  <annotation>
    <documentation>Details about an alarm monitoring
      station.</documentation>
  </annotation>

```



```

    </annotation>
</element>
<element name="AlarmMonitoringStationAugmentation" type="apco-alarm:AlarmMonitoringStationAugmentationType" abstract=
"false" nillable="true">
  <annotation>
    <documentation>An augmentation that applies
      to AlarmMonitoringStationType</documentation>
  </annotation>
</element>
<element name="AlarmPayload" type="apco-alarm:AlarmPayloadType" abstract="false" nillable="true">
  <annotation>
    <documentation>Contains details about an
      alarm</documentation>
  </annotation>
</element>
<element name="AlarmRejectReasonText" type="nc:TextType">
  <annotation>
    <documentation>A machine friendly numeric code identifying the reason a request was rejected</documentation>
  </annotation>
</element>
<element name="AlarmRejectSourceName" type="nc:TextType">
  <annotation>
    <documentation>Identifies the element that rejected the message (i.e., ECC or Broker).</documentation>
  </annotation>
</element>
<element name="AlarmScoringMetricText" type="nc:TextType" abstract="false" nillable="true">
  <annotation>
    <documentation>Captures a standardized alarm scoring metric that the alarm industry will provide at the time they
      send a new or updated alarm and used to estimate the validity of an alarm event and assist public safety
      departments that opt-in with their alarm response policies</documentation>
  </annotation>
</element>
<element name="AlarmServiceLocation" type="apco-alarm:LocationType" abstract="false" nillable="true">
  <annotation>
    <documentation>Contains details about a
      service location.</documentation>
  </annotation>
</element>
<element name="AlarmServiceLocationAugmentation" type="apco-alarm:AlarmServiceLocationAugmentationType" abstract="false"
nillable="true">
  <annotation>
    <documentation>An augmentation with details
      about an alarm event location.</documentation>
  </annotation>
</element>
<element name="AlarmServiceOrganization" type="nc:OrganizationType">
  <annotation>
    <documentation>The service company is an organization that installs an alarm, may or may not monitor that alarm
      and may be financially responsible for any fines associated with a false alarm.</documentation>
  </annotation>
</element>

```

```

<element name="AlertExpirationDateTime" type="niem-xsd:dateTime" abstract="false" nillable="true">
  <annotation>
    <documentation>Assigned by the requestor, this is the date/time after which the message is considered expired and
      the responder should not respond to this message.</documentation>
  </annotation>
</element>
<element name="BuildingSensorDetailsText" type="niem-xsd:string" abstract="false" nillable="true">
  <annotation>
    <documentation>Text description of alarm
      information from a building sensor.</documentation>
  </annotation>
</element>
<element name="CallToPremiseText" type="niem-xsd:string" abstract="false" nillable="true">
  <annotation>
    <documentation>This field represents the results of the actions taken by the alarm company to attempt to reach
      someone at the premise before notifying the ECC
    </documentation>
  </annotation>
</element>
<element name="CellID" type="nc:IdentificationType" abstract="false" nillable="true">
  <annotation>
    <documentation>A number that uniquely identifies
      a cellular phone</documentation>
  </annotation>
</element>
<element name="CellLocationService" type="apco-alarm:CellLocationServiceType" abstract="false" nillable="true">
  <annotation>
    <documentation>Details about a cell location
      service</documentation>
  </annotation>
</element>
<element name="CellSectorID" type="nc:IdentificationType" abstract="false" nillable="true">
  <annotation>
    <documentation>An alphanumeric that uniquely
      identifies a cell sector.</documentation>
  </annotation>
</element>
<element name="ExternalAlarm" type="apco-alarm:ExternalAlarmType" abstract="false" nillable="true">
  <annotation>
    <documentation>A document containing metadata
      and payload information about an alarm</documentation>
  </annotation>
</element>
<element name="LocationCaptureDateTime" type="niem-xsd:dateTime" abstract="false" nillable="true">
  <annotation>
    <documentation>The time at which the location
      was captured</documentation>
  </annotation>
</element>
<element name="PositionAccuracyDistanceMeasure" type="nc:LengthMeasureType" abstract="false" nillable="true">
  <annotation>

```

```

        <documentation>A measure of the potential
            error of GPS coordinates</documentation>
    </annotation>
</element>
<element name="RequestingDisciplineText" type="nc:TextType">
    <annotation>
        <documentation>When requesting an address verification, describes the discipline that the verification is
            requested for (i.e., Law, Fire, EMS, Animal Control). A request for multiple disciplines should be captured in
            separate elements.</documentation>
    </annotation>
</element>
<element name="Subscriber" type="apco-alarm:SubscriberType" abstract="false" nillable="true">
    <annotation>
        <documentation>A role of a person who is
            a client of an alarm company service.</documentation>
    </annotation>
</element>
</schema>

```


Appendix 1.3 NIEM/APPINFO.XSD

```
<?xml version="1.0" encoding="utf-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:i="http://niem.gov/niem/appinfo/2.0" xmlns:s=
"http://niem.gov/niem/structures/2.0" targetNamespace="http://niem.gov/niem/appinfo/2.0" attributeFormDefault="qualified"
version="1">
  <xsd:annotation>
    <xsd:documentation>The appinfo schema provides support for high level
    data model concepts and additional syntax to support the NIEM
    conceptual model and validation of NIEM-conformant
    instances.</xsd:documentation>
  </xsd:annotation>
  <xsd:element name="Resource">
    <xsd:annotation>
      <xsd:documentation>The Resource element provides a method for
      application information to define a name within a schema, without the
      name being bound to a schema component. This is used by the
      structures schema to define names for structures:Object and
      structures:Association.</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:attribute name="name" type="xsd:NCName" use="required"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="Deprecated">
    <xsd:annotation>
      <xsd:documentation>The Deprecated element provides a method for
      identifying components as being deprecated. A deprecated component is
      one which is provided, but whose use is not
      recommended.</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:attribute name="value" use="required">
        <xsd:simpleType>
          <xsd:restriction base="xsd:boolean">
            <xsd:pattern value="true"/>
          </xsd:restriction>
        </xsd:simpleType>
      </xsd:attribute>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="Base">
    <xsd:annotation>
      <xsd:documentation>The Base element provides a mechanism for
      indicating base types and base elements in schema, for the cases in
      which XML Schema mechanisms are insufficient. For example, it is used
      to indicate Object or Association bases.</xsd:documentation>
    </xsd:annotation>
    <xsd:complexType>
      <xsd:attribute name="name" type="xsd:NCName" use="required"/>
      <xsd:attribute name="namespace" type="xsd:anyURI" use="optional"/>
    </xsd:complexType>
  </xsd:element>
```

```

<xsd:element name="ReferenceTarget">
  <xsd:annotation>
    <xsd:documentation>The ReferenceTarget element indicates a NIEM type
    which may be a target (that is, a destination) of a NIEM reference
    element. It may be used in combinations to indicate a set of valid
    types.</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="name" type="xsd:NCName" use="required"/>
    <xsd:attribute name="namespace" type="xsd:anyURI" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="AppliesTo">
  <xsd:annotation>
    <xsd:documentation>The AppliesTo element is used in two ways. First,
    it indicates the set of types to which a metadata type may be
    applied. Second, it indicates the set of types to which an
    augmentation element may be applied.</xsd:documentation>
  </xsd:annotation>
  <xsd:complexType>
    <xsd:attribute name="name" type="xsd:NCName" use="required"/>
    <xsd:attribute name="namespace" type="xsd:anyURI" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="ConformantIndicator" type="xsd:boolean">
  <xsd:annotation>
    <xsd:documentation>The ConformantIndicator element may be used in two
    ways. First, it is included as application information for a schema
    document element to indicate that the schema is NIEM-conformant.
    Second, it is used as application information of a namespace import
    to indicate that the schema is not
    NIEM-conformant.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="ExternalAdapterTypeIndicator" type="xsd:boolean">
  <xsd:annotation>
    <xsd:documentation>The ExternalAdapterTypeIndicator element indicates
    that a complex type is an external adapter type. Such a type is one
    that is composed of elements and attributes from non-NIEM-conformant
    schemas. The indicator allows schema processors to switch to
    alternative processing modes when processing NIEM-conformant versus
    non-NIEM-conformant content.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
</xsd:schema>

```


Appendix 1.4 NIEM/DOMAINS/EMERGENCYMANAGEMENT.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://niem.gov/niem/domains/emergencyManagement/2.0" version="1" xmlns:s=
"http://niem.gov/niem/structures/2.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:i=
"http://niem.gov/niem/appinfo/2.0">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import schemaLocation="../../../niem-core/2.0/niem-core.xsd" namespace="http://niem.gov/niem/niem-core/2.0"/>
  <xsd:import schemaLocation="../../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:import schemaLocation="../../../structures/2.0/structures.xsd" namespace="http://niem.gov/niem/structures/2.0"/>
  <xsd:complexType name="AlarmEventLocationAugmentationType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="AugmentationType"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:AugmentationType">
        <xsd:sequence>
          <xsd:element ref="em:LocationDirectionsText" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:LocationInformationText" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="AlarmEventType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/niem-core/2.0" i:name="ActivityType"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="nc:ActivityType">
        <xsd:sequence>
          <xsd:element ref="em:AlarmEventCategory" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:AlarmEventLocationCategory" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:AlarmEventDetailsText" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:AlarmEventCallPrivacyBypassCode" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:AlarmEventPermit" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="em:AlarmEventDispatchAgency" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="PermitType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:complexType>
```

```

    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="em:PermitIdentification" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="em:PermitCategoryText" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:element name="AlarmEventCallPrivacyBypassCode" type="nc:TextType" nillable="true"/>
<xsd:element name="AlarmEventCategory" abstract="true"/>
<xsd:element name="AlarmEventCategoryText" type="nc:TextType" substitutionGroup="em:AlarmEventCategory" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AlarmEventCategory"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="AlarmEventDetailsText" type="nc:TextType" nillable="true"/>
<xsd:element name="AlarmEventDispatchAgency" type="nc:OrganizationType" nillable="true"/>
<xsd:element name="AlarmEventLocationAugmentation" type="em:AlarmEventLocationAugmentationType" substitutionGroup=
"s:Augmentation">
  <xsd:annotation>
    <xsd:appinfo>
      <i:AppliesTo i:namespace="http://niem.gov/niem/niem-core/2.0" i:name="LocationType"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="AlarmEventLocationCategory" abstract="true"/>
<xsd:element name="AlarmEventLocationCategoryText" type="nc:TextType" substitutionGroup="em:AlarmEventLocationCategory"
nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AlarmEventLocationCategory"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="AlarmEventPermit" type="em:PermitType" nillable="true"/>
<xsd:element name="LocationDirectionsText" type="nc:TextType" nillable="true"/>
<xsd:element name="LocationInformationText" type="nc:TextType" nillable="true"/>
<xsd:element name="PermitCategoryText" type="nc:TextType" nillable="true"/>
<xsd:element name="PermitIdentification" type="nc:IdentificationType" nillable="true"/>
</xsd:schema>

```


Appendix 1.5 NIEM/DOMAINS/JXDM.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://niem.gov/niem/domains/jxdm/4.0" version="1" xmlns:s="http://niem.gov/niem/structures/2.0"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:nc="http://niem.gov/niem/niem-core/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:i="http://niem.gov/niem/appinfo/2.0">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import schemaLocation="../../../niem-core/2.0/niem-core.xsd" namespace="http://niem.gov/niem/niem-core/2.0"/>
  <xsd:import schemaLocation="../../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:import schemaLocation="../../../structures/2.0/structures.xsd" namespace="http://niem.gov/niem/structures/2.0"/>
  <xsd:complexType name="ActivityLocationAssociationType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/niem-core/2.0" i:name="AssociationType"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="nc:AssociationType">
        <xsd:sequence>
          <xsd:element ref="nc:ActivityReference" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:LocationReference" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="SubjectType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:ComplexObjectType">
        <xsd:sequence>
          <xsd:element ref="nc:RoleOfPersonReference" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:element name="ActivityLocationAssociation" type="j:ActivityLocationAssociationType" nillable="true"/>
</xsd:schema>
```

Appendix 1.6 NIEM/NGA.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://niem.gov/niem/nga/2.0" version="1" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nga
="http://niem.gov/niem/nga/2.0" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:i="http://niem.gov/niem/appinfo/2.0">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import schemaLocation="../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:import schemaLocation="../../structures/2.0/structures.xsd" namespace="http://niem.gov/niem/structures/2.0"/>
  <xsd:simpleType name="DatumCodeSimpleType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="ADI-A"/>
      <xsd:enumeration value="ADI-B"/>
      <xsd:enumeration value="ADI-C"/>
      <xsd:enumeration value="ADI-D"/>
      <xsd:enumeration value="ADI-E"/>
      <xsd:enumeration value="ADI-F"/>
      <xsd:enumeration value="ADI-M"/>
      <xsd:enumeration value="AFG"/>
      <xsd:enumeration value="ATA"/>
      <xsd:enumeration value="AIN-A"/>
      <xsd:enumeration value="AIN-B"/>
      <xsd:enumeration value="AMA"/>
      <xsd:enumeration value="ANO"/>
      <xsd:enumeration value="ARF-A"/>
      <xsd:enumeration value="ARF-B"/>
      <xsd:enumeration value="ARF-C"/>
      <xsd:enumeration value="ARF-D"/>
      <xsd:enumeration value="ARF-E"/>
      <xsd:enumeration value="ARF-F"/>
      <xsd:enumeration value="ARF-G"/>
      <xsd:enumeration value="ARF-H"/>
      <xsd:enumeration value="ARF-M"/>
      <xsd:enumeration value="ARS-A"/>
      <xsd:enumeration value="ARS-B"/>
      <xsd:enumeration value="ARS-M"/>
      <xsd:enumeration value="ASC"/>
      <xsd:enumeration value="ASM"/>
      <xsd:enumeration value="ASQ"/>
      <xsd:enumeration value="ATF"/>
      <xsd:enumeration value="AUA"/>
      <xsd:enumeration value="AUG"/>
      <xsd:enumeration value="BAT"/>
      <xsd:enumeration value="BER"/>
      <xsd:enumeration value="BID"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```



```

<xsd:enumeration value="BOO"/>
<xsd:enumeration value="BUR"/>
<xsd:enumeration value="CAC"/>
<xsd:enumeration value="CAI"/>
<xsd:enumeration value="CAO"/>
<xsd:enumeration value="CAP"/>
<xsd:enumeration value="CAZ"/>
<xsd:enumeration value="CCD"/>
<xsd:enumeration value="CGE"/>
<xsd:enumeration value="CHI"/>
<xsd:enumeration value="CHU"/>
<xsd:enumeration value="COA"/>
<xsd:enumeration value="DAL"/>
<xsd:enumeration value="DID"/>
<xsd:enumeration value="DOB"/>
<xsd:enumeration value="EAS"/>
<xsd:enumeration value="ENW"/>
<xsd:enumeration value="EST"/>
<xsd:enumeration value="EUR-A"/>
<xsd:enumeration value="EUR-B"/>
<xsd:enumeration value="EUR-C"/>
<xsd:enumeration value="EUR-D"/>
<xsd:enumeration value="EUR-E"/>
<xsd:enumeration value="EUR-F"/>
<xsd:enumeration value="EUR-G"/>
<xsd:enumeration value="EUR-H"/>
<xsd:enumeration value="EUR-I"/>
<xsd:enumeration value="EUR-J"/>
<xsd:enumeration value="EUR-K"/>
<xsd:enumeration value="EUR-L"/>
<xsd:enumeration value="EUR-M"/>
<xsd:enumeration value="EUR-S"/>
<xsd:enumeration value="EUR-T"/>
<xsd:enumeration value="EUS"/>
<xsd:enumeration value="FAH"/>
<xsd:enumeration value="FLO"/>
<xsd:enumeration value="FOT"/>
<xsd:enumeration value="GAA"/>
<xsd:enumeration value="GEO"/>
<xsd:enumeration value="GIZ"/>
<xsd:enumeration value="GRA"/>
<xsd:enumeration value="GSE"/>
<xsd:enumeration value="GUA"/>
<xsd:enumeration value="HEN"/>
<xsd:enumeration value="HER"/>
<xsd:enumeration value="HIT"/>
<xsd:enumeration value="HJO"/>
<xsd:enumeration value="HKD"/>
<xsd:enumeration value="HTN"/>
<xsd:enumeration value="IBE"/>
<xsd:enumeration value="IDN"/>

```

```

<xsd:enumeration value="IND-B"/>
<xsd:enumeration value="IND-I"/>
<xsd:enumeration value="IND-P"/>
<xsd:enumeration value="INF-A"/>
<xsd:enumeration value="ING-A"/>
<xsd:enumeration value="ING-B"/>
<xsd:enumeration value="INH-A"/>
<xsd:enumeration value="IRL"/>
<xsd:enumeration value="ISG"/>
<xsd:enumeration value="IST"/>
<xsd:enumeration value="JOH"/>
<xsd:enumeration value="KAN"/>
<xsd:enumeration value="KEA"/>
<xsd:enumeration value="KEG"/>
<xsd:enumeration value="KUS"/>
<xsd:enumeration value="LCF"/>
<xsd:enumeration value="LEH"/>
<xsd:enumeration value="LIB"/>
<xsd:enumeration value="LUZ-A"/>
<xsd:enumeration value="LUZ-B"/>
<xsd:enumeration value="MAS"/>
<xsd:enumeration value="MER"/>
<xsd:enumeration value="MID"/>
<xsd:enumeration value="MIK"/>
<xsd:enumeration value="MIN-A"/>
<xsd:enumeration value="MIN-B"/>
<xsd:enumeration value="MOD"/>
<xsd:enumeration value="MPO"/>
<xsd:enumeration value="MVS"/>
<xsd:enumeration value="NAH-A"/>
<xsd:enumeration value="NAH-B"/>
<xsd:enumeration value="NAH-C"/>
<xsd:enumeration value="NAP"/>
<xsd:enumeration value="NAR-A"/>
<xsd:enumeration value="NAR-B"/>
<xsd:enumeration value="NAR-C"/>
<xsd:enumeration value="NAR-D"/>
<xsd:enumeration value="NAR-E"/>
<xsd:enumeration value="NAR-H"/>
<xsd:enumeration value="NAS-A"/>
<xsd:enumeration value="NAS-B"/>
<xsd:enumeration value="NAS-C"/>
<xsd:enumeration value="NAS-D"/>
<xsd:enumeration value="NAS-E"/>
<xsd:enumeration value="NAS-F"/>
<xsd:enumeration value="NAS-G"/>
<xsd:enumeration value="NAS-H"/>
<xsd:enumeration value="NAS-I"/>
<xsd:enumeration value="NAS-J"/>
<xsd:enumeration value="NAS-L"/>
<xsd:enumeration value="NAS-N"/>

```

```

<xsd:enumeration value="NAS-O"/>
<xsd:enumeration value="NAS-P"/>
<xsd:enumeration value="NAS-Q"/>
<xsd:enumeration value="NAS-R"/>
<xsd:enumeration value="NAS-T"/>
<xsd:enumeration value="NAS-U"/>
<xsd:enumeration value="NAS-V"/>
<xsd:enumeration value="NAS-W"/>
<xsd:enumeration value="NSD"/>
<xsd:enumeration value="OEG"/>
<xsd:enumeration value="OGB-A"/>
<xsd:enumeration value="OGB-B"/>
<xsd:enumeration value="OGB-C"/>
<xsd:enumeration value="OGB-D"/>
<xsd:enumeration value="OGB-M"/>
<xsd:enumeration value="OHA-A"/>
<xsd:enumeration value="OHA-B"/>
<xsd:enumeration value="OHA-C"/>
<xsd:enumeration value="OHA-D"/>
<xsd:enumeration value="OHA-M"/>
<xsd:enumeration value="PHA"/>
<xsd:enumeration value="PIT"/>
<xsd:enumeration value="PLN"/>
<xsd:enumeration value="POS"/>
<xsd:enumeration value="PRP-A"/>
<xsd:enumeration value="PRP-B"/>
<xsd:enumeration value="PRP-C"/>
<xsd:enumeration value="PRP-D"/>
<xsd:enumeration value="PRP-E"/>
<xsd:enumeration value="PRP-F"/>
<xsd:enumeration value="PRP-G"/>
<xsd:enumeration value="PRP-H"/>
<xsd:enumeration value="PRP-M"/>
<xsd:enumeration value="PTB"/>
<xsd:enumeration value="PTN"/>
<xsd:enumeration value="PUK"/>
<xsd:enumeration value="PUR"/>
<xsd:enumeration value="QAT"/>
<xsd:enumeration value="QUO"/>
<xsd:enumeration value="REU"/>
<xsd:enumeration value="SAE"/>
<xsd:enumeration value="SAN-A"/>
<xsd:enumeration value="SAN-B"/>
<xsd:enumeration value="SAN-C"/>
<xsd:enumeration value="SAN-D"/>
<xsd:enumeration value="SAN-E"/>
<xsd:enumeration value="SAN-F"/>
<xsd:enumeration value="SAN-G"/>
<xsd:enumeration value="SAN-H"/>
<xsd:enumeration value="SAN-I"/>
<xsd:enumeration value="SAN-J"/>

```

```

<xsd:enumeration value="SAN-K"/>
<xsd:enumeration value="SAN-L"/>
<xsd:enumeration value="SAN-M"/>
<xsd:enumeration value="SAO"/>
<xsd:enumeration value="SAP"/>
<xsd:enumeration value="SCK"/>
<xsd:enumeration value="SGM"/>
<xsd:enumeration value="SHB"/>
<xsd:enumeration value="SOA"/>
<xsd:enumeration value="SPK-A"/>
<xsd:enumeration value="SPK-B"/>
<xsd:enumeration value="SPK-C"/>
<xsd:enumeration value="SPK-D"/>
<xsd:enumeration value="SPK-E"/>
<xsd:enumeration value="SPK-F"/>
<xsd:enumeration value="SPK-G"/>
<xsd:enumeration value="SRL"/>
<xsd:enumeration value="TAN"/>
<xsd:enumeration value="TDC"/>
<xsd:enumeration value="TIL"/>
<xsd:enumeration value="TOY-A"/>
<xsd:enumeration value="TOY-B"/>
<xsd:enumeration value="TOY-C"/>
<xsd:enumeration value="TOY-M"/>
<xsd:enumeration value="TRN"/>
<xsd:enumeration value="VOI"/>
<xsd:enumeration value="VOR"/>
<xsd:enumeration value="WAK"/>
<xsd:enumeration value="YAC"/>
<xsd:enumeration value="ZAN"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="DatumCodeType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="nga:DatumCodeSimpleType">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
</xsd:schema>

```


Appendix 1.7 NIEM/NIEM-CORE.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XMLSpy v2008 rel. 2 sp2 (http://www.altova.com) by Aaron Gorrell (Waterhole Software) -->
<xsd:schema xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nga="http://niem.gov/niem/nga/2.0" xmlns:xsd=
"http://www.w3.org/2001/XMLSchema" xmlns:nc="http://niem.gov/niem/niem-core/2.0" xmlns:niem-xsd=
"http://niem.gov/niem/proxy/xsd/2.0" xmlns:fbi="http://niem.gov/niem/fbi/2.0" xmlns:i="http://niem.gov/niem/appinfo/2.0"
targetNamespace="http://niem.gov/niem/niem-core/2.0" version="1">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import namespace="http://niem.gov/niem/nga/2.0" schemaLocation="../../nga/2.0/nga.xsd"/>
  <xsd:import namespace="http://niem.gov/niem/proxy/xsd/2.0" schemaLocation="../../proxy/xsd/2.0/xsd.xsd"/>
  <xsd:import namespace="http://niem.gov/niem/appinfo/2.0" schemaLocation="../../appinfo/2.0/appinfo.xsd"/>
  <xsd:import namespace="http://niem.gov/niem/structures/2.0" schemaLocation="../../structures/2.0/structures.xsd"/>
  <xsd:import namespace="http://niem.gov/niem/fbi/2.0" schemaLocation="../../fbi/2.0/fbi.xsd"/>
  <xsd:complexType name="ActivityPersonAssociationType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="AssociationType"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="nc:AssociationType">
        <xsd:sequence>
          <xsd:element ref="nc:PersonReference" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="ActivityType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:ComplexObjectType">
        <xsd:sequence>
          <xsd:element ref="nc:ActivityIdentification" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:ActivityCategoryText" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:ActivityDate" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:ActivityStatus" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="AddressType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:complexType>
```

```

        </xsd:appinfo>
      </xsd:annotation>
      <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
          <xsd:sequence>
            <xsd:element ref="nc:AddressFullText" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="nc:StructuredAddress" minOccurs="0" maxOccurs="unbounded"/>
          </xsd:sequence>
        </xsd:extension>
      </xsd:complexContent>
    </xsd:complexType>
    <xsd:simpleType name="AngularMinuteSimpleType">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
      </xsd:annotation>
      <xsd:restriction base="xsd:decimal">
        <xsd:minInclusive value="0"/>
        <xsd:maxExclusive value="60"/>
      </xsd:restriction>
    </xsd:simpleType>
    <xsd:complexType name="AngularMinuteType">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
      </xsd:annotation>
      <xsd:simpleContent>
        <xsd:extension base="nc:AngularMinuteSimpleType">
          <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
        </xsd:extension>
      </xsd:simpleContent>
    </xsd:complexType>
    <xsd:simpleType name="AngularSecondSimpleType">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
      </xsd:annotation>
      <xsd:restriction base="xsd:decimal">
        <xsd:minInclusive value="0"/>
        <xsd:maxExclusive value="60"/>
      </xsd:restriction>
    </xsd:simpleType>
    <xsd:complexType name="AngularSecondType">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
      </xsd:annotation>

```



```

    <xsd:simpleContent>
      <xsd:extension base="nc:AngularSecondsSimpleType">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="AssociationType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Association"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:ComplexObjectType"/>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="BinaryType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:ComplexObjectType">
        <xsd:sequence>
          <xsd:element ref="nc:BinaryID" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:BinaryObject" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:BinaryDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:BinaryFormatID" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:BinarySizeValue" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="CommercialVehicleType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="VehicleType"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="nc:VehicleType">
        <xsd:sequence>
          <xsd:element ref="nc:VehicleCurrentWeightMeasure" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="ContactInformationType">
    <xsd:annotation>
      <xsd:appinfo>

```

```

        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
</xsd:annotation>
<xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
        <xsd:sequence>
            <xsd:element ref="nc:ContactEmailID" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="nc:ContactTelephoneNumber" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="nc:ContactInformationDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ConveyanceType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:name="TangibleItemType"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="nc:TangibleItemType">
            <xsd:sequence>
                <xsd:element ref="nc:ConveyanceRegistrationPlateIdentification" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="CrossStreetType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:CrossStreetDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="DateType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:DateTime" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>

```

```

        <xsd:element ref="nc:YearMonth" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
</xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="DocumentType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType"/>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="FullTelephoneNumberType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:TelephoneNumberFullID" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="IdentificationType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:IdentificationID" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:IdentificationCategory" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:IdentificationExpirationDate" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:IdentificationSourceText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ItemType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>

```



```

</xsd:annotation>
<xsd:complexContent>
  <xsd:extension base="s:ComplexObjectType">
    <xsd:sequence>
      <xsd:element ref="nc:ItemDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element ref="nc:ItemOtherIdentification" minOccurs="0" maxOccurs="unbounded"/>
      <xsd:element ref="nc:ItemUsageText" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
  </xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="LatitudeCoordinateType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:LatitudeDegreeValue" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LatitudeMinuteValue" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LatitudeSecondValue" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:simpleType name="LatitudeDegreeSimpleType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:restriction base="xsd:decimal">
    <xsd:maxInclusive value="90"/>
    <xsd:minInclusive value="-90"/>
  </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="LatitudeDegreeType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="nc:LatitudeDegreeSimpleType">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="LengthMeasureType">

```

```

<xsd:annotation>
  <xsd:appinfo>
    <i:Base i:name="MeasureType"/>
  </xsd:appinfo>
</xsd:annotation>
<xsd:complexContent>
  <xsd:extension base="nc:MeasureType"/>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="LocationType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:LocationAddress" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationAltitudeMeasure" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationCrossStreet" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationMapLocation" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationTwoDimensionalGeographicCoordinate" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="LongitudeCoordinateType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:LongitudeDegreeValue" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LongitudeMinuteValue" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LongitudeSecondValue" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:simpleType name="LongitudeDegreeSimpleType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>

```

```

    <xsd:restriction base="xsd:decimal">
      <xsd:maxExclusive value="180"/>
      <xsd:minInclusive value="-180"/>
    </xsd:restriction>
  </xsd:simpleType>
  <xsd:complexType name="LongitudeDegreeType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="nc:LongitudeDegreeSimpleType">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="MapLocationType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
      <xsd:extension base="s:ComplexObjectType">
        <xsd:sequence>
          <xsd:element ref="nc:MapHorizontalCoordinateText" minOccurs="0" maxOccurs="unbounded"/>
          <xsd:element ref="nc:MapVerticalCoordinateText" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
      </xsd:extension>
    </xsd:complexContent>
  </xsd:complexType>
  <xsd:complexType name="MeasurePointValueType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:decimal">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="MeasureType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>

```



```

        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:MeasureValue" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:MeasureUnitText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="NANPTTelephoneNumberType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:TelephoneAreaCodeID" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:TelephoneExchangeID" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:TelephoneLineID" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:TelephoneSuffixID" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:simpleType name="NonNegativeDecimalSimpleType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:restriction base="xsd:decimal">
        <xsd:minInclusive value="0"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="NonNegativeDecimalType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="nc:NonNegativeDecimalSimpleType">
            <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="OrganizationType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>

```

```

        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:OrganizationIdentification" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:OrganizationName" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:OrganizationPrimaryContactInformation" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PersonContactInformationAssociationType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:name="AssociationType"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="nc:AssociationType">
            <xsd:sequence>
                <xsd:element ref="nc:PersonReference" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:ContactInformationReference" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PersonEmploymentAssociationType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:name="AssociationType"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="nc:AssociationType">
            <xsd:sequence>
                <xsd:element ref="nc:EmployeeIdentification" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:EmploymentContactInformationReference" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PersonNameTextType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:name="ProperNameTextType"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="nc:ProperNameTextType"/>
    </xsd:simpleContent>

```



```

</xsd:complexType>
<xsd:complexType name="PersonNameType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:PersonNamePrefixText" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:PersonGivenName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:PersonMiddleName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:PersonSurName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:PersonNameSuffixText" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:PersonFullName" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="PersonType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:PersonName" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ProperNameTextType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="TextType"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="nc:TextType"/>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="SpeedMeasureType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="MeasureType"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>

```

```

        <xsd:extension base="nc:MeasureType">
            <xsd:sequence>
                <xsd:element ref="nc:SpeedUnitCode" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="StatusType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:StatusText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:StatusDescriptionText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="StreetType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:StreetNumberText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:StreetPredirectionalText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:StreetName" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:StreetCategoryText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:StreetPostdirectionalText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="StructuredAddressType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:AddressBuildingText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:AddressSecondaryUnitText" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>

```



```

        <xsd:element ref="nc:LocationStreet" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationCityName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationCountyName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationStateName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationCountryName" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:LocationPostalCode" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
</xsd:extension>
</xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="TangibleItemType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:name="ItemType"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="nc:ItemType">
            <xsd:sequence>
                <xsd:element ref="nc:ConveyanceColorPrimaryText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:ConveyanceColorSecondaryText" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:ItemModelYearDate" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:VehicleStyleCode" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="TelephoneNumberType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:complexContent>
        <xsd:extension base="s:ComplexObjectType">
            <xsd:sequence>
                <xsd:element ref="nc:FullTelephoneNumber" minOccurs="0" maxOccurs="unbounded"/>
                <xsd:element ref="nc:NANPTelephoneNumber" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:extension>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="TextType">
    <xsd:annotation>
        <xsd:appinfo>
            <i:Base i:namespace="http://niem.gov/niem/proxy/xsd/2.0" i:name="string"/>
        </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
        <xsd:extension base="niem-xsd:string"/>
    </xsd:simpleContent>

```

```

</xsd:complexType>
<xsd:complexType name="TwoDimensionalGeographicCoordinateType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="s:ComplexObjectType">
      <xsd:sequence>
        <xsd:element ref="nc:GeographicDatumCode" minOccurs="0"/>
        <xsd:element ref="nc:GeographicCoordinateLatitude"/>
        <xsd:element ref="nc:GeographicCoordinateLongitude"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VehicleType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="ConveyanceType"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="nc:ConveyanceType">
      <xsd:sequence>
        <xsd:element ref="nc:VehicleIdentification" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:VehicleMakeCode" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:VehicleModelCode" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:ItemOwnershipCategoryText" minOccurs="0" maxOccurs="unbounded"/>
        <xsd:element ref="nc:VehicleVINAText" minOccurs="0" maxOccurs="unbounded"/>
      </xsd:sequence>
    </xsd:extension>
  </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="WeightMeasureType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="MeasureType"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:complexContent>
    <xsd:extension base="nc:MeasureType"/>
  </xsd:complexContent>
</xsd:complexType>
<xsd:element name="ActivityReference" type="s:ReferenceType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ReferenceTarget i:name="ActivityType"/>
    </xsd:appinfo>
  </xsd:annotation>

```



```

</xsd:element>
<xsd:element name="ActivityCategoryText" type="nc:TextType" nillable="true"/>
<xsd:element name="ActivityDate" type="nc:DateType" substitutionGroup="nc:ActivityDateRepresentation" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="ActivityDateRepresentation"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="ActivityDateRepresentation" abstract="true"/>
<xsd:element name="ActivityIdentification" type="nc:IdentificationType" nillable="true"/>
<xsd:element name="ActivityStatus" type="nc:StatusType" nillable="true"/>
<xsd:element name="AddressBuildingText" type="nc:TextType" substitutionGroup="nc:AddressDeliveryPoint" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AddressDeliveryPoint"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="AddressDeliveryPoint" abstract="true"/>
<xsd:element name="AddressFullText" type="nc:TextType" substitutionGroup="nc:AddressRepresentation" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AddressRepresentation"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="AddressRepresentation" abstract="true"/>
<xsd:element name="AddressSecondaryUnitText" type="nc:TextType" substitutionGroup="nc:AddressDeliveryPoint" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AddressDeliveryPoint"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="Attachment" type="nc:BinaryType" nillable="true"/>
<xsd:element name="BinaryBase64Object" type="niem-xsd:base64Binary" substitutionGroup="nc:BinaryObject" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="BinaryObject"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="BinaryDescriptionText" type="nc:TextType" nillable="true"/>
<xsd:element name="BinaryFormatID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="BinaryID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="BinaryObject" abstract="true"/>
<xsd:element name="BinarySizeValue" type="nc:NonNegativeDecimalType" nillable="true"/>
<xsd:element name="CommercialVehicle" type="nc:CommercialVehicleType" nillable="true"/>
<xsd:element name="ContactEmailID" type="niem-xsd:string" substitutionGroup="nc:ContactMeans" nillable="true">

```

```

    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="ContactMeans"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="ContactInformationReference" type="s:ReferenceType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:ReferenceTarget i:name="ContactInformationType"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="ContactInformation" type="nc:ContactInformationType" nillable="true"/>
  <xsd:element name="ContactInformationDescriptionText" type="nc:TextType" nillable="true"/>
  <xsd:element name="ContactMeans" abstract="true"/>
  <xsd:element name="ContactTelephoneNumber" type="nc:TelephoneNumberType" substitutionGroup="nc:ContactMeans" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="ContactMeans"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="ConveyanceColorPrimaryText" type="nc:TextType" substitutionGroup="nc:ItemColor" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="ItemColor"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="ConveyanceColorSecondaryText" type="nc:TextType" substitutionGroup="nc:ItemColor" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="ItemColor"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="ConveyanceRegistrationPlateIdentification" type="nc:IdentificationType" nillable="true"/>
  <xsd:element name="CrossStreetDescriptionText" type="nc:TextType" nillable="true"/>
  <xsd:element name="DateRepresentation" abstract="true"/>
  <xsd:element name="DateTime" type="niem-xsd:dateTime" substitutionGroup="nc:DateRepresentation" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="DateRepresentation"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="EmployeeIdentification" type="nc:IdentificationType" nillable="true"/>
  <xsd:element name="EmploymentContactInformationReference" type="s:ReferenceType">
    <xsd:annotation>

```



```

        <xsd:appinfo>
          <i:ReferenceTarget i:name="ContactInformationType"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="FullTelephoneNumber" type="nc:FullTelephoneNumberType" substitutionGroup=
      "nc:TelephoneNumberRepresentation" nillable="true">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:name="TelephoneNumberRepresentation"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="GeographicCoordinateLatitude" type="nc:LatitudeCoordinateType" nillable="true"/>
    <xsd:element name="GeographicCoordinateLongitude" type="nc:LongitudeCoordinateType" nillable="true"/>
    <xsd:element name="GeographicDatumCode" type="nga:DatumCodeType" nillable="true"/>
    <xsd:element name="IdentificationCategory" abstract="true"/>
    <xsd:element name="IdentificationCategoryText" type="nc:TextType" substitutionGroup="nc:IdentificationCategory" nillable=
      "true">
      <xsd:annotation>
        <xsd:appinfo>
          <i:Base i:name="IdentificationCategory"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="IdentificationExpirationDate" type="nc:DateType" nillable="true"/>
    <xsd:element name="IdentificationID" type="niem-xsd:string" nillable="true"/>
    <xsd:element name="IdentificationSourceText" type="nc:TextType" nillable="true"/>
    <xsd:element name="ItemColor" abstract="true"/>
    <xsd:element name="ItemDescriptionText" type="nc:TextType" nillable="true"/>
    <xsd:element name="ItemModelYearDate" type="niem-xsd:gYear" nillable="true"/>
    <xsd:element name="ItemOtherIdentification" type="nc:IdentificationType" nillable="true"/>
    <xsd:element name="ItemOwnershipCategoryText" type="nc:TextType" nillable="true"/>
    <xsd:element name="ItemStyle" abstract="true"/>
    <xsd:element name="ItemUsageText" type="nc:TextType" nillable="true"/>
    <xsd:element name="LatitudeDegreeValue" type="nc:LatitudeDegreeType" nillable="true"/>
    <xsd:element name="LatitudeMinuteValue" type="nc:AngularMinuteType" nillable="true"/>
    <xsd:element name="LatitudeSecondValue" type="nc:AngularSecondType" nillable="true"/>
    <xsd:element name="LocationReference" type="s:ReferenceType">
      <xsd:annotation>
        <xsd:appinfo>
          <i:ReferenceTarget i:name="LocationType"/>
        </xsd:appinfo>
      </xsd:annotation>
    </xsd:element>
    <xsd:element name="LocationAddress" type="nc:AddressType" nillable="true"/>
    <xsd:element name="LocationAltitudeMeasure" type="nc:LengthMeasureType" nillable="true"/>
    <xsd:element name="LocationCityName" type="nc:ProperNameTextType" nillable="true"/>
    <xsd:element name="LocationCountry" abstract="true"/>
    <xsd:element name="LocationCountryName" type="nc:ProperNameTextType" substitutionGroup="nc:LocationCountry" nillable=
      "true">

```

```

    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="LocationCountry"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="LocationCountry" abstract="true"/>
  <xsd:element name="LocationCountryName" type="nc:ProperNameTextType" substitutionGroup="nc:LocationCountry" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="LocationCountry"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="LocationCrossStreet" type="nc:CrossStreetType" nillable="true"/>
  <xsd:element name="LocationDescriptionText" type="nc:TextType" nillable="true"/>
  <xsd:element name="LocationMapLocation" type="nc:MapLocationType" nillable="true"/>
  <xsd:element name="LocationName" type="nc:ProperNameTextType" nillable="true"/>
  <xsd:element name="LocationPostalCode" type="nc:string" nillable="true"/>
  <xsd:element name="LocationState" abstract="true"/>
  <xsd:element name="LocationStateName" type="nc:ProperNameTextType" substitutionGroup="nc:LocationState" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="LocationState"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="LocationStreet" type="nc:StreetType" substitutionGroup="nc:AddressDeliveryPoint" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="AddressDeliveryPoint"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="LocationTwoDimensionalGeographicCoordinate" type="nc:TwoDimensionalGeographicCoordinateType" nillable="true"/>
  <xsd:element name="LongitudeDegreeValue" type="nc:LongitudeDegreeType" nillable="true"/>
  <xsd:element name="LongitudeMinuteValue" type="nc:AngularMinuteType" nillable="true"/>
  <xsd:element name="LongitudeSecondValue" type="nc:AngularSecondType" nillable="true"/>
  <xsd:element name="MapHorizontalCoordinateText" type="nc:TextType" nillable="true"/>
  <xsd:element name="MapVerticalCoordinateText" type="nc:TextType" nillable="true"/>
  <xsd:element name="MeasurePointValue" type="nc:MeasurePointValueType" substitutionGroup="nc:MeasureValue" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="MeasureValue"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="MeasureText" type="nc:TextType" substitutionGroup="nc:MeasureValue" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>

```



```

        <i:Base i:name="MeasureValue"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="MeasureUnitText" type="nc:TextType" nillable="true"/>
  <xsd:element name="MeasureValue" abstract="true" nillable="true"/>
  <xsd:element name="NANPTelephoneNumber" type="nc:NANPTelephoneNumberType" substitutionGroup=
"nc:TelephoneNumberRepresentation" nillable="true">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:name="TelephoneNumberRepresentation"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="OrganizationIdentification" type="nc:IdentificationType" nillable="true"/>
  <xsd:element name="OrganizationName" type="nc:TextType" nillable="true"/>
  <xsd:element name="OrganizationPrimaryContactInformation" type="nc:ContactInformationType" nillable="true"/>
  <xsd:element name="PersonReference" type="s:ReferenceType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:ReferenceTarget i:name="PersonType"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="Person" type="nc:PersonType" nillable="true"/>
  <xsd:element name="PersonActivityInvolvementAssociation" type="nc:ActivityPersonAssociationType" nillable="true"/>
  <xsd:element name="PersonContactInformationAssociation" type="nc:PersonContactInformationAssociationType" nillable="true"/>
  <xsd:element name="PersonCurrentEmploymentAssociation" type="nc:PersonEmploymentAssociationType" nillable="true"/>
  <xsd:element name="PersonFullName" type="nc:PersonNameTextType" nillable="true"/>
  <xsd:element name="PersonGivenName" type="nc:PersonNameTextType" nillable="true"/>
  <xsd:element name="PersonMiddleName" type="nc:PersonNameTextType" nillable="true"/>
  <xsd:element name="PersonName" type="nc:PersonNameType" nillable="true"/>
  <xsd:element name="PersonNamePrefixText" type="nc:TextType" nillable="true"/>
  <xsd:element name="PersonNameSuffixText" type="nc:TextType" nillable="true"/>
  <xsd:element name="PersonSurName" type="nc:PersonNameTextType" nillable="true"/>
  <xsd:element name="RoleOf" abstract="true"/>
  <xsd:element name="RoleOfPersonReference" type="s:ReferenceType" substitutionGroup="nc:RoleOf">
    <xsd:annotation>
      <xsd:appinfo>
        <i:ReferenceTarget i:name="PersonType"/>
        <i:Base i:name="RoleOf"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:element>
  <xsd:element name="SourceIDText" type="nc:TextType" nillable="true"/>
  <xsd:element name="SpeedMeasure" type="nc:SpeedMeasureType" nillable="true"/>
  <xsd:element name="SpeedUnitCode" type="niem-xsd:string" nillable="true"/>
  <xsd:element name="StatusDescriptionText" type="nc:TextType" nillable="true"/>
  <xsd:element name="StatusText" type="nc:TextType" nillable="true"/>
  <xsd:element name="StreetCategoryText" type="nc:TextType" nillable="true"/>
  <xsd:element name="StreetName" type="nc:ProperNameTextType" nillable="true"/>

```

```

<xsd:element name="StreetNumberText" type="nc:TextType" nillable="true"/>
<xsd:element name="StreetPostdirectionalText" type="nc:TextType" nillable="true"/>
<xsd:element name="StreetPredirectionalText" type="nc:TextType" nillable="true"/>
<xsd:element name="StructuredAddress" type="nc:StructuredAddressType" substitutionGroup="nc:AddressRepresentation"
nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="AddressRepresentation"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="TelephoneAreaCodeID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="TelephoneExchangeID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="TelephoneLineID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="TelephoneNumberFullID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="TelephoneNumberRepresentation" abstract="true"/>
<xsd:element name="TelephoneSuffixID" type="niem-xsd:string" nillable="true"/>
<xsd:element name="Vehicle" type="nc:VehicleType" nillable="true"/>
<xsd:element name="VehicleCurrentWeightMeasure" type="nc:WeightMeasureType" nillable="true"/>
<xsd:element name="VehicleIdentification" type="nc:IdentificationType" nillable="true"/>
<xsd:element name="VehicleMakeCode" type="fbi:VMACodeType" nillable="true"/>
<xsd:element name="VehicleModelCode" type="fbi:VMOCCodeType" nillable="true"/>
<xsd:element name="VehicleStyleCode" type="fbi:VSTCodeType" substitutionGroup="nc:ItemStyle" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="ItemStyle"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
<xsd:element name="VehicleVINAText" type="nc:TextType" nillable="true"/>
<xsd:element name="YearMonth" type="niem-xsd:gYearMonth" substitutionGroup="nc:DateRepresentation" nillable="true">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:name="DateRepresentation"/>
    </xsd:appinfo>
  </xsd:annotation>
</xsd:element>
</xsd:schema>

```


Appendix 1.8 NIEM/PROXY.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://niem.gov/niem/proxy/xsd/2.0" version="1" xmlns:s="http://niem.gov/niem/structures/2.0"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:niem-xsd="http://niem.gov/niem/proxy/xsd/2.0" xmlns:i=
"http://niem.gov/niem/appinfo/2.0">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import schemaLocation="../../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:import schemaLocation="../../../structures/2.0/structures.xsd" namespace="http://niem.gov/niem/structures/2.0"/>
  <xsd:complexType name="anyURI">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:anyURI">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="base64Binary">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:base64Binary">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="dateTime">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:simpleContent>
      <xsd:extension base="xsd:dateTime">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>
  <xsd:complexType name="gYear">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
  </xsd:complexType>
```

```

    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:gYear">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="gYearMonth">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:gYearMonth">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:complexType name="string">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
</xsd:schema>

```


Appendix 1.9 NIEM/STRUCTURES.XSD

```
<?xml version="1.0" encoding="utf-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:i="http://niem.gov/niem/appinfo/2.0" xmlns:s="http://niem.gov/niem/structures/2.0" targetNamespace="http://niem.gov/niem/structures/2.0" version="1">
  <xsd:annotation>
    <xsd:documentation>The structures schema provides support for
      fundamental NIEM linking mechanisms, as well as providing base types
      for definition of NIEM-conformant types.</xsd:documentation>
  </xsd:annotation>
  <xsd:import schemaLocation="../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:annotation>
    <xsd:documentation>The Object resource defines an identifier which acts
      as a conceptual base for objects in NIEM-conformant
      schemas.</xsd:documentation>
    <xsd:appinfo>
      <i:Resource i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:annotation>
    <xsd:documentation>The Association resource defines an identifier which
      acts as a conceptual base for association in NIEM-conformant
      schemas.</xsd:documentation>
    <xsd:appinfo>
      <i:Resource i:name="Association"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:attribute name="id" type="xsd:ID">
    <xsd:annotation>
      <xsd:documentation>The id attribute is used to define XML IDs for
        NIEM objects. These IDs may be targets of reference elements,
        metadata attributes, and link metadata
        attributes.</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="linkMetadata" type="xsd:IDREFS">
    <xsd:annotation>
      <xsd:documentation>The linkMetadata attribute allows an element to
        point to metadata that affects the relationship between the context
        and the value of the object.</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="metadata" type="xsd:IDREFS">
    <xsd:annotation>
      <xsd:documentation>The attribute metadata allows an object to point
        to metadata that affects itself.</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
  <xsd:attribute name="ref" type="xsd:IDREF">
    <xsd:annotation>
      <xsd:documentation>The ref attribute is used by reference elements in
        NIEM to refer to an object via an ID reference, rather than including
        the object itself as element content.</xsd:documentation>
    </xsd:annotation>
  </xsd:attribute>
</xsd:schema>
```

```

</xsd:annotation>
</xsd:attribute>
<xsd:attribute name="sequenceID" type="xsd:integer">
  <xsd:annotation>
    <xsd:documentation>The sequenceID attribute allows a series of
    elements to define a sequence for content that does not correspond to
    the order of element declarations within a type. This attribute may
    override the sequence of elements appearing within an
    instance.</xsd:documentation>
  </xsd:annotation>
</xsd:attribute>
<xsd:attributeGroup name="SimpleObjectAttributeGroup">
  <xsd:annotation>
    <xsd:documentation>The SimpleObjectAttributeGroup attribute group
    provides a collection of attributes which are appropriate for
    definition of object types.</xsd:documentation>
  </xsd:annotation>
  <xsd:attribute ref="s:id"/>
  <xsd:attribute ref="s:metadata"/>
  <xsd:attribute ref="s:linkMetadata"/>
</xsd:attributeGroup>
<xsd:element name="Augmentation" type="s:AugmentationType" abstract="true">
  <xsd:annotation>
    <xsd:documentation>The Augmentation element provides a substitution
    group head for augmentations. The designer of a message or object may
    use this element within an object definition. This will allow the
    selection of augmentations dynamically, at run time (or at least
    schema selection time) rather than at schema authoring
    time.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:element name="Metadata" type="s:MetadataType" abstract="true">
  <xsd:annotation>
    <xsd:documentation>The Metadata element provides a substitution group
    head for metadata. Like the substitution group head for
    augmentations, this allows selection of metadata to be decided late
    in message creation, rather than at schema authoring time. This
    element may also be used to provide a single point in a container
    where all metadata for a message may be
    deposited.</xsd:documentation>
  </xsd:annotation>
</xsd:element>
<xsd:complexType name="AugmentationType" abstract="true">
  <xsd:annotation>
    <xsd:documentation>The AugmentationType type is a base type for all
    augmentations. An augmentation may have metadata and an ID, but may
    not have link metadata, as it does not establish a relationship
    between its value and its context. The individual element contents of
    an augmentation, however, do establish a relationship between the
    context of the augmentation and the values of the individual
    elements.</xsd:documentation>
  </xsd:annotation>

```



```

</xsd:annotation>
<xsd:attribute ref="s:id"/>
<xsd:attribute ref="s:metadata"/>
</xsd:complexType>
<xsd:complexType name="ComplexObjectType" abstract="true">
  <xsd:annotation>
    <xsd:documentation>The ComplexObjectType type provides a base class
    for object definition, association definitions, and external adapter
    type definitions. An instance of one of these types may have an ID.
    It may have metadata as it establishes the existence of an object
    (maybe a conceptual object). It may also have link metadata, as an
    element of one of these types establishes a relationship between its
    value and its context.</xsd:documentation>
  </xsd:annotation>
  <xsd:attribute ref="s:id"/>
  <xsd:attribute ref="s:metadata"/>
  <xsd:attribute ref="s:linkMetadata"/>
</xsd:complexType>
<xsd:complexType name="MetadataType" abstract="true">
  <xsd:annotation>
    <xsd:documentation>The MetadataType type is a base class for metadata
    type definition. This type provides only an ID, as the metadata may
    be referenced. It does not itself have metadata, and does not have
    link metadata.</xsd:documentation>
  </xsd:annotation>
  <xsd:attribute ref="s:id"/>
</xsd:complexType>
<xsd:complexType name="ReferenceType" final="#all">
  <xsd:annotation>
    <xsd:documentation>The ReferenceType type is the type of all
    reference elements within NIEM-conformant schemas. This type provides
    a reference attribute, to reference an object defined elsewhere. It
    includes an ID, as the link established by a reference element may
    need to be identified, and it includes link metadata, as an element
    of this type establishes a relationship between its context and the
    referenced object. It does not contain metadata, as it does not
    itself establish the existence of an object; it relies on a
    definition located elsewhere.</xsd:documentation>
  </xsd:annotation>
  <xsd:attribute ref="s:id"/>
  <xsd:attribute ref="s:ref"/>
  <xsd:attribute ref="s:linkMetadata"/>
</xsd:complexType>
</xsd:schema>

```

Appendix 1.10 NIEM/FBI.XSD

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema targetNamespace="http://niem.gov/niem/fbi/2.0" version="1" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:xsd
="http://www.w3.org/2001/XMLSchema" xmlns:fbi="http://niem.gov/niem/fbi/2.0" xmlns:i="http://niem.gov/niem/appinfo/2.0">
  <xsd:annotation>
    <xsd:appinfo>
      <i:ConformantIndicator>true</i:ConformantIndicator>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:import schemaLocation="../../appinfo/2.0/appinfo.xsd" namespace="http://niem.gov/niem/appinfo/2.0"/>
  <xsd:import schemaLocation="../../structures/2.0/structures.xsd" namespace="http://niem.gov/niem/structures/2.0"/>
  <xsd:simpleType name="VMACodeSimpleType">
    <xsd:annotation>
      <xsd:appinfo>
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
      </xsd:appinfo>
    </xsd:annotation>
    <xsd:restriction base="xsd:token">
      <xsd:enumeration value="AAA"/>
      <xsd:enumeration value="AAB"/>
      <xsd:enumeration value="AALI"/>
      <xsd:enumeration value="AAPX"/>
      <xsd:enumeration value="AARD"/>
      <xsd:enumeration value="AATM"/>
      <xsd:enumeration value="AATS"/>
      <xsd:enumeration value="AAVH"/>
      <xsd:enumeration value="AAWL"/>
      <xsd:enumeration value="AAWS"/>
      <xsd:enumeration value="ABAR"/>
      <xsd:enumeration value="ABBO"/>
      <xsd:enumeration value="ABC"/>
      <xsd:enumeration value="ABCC"/>
      <xsd:enumeration value="ABCH"/>
      <xsd:enumeration value="ABCO"/>
      <xsd:enumeration value="ABER"/>
      <xsd:enumeration value="ABFI"/>
      <xsd:enumeration value="ABIA"/>
      <xsd:enumeration value="ABTM"/>
      <xsd:enumeration value="ABTR"/>
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      <xsd:enumeration value="ACAD"/>
      <xsd:enumeration value="ACAE"/>
      <xsd:enumeration value="ACAI"/>
      <xsd:enumeration value="ACCU"/>
      <xsd:enumeration value="ACE"/>
      <xsd:enumeration value="ACEC"/>
      <xsd:enumeration value="ACEE"/>
      <xsd:enumeration value="ACGC"/>
      <xsd:enumeration value="ACKN"/>
      <xsd:enumeration value="ACME"/>
      <xsd:enumeration value="ACMM"/>
      <xsd:enumeration value="ACOR"/>
    </xsd:restriction>
  </xsd:simpleType>
</xsd:schema>
```


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```

<xsd:enumeration value="WOOM"/>
<xsd:enumeration value="WOON"/>
<xsd:enumeration value="WOOS"/>
<xsd:enumeration value="WORH"/>
<xsd:enumeration value="WORI"/>
<xsd:enumeration value="WORK"/>
<xsd:enumeration value="WORL"/>
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<xsd:enumeration value="WORT"/>
<xsd:enumeration value="WPAR"/>
<xsd:enumeration value="WRAG"/>
<xsd:enumeration value="WRAN"/>
<xsd:enumeration value="WRGH"/>
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<xsd:enumeration value="WRKH"/>
<xsd:enumeration value="WRLD"/>
<xsd:enumeration value="WRVI"/>
<xsd:enumeration value="WSBT"/>
<xsd:enumeration value="WSID"/>
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<xsd:enumeration value="XCEL"/>
<xsd:enumeration value="XKEL"/>
<xsd:enumeration value="XLST"/>
<xsd:enumeration value="XMRK"/>
<xsd:enumeration value="XPFI"/>
<xsd:enumeration value="XPLO"/>

<xsd:enumeration value="XTRA"/>
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<xsd:enumeration value="YALE"/>
<xsd:enumeration value="YAMA"/>
<xsd:enumeration value="YAMP"/>
<xsd:enumeration value="YAMT"/>
<xsd:enumeration value="YANG"/>
<xsd:enumeration value="YANK"/>
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<xsd:enumeration value="YARB"/>
<xsd:enumeration value="YARD"/>
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<xsd:enumeration value="YAZO"/>
<xsd:enumeration value="YELL"/>
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<xsd:enumeration value="YUCH"/>
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<xsd:enumeration value="ZIPP"/>
<xsd:enumeration value="ZLMC"/>
<xsd:enumeration value="ZLMI"/>
<xsd:enumeration value="ZMCC"/>

<xsd:enumeration value="ZMMN"/>
<xsd:enumeration value="ZNEL"/>
<xsd:enumeration value="ZOBO"/>
<xsd:enumeration value="ZOLL"/>
<xsd:enumeration value="ZONG"/>
<xsd:enumeration value="ZUND"/>
<xsd:enumeration value="ZWIC"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="VMACCodeType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="fbi:VMACCodeSimpleType">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:simpleType name="VMOCCodeSimpleType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="002"/>
    <xsd:enumeration value="100"/>
    <xsd:enumeration value="102"/>
    <xsd:enumeration value="105"/>
    <xsd:enumeration value="110"/>
    <xsd:enumeration value="113"/>
    <xsd:enumeration value="120"/>
    <xsd:enumeration value="122"/>
    <xsd:enumeration value="124"/>
    <xsd:enumeration value="125"/>
    <xsd:enumeration value="128"/>
    <xsd:enumeration value="129"/>
    <xsd:enumeration value="130"/>
    <xsd:enumeration value="131"/>
    <xsd:enumeration value="140"/>
    <xsd:enumeration value="150"/>
    <xsd:enumeration value="151"/>
    <xsd:enumeration value="160"/>
    <xsd:enumeration value="164"/>
    <xsd:enumeration value="18"/>
    <xsd:enumeration value="180"/>
    <xsd:enumeration value="190"/>
    <xsd:enumeration value="1GL"/>
  </xsd:restriction>

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<xsd:enumeration value="VAN"/>
<xsd:enumeration value="VAR"/>
<xsd:enumeration value="VCS"/>
<xsd:enumeration value="VEC"/>
<xsd:enumeration value="VED"/>
<xsd:enumeration value="VEG"/>
<xsd:enumeration value="VEL"/>
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<xsd:enumeration value="Z8"/>
<xsd:enumeration value="ZAG"/>
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<xsd:enumeration value="ZOD"/>
<xsd:enumeration value="ZX2"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:complexType name="VMOCCodeType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:simpleContent>
    <xsd:extension base="fbi:VMOCCodeSimpleType">
      <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>
<xsd:simpleType name="VSTCodeSimpleType">
  <xsd:annotation>
    <xsd:appinfo>
      <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
  </xsd:annotation>
  <xsd:restriction base="xsd:token">
    <xsd:enumeration value="1J"/>
    <xsd:enumeration value="1P"/>
    <xsd:enumeration value="2D"/>
  </xsd:restriction>
</xsd:simpleType>

```


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```
        <i:Base i:namespace="http://niem.gov/niem/structures/2.0" i:name="Object"/>
    </xsd:appinfo>
</xsd:annotation>
<xsd:simpleContent>
    <xsd:extension base="fbi:VSTCodeSimpleType">
        <xsd:attributeGroup ref="s:SimpleObjectAttributeGroup"/>
    </xsd:extension>
</xsd:simpleContent>
</xsd:complexType>
</xsd:schema>
```

Appendix 1.11 WANTLIST.XML

```
<w:WantList w:release="2.0" w:product="NIEM"
  xmlns:nga="http://niem.gov/niem/nga/2.0"
  xmlns:nc="http://niem.gov/niem/niem-core/2.0"
  xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0"
  xmlns:niem-xsd="http://niem.gov/niem/proxy/xsd/2.0"
  xmlns:fbi="http://niem.gov/niem/fbi/2.0"
  xmlns:j="http://niem.gov/niem/domains/jxdm/4.0" xmlns:w="http://niem.gov/niem/wantlist/2">
  <w:Element w:name="em:AlarmEventCallPrivacyBypassCode" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventCategory" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventCategoryText" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventDetailsText" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventDispatchAgency" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventLocationAugmentation" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventLocationCategory" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventLocationCategoryText" w:isReference="false"/>
  <w:Element w:name="em:AlarmEventPermit" w:isReference="false"/>
  <w:Element w:name="em:LocationDirectionsText" w:isReference="false"/>
  <w:Element w:name="em:LocationInformationText" w:isReference="false"/>
  <w:Element w:name="em:PermitCategoryText" w:isReference="false"/>
  <w:Element w:name="em:PermitIdentification" w:isReference="false"/>
  <w:Element w:name="j:ActivityLocationAssociation" w:isReference="false"/>
  <w:Element w:name="nc:ActivityCategoryText" w:isReference="false"/>
  <w:Element w:name="nc:ActivityDate" w:isReference="false"/>
  <w:Element w:name="nc:ActivityDateRepresentation" w:isReference="false"/>
  <w:Element w:name="nc:ActivityIdentification" w:isReference="false"/>
  <w:Element w:name="nc:ActivityStatus" w:isReference="false"/>
  <w:Element w:name="nc:AddressBuildingText" w:isReference="false"/>
  <w:Element w:name="nc:AddressDeliveryPoint" w:isReference="false"/>
  <w:Element w:name="nc:AddressFullText" w:isReference="false"/>
  <w:Element w:name="nc:AddressRepresentation" w:isReference="false"/>
  <w:Element w:name="nc:AddressSecondaryUnitText" w:isReference="false"/>
  <w:Element w:name="nc:Attachment" w:isReference="false"/>
  <w:Element w:name="nc:BinaryBase64Object" w:isReference="false"/>
  <w:Element w:name="nc:BinaryDescriptionText" w:isReference="false"/>
  <w:Element w:name="nc:BinaryFormatID" w:isReference="false"/>
  <w:Element w:name="nc:BinaryID" w:isReference="false"/>
  <w:Element w:name="nc:BinaryObject" w:isReference="false"/>
  <w:Element w:name="nc:BinarySizeValue" w:isReference="false"/>
  <w:Element w:name="nc:CommercialVehicle" w:isReference="false"/>
  <w:Element w:name="nc:ContactEmailID" w:isReference="false"/>
  <w:Element w:name="nc:ContactInformation" w:isReference="false"/>
  <w:Element w:name="nc:ContactInformationDescriptionText" w:isReference="false"/>
  <w:Element w:name="nc:ContactMeans" w:isReference="false"/>
  <w:Element w:name="nc:ContactTelephoneNumber" w:isReference="false"/>
  <w:Element w:name="nc:ConveyanceColorPrimaryText" w:isReference="false"/>
  <w:Element w:name="nc:ConveyanceColorSecondaryText" w:isReference="false"/>
  <w:Element w:name="nc:ConveyanceRegistrationPlateIdentification" w:isReference="false"/>
  <w:Element w:name="nc:CrossStreetDescriptionText" w:isReference="false"/>
  <w:Element w:name="nc:DateRepresentation" w:isReference="false"/>
  <w:Element w:name="nc:DateTime" w:isReference="false"/>
```



```

<w:Element w:name="nc:EmployeeIdentification" w:isReference="false"/>
<w:Element w:name="nc:FullTelephoneNumber" w:isReference="false"/>
<w:Element w:name="nc:GeographicCoordinateLatitude" w:isReference="false"/>
<w:Element w:name="nc:GeographicCoordinateLongitude" w:isReference="false"/>
<w:Element w:name="nc:GeographicDatumCode" w:isReference="false"/>
<w:Element w:name="nc:IdentificationCategory" w:isReference="false"/>
<w:Element w:name="nc:IdentificationCategoryText" w:isReference="false"/>
<w:Element w:name="nc:IdentificationExpirationDate" w:isReference="false"/>
<w:Element w:name="nc:IdentificationID" w:isReference="false"/>
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<w:Element w:name="nc:ItemModelYearDate" w:isReference="false"/>
<w:Element w:name="nc:ItemOtherIdentification" w:isReference="false"/>
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<w:Element w:name="nc:ItemStyle" w:isReference="false"/>
<w:Element w:name="nc:ItemUsageText" w:isReference="false"/>
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<w:Element w:name="nc:LatitudeMinuteValue" w:isReference="false"/>
<w:Element w:name="nc:LatitudeSecondValue" w:isReference="false"/>
<w:Element w:name="nc:LocationAddress" w:isReference="false"/>
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<w:Element w:name="nc:LocationDescriptionText" w:isReference="false"/>
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<w:Element w:name="nc:LocationPostalCode" w:isReference="false"/>
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<w:Element w:name="nc:LongitudeMinuteValue" w:isReference="false"/>
<w:Element w:name="nc:LongitudeSecondValue" w:isReference="false"/>
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<w:Element w:name="nc:MeasureUnitText" w:isReference="false"/>
<w:Element w:name="nc:MeasureValue" w:isReference="false"/>
<w:Element w:name="nc:NANPTelephoneNumber" w:isReference="false"/>
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<w:Element w:name="nc:OrganizationName" w:isReference="false"/>
<w:Element w:name="nc:Person" w:isReference="false"/>
<w:Element w:name="nc:PersonActivityInvolvementAssociation" w:isReference="false"/>
<w:Element w:name="nc:PersonContactInformationAssociation" w:isReference="false"/>
<w:Element w:name="nc:PersonCurrentEmploymentAssociation" w:isReference="false"/>
<w:Element w:name="nc:PersonFullName" w:isReference="false"/>
<w:Element w:name="nc:PersonGivenName" w:isReference="false"/>

```



```

<w:Element w:name="nc:PersonMiddleName" w:isReference="false"/>
<w:Element w:name="nc:PersonName" w:isReference="false"/>
<w:Element w:name="nc:PersonNamePrefixText" w:isReference="false"/>
<w:Element w:name="nc:PersonNameSuffixText" w:isReference="false"/>
<w:Element w:name="nc:PersonSurName" w:isReference="false"/>
<w:Element w:name="nc:SourceIDText" w:isReference="false"/>
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<w:Element w:name="nc:SpeedUnitCode" w:isReference="false"/>
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<w:Element w:name="nc:StreetNumberText" w:isReference="false"/>
<w:Element w:name="nc:StreetPostdirectionalText" w:isReference="false"/>
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<w:Element w:name="nc:StructuredAddress" w:isReference="false"/>
<w:Element w:name="nc:TelephoneAreaCodeID" w:isReference="false"/>
<w:Element w:name="nc:TelephoneExchangeID" w:isReference="false"/>
<w:Element w:name="nc:TelephoneLineID" w:isReference="false"/>
<w:Element w:name="nc:TelephoneNumberFullID" w:isReference="false"/>
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<w:Element w:name="nc:TelephoneSuffixID" w:isReference="false"/>
<w:Element w:name="nc:Vehicle" w:isReference="false"/>
<w:Element w:name="nc:VehicleCurrentWeightMeasure" w:isReference="false"/>
<w:Element w:name="nc:VehicleIdentification" w:isReference="false"/>
<w:Element w:name="nc:VehicleMakeCode" w:isReference="false"/>
<w:Element w:name="nc:VehicleModelCode" w:isReference="false"/>
<w:Element w:name="nc:VehicleStyleCode" w:isReference="false"/>
<w:Element w:name="nc:VehicleVINAText" w:isReference="false"/>
<w:Element w:name="nc:YearMonth" w:isReference="false"/>
<w:Type w:name="em:AlarmEventLocationAugmentationType" w:isRequested="true">
  <w:ElementInType w:name="em:LocationDirectionsText"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:LocationInformationText"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
</w:Type>
<w:Type w:name="em:AlarmEventType" w:isRequested="true">
  <w:ElementInType w:name="em:AlarmEventCallPrivacyBypassCode"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:AlarmEventCategory"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:AlarmEventDetailsText"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:AlarmEventDispatchAgency"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:AlarmEventLocationCategory"
    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
  <w:ElementInType w:name="em:AlarmEventPermit" w:isReference="false"
    w:minOccurs="0" w:maxOccurs="unbounded"/>
</w:Type>
<w:Type w:name="em:PermitType" w:isRequested="true">

```


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```
<w:Facet w:facet="enumeration" w:value="YANK"/>
<w:Facet w:facet="enumeration" w:value="YAMM"/>
<w:Facet w:facet="enumeration" w:value="YARB"/>
<w:Facet w:facet="enumeration" w:value="YARD"/>
<w:Facet w:facet="enumeration" w:value="YARM"/>
<w:Facet w:facet="enumeration" w:value="YAZO"/>
<w:Facet w:facet="enumeration" w:value="YELL"/>
<w:Facet w:facet="enumeration" w:value="YENC"/>
<w:Facet w:facet="enumeration" w:value="YENK"/>
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[illegible]

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[illegible]


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<w:Facet w:facet="enumeration" w:value="3P"/>
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APCO/TMA ANS 2.101.3-2021: Alarm Monitoring Company to Emergency Communications Center (ECC) Computer-Aided Dispatch (CAD) Automated Secure Alarm Protocol (ASAP)


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  <w:ElementInType w:name="nc:BinaryID" w:isReference="false"
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  <w:ElementInType w:name="nc:BinaryObject" w:isReference="false"
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    w:isReference="false" w:minOccurs="0" w:maxOccurs="unbounded"/>
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<w:Type w:name="nc:LocationType" w:isRequested="true">
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</w:Type>
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  <w:Facet w:facet="enumeration" w:value="ADI-D"/>
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  <w:Facet w:facet="enumeration" w:value="ARF-A"/>
  <w:Facet w:facet="enumeration" w:value="ARF-B"/>
  <w:Facet w:facet="enumeration" w:value="ARF-C"/>
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[illegible][illegible]


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Appendix Two

Alarm Event to CAD Event Type Translations

SCOPE

The ECC will decide on the event types that will be accepted by the ECC's CAD system. As one example, some ECC's may dispatch for only a single discipline such as police-only communications center that accept law enforcement-type alarms only and will not accept fire and/or EMS alarms, or vice-versa. ECC's may also decide to accept certain types of alarms within a single discipline but reject others; e.g. a police-only dispatch center may decide to accept burglary, holdup, panic, and duress alarms but may decide to not accept tamper alarms. This shall be controlled through the use of a configurable alarm event to CAD nature event translation table that is under the control of the ECC. Alarm monitoring company alarm notifications must adhere to a standard list of event types that is provided in this IEPD.

Appendix 2.1 ALARM EVENT TYPES THAT MAY BE SENT BY ALARM COMPANIES (GROUPED BY DISCIPLINE)

Alarm Event Type	Typical Primary Discipline	Comments
BURGLARY	LAW	
BURGLARY VERIFIED BY AUDIO	LAW	Introduced in ASAP version 3.4.
BURGLARY VERIFIED BY MULTIPLE TRIPS	LAW	Introduced in ASAP version 3.4.
BURGLARY VERIFIED BY VIDEO	LAW	Introduced in ASAP version 3.4.
COMMUNICATIONS FAILURE	LAW	Connection to premises has been severed/line security failure. Could mean that someone has cut the telephone line. Treated as a burglary alarm. Formerly known as "Phone Line". Renamed in version 3.4.
DURESS	LAW	
DURESS/PANIC	LAW	
ELEVATOR - ASSAULT	LAW	Reported from an elevator emergency phone to an alarm monitoring company. Individual has been assaulted, Introduced in ASAP version 3.4.
ELEVATOR - DISORDERLY	LAW	Reported from an elevator emergency phone to an alarm monitoring company. Disorderly behavior is occurring with or in the elevator (could include intoxicated subjects who are disorderly). Introduced in ASAP version 3.4.
HOLDUP	LAW	
HOLDUP/PANIC/DURESS/EMERGENCY	LAW	
OPEN/CLOSE	LAW	Treated as a Burglary Alarm. This is typically commercial only. When a customer asks for supervised open/close the panel sends a signal each time the panel is armed or disarmed. The supervision is when the customer (or UL Certified site) requests that alarm company call the site if the system is disarmed/armed outside a schedule. The alarm company calls the site to identify the person who disarmed/armed out of schedule and verify their code. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
PANIC	LAW	

Alarm Event Type	Typical Primary Discipline	Comments
PANIC/DURESS	LAW	
RESET/CANCEL	LAW	Treated as a Burglary Alarm but someone tampering with equipment without proper code. This is when someone on site enters their code into the keypad. If the panel was in alarm at the time the code was entered a reset/cancel is sent. The alarm company will attempt to pair up the reset/cancel to a previous alarm. If it can be paired, the alarm company takes no action we take no action. If it cannot then we attempt to verify. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
RESTORE	LAW	Treated as a Burglary Alarm. A zone was in alarm and now it has returned to normal. In older systems some times the panel never sends the original alarm. So if the alarm company is unable to pair up the restore to a previous alarm it is treated like a burglary. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
SWIMMING POOL/ASSAULT	LAW	Reported from a pool emergency phone to an alarm monitoring company. Individual has been assaulted. Introduced in ASAP version 3.4.
SWIMMING POOL/DISORDERLY	LAW	Reported from a pool emergency phone to an alarm monitoring company. Individual behaving improperly. Introduced in ASAP version 3.4.
SWIMMING POOL/FIGHT	LAW	Reported from a pool emergency phone to an alarm monitoring company. Multiple individuals engaged in dispute. Introduced in ASAP version 3.4.
TAMPER	LAW	Treated as a Burglar Alarm but someone tampering with equipment.
TROUBLE	LAW	
ELEVATOR/MEDICAL	EMS	Individual is having medical emergency without respect to elevator operation (Unless we know that the person is unconscious, this will be translated to a person down/unknown problem by most ECCs). Introduced in ASAP version 3.4.
ELEVATOR/MEDICAL - UNCONSCIOUS	EMS	Individual in the elevator is unconscious. Introduced in ASAP version 3.4.
MEDICAL	EMS	
MEDICAL ALARM	EMS	
MEDICAL - DEFIBRILLATOR	EMS	
SWIMMING POOL/MEDICAL	EMS	Reported from a pool emergency phone to an alarm monitoring company. Miscellaneous Medical (i.e. injury, fall). Introduced in ASAP version 3.4.
SWIMMING POOL/MEDICAL - UNCONSCIOUS	EMS	Reported from a pool emergency phone to an alarm monitoring company. Individual at pool is unconscious (i.e. drowning, heart attack). Introduced in ASAP version 3.4.
ELEVATOR/ENTRAPMENT	FIRE	Reported from an elevator emergency phone to an alarm monitoring company. Victim trapped in elevator mechanism (i.e. limb). Introduced in ASAP version 3.4.
ELEVATOR/STUCK	FIRE	Reported from an elevator emergency phone to an alarm monitoring company. Elevator is non-operative with persons unable to exit the cab. Introduced in ASAP version 3.4.
FIRE	FIRE	
FIRE - HEAT	FIRE	
FIRE - KEYPAD	FIRE	
FIRE - PULL STATION	FIRE	
FIRE - SMOKE	FIRE	
FIRE - WATERFLOW/SPRINKLER	FIRE	
GAS	FIRE	
GAS - CARBON DIOXIDE	FIRE	
GAS - CARBON MONOXIDE	FIRE	
GAS - NATURAL	FIRE	
GAS - PROPANE	FIRE	

Alarm Event Type	Typical Primary Discipline	Comments
SWIMMING POOL/FIRE	FIRE	Reported from a pool emergency phone to an alarm monitoring company. Swimming pool and associated equipment and chemicals on fire. Introduced in ASAP version 3.4.
SWIMMING POOL/HAZARD	FIRE	Reported from a pool emergency phone to an alarm monitoring company. Live hazard at pool (i.e. exposed wires). Introduced in ASAP version 3.4.
TROUBLE - FIRE	FIRE	Treated as a Fire Alarm; Actual fire may have already burned through telephone line before detector has detected the fire.

Appendix 2.2 ALARM EVENT TO CAD NATURE EVENT TYPE WORKSHEET TEMPLATE (GROUPED BY DISCIPLINE)

Each CAD system shall provide a configurable alarm event to CAD nature event translation table that is under the control of the ECC. The following worksheet template is completed by the ECC to identify how each alarm event type will be mapped to an appropriate CAD event type (nature/problem code). The ECC may reject certain alarm event types. Some columns may be optional depending on the CAD platform.

Alarm Type Enumerations (Alarm companies may only send these event types for an alarm notification)	Comments/Conditionals (Location type is sent by the alarm companies; generally "Commercial" or "Residential" for static addresses.	CAD Event Type Code	CAD Event Sub-Type Code ¹	Event Type Description	Event Sub-Type Description ¹	Event Type Short ¹	Typical Primary Discipline(s)	Response Plan ¹	Agency (ies)	P R I 2	Comments
BURGLARY	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
BURGLARY VERIFIED BY AUDIO	If location type = "Commercial"						Law				Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" and Location type <> "Residential" then equals {All Other} location types.						Law				
BURGLARY VERIFIED BY MULTIPLE TRIPS	If location type = "Commercial"						Law				Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" and Location type <> "Residential" then equals {All Other} location types.						Law				
BURGLARY VERIFIED BY VIDEO	If location type = "Commercial"						Law				Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" and Location type <> "Residential" then equals {All Other} location types.						Law				
COMMUNICATIONS FAILURE	If location type = "Commercial"						Law				Connection to premises has been severed/line security failure. Could mean that someone has cut the telephone line. Treated as a burglary alarm. Formerly known as "Phone Line". Renamed in ver 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
DURESS	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
DURESS/PANIC	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
ELEVATOR - ASSAULT	If location type = "Commercial"						Law				Individual has been assaulted, Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
ELEVATOR - DISORDERLY	If location type = "Commercial"						Law				Disorderly behavior is occurring with or in the elevator (could include intoxicated subjects who are disorderly)
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				

¹ Optional or may not apply to all CAD systems.

² For reference only. The priority is controlled by the CAD system.

Alarm Type Enumerations (Alarm companies may only send these event types for an alarm notification)	Comments/Conditionals (Location type is sent by the alarm companies; generally "Commercial" or "Residential" for static addresses.	CAD Event Type Code	CAD Event Sub-Type Code ¹	Event Type Description	Event Sub-Type Description ¹	Event Type Short ¹	Typical Primary Discipline(s)	Response Plan ¹	Agency (ies)	P R I 2	Comments
											Introduced in ASAP version 3.4.
HOLDUP	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
HOLDUP/PANIC/DURESS/EMERGENCY	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
OPEN/CLOSE	If location type = "Commercial"						Law				Treated as a Burglary Alarm. This is typically commercial only. When a customer asks for supervised open/close the panel sends a signal each time the panel is armed or disarmed. The supervision is when the customer (or UL Certified site) request that alarm company call the site if the system is disarmed/armed outside a schedule. The alarm company calls the site to identify the person who disarmed/armed out of schedule and verify their code. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
PANIC	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
PANIC/DURESS	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
RESET/CANCEL	If location type = "Commercial"						Law				Treated as a Burglary Alarm but someone tampering with equipment without proper code. This is when someone on site enters their code into the keypad. If the panel was in alarm at the time the code was entered a reset/cancel is sent. The alarm company will attempt to pair up the reset/cancel to a previous alarm. If it can be paired, the alarm company takes no action. If it cannot then we attempt to verify. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
RESTORE	If location type = "Commercial"						Law				Treated as a Burglary Alarm. A zone was in alarm and now it has returned to normal. In older systems sometimes the panel never sends the original alarm. So if the alarm company is unable to pair up
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				

¹ Optional or may not apply to all CAD systems.

² For reference only. The priority is controlled by the CAD system.

Alarm Type Enumerations (Alarm companies may only send these event types for an alarm notification)	Comments/Conditionals (Location type is sent by the alarm companies; generally "Commercial" or "Residential" for static addresses.	CAD Event Type Code	CAD Event Sub-Type Code ¹	Event Type Description	Event Sub-Type Description ¹	Event Type Short ¹	Typical Primary Discipline(s)	Response Plan ¹	Agency (ies)	P R I 2	Comments
											the restore to a previous alarm it is treated like a burglary. If unable to verify then police are dispatched. Not all alarm companies have this protocol. Sending this alarm type may be unique to certain automation systems.
SWIMMING POOL/ASSAULT	If location type = "Commercial"						Law				Individual has been assaulted. Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
SWIMMING POOL/DISORDERLY	If location type = "Commercial"						Law				Individual behaving improperly. Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
SWIMMING POOL/FIGHT	If location type = "Commercial"						Law				Multiple individuals engaged in dispute. Introduced in ASAP version 3.4.
	If location type = "Residential"						Law				
	If location type <> "Commercial" and Location type <> "Residential" then equals {All Other or Default} location types.						Law				
TAMPER	If location type = "Commercial"						Law				Treated as a Burglar Alarm but someone tampering with equipment.
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
TROUBLE	If location type = "Commercial"						Law				
	If location type = "Residential"						Law				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						Law				
ELEVATOR/MEDICAL	If location type = "Commercial"						EMS				Individual is having medical emergency without respect to elevator operation (Unless we know that the person is unconscious, this will be translated to a person down/unknown problem by most ECCs) Introduced in ASAP version 3.4.
	If location type = "Residential"						EMS				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						EMS				
ELEVATOR/MEDICAL - UNCONSCIOUS	If location type = "Commercial"						EMS				Individual in the elevator is unconscious. Introduced in ASAP version 3.4.
	If location type = "Residential"						EMS				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						EMS				
MEDICAL	If location type = "Commercial"						EMS				
	If location type = "Residential"						EMS				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						EMS				
MEDICAL ALARM	If location type = "Commercial"						EMS				
	If location type = "Residential"						EMS				
	If location type <> "Commercial" & Location type <> "Residential" then equals {All Other} location types.						EMS				

¹ Optional or may not apply to all CAD systems.

² For reference only. The priority is controlled by the CAD system.

Alarm Type Enumerations (Alarm companies may only send these event types for an alarm notification)	Comments/Conditionals (Location type is sent by the alarm companies; generally "Commercial" or "Residential" for static addresses.	CAD Event Type Code	CAD Event Sub-Type Code ¹	Event Type Description	Event Sub-Type Description ¹	Event Type Short ¹	Typical Primary Discipline(s)	Response Plan ¹	Agency (ies)	P R I 2	Comments
MEDICAL - DEFIBRILLATOR	If location type = "Commercial"						EMS				
	If location type = "Residential"						EMS				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						EMS				
SWIMMING POOL/MEDICAL	If location type = "Commercial"						EMS				
	If location type = "Residential"						EMS				Miscellaneous Medical (i.e. injury, fall)
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						EMS				Introduced in ASAP version 3.4.
SWIMMING POOL/MEDICAL - UNCONSCIOUS	If location type = "Commercial"						EMS				
	If location type = "Residential"						EMS				Individual at pool is unconscious (i.e. drowning, heart attack)
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						EMS				Introduced in ASAP version 3.4.
ELEVATOR/ENTRAPMENT	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				Victim trapped in elevator mechanism (i.e. limb)
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				Introduced in ASAP version 3.4.
ELEVATOR/STUCK	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				Elevator is non-operative with persons unable to exit the cab
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				Introduced in ASAP version 3.4.
FIRE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
FIRE - HEAT	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
FIRE - KEYPAD	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
FIRE - PULL STATION	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
FIRE - SMOKE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
FIRE - WATERFLOW/SPRINKLER	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
GAS	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				

¹ Optional or may not apply to all CAD systems.

² For reference only. The priority is controlled by the CAD system.

Alarm Type Enumerations (Alarm companies may only send these event types for an alarm notification)	Comments/Conditionals (Location type is sent by the alarm companies; generally "Commercial" or "Residential" for static addresses.	CAD Event Type Code	CAD Event Sub-Type Code ¹	Event Type Description	Event Sub-Type Description ¹	Event Type Short ¹	Typical Primary Discipline(s)	Response Plan ¹	Agency (ies)	P R I 2	Comments
GAS - CARBON DIOXIDE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
GAS - CARBON MONOXIDE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
GAS - NATURAL	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
GAS - PROPANE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				
SWIMMING POOL/FIRE	If location type = "Commercial"						Fire				Swimming pool and associated equipment and chemicals on fire.
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				Introduced in ASAP version 3.4.
SWIMMING POOL/HAZARD	If location type = "Commercial"						Fire				Live hazard at pool (i.e. exposed wires)
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				Introduced in ASAP version 3.4.
TROUBLE - FIRE	If location type = "Commercial"						Fire				
	If location type = "Residential"						Fire				
	If location type <> "Commercial" & Location type <> "Residential" then equals (All Other) location types.						Fire				Treated as a Fire Alarm; Actual fire may have already burned through telephone line before detector has detected the fire.

¹ Optional or may not apply to all CAD systems.

² For reference only. The priority is controlled by the CAD system.

Appendix Three

Agency Disposition Code Mapping Template

SCOPE

Disposition codes are used by ECCs and public safety to identify the outcome of an event (incidents). These codes typically involve the use of numeric, alpha or alphanumeric characters that are only meaningful to a specific agency or region. APCO ANS 1.111.2-2018 Public Safety Communications Common Disposition Codes for Data Exchange provides a list of Common Disposition Codes and Disposition Descriptors for use by ECCs and public safety when sharing incident information with disparate agencies and authorized stakeholders. The standard is available for download at <https://www.apcointl.org/standards/standards-to-download/>.

A disposition code mapping template is provided as a guide for CAD vendors to enable public safety agencies to map agency-specific disposition codes to the standardized list of Common Disposition Codes and Disposition Descriptors. Upon closure of the alarm event call-for-service by the ECC, the CAD will send disposition codes and descriptors using the disposition code mapping template.

Appendix 3.1 CAD DISPOSITION CODE MAPPING TEMPLATE EXAMPLE

ECC's Unique Disposition Code	ECC's Disposition Code Descriptor	APCO Common Disposition Code	APCO Common Disposition Code Descriptor
40	IBR Report	01	Report Taken
32	Felony Arrest	03	Arrest
		10	Event Cancelled
		17	False Alarm Cause by: Weather, Power Outage/Other Related Cause/Animal
		20	Building secure
		21	Unit cancelled enroute
		22	Cancelled - Duplicate call
H	Unit cancelled by alarm company prior to arrival	32	Cancelled – Prior to arrival on scene

Appendix 3.2 Example Use in the XML (See Appendix 4.17 for Full Sample Instance of the Alarm Close Message)

```
<!-- A single alarm event may be closed with multiple dispositions -->
<apco-alarm:AlarmCloseDisposition>
  <!-- This is a field to document the disposition reason code and definition, separated by a pipe delimiter, when an alarm event has been closed. -->
  <apco-alarm:AlarmCloseDispositionReasonCodeText>32|Cancelled (Prior to Arrival at Scene)</apco-alarm:AlarmCloseDispositionReasonCodeText>
    <!-- Additional incident-specific information can be added through additional apco-alarm:AlarmCloseDispositionDescriptionText nodes -->
    <apco-alarm:AlarmCloseDispositionDescriptionText>IBR Report #202007222312</apco-alarm:AlarmCloseDispositionDescriptionText>
  </apco-alarm:AlarmCloseDisposition>
  <apco-alarm:AlarmCloseDisposition>
    <apco-alarm:AlarmCloseDispositionReasonCodeText>17|False Alarm caused by: Weather, Power Outage/Other Related Cause/Animal </apco-
alarm:AlarmCloseDispositionReasonCodeText>
    <apco-alarm:AlarmCloseDispositionDescriptionText>Vehicle struck power pole nearby</apco-alarm:AlarmCloseDispositionDescriptionText>
  </apco-alarm:AlarmCloseDisposition>
  <apco-alarm:AlarmCloseDisposition>
    <apco-alarm:AlarmCloseDispositionReasonCodeText>20|Building Secure </apco-alarm:AlarmCloseDispositionReasonCodeText>
    <apco-alarm:AlarmCloseDispositionDescriptionText></apco-alarm:AlarmCloseDispositionDescriptionText>
  </apco-alarm:AlarmCloseDisposition>
```

Appendix Four

Sample XML Instances

SCOPE

The following are example XML instances provided for each message type and scenario.

Appendix 4.1 SCENARIO 1 – NEW ALARM

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <j:ActivityLocationAssociation>
      <nc:ActivityReference s:ref="act1"/>
      <nc:LocationReference s:ref="loc1"/>
    </j:ActivityLocationAssociation>
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityCategoryText>Alarm</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity Status is NOT populated for the initial alert -->
      <nc:ActivityStatus>
      </nc:ActivityStatus>
      <!-- Transmission Type Text -->
      <em:AlarmEventCategoryText>Burglary</em:AlarmEventCategoryText>
      <!-- Property Type Text -->
      <em:AlarmEventLocationCategoryText>Commercial</em:AlarmEventLocationCategoryText>
      <em:AlarmEventDetailsText>Front door and motion, reception area</em:AlarmEventDetailsText>
      <em:AlarmEventCallPrivacyBypassCode>1234</em:AlarmEventCallPrivacyBypassCode>
      <em:AlarmEventPermit>
        <em:PermitIdentification>
          <nc:IdentificationID>Permit-1234</nc:IdentificationID>
        </em:PermitIdentification>
        <em:PermitCategoryText>Burglary</em:PermitCategoryText>
      </em:AlarmEventPermit>
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <!-- PSAP Organization Identifier -->
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <!-- PSAP Name -->
        <nc:OrganizationName>Richmond (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- AUDIBLE, SILENT or <BLANK> -->
        <apco-alarm:AlarmAudibleDescriptionText>AUDIBLE</apco-alarm:AlarmAudibleDescriptionText>
        <!-- Alarm confirmation text information may be included in a new alarm message from the alarm company if
        this additional verification information becomes available when the initial new alarm is sent -->
        <apco-alarm:AlarmConfirmationText>024100|Alarm Verified via Observed Video</apco-alarm:AlarmConfirmationText>
        <apco-alarm:AlarmConfirmationText>024300|Alarm Verified via Security Guard</apco-alarm:AlarmConfirmationText>
        <!-- Alarm Confirmation URI is a link to a location where confirming video can be accessed -->
```

```

<apco-alarm:AlarmConfirmationURI>http://www.trutv.com/video/most-shocking/worst-burglar-ever.html
</apco-alarm:AlarmConfirmationURI>
<!-- Captures a standardized alarm scoring metric that the alarm industry will provide to estimate the
validity of an alarm event and assist public safety departments that opt-in with their alarm response
policies -->
<apco-alarm:AlarmScoringMetricText></apco-alarm:AlarmScoringMetricText>
<apco-alarm:BuildingSensorDetailsText>Radiological sensor alerting</apco-alarm:BuildingSensorDetailsText>
<apco-alarm:CallToPremiseText>No answer at contact number indicated</apco-alarm:CallToPremiseText>
</apco-alarm:AlarmEventAugmentation>
</apco-alarm:AlarmEvent>
<apco-alarm:AlarmMonitoringStation>
  <nc:OrganizationIdentification>
    <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
    <nc:IdentificationID>1VS</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>Vector Security</nc:OrganizationName>
  <apco-alarm:AlarmMonitoringStationAugmentation>
    <nc:PersonCurrentEmploymentAssociation>
      <nc:EmployeeIdentification>
        <!-- Operator ID -->
        <nc:IdentificationID>56</nc:IdentificationID>
      </nc:EmployeeIdentification>
      <nc:EmploymentContactInformationReference s:ref="cxt1"/>
    </nc:PersonCurrentEmploymentAssociation>
    <!-- Destination address for the alarm monitoring company for message routing purposes -->
    <nc:SourceIDText>FRED12345</nc:SourceIDText>
  </apco-alarm:AlarmMonitoringStationAugmentation>
</apco-alarm:AlarmMonitoringStation>
<apco-alarm:AlarmServiceLocation s:id="loc1">
  <nc:LocationAddress>
    <nc:AddressFullText>3616 N. Hopkins Rd Suite 200 Richmond City VA 23224</nc:AddressFullText>
    <!-- Address represented as a structured address -->
    <nc:StructuredAddress>
      <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
      <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
      <nc:LocationStreet>
        <nc:StreetNumberText>3616</nc:StreetNumberText>
        <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
        <nc:StreetName>Hopkins</nc:StreetName>
        <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
        <nc:StreetPostdirectionalText>
      </nc:StreetPostdirectionalText>
      </nc:LocationStreet>
      <nc:LocationCityName>Richmond City</nc:LocationCityName>
      <nc:LocationCountyName>RICHMOND CITY - IND CITY</nc:LocationCountyName>
      <nc:LocationStateName>VA</nc:LocationStateName>
      <nc:LocationPostalCode>23224</nc:LocationPostalCode>
    </nc:StructuredAddress>
  </nc:LocationAddress>
  <nc:LocationAltitudeMeasure>
    <nc:MeasurePointValue>23</nc:MeasurePointValue>
  </nc:LocationAltitudeMeasure>
</apco-alarm:AlarmServiceLocation>
</apco-alarm:Alarm>

```



```

    <nc:MeasureUnitText>Ft</nc:MeasureUnitText>
  </nc:LocationAltitudeMeasure>
  <nc:LocationCrossStreet>
    <nc:CrossStreetDescriptionText>Walnut Terrace</nc:CrossStreetDescriptionText>
  </nc:LocationCrossStreet>
  <!-- Building Usage Text -->
  <nc:LocationDescriptionText>Gun Shop</nc:LocationDescriptionText>
  <nc:LocationMapLocation>
    <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
    <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
  </nc:LocationMapLocation>
  <nc:LocationName>XYZ Service Center</nc:LocationName>
  <nc:LocationTwoDimensionalGeographicCoordinate>
    <nc:GeographicDatumCode>NAH-B</nc:GeographicDatumCode>
    <nc:GeographicCoordinateLatitude>
      <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
      <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
      <nc:LatitudeSecondValue>58.5600</nc:LatitudeSecondValue>
    </nc:GeographicCoordinateLatitude>
    <nc:GeographicCoordinateLongitude>
      <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
      <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
      <nc:LongitudeSecondValue>19.7640</nc:LongitudeSecondValue>
    </nc:GeographicCoordinateLongitude>
  </nc:LocationTwoDimensionalGeographicCoordinate>
  <em:AlarmEventLocationAugmentation>
    <em:LocationDirectionsText>McKnight Road North, Left on Wallace, Right on Elm</em:LocationDirectionsText>
    <em:LocationInformationText>2 Story red brick office building</em:LocationInformationText>
  </em:AlarmEventLocationAugmentation>
  <apco-alarm:AlarmServiceLocationAugmentation>
    <apco-alarm:LocationCaptureDateTime>2004-06-22T16:45:00.0Z</apco-alarm:LocationCaptureDateTime>
  </apco-alarm:AlarmServiceLocationAugmentation>
</apco-alarm:AlarmServiceLocation>
<!-- Company that services and is responsible for the alarm system, if different from the alarm monitoring company -->
<apco-alarm:AlarmServiceOrganization>
  <nc:OrganizationIdentification>
    <nc:IdentificationID>VA-DCJS12345</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>Petersburg Alarm</nc:OrganizationName>
  <nc:OrganizationPrimaryContactInformation>
    <nc:ContactTelephoneNumber>
      <nc:FullTelephoneNumber>
        <nc:TelephoneNumberFullID>800-555-1234</nc:TelephoneNumberFullID>
      </nc:FullTelephoneNumber>
    </nc:ContactTelephoneNumber>
  </nc:OrganizationPrimaryContactInformation>
</apco-alarm:AlarmServiceOrganization>
<!-- Contact information for the operator -->
<nc:ContactInformation s:id="cxt1">
  <nc:ContactTelephoneNumber>
    <nc:FullTelephoneNumber>

```

```

        <nc:MeasureUnitText>Ft</nc:MeasureUnitText>
    </nc:LocationAltitudeMeasure>
    <nc:LocationCrossStreet>
        <nc:CrossStreetDescriptionText>Walnut Terrace</nc:CrossStreetDescriptionText>
    </nc:LocationCrossStreet>
    <!-- Building Usage Text -->
    <nc:LocationDescriptionText>Gun Shop</nc:LocationDescriptionText>
    <nc:LocationMapLocation>
        <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
        <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
    </nc:LocationMapLocation>
    <nc:LocationName>XYZ Service Center</nc:LocationName>
    <nc:LocationTwoDimensionalGeographicCoordinate>
        <nc:GeographicDatumCode>NAH-B</nc:GeographicDatumCode>
        <nc:GeographicCoordinateLatitude>
            <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
            <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
            <nc:LatitudeSecondValue>58.5600</nc:LatitudeSecondValue>
        </nc:GeographicCoordinateLatitude>
        <nc:GeographicCoordinateLongitude>
            <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
            <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
            <nc:LongitudeSecondValue>19.7640</nc:LongitudeSecondValue>
        </nc:GeographicCoordinateLongitude>
    </nc:LocationTwoDimensionalGeographicCoordinate>
    <em:AlarmEventLocationAugmentation>
        <em:LocationDirectionsText>McKnight Road North, Left on Wallace, Right on Elm</em:LocationDirectionsText>
        <em:LocationInformationText>2 Story red brick office building</em:LocationInformationText>
    </em:AlarmEventLocationAugmentation>
    <apco-alarm:AlarmServiceLocationAugmentation>
        <apco-alarm:LocationCaptureDateTime>2004-06-22T16:45:00.0Z</apco-alarm:LocationCaptureDateTime>
    </apco-alarm:AlarmServiceLocationAugmentation>
</apco-alarm:AlarmServiceLocation>
<!-- Company that services and is responsible for the alarm system, if different from the alarm monitoring company -->
<apco-alarm:AlarmServiceOrganization>
    <nc:OrganizationIdentification>
        <nc:IdentificationID>VA-DCJS12345</nc:IdentificationID>
    </nc:OrganizationIdentification>
    <nc:OrganizationName>Petersburg Alarm</nc:OrganizationName>
    <nc:OrganizationPrimaryContactInformation>
        <nc:ContactTelephoneNumber>
            <nc:FullTelephoneNumber>
                <nc:TelephoneNumberFullID>800-555-1234</nc:TelephoneNumberFullID>
            </nc:FullTelephoneNumber>
        </nc:ContactTelephoneNumber>
    </nc:OrganizationPrimaryContactInformation>
</apco-alarm:AlarmServiceOrganization>
<!-- Contact information for the operator -->
<nc:ContactInformation s:id="cxt1">
    <nc:ContactTelephoneNumber>
        <nc:FullTelephoneNumber>

```



```

        <nc:TelephoneNumberFullID>412-565-6754</nc:TelephoneNumberFullID>
    </nc:FullTelephoneNumber>
</nc:ContactTelephoneNumber>
<nc:ContactTelephoneNumber>
    <nc:NANPTelephoneNumber>
        <nc:TelephoneAreaCodeID>412</nc:TelephoneAreaCodeID>
        <nc:TelephoneExchangeID>565</nc:TelephoneExchangeID>
        <nc:TelephoneLineID>6754</nc:TelephoneLineID>
    </nc:NANPTelephoneNumber>
</nc:ContactTelephoneNumber>
<nc:ContactInformationDescriptionText>Land line</nc:ContactInformationDescriptionText>
</nc:ContactInformation>
<!-- Contact information for the subscriber -->
<nc:ContactInformation s:id="cxt2">
    <nc:ContactTelephoneNumber>
        <nc:FullTelephoneNumber>
            <nc:TelephoneNumberFullID>202-212-5555</nc:TelephoneNumberFullID>
        </nc:FullTelephoneNumber>
        <nc:NANPTelephoneNumber>
            <nc:TelephoneAreaCodeID>202</nc:TelephoneAreaCodeID>
            <nc:TelephoneExchangeID>212</nc:TelephoneExchangeID>
            <nc:TelephoneLineID>5555</nc:TelephoneLineID>
        </nc:NANPTelephoneNumber>
    </nc:ContactTelephoneNumber>
    <nc:ContactInformationDescriptionText>Mobile</nc:ContactInformationDescriptionText>
</nc:ContactInformation>
<!-- Subscriber (Optional Fields) -->
<nc:Person s:id="per1">
    <nc:PersonName>
        <nc:PersonGivenName>John</nc:PersonGivenName>
        <nc:PersonMiddleName>Q</nc:PersonMiddleName>
        <nc:PersonSurName>Public</nc:PersonSurName>
    </nc:PersonName>
</nc:Person>
<!-- Link the subscriber to the alarm activity -->
<nc:PersonActivityInvolvementAssociation>
    <nc:PersonReference s:ref="subs1"/>
</nc:PersonActivityInvolvementAssociation>
<nc:PersonContactInformationAssociation>
    <nc:PersonReference s:ref="subs1"/>
    <nc:ContactInformationReference s:ref="cxt2"/>
</nc:PersonContactInformationAssociation>
<!-- Defines the role of a particular person -->
<apco-alarm:Subscriber s:id="subs1">
    <nc:RoleOfPersonReference s:ref="per1"/>
</apco-alarm:Subscriber>
<!-- An alarmed vehicle (Only applies if alarm applies to a vehicle) -->
<nc:Vehicle>
    <nc:ConveyanceColorPrimaryText>White</nc:ConveyanceColorPrimaryText>
    <nc:VehicleStyleCode>HS</nc:VehicleStyleCode>
    <nc:ConveyanceRegistrationPlateIdentification>

```

```
        <nc:IdentificationID>ASD43444</nc:IdentificationID>
        <nc:IdentificationSourceText>CO</nc:IdentificationSourceText>
    </nc:ConveyanceRegistrationPlateIdentification>
    <nc:VehicleMakeCode>FORD</nc:VehicleMakeCode>
    <nc:VehicleModelCode>CW3</nc:VehicleModelCode>
    <nc:VehicleVINAText>1FDKE30G6KHC23975</nc:VehicleVINAText>
</nc:Vehicle>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```


Appendix 4.2 SCENARIO 1(a) – ADDRESS VERIFICATION BULK REQUEST

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <j:ActivityLocationAssociation>
      <nc:ActivityReference s:ref="act1"/>
      <nc:LocationReference s:ref="loc1"/>
    </j:ActivityLocationAssociation>
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityCategoryText>Address Verification Bulk</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-08T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity Status is NOT populated for the initial alert -->
      <nc:ActivityStatus>
      </nc:ActivityStatus>
      <!-- Alarm event type -->
      <em:AlarmEventCategoryText>BURGLARY</em:AlarmEventCategoryText>
      <!-- Property Type Text -->
      <em:AlarmEventLocationCategoryText>Commercial</em:AlarmEventLocationCategoryText>
      <em:AlarmEventDetailsText/>
      <em:AlarmEventCallPrivacyBypassCode/>
      <em:AlarmEventPermit>
        <em:PermitIdentification>
          <nc:IdentificationID>Permit-1234</nc:IdentificationID>
        </em:PermitIdentification>
        <em:PermitCategoryText>Burglary</em:PermitCategoryText>
      </em:AlarmEventPermit>
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <!-- PSAP Organization Identifier -->
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <!-- PSAP Name -->
        <nc:OrganizationName>Richmond (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- AUDIBLE, SILENT or <BLANK> -->
        <apco-alarm:AlarmAudibleDescriptionText>AUDIBLE</apco-alarm:AlarmAudibleDescriptionText>
        <apco-alarm:AlarmConfirmationText/>
        <apco-alarm:BuildingSensorDetailsText/>
        <apco-alarm:CallToPremiseText/>
        <!-- When performing an address verification, the requesting discipline should be indicated -->
        <apco-alarm:RequestingDisciplineText>Law</apco-alarm:RequestingDisciplineText>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```

    <apco-alarm:RequestingDisciplineText>Fire</apco-alarm:RequestingDisciplineText>
  </apco-alarm:AlarmEventAugmentation>
</apco-alarm:AlarmEvent>
<apco-alarm:AlarmMonitoringStation>
  <nc:OrganizationIdentification>
    <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
    <nc:IdentificationID>1VS</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>Vector Security</nc:OrganizationName>
  <apco-alarm:AlarmMonitoringStationAugmentation>
    <nc:PersonCurrentEmploymentAssociation>
      <nc:EmployeeIdentification>
        <!-- Operator ID -->
        <nc:IdentificationID>56</nc:IdentificationID>
      </nc:EmployeeIdentification>
      <nc:EmploymentContactInformationReference s:ref="cxt1"/>
    </nc:PersonCurrentEmploymentAssociation>
    <!-- Destination address for the alarm monitoring company for message routing purposes -->
    <nc:SourceIDText>FRED12345</nc:SourceIDText>
  </apco-alarm:AlarmMonitoringStationAugmentation>
</apco-alarm:AlarmMonitoringStation>
<apco-alarm:AlarmServiceLocation s:id="loc1">
  <nc:LocationAddress>
    <nc:AddressFullText>3616 N. Hopkins Rd Suite 200 Richmond City VA 23224</nc:AddressFullText>
    <!-- Address represented as a structured address -->
    <nc:StructuredAddress>
      <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
      <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
      <nc:LocationStreet>
        <nc:StreetNumberText>3516</nc:StreetNumberText>
        <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
        <nc:StreetName>Hopkins</nc:StreetName>
        <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
        <nc:StreetPostdirectionalText></nc:StreetPostdirectionalText>
      </nc:LocationStreet>
      <nc:LocationCityName>Richmond</nc:LocationCityName>
      <nc:LocationCountyName>RICHMOND CITY - IND CITY</nc:LocationCountyName>
      <nc:LocationStateName>VA</nc:LocationStateName>
      <nc:LocationPostalCode>23224</nc:LocationPostalCode>
    </nc:StructuredAddress>
  </nc:LocationAddress>
  <nc:LocationAltitudeMeasure>
    <nc:MeasurePointValue>23</nc:MeasurePointValue>
    <nc:MeasureUnitText>Ft</nc:MeasureUnitText>
  </nc:LocationAltitudeMeasure>
  <nc:LocationCrossStreet>
    <nc:CrossStreetDescriptionText>Walnut Terrace</nc:CrossStreetDescriptionText>
  </nc:LocationCrossStreet>
  <!-- Building Usage Text -->
  <nc:LocationDescriptionText>Gun Shop</nc:LocationDescriptionText>
  <nc:LocationMapLocation>

```



```

    <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
    <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
  </nc:LocationMapLocation>
  <nc:LocationName>XYZ Service Center</nc:LocationName>
  <!-- GeoCoordinates Should be included if available -->
  <nc:LocationTwoDimensionalGeographicCoordinate>
    <nc:GeographicDatumCode>NAH-B</nc:GeographicDatumCode>
    <nc:GeographicCoordinateLatitude>
      <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
      <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
      <nc:LatitudeSecondValue>58.5600</nc:LatitudeSecondValue>
    </nc:GeographicCoordinateLatitude>
    <nc:GeographicCoordinateLongitude>
      <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
      <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
      <nc:LongitudeSecondValue>19.7640</nc:LongitudeSecondValue>
    </nc:GeographicCoordinateLongitude>
  </nc:LocationTwoDimensionalGeographicCoordinate>
  <em:AlarmEventLocationAugmentation>
    <em:LocationDirectionsText>McKnight Road North, Left on Wallace, Right on Elm</em:LocationDirectionsText>
    <em:LocationInformationText>2 Story red brick office building</em:LocationInformationText>
  </em:AlarmEventLocationAugmentation>
  <apco-alarm:AlarmServiceLocationAugmentation>
    <apco-alarm:LocationCaptureDateTime>2004-06-22T16:45:00.0Z</apco-alarm:LocationCaptureDateTime>
  </apco-alarm:AlarmServiceLocationAugmentation>
</apco-alarm:AlarmServiceLocation>
<!-- Company that services and is responsible for the alarm system, if different from the alarm monitoring company -->
<apco-alarm:AlarmServiceOrganization>
  <nc:OrganizationIdentification>
    <nc:IdentificationID>VA-DCJS12345</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>Petersburg Alarm</nc:OrganizationName>
  <nc:OrganizationPrimaryContactInformation>
    <nc:ContactTelephoneNumber>
      <nc:FullTelephoneNumber>
        <nc:TelephoneNumberFullID>800-555-1234</nc:TelephoneNumberFullID>
      </nc:FullTelephoneNumber>
    </nc:ContactTelephoneNumber>
  </nc:OrganizationPrimaryContactInformation>
</apco-alarm:AlarmServiceOrganization>
<!-- Contact information for the operator -->
<nc:ContactInformation s:id="cxt1">
  <nc:ContactTelephoneNumber>
    <nc:FullTelephoneNumber>
      <nc:TelephoneNumberFullID>412-565-6754</nc:TelephoneNumberFullID>
    </nc:FullTelephoneNumber>
  </nc:ContactTelephoneNumber>
  <nc:ContactTelephoneNumber>
    <nc:NANPTelephoneNumber>
      <nc:TelephoneAreaCodeID>412</nc:TelephoneAreaCodeID>
      <nc:TelephoneExchangeID>565</nc:TelephoneExchangeID>
    </nc:NANPTelephoneNumber>
  </nc:ContactTelephoneNumber>
</nc:ContactInformation>

```

```

        <nc:TelephoneLineID>6754</nc:TelephoneLineID>
    </nc:NANPTelephoneNumber>
</nc>ContactTelephoneNumber>
    <nc:ContactInformationDescriptionText>Land line</nc:ContactInformationDescriptionText>
</nc>ContactInformation>
<!-- Contact information for the subscriber -->
<nc:ContactInformation s:id="cxt2">
    <nc>ContactTelephoneNumber>
        <nc:FullTelephoneNumber>
            <nc:TelephoneNumberFullID>202-212-5555</nc:TelephoneNumberFullID>
        </nc:FullTelephoneNumber>
        <nc:NANPTelephoneNumber>
            <nc:TelephoneAreaCodeID>202</nc:TelephoneAreaCodeID>
            <nc:TelephoneExchangeID>212</nc:TelephoneExchangeID>
            <nc:TelephoneLineID>5555</nc:TelephoneLineID>
        </nc:NANPTelephoneNumber>
    </nc>ContactTelephoneNumber>
    <nc:ContactInformationDescriptionText>Mobile</nc:ContactInformationDescriptionText>
</nc>ContactInformation>
<!-- Subscriber (Optional fields) -->
<nc:Person s:id="per1">
    <nc:PersonName>
        <nc:PersonGivenName>John</nc:PersonGivenName>
        <nc:PersonMiddleName>Q</nc:PersonMiddleName>
        <nc:PersonSurName>Public</nc:PersonSurName>
    </nc:PersonName>
</nc:Person>
<!-- Link the subscriber to the alarm activity -->
<nc:PersonActivityInvolvementAssociation>
    <nc:PersonReference s:ref="subs1"/>
</nc:PersonActivityInvolvementAssociation>
<nc:PersonContactInformationAssociation>
    <nc:PersonReference s:ref="subs1"/>
    <nc:ContactInformationReference s:ref="cxt2"/>
</nc:PersonContactInformationAssociation>
<!-- Defines the role of a particular person -->
<apco-alarm:Subscriber s:id="subs1">
    <nc:RoleOfPersonReference s:ref="per1"/>
</apco-alarm:Subscriber>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


Appendix 4.3 SCENARIO 1(b) – ADDRESS VERIFICATION SINGLE REQUEST

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <j:ActivityLocationAssociation>
      <nc:ActivityReference s:ref="act1"/>
      <nc:LocationReference s:ref="loc1"/>
    </j:ActivityLocationAssociation>
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityCategoryText>Address Verification Single</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-08T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity Status is NOT populated for the initial alert -->
      <nc:ActivityStatus>
      </nc:ActivityStatus>
      <!-- Alarm event type -->
      <em:AlarmEventCategoryText>BURGLARY</em:AlarmEventCategoryText>
      <!-- Property Type Text -->
      <em:AlarmEventLocationCategoryText>Commercial</em:AlarmEventLocationCategoryText>
      <em:AlarmEventDetailsText/>
      <em:AlarmEventCallPrivacyBypassCode/>
      <em:AlarmEventPermit>
        <em:PermitIdentification>
          <nc:IdentificationID>Permit-1234</nc:IdentificationID>
        </em:PermitIdentification>
        <em:PermitCategoryText>Burglary</em:PermitCategoryText>
      </em:AlarmEventPermit>
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <!-- PSAP Organization Identifier -->
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <!-- PSAP Name -->
        <nc:OrganizationName>Richmond (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- AUDIBLE, SILENT or <BLANK> -->
        <apco-alarm:AlarmAudibleDescriptionText>AUDIBLE</apco-alarm:AlarmAudibleDescriptionText>
        <apco-alarm:AlarmConfirmationText/>
        <apco-alarm:BuildingSensorDetailsText/>
        <apco-alarm:CallToPremiseText/>
        <!-- When performing an address verification, the requesting discipline should be indicated -->
        <apco-alarm:RequestingDisciplineText>Law</apco-alarm:RequestingDisciplineText>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```

        <apco-alarm:RequestingDisciplineText>Fire</apco-alarm:RequestingDisciplineText>
        <apco-alarm:RequestingDisciplineText>EMS</apco-alarm:RequestingDisciplineText>
    </apco-alarm:AlarmEventAugmentation>
</apco-alarm:AlarmEvent>
<apco-alarm:AlarmMonitoringStation>
    <nc:OrganizationIdentification>
        <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
        <nc:IdentificationID>1VS</nc:IdentificationID>
    </nc:OrganizationIdentification>
    <nc:OrganizationName>Vector Security</nc:OrganizationName>
    <apco-alarm:AlarmMonitoringStationAugmentation>
        <nc:PersonCurrentEmploymentAssociation>
            <nc:EmployeeIdentification>
                <!-- Operator ID -->
                <nc:IdentificationID>56</nc:IdentificationID>
            </nc:EmployeeIdentification>
            <nc:EmploymentContactInformationReference s:ref="cxt1"/>
        </nc:PersonCurrentEmploymentAssociation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
    </apco-alarm:AlarmMonitoringStationAugmentation>
</apco-alarm:AlarmMonitoringStation>
<apco-alarm:AlarmServiceLocation s:id="loc1">
    <nc:LocationAddress>
        <nc:AddressFullText>3616 N. Hopkins Rd Suite 200 Richmond City VA 23224</nc:AddressFullText>
        <!-- Address represented as a structured address -->
        <nc:StructuredAddress>
            <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
            <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
            <nc:LocationStreet>
                <nc:StreetNumberText>3516</nc:StreetNumberText>
                <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
                <nc:StreetName>Hopkins</nc:StreetName>
                <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
                <nc:StreetPostdirectionalText>
            </nc:StreetPostdirectionalText>
            </nc:LocationStreet>
            <nc:LocationCityName>Richmond</nc:LocationCityName>
            <nc:LocationCountyName>RICHMOND CITY - IND CITY</nc:LocationCountyName>
            <nc:LocationStateName>VA</nc:LocationStateName>
            <nc:LocationPostalCode>23224</nc:LocationPostalCode>
        </nc:StructuredAddress>
    </nc:LocationAddress>
    <nc:LocationAltitudeMeasure>
        <nc:MeasurePointValue>23</nc:MeasurePointValue>
        <nc:MeasureUnitText>Ft</nc:MeasureUnitText>
    </nc:LocationAltitudeMeasure>
    <nc:LocationCrossStreet>
        <nc:CrossStreetDescriptionText>Walnut Terrace</nc:CrossStreetDescriptionText>
    </nc:LocationCrossStreet>
    <!-- Building Usage Text -->

```



```

<nc:LocationDescriptionText>Gun Shop</nc:LocationDescriptionText>
<!-- Under normal circumstances for a fixed address, GeoCoordinates should be left blank as the
      CAD system will supply the geo-coordinates in the Accept response which the alarm company's automation should
      capture.
      GeoCoordinates may be supplied for a non-static location -->
<nc:LocationMapLocation>
  <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
  <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
</nc:LocationMapLocation>
<nc:LocationName>XYZ Service Center</nc:LocationName>
<!-- Under normal circumstances for a fixed address, GeoCoordinates should be left blank as the
      CAD system will supply the geo-coordinates in the Accept response which the alarm company's automation should
      capture.
      GeoCoordinates may be supplied for a non-static location -->
<nc:LocationTwoDimensionalGeographicCoordinate>
  <nc:GeographicDatumCode>NAH-B</nc:GeographicDatumCode>
  <nc:GeographicCoordinateLatitude>
    <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
    <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
    <nc:LatitudeSecondValue>58.5600</nc:LatitudeSecondValue>
  </nc:GeographicCoordinateLatitude>
  <nc:GeographicCoordinateLongitude>
    <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
    <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
    <nc:LongitudeSecondValue>19.7640</nc:LongitudeSecondValue>
  </nc:GeographicCoordinateLongitude>
</nc:LocationTwoDimensionalGeographicCoordinate>
<em:AlarmEventLocationAugmentation>
  <em:LocationDirectionsText>McKnight Road North, Left on Wallace, Right on Elm</em:LocationDirectionsText>
  <em:LocationInformationText>2 Story red brick office building</em:LocationInformationText>
</em:AlarmEventLocationAugmentation>
<apco-alarm:AlarmServiceLocationAugmentation>
  <apco-alarm:LocationCaptureDateTime>2004-06-22T16:45:00.0Z</apco-alarm:LocationCaptureDateTime>
</apco-alarm:AlarmServiceLocationAugmentation>
</apco-alarm:AlarmServiceLocation>
<!-- Company that services and is responsible for the alarm system, if different from the alarm monitoring company -->
<apco-alarm:AlarmServiceOrganization>
  <nc:OrganizationIdentification>
    <nc:IdentificationID>VA-DCJS12345</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>Petersburg Alarm</nc:OrganizationName>
  <nc:OrganizationPrimaryContactInformation>
    <nc:ContactTelephoneNumber>
      <nc:FullTelephoneNumber>
        <nc:TelephoneNumberFullID>800-555-1234</nc:TelephoneNumberFullID>
      </nc:FullTelephoneNumber>
    </nc:ContactTelephoneNumber>
  </nc:OrganizationPrimaryContactInformation>
</apco-alarm:AlarmServiceOrganization>
<!-- Contact information for the operator -->
<nc:ContactInformation s:id="cxt1">

```

```

    <nc:ContactTelephoneNumber>
      <nc:FullTelephoneNumber>
        <nc:TelephoneNumberFullID>412-565-6754</nc:TelephoneNumberFullID>
      </nc:FullTelephoneNumber>
    </nc:ContactTelephoneNumber>
    <nc:ContactTelephoneNumber>
      <nc:NANPTelephoneNumber>
        <nc:TelephoneAreaCodeID>412</nc:TelephoneAreaCodeID>
        <nc:TelephoneExchangeID>565</nc:TelephoneExchangeID>
        <nc:TelephoneLineID>6754</nc:TelephoneLineID>
      </nc:NANPTelephoneNumber>
    </nc:ContactTelephoneNumber>
    <nc:ContactInformationDescriptionText>Land line</nc:ContactInformationDescriptionText>
  </nc:ContactInformation>
  <!-- Contact information for the subscriber -->
  <nc:ContactInformation s:id="cxt2">
    <nc:ContactTelephoneNumber>
      <nc:FullTelephoneNumber>
        <nc:TelephoneNumberFullID>202-212-5555</nc:TelephoneNumberFullID>
      </nc:FullTelephoneNumber>
      <nc:NANPTelephoneNumber>
        <nc:TelephoneAreaCodeID>202</nc:TelephoneAreaCodeID>
        <nc:TelephoneExchangeID>212</nc:TelephoneExchangeID>
        <nc:TelephoneLineID>5555</nc:TelephoneLineID>
      </nc:NANPTelephoneNumber>
    </nc:ContactTelephoneNumber>
    <nc:ContactInformationDescriptionText>Mobile</nc:ContactInformationDescriptionText>
  </nc:ContactInformation>
  <!-- Subscriber (Optional fields) -->
  <nc:Person s:id="per1">
    <nc:PersonName>
      <nc:PersonGivenName>John</nc:PersonGivenName>
      <nc:PersonMiddleName>Q</nc:PersonMiddleName>
      <nc:PersonSurName>Public</nc:PersonSurName>
    </nc:PersonName>
  </nc:Person>
  <!-- Link the subscriber to the alarm activity -->
  <nc:PersonActivityInvolvementAssociation>
    <nc:PersonReference s:ref="subs1"/>
  </nc:PersonActivityInvolvementAssociation>
  <nc:PersonContactInformationAssociation>
    <nc:PersonReference s:ref="subs1"/>
    <nc:ContactInformationReference s:ref="cxt2"/>
  </nc:PersonContactInformationAssociation>
  <!-- Defines the role of a particular person -->
  <apco-alarm:Subscriber s:id="subs1">
    <nc:RoleOfPersonReference s:ref="per1"/>
  </apco-alarm:Subscriber>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


Appendix 4.4 SCENARIO 2 – ACCEPTED ALARM

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>ACCEPT</nc:StatusText>
        <!-- Message Status Description -->
        <nc:StatusDescriptionText>Sent to law enforcement dispatch queue</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Return Validated Address and Lat/Long -->
    <apco-alarm:AlarmServiceLocation>
      <nc:LocationAddress>
        <nc:AddressFullText>3516 N HOPKINS RD Suite 200 Richmond City VA 23224</nc:AddressFullText>
        <nc:StructuredAddress>
          <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
```

```

        <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
        <nc:LocationStreet>
            <nc:StreetNumberText>3516</nc:StreetNumberText>
            <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
            <nc:StreetName>Hopkins</nc:StreetName>
            <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
            <nc:StreetPostdirectionalText>
        </nc:StreetPostdirectionalText>
        </nc:LocationStreet>
        <nc:LocationCityName>Richmond</nc:LocationCityName>
        <nc:LocationCountyName>Richmond City - Ind City</nc:LocationCountyName>
        <nc:LocationStateName>VA</nc:LocationStateName>
        <nc:LocationPostalCode>23224</nc:LocationPostalCode>
    </nc:StructuredAddress>
</nc:LocationAddress>
<nc:LocationMapLocation>
    <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
    <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
</nc:LocationMapLocation>
<nc:LocationTwoDimensionalGeographicCoordinate>
    <nc:GeographicDatumCode>NAR-C</nc:GeographicDatumCode>
    <nc:GeographicCoordinateLatitude>
        <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
        <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
        <nc:LatitudeSecondValue>58.56000</nc:LatitudeSecondValue>
    </nc:GeographicCoordinateLatitude>
    <nc:GeographicCoordinateLongitude>
        <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
        <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
        <nc:LongitudeSecondValue>19.76400</nc:LongitudeSecondValue>
    </nc:GeographicCoordinateLongitude>
</nc:LocationTwoDimensionalGeographicCoordinate>
</apco-alarm:AlarmServiceLocation>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


Appendix 4.5 SCENARIO 2(a) – ACCEPTED ADDRESS VERIFICATION ONLY

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>ACCEPT</nc:StatusText>
        <!-- Message Status Description -->
        <nc:StatusDescriptionText>ADDRESS VALIDATION ONLY, GOOD ADDRESS</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number (The PSAP Incident Number may or may not be present, depending on the CAD provider's
      solution) -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
        <!-- Address is validated for the the disciplines listed. If missing, this is an implied rejection for that
        discipline -->
        <apco-alarm:RequestingDisciplineText>Law</apco-alarm:RequestingDisciplineText>
        <apco-alarm:RequestingDisciplineText>Fire</apco-alarm:RequestingDisciplineText>
        <apco-alarm:RequestingDisciplineText>EMS</apco-alarm:RequestingDisciplineText>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```

<!-- Return Validated Address and Lat/Long -->
<apco-alarm:AlarmServiceLocation>
  <nc:LocationAddress>
    <nc:AddressFullText>3516 N HOPKINS RD Suite 200 Richmond City VA 23224</nc:AddressFullText>
    <nc:StructuredAddress>
      <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
      <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
      <nc:LocationStreet>
        <nc:StreetNumberText>3516</nc:StreetNumberText>
        <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
        <nc:StreetName>Hopkins</nc:StreetName>
        <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
        <nc:StreetPostdirectionalText></nc:StreetPostdirectionalText>
      </nc:LocationStreet>
      <nc:LocationCityName>Richmond</nc:LocationCityName>
      <nc:LocationCountyName>Richmond City - Ind City</nc:LocationCountyName>
      <nc:LocationStateName>VA</nc:LocationStateName>
      <nc:LocationPostalCode>23224</nc:LocationPostalCode>
    </nc:StructuredAddress>
  </nc:LocationAddress>
  <nc:LocationMapLocation>
    <nc:MapHorizontalCoordinateText>37.501308</nc:MapHorizontalCoordinateText>
    <nc:MapVerticalCoordinateText>-77.456174</nc:MapVerticalCoordinateText>
  </nc:LocationMapLocation>
  <nc:LocationTwoDimensionalGeographicCoordinate>
    <nc:GeographicDatumCode>NAR-C</nc:GeographicDatumCode>
    <nc:GeographicCoordinateLatitude>
      <nc:LatitudeDegreeValue>37</nc:LatitudeDegreeValue>
      <nc:LatitudeMinuteValue>29</nc:LatitudeMinuteValue>
      <nc:LatitudeSecondValue>58.56000</nc:LatitudeSecondValue>
    </nc:GeographicCoordinateLatitude>
    <nc:GeographicCoordinateLongitude>
      <nc:LongitudeDegreeValue>-77</nc:LongitudeDegreeValue>
      <nc:LongitudeMinuteValue>27</nc:LongitudeMinuteValue>
      <nc:LongitudeSecondValue>19.76400</nc:LongitudeSecondValue>
    </nc:GeographicCoordinateLongitude>
  </nc:LocationTwoDimensionalGeographicCoordinate>
</apco-alarm:AlarmServiceLocation>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


Appendix 4.6 SCENARIO 3 - REJECT (ADDRESS VERIFICATIONS AND ALARMS)

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP or the Message Broker-->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>REJECT</nc:StatusText>
        <!-- Message Status Description -->
        <nc:StatusDescriptionText>Location verify failed</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number - may or may not be present depending on the CAD provider's solution -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
        <apco-alarm:AlarmRejectReasonText>020100</apco-alarm:AlarmRejectReasonText>
        <apco-alarm:AlarmRejectSourceName>PSAP</apco-alarm:AlarmRejectSourceName>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <apco-alarm:AlarmServiceLocation>
```

```

    <nc:LocationAddress>
      <nc:AddressFullText>3516 N HOPKINS RD Suite 200 Richmond City VA 23224</nc:AddressFullText>
      <nc:StructuredAddress>
        <nc:AddressBuildingText>Dogwood Building</nc:AddressBuildingText>
        <nc:AddressSecondaryUnitText>200</nc:AddressSecondaryUnitText>
        <nc:LocationStreet>
          <nc:StreetNumberText>3516</nc:StreetNumberText>
          <nc:StreetPredirectionalText>N</nc:StreetPredirectionalText>
          <nc:StreetName>Hopkins</nc:StreetName>
          <nc:StreetCategoryText>Rd</nc:StreetCategoryText>
          <nc:StreetPostdirectionalText>
            </nc:StreetPostdirectionalText>
          </nc:LocationStreet>
          <nc:LocationCityName>Richmond</nc:LocationCityName>
          <nc:LocationCountyName>Richmond City - Ind City</nc:LocationCountyName>
          <nc:LocationStateName>VA</nc:LocationStateName>
          <nc:LocationPostalCode>23224</nc:LocationPostalCode>
        </nc:StructuredAddress>
      </nc:LocationAddress>
    </apco-alarm:AlarmServiceLocation>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


Appendix 4.7 SCENARIO 4 – UPDATE FROM ECC

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Activity Category Text is required by the Message Broker -->
      <nc:ActivityCategoryText>Update</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>Update</nc:StatusText>
        <!-- Message Status Description: Will Include Radio Dispatcher or Field Unit Comments or question -->
        <nc:StatusDescriptionText>Do you have an Estimated Time of Arrival for the Keyholder?
        </nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
  <!-- Service location should never be changed as part of an update message -->

```

```
        <apco-alarm:AlarmServiceLocation/>  
    </apco-alarm:AlarmPayload>  
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.8 SCENARIO5 – UPDATE FROM ALARM COMPANY

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Activity Category Text is required by the Message Broker -->
      <nc:ActivityCategoryText>Update</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the additional information provided by the Alarm Company -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>Update</nc:StatusText>
        <!-- Message Status Description -->
        <nc:StatusDescriptionText>Keyholder en-route, ETA 20 minutes, A Mrs Jones on the premises and does not know
the pass code</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <nc:OrganizationName>P-RICHMOND (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- Alarm confirmation text information may be included in an update message from the alarm company if this
additional verification information becomes available after the initial new alarm is sent -->
        <apco-alarm:AlarmConfirmationText>024100|Alarm Verified via Observed Video</apco-alarm:AlarmConfirmationText>
        <apco-alarm:AlarmConfirmationText>024300|Alarm Verified via Security Guard</apco-alarm:AlarmConfirmationText>
        <!-- Hyperlink location where confirming video can be viewed -->
        <apco-alarm:AlarmConfirmationURI>http://www.trutv.com/video/most-shocking/worst-burglar-ever.html
        </apco-alarm:AlarmConfirmationURI>
        <!-- PSAP Incident Number -->
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
        <!-- Captures a standardized alarm scoring metric that the alarm industry will provide to estimate the
validity of an alarm event and assist public safety departments that opt-in with their alarm response
policies -->
        <apco-alarm:AlarmScoringMetricText></apco-alarm:AlarmScoringMetricText>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```

</apco-alarm:AlarmEvent>
<apco-alarm:AlarmMonitoringStation>
  <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
  <nc:OrganizationIdentification>
    <nc:IdentificationID>1VS</nc:IdentificationID>
  </nc:OrganizationIdentification>
  <nc:OrganizationName>VECTOR SECURITY</nc:OrganizationName>
  <!-- Destination address for the alarm monitoring company for message routing purposes -->
  <apco-alarm:AlarmMonitoringStationAugmentation>
    <nc:SourceIDText>FRED12345</nc:SourceIDText>
  </apco-alarm:AlarmMonitoringStationAugmentation>
</apco-alarm:AlarmMonitoringStation>
<!-- Service location should never be changed as part of an update message -->
<apco-alarm:AlarmServiceLocation/>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


APPENDIX 4.9 SCENARIO6(a) – UPDATE ACCEPTED FROM ECC

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.02</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>UPD ACCEPT</nc:StatusText>
        <!-- Message Status Description: Always UPD ACCEPT -->
        <nc:StatusDescriptionText>Event Updated</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmAcceptReasonText>022810</apco-alarm:AlarmAcceptReasonText>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an update accept message -->
    <apco-alarm:AlarmServiceLocation/>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

APPENDIX 4.10 SCENARIO6(b) – UPDATE ACCEPTED FROM ALARM COMPANY

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>UPD ACCEPT</nc:StatusText>
        <nc:StatusDescriptionText>Update Received</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmAcceptReasonText>022815</apco-alarm:AlarmAcceptReasonText>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an update accept message -->
    <apco-alarm:AlarmServiceLocation/>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.11 SCENARIO7(a) – UPDATE REJECTED FROM ECC

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP or the Message Broker -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>UPD REJECT</nc:StatusText>
        <!-- Message Status Description: Must include reason why the Update from the alarm company is being rejected
        -->
        <nc:StatusDescriptionText>Rejected - Event has been closed. No update possible</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number, may or may not be present depending on the CAD provider's solution -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
        <apco-alarm:AlarmRejectReasonText>020500</apco-alarm:AlarmRejectReasonText>
        <apco-alarm:AlarmRejectSourceName>PSAP</apco-alarm:AlarmRejectSourceName>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
  <!-- Service location should never be changed as part of an UPD REJECT message -->
</apco-alarm:ExternalAlarm>
```

```
        <apco-alarm:AlarmServiceLocation/>  
    </apco-alarm:AlarmPayload>  
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.12 SCENARIO7(b) – UPDATE REJECTED FROM ALARM COMPANY

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP or the Message Broker -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>UPD REJECT</nc:StatusText>
        <!-- Message Status Description: Must include reason why the Update from the PSAP company is being rejected -->
        <nc:StatusDescriptionText>AUTOMATION APPLICATION ERROR. PLEASE CONTRACT ALARM MONITORING COMPANY VIA
        TELEPHONE.</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number, may or may not be present depending on the CAD provider's solution -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
        <apco-alarm:AlarmRejectReasonText>020505</apco-alarm:AlarmRejectReasonText>
        <apco-alarm:AlarmRejectSourceName>CENTRAL</apco-alarm:AlarmRejectSourceName>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an UPD REJECT message -->
```

```
        <apco-alarm:AlarmServiceLocation/>  
    </apco-alarm:AlarmPayload>  
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.13 SCENARIO8 – CAD UPDATE FROM ECC (AGENCY DISPATCHED)

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>CADUpdate</nc:StatusText>
        <!-- Message Status Description: Automatic updates from the CAD system notifying that an agency has been
        dispatched or has arrived on scene -->
        <nc:StatusDescriptionText>Law Enforcement agency has been dispatched</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an CADUpdate message -->
    <apco-alarm:AlarmServiceLocation/>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.14 SCENARIO8(a) – CADUPDATE FROM ECC (AGENCY ARRIVED ON SCENE)

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>4601156</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>CADUpdate</nc:StatusText>
        <!-- Message Status Description: Automatic updates from the CAD system notifying that the primary agency has
        been dispatched or has arrived on scene. -->
        <nc:StatusDescriptionText>Law Enforcement agency has arrived on scene</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an CADUpdate message -->
    <apco-alarm:AlarmServiceLocation/>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.15 SCENARIO9(a) – HEARTBEAT REQUEST

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>659875</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Transmission Type Text -->
      <nc:ActivityCategoryText>Heartbeat</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <nc:ActivityStatus>
        <nc:StatusText>REQ</nc:StatusText>
      </nc:ActivityStatus>
      <!-- Organization receiving the heartbeat request -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <!-- PSAP Organization Identifier -->
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <!-- PSAP Name -->
        <nc:OrganizationName>Richmond (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- Assigned by the requestor, this is the date/time after which the message is considered expired and the
        responder should not respond to this message. -->
        <apco-alarm:AlertExpirationDateTime>2020-07-04T06:00:00.0Z</apco-alarm:AlertExpirationDateTime>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <!-- Alarm Monitoring Company -->
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <nc:OrganizationName>Vector Security</nc:OrganizationName>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>AZNLETS15</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

APPENDIX 4.16 SCENARIO9(a) – HEARTBEAT ACKNOWLEDGEMENT

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>659875</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Transmission Type Text -->
      <nc:ActivityCategoryText>Heartbeat</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-03T06:00:00.02</nc:DateTime>
      </nc:ActivityDate>
      <nc:ActivityStatus>
        <nc:StatusText>ACK</nc:StatusText>
      </nc:ActivityStatus>
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <!-- PSAP Organization Identifier -->
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <!-- PSAP Name -->
        <nc:OrganizationName>Richmond (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <nc:OrganizationIdentification>
        <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <nc:OrganizationName>Vector Security</nc:OrganizationName>
      <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>AZNLETS15</nc:SourceIDText>
      </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.17 SCENARIO10 – ALARM CLOSE

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Alarm Monitoring Station Event Number -->
        <nc:IdentificationID>778855</nc:IdentificationID>
      </nc:ActivityIdentification>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-06T06:00:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the action taken by the PSAP -->
      <nc:ActivityStatus>
        <!-- Message Status Code, the AlarmClose status update must include a disposition reason in
        AlarmCloseDisposition-->
        <nc:StatusText>AlarmClose</nc:StatusText>
      </nc:ActivityStatus>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
      </em:AlarmEventDispatchAgency>
      <!-- PSAP Incident Number -->
      <apco-alarm:AlarmEventAugmentation>
        <!-- A single alarm event may be closed with multiple dispositions -->
        <apco-alarm:AlarmCloseDisposition>
          <!-- This is a field to document the disposition reason code and definition, separated by a pipe
          delimiter, when an alarm event has been closed. -->
          <apco-alarm:AlarmCloseDispositionReasonCodeText>32|Cancelled (Prior to Arrival at Scene)
          </apco-alarm:AlarmCloseDispositionReasonCodeText>
          <!-- Additional incident-specific information can be added through additional
          apco-alarm:AlarmCloseDispositionDescriptionText nodes -->
          <apco-alarm:AlarmCloseDispositionDescriptionText>IBR Report #202007222312
          </apco-alarm:AlarmCloseDispositionDescriptionText>
        </apco-alarm:AlarmCloseDisposition>
        <apco-alarm:AlarmCloseDisposition>
          <apco-alarm:AlarmCloseDispositionReasonCodeText>17|False Alarm caused by: Weather, Power Outage/Other
          Related Cause/Animal </apco-alarm:AlarmCloseDispositionReasonCodeText>
          <apco-alarm:AlarmCloseDispositionDescriptionText>Vehicle struck power pole nearby
          </apco-alarm:AlarmCloseDispositionDescriptionText>
        </apco-alarm:AlarmCloseDisposition>
        <apco-alarm:AlarmCloseDisposition>
          <apco-alarm:AlarmCloseDispositionReasonCodeText>20|Building Secure
          </apco-alarm:AlarmCloseDispositionReasonCodeText>
          <apco-alarm:AlarmCloseDispositionDescriptionText></apco-alarm:AlarmCloseDispositionDescriptionText>
        </apco-alarm:AlarmCloseDisposition>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```

        <apco-alarm:AlarmEventDispatchActivity>
            <nc:ActivityIdentification>
                <nc:IdentificationID>P-20200706-123</nc:IdentificationID>
            </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
    </apco-alarm:AlarmEventAugmentation>
</apco-alarm:AlarmEvent>
<apco-alarm:AlarmMonitoringStation>
    <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
    <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
    </nc:OrganizationIdentification>
    <apco-alarm:AlarmMonitoringStationAugmentation>
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <nc:SourceIDText>FRED12345</nc:SourceIDText>
    </apco-alarm:AlarmMonitoringStationAugmentation>
</apco-alarm:AlarmMonitoringStation>
    <!-- Service location should never be changed as part of an update message -->
    <apco-alarm:AlarmServiceLocation/>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>

```


APPENDIX 4.18 SCENARIO11(a) – CANCEL REQUEST FROM ALARM COMPANY

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>65565</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Activity Category Text is required by the Message Broker -->
      <nc:ActivityCategoryText>Update</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-08T04:23:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity Status is populated to indicate the additional information provided by the Alarm Company -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>CancelRequest</nc:StatusText>
        <!-- The cancel request reason code, and the definition from the master information list should be included.
        Additional details specific to the incident should be included as a additional StatusDescriptionText fields -->
        <nc:StatusDescriptionText>023100|End user made an authorized request to cancel by either verbal or electronic
        means</nc:StatusDescriptionText>
        <nc:StatusDescriptionText>End user provided proper pass phrase</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- Alarm Type Text -->
      <em:AlarmEventCategoryText>Burglary</em:AlarmEventCategoryText>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <nc:OrganizationName>P-RICHMOND (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- PSAP Incident Number -->
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <nc:OrganizationName>VECTOR SECURITY</nc:OrganizationName>
    </apco-alarm:AlarmMonitoringStation>
  </apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```

```
        <!-- Destination address for the alarm monitoring company for message routing purposes -->
        <apco-alarm:AlarmMonitoringStationAugmentation>
            <nc:SourceIDText>FRED12345</nc:SourceIDText>
        </apco-alarm:AlarmMonitoringStationAugmentation>
    </apco-alarm:AlarmMonitoringStation>
</apco-alarm:AlarmPayload>
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.19 SCENARIO11(b) – CANCEL REQUEST RESPONSE FROM ECC

```
<apco-alarm:ExternalAlarm xsi:schemaLocation="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd
..\xsd\apco-alarm\3.4\external-alarm.xsd" xmlns:em="http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:j=
"http://niem.gov/niem/domains/jxdm/4.0" xmlns:s="http://niem.gov/niem/structures/2.0" xmlns:nc=
"http://niem.gov/niem/niem-core/2.0" xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.4/external-alarm.xsd"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <apco-alarm:AlarmPayload alarmVersion="3.4">
    <apco-alarm:AlarmEvent s:id="act1">
      <nc:ActivityIdentification>
        <!-- Monitoring Station Event Number -->
        <nc:IdentificationID>65565</nc:IdentificationID>
      </nc:ActivityIdentification>
      <!-- Activity Category Text is required by the Message Broker -->
      <nc:ActivityCategoryText>Update</nc:ActivityCategoryText>
      <nc:ActivityDate>
        <!-- Date/Time that this message was transmitted -->
        <nc:DateTime>2020-07-08T04:26:00.0Z</nc:DateTime>
      </nc:ActivityDate>
      <!-- Activity status is populated to indicate the additional information provided by the Alarm Company -->
      <nc:ActivityStatus>
        <!-- Message Status Code -->
        <nc:StatusText>CancelRequestResponse</nc:StatusText>
        <!-- Indicate the cancel request response code from the master information list and the corresponding
description of the action(s) that the PSAP will take separated by a pipe ('|') delimiter -->
        <nc:StatusDescriptionText>023500|Cancel Request Accepted</nc:StatusDescriptionText>
      </nc:ActivityStatus>
      <!-- Alarm Type Text -->
      <em:AlarmEventCategoryText>Burglary</em:AlarmEventCategoryText>
      <!-- PSAP -->
      <em:AlarmEventDispatchAgency>
        <nc:OrganizationIdentification>
          <nc:IdentificationID>VA12200B2</nc:IdentificationID>
        </nc:OrganizationIdentification>
        <nc:OrganizationName>P-RICHMOND (CITY), VA-APCO</nc:OrganizationName>
      </em:AlarmEventDispatchAgency>
      <apco-alarm:AlarmEventAugmentation>
        <!-- PSAP Incident Number -->
        <apco-alarm:AlarmEventDispatchActivity>
          <nc:ActivityIdentification>
            <nc:IdentificationID>P-20060912-297</nc:IdentificationID>
          </nc:ActivityIdentification>
        </apco-alarm:AlarmEventDispatchActivity>
      </apco-alarm:AlarmEventAugmentation>
    </apco-alarm:AlarmEvent>
    <apco-alarm:AlarmMonitoringStation>
      <!-- Unique identifier assigned to an alarm monitoring company by the CSAA -->
      <nc:OrganizationIdentification>
        <nc:IdentificationID>1VS</nc:IdentificationID>
      </nc:OrganizationIdentification>
      <nc:OrganizationName>VECTOR SECURITY</nc:OrganizationName>
      <!-- Destination address for the alarm monitoring company for message routing purposes -->
      <apco-alarm:AlarmMonitoringStationAugmentation>
```

```
        <nc:SourceIDText>FRED12345</nc:SourceIDText>  
    </apco-alarm:AlarmMonitoringStationAugmentation>  
    </apco-alarm:AlarmMonitoringStation>  
    </apco-alarm:AlarmPayload>  
</apco-alarm:ExternalAlarm>
```


APPENDIX 4.20 ALARM STYLE SHEET XSL

```
<?xml version='1.0' encoding='utf-8'?>
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform" xmlns:apco-alarm=
"http://www.apcointl.com/new/commcenter911/3.2/external-alarm.xsd" xmlns:em=
"http://niem.gov/niem/domains/emergencyManagement/2.0" xmlns:nc="http://niem.gov/niem/niem-core/2.0" exclude-result-prefixes=
"NonHtml apco-alarm em nc" xmlns:NonHtml="http://www.progress.com/StylusStudio/NonHtml">
<xsl:output method="html"/>

<xsl:template match="/">
  <p xmlns:apco-alarm="http://www.apcointl.com/new/commcenter911/3.2/external-alarm.xsd">
    <html>
      <body/>
    </html>
  </p>
  <p>
    <font face="Arial" size="4">
      <strong>
        <u>Alarm Message</u>
      </strong>
    </font>
  </p>
  <p>
    <table width="100%" border="1">
      <tbody>
        <tr>
          <td width="50%">Alarm Type</td>
          <td width="50%">
            <xsl:value-of select=
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          </td>
        </tr>
        <tr>
          <td width="50%">Message Date/Time</td>
          <td width="50%">
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          </td>
        </tr>
        <tr>
          <td width="50%">Message Type</td>
          <td width="50%">
            <xsl:value-of select=
              "apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmEvent/nc:ActivityCategoryText"/>
          </td>
        </tr>
      </tbody>
    </table>
  </p>
  <p>
    <font face="Arial CYR" size="4">
      <u>
        <strong>Message Status</strong>
      </u>
    </font>
  </p>

```

```

        </u>
    </font>
</p>
<p>
    <table width="100%" border="1">
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            </tr>
            <tr>
                <td width="50%">Status Description</td>
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                    />
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</p>
<p>
    <font face="Arial CYR" size="4">
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            <strong>Monitoring Station</strong>
        </u>
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<p>
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                    />
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            </tr>
            <tr>
                <td width="50%">Monitoring Station Name</td>
                <td width="50%">
                    <xsl:value-of select=
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                    />
                </td>
            </tr>
        </tbody>
    </table>
</p>

```



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        <tr>
          <td width="50%">Monitoring Station ID</td>
          <td width="50%">
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              tification/nc:IdentificationID"/>
          </td>
        </tr>
        <tr>
          <td width="50%">Operator ID</td>
          <td width="50%">
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              ationID"/>
          </td>
        </tr>
        <tr>
          <td width="50%">Contact Number</td>
          <td width="50%">/>
        </tr>
        <tr>
          <td width="50%">IP Address</td>
          <td width="50%">
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              itoringStationAugmentation/nc:SourceIDText"/>
          </td>
        </tr>
      </tbody>
    </table>
  </p>
  <p>
    <font face="Arial" size="4">
      <strong>
        <u>PSAP</u>
      </strong>
    </font>
  </p>
  <p>
    <table width="100%" border="1">
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              OrganizationName"/>
          </td>
        </tr>
      </tbody>
    </table>
  </p>

```

```

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        <td width="50%">
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    </tr>
    <tr>
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        </td>
    </tr>
    <tr>
        <td width="50%"></td>
        <td width="50%"></td>
    </tr>
</tbody>
</table>
</p>
<p>
    <strong>
        <u>
            <font face="Arial" size="4">Service Location (Address)</font>
        </u>
    </strong>
</p>
<p>
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                </td>
            </tr>
            <tr>
                <td width="50%">Directions</td>
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                        Augmentation/em:LocationDirectionsText"/>
                </td>
            </tr>
            <tr>
                <td width="50%">Cross Street</td>
                <td width="50%">

```



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    </td>
</tr>
<tr>
    <td width="50%">Street</td>
    <td width="50%">
        <p>
            <xsl:value-of select=
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            <xsl:value-of select=
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            <xsl:value-of select=
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            s/nc:StructuredAddress/nc:LocationStreet/nc:StreetName"/><![CDATA[ ]]>
            <xsl:value-of select=
            "apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddres
            s/nc:StructuredAddress/nc:LocationStreet/nc:StreetCategoryText"/>
        </p>
        <p>Suite
            <xsl:value-of select=
            "apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/apco-alarm:AlarmServiceLocation/nc:LocationAddres
            s/nc:StructuredAddress/nc:AddressSecondaryUnitText"/>
        </p>
    </td>
</tr>
<tr>
    <td width="50%">City</td>
    <td width="50%">
        <xsl:value-of select=
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        :StructuredAddress/nc:LocationCityName"/>
    </td>
</tr>
<tr>
    <td width="50%">State, Postal Code</td>
    <td width="50%">
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</tr>
</tbody>
</table>
</p>

```

```

<p>
  <strong>
    <u>
      <font face="Arial" size="4">Subscriber</font>
    </u>
  </strong>
</p>
<p>
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          <![CDATA[ ]]>
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            "apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonMiddleName"/>
          <![CDATA[ ]]>
          <xsl:value-of select=
            "apco-alarm:ExternalAlarm/apco-alarm:AlarmPayload/nc:Person/nc:PersonName/nc:PersonSurName"/>
        </td>
      </tr>
      <tr>
        <td width="50%">Permit Number</td>
        <td width="50%">
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            entification/nc:IdentificationID"/>
        </td>
      </tr>
      <tr>
        <td width="50%">Permit Type</td>
        <td width="50%">
          <xsl:value-of select=
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            tegoryText"/>
        </td>
      </tr>
    </tbody>
  </table>
</p>
</xsl:template>

</xsl:stylesheet><!-- Stylus Studio meta-information - (c) 2004-2006. Progress Software Corporation. All rights reserved.
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Appendix Five

Master Information List

SCOPE

The Master Information list is a dynamic list of standardized rejection/acceptance/status-update codes and definitions for use with ASAP. The most recent copy is published on APCO's website at <https://www.apcointl.org/standards/standards-to-download/>.

Appendix 5.1 CAD Generated (For Use by the CAD Systems)

Message Code	Message Group	Message Type	Message Code Descriptor	Comments
020110	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD ADDRESS	
020120	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD LOCATION CITY OR COUNTY NAME	
020135	Address Verification	Reject	ADDRESS VALIDATION ONLY, GOOD ADDRESS, PERMIT NOT VALID	Used for an address verification from the alarm company where the address is valid but the permit is not valid.
020140	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD ADDRESS, BAD PERMIT	Used for an address verification from the alarm company where the address is invalid and the permit is invalid.
020150	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD ADDRESS, NO PERMIT	Used for an address verification from the alarm company where the address is invalid and there is no permit present.
020160	Address Verification	Reject	ADDRESS VALIDATION ONLY, EXPIRED PERMIT	Used for an address verification from the alarm company where the permit has expired.
020170	Address Verification	Reject	ADDRESS VALIDATION ONLY, SUSPENDED PERMIT	Used for an address verification from the alarm company where the permit is suspended.
020180	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD ADDRESS, EXPIRED PERMIT	Used for an address verification from the alarm company where the address is invalid and the permit has expired.
020190	Address Verification	Reject	ADDRESS VALIDATION ONLY, BAD ADDRESS, SUSPENDED PERMIT	Used for an address verification from the alarm company where the address is invalid and the permit has been suspended.
020195	Address Verification	Reject	ADDRESS VALIDATION ONLY, ADDRESS / PERMIT MISMATCH	Used for an address verification from the alarm company where the address is a valid address, the permit is a valid permit, but the two do not belong together.
022100	Address Verification	Accept	ADDRESS VALIDATION ONLY, GOOD ADDRESS	
022130	Address Verification	Accept	ADDRESS VALIDATION ONLY, BAD ADDRESS, GOOD GEO Coordinates	
022140	Address Verification	Accept	ADDRESS VALIDATION ONLY, GOOD ADDRESS, PERMIT VALID	
020010	Alarm Acceptance	Reject	ALARM REQUESTS ARE DISABLED, <COMMENT>	
020020	Alarm Acceptance	Reject	MESSAGE TYPE NOT ACCEPTED BY ECC	
020030	Alarm Acceptance	Reject	FREQUENCY THRESHOLD EXCEEDED FOR MONITORING STATION	
020100	Alarm Acceptance	Reject	LOCATION VERIFY FAILED	
020130	Address Verification & Alarm Acceptance	Reject	INVALID LOCATION CITY OR COUNTY NAME	Returned when the the city name and/or county name is enforced but cannot be determined which field is in error. Prefer to use 020132 or 020134 when possible to clarify the exact issue.
020132	Address Verification & Alarm Acceptance	Reject	INVALID LOCATION CITY NAME OR ECC DOES NOT ACCEPT ALARMS FOR THIS AREA	Returned when the city name is enforced and an invalid city name has been sent
020134	Address Verification & Alarm Acceptance	Reject	INVALID LOCATION COUNTY NAME	Returned when the county name is enforced and an invalid county name has been sent
020136	Address Verification & Alarm Acceptance	Reject	ADDRESS IS VALID BUT THE ECC DOES NOT ACCEPT ALARMS FOR THIS AREA	Returned for a valid address but the ECC will not accept alarms for this municipality/community/zone
020200	Alarm Acceptance	Reject	INVALID ALARM TYPE/LOCATION CATEGORY MISMATCH	
020210	Alarm Acceptance	Reject	INVALID ALARM TYPE	
020300	Alarm Acceptance	Reject	NO PERMIT FOR THIS ADDRESS- NO DISPATCH	
020310	Alarm Acceptance	Reject	MULTIPLE PERMITS FOUND FOR THIS ADDRESS- NO DISPATCH	Only when correct permit number not provided by Alarm Company

Message Code	Message Group	Message Type	Message Code Descriptor	Comments
020320	Alarm Acceptance	Reject	ALARM PERMIT EXCEEDED FALSE ALARM THRESHOLD- NO DISPATCH	
020330	Alarm Acceptance	Reject	ECC WILL NOT DISPATCH TO THIS LOCATION	This is an intentional rejection by the ECC and is used when the Authority Having Jurisdiction (AHJ) administratively refuses to dispatch to the individual address specified in the alarm message. This message/status from CAD for this individual address can be transient and should not be used by the central station automation to prohibit future alarm transmission for the location via ASAP.
020340	Alarm Acceptance	Reject	INVALID PERMIT	
020350	Alarm Acceptance	Reject	GOOD ADDRESS, PERMIT NOT VALID	Used for an alarm notification from the alarm company where the address is valid but the permit is not valid.
020360	Alarm Acceptance	Reject	BAD ADDRESS, BAD PERMIT	Used for an alarm notification from the alarm company where the address is invalid and the permit is invalid.
020370	Alarm Acceptance	Reject	BAD ADDRESS, NO PERMIT	Used for an alarm notification from the alarm company where the address is invalid and there is no permit present.
020380	Alarm Acceptance	Reject	EXPIRED PERMIT	Used for an alarm notification from the alarm company where the permit has expired.
020385	Alarm Acceptance	Reject	SUSPENDED PERMIT	Used for an alarm notification from the alarm company where the permit is suspended.
020390	Alarm Acceptance	Reject	BAD ADDRESS, EXPIRED PERMIT	Used for an alarm notification from the alarm company where the address is invalid and the permit has expired.
020395	Alarm Acceptance	Reject	BAD ADDRESS, SUSPENDED PERMIT	Used for an alarm notification from the alarm company where the address is invalid and the permit has been suspended.
020397	Alarm Acceptance	Reject	VALID ADDRESS, VALID PERMIT, BUT MISMATCH	Used for an alarm notification from the alarm company where the address is a valid address, the permit is a valid permit, but the two do not belong together.
020400	Alarm Acceptance	Reject	ALARM TOO OLD- NO DISPATCH	
020500	Alarm Acceptance	Reject	EVENT CLOSED, NO UPDATE POSSIBLE	
020505	Update Acceptance	Reject	AUTOMATION APPLICATION ERROR. PLEASE CONTRACT ALARM MONITORING COMPANY VIA TELEPHONE.	
020510	Alarm Acceptance	Reject	NO UPDATE POSSIBLE, ALARM MONITORING COMPANY & ECC INCIDENT NUMBER MIS-MATCH	Used when an UPDATE is received from the Alarm Monitoring Company but the two incident numbers are not in sync.
020600	Alarm Acceptance	Reject	EVENT UPDATED, ALREADY IN PROGRESS WITH STATUS <XXX>	Used when a pre-existing event is appended for this alarm.
020700	Alarm Acceptance	Reject	ECC APPLICATION ERROR. PLEASE CALL IN ALARM.	
020705	Alarm Acceptance	Reject	DUPLICATE - ALARM EVENT ALREADY EXISTS. PLEASE CALL ECC	Used when an alarm event is received that is a duplicate of an event already received from the same alarm company with the same alarm company incident number.
020710	Alarm Acceptance	Reject	ECC APPLICATION ERROR. PLEASE CALL IN UPDATE	Used when the CAD cannot add an UPDATE to a call-for-service for a reason other than the call-for-service having been closed
022810	Alarm Acceptance	Accept	EVENT UPDATED	Sent in response to update from central station
022815			UPDATE RECEIVED	
022820	Alarm Acceptance	Accept	SENT TO FIRE DISPATCH QUEUE	
022830	Alarm Acceptance	Accept	SENT TO EMS DISPATCH QUEUE	
022840	Alarm Acceptance	Accept	SENT TO LAW ENFORCEMENT DISPATCH QUEUE	
022850	Alarm Acceptance	Accept	SENT TO LAW ENFORCEMENT & FIRE DISPATCH QUEUE	
022860	Alarm Acceptance	Accept	SENT TO LAW ENFORCEMENT, FIRE & EMS DISPATCH QUEUE	
022870	Alarm Acceptance	Accept	SENT TO DISPATCH QUEUE	
023100	Alarm Cancel	Cancel Request	End user made an authorized request to cancel by either verbal or electronic means	Used by the alarm companies to request a cancellation
023200	Alarm Cancel	Cancel Request	Installer company made an authorized request to cancel by either verbal or electronic means	Used by the alarm companies to request a cancellation
023300	Alarm Cancel	Cancel Request	Installer company made an authorized request to cancel technician on site did not put site system on test prior to servicing by either verbal or electronic means	Used by the alarm companies to request a cancellation
023400	Alarm Cancel	Cancel Request	Central station operator made dispatch request in error	Used by the alarm companies to request a cancellation
023500	Alarm Cancel	Cancel Request Response	Cancel Request Accepted	Used by the ECC in response to an alarm cancel request
023600	Alarm Cancel	Cancel Request Response	Cancel Request forwarded to dispatch, response continues	Used by the ECC in response to an alarm cancel request
023700	Alarm Cancel	Cancel Request Response	Cancel Request rejected, agency does not accept cancel requests	Used by the ECC in response to an alarm cancel request
023800	Alarm Cancel	Cancel Request Response	CAD cannot handle Cancel Request, Send Request via an UPDATE Message	Used by the ECC in response to an alarm cancel request
024100	Alarm Confirmation	Verified Alarm	Alarm verified via Observed Video	May be used in the <i>AlarmConfirmationText</i> field to support the validity of the alarm.
024200	Alarm Confirmation	Verified Alarm	Alarm verified via Live Audio	May be used in the <i>AlarmConfirmationText</i> field to support the validity of the alarm.
024300	Alarm Confirmation	Verified Alarm	Alarm verified via Guard	May be used in the <i>AlarmConfirmationText</i> field to support the validity of the alarm.
024400	Alarm Confirmation	Verified Alarm	Alarm verified via call to premises	May be used in the <i>AlarmConfirmationText</i> field to support the validity of the alarm.
024500	Alarm Confirmation	Verified Alarm	Alarm verified by subscriber	May be used in the <i>AlarmConfirmationText</i> field to support the validity of the alarm.

Appendix 5.2 ASAP Service Generated (For Use By the ASAP Service Only)

Message Code	Message Group	Message Type	Message Code Descriptor	Comments
010001	ASAP Service	Reject	ASAP SERVICE - UNKNOWN ERROR	Non-specific error
010002	ASAP Service	Reject	ASAP SERVICE - XML MESSAGE ERROR	Request is not properly formatted
010003	ASAP Service	Reject	ASAP SERVICE - ACTION CATEGORY ERROR - REPORT TO ASAP SERVICE	The Broker is unable to determine how to process the message. This is typically a configuration error at the Broker
010100	ASAP Service	Reject	ASAP SERVICE - UNKNOWN ACTIVITY CATEGORY	The value in <i>ActivityCategoryText</i> is not recognized as valid.
010101	ASAP Service	Reject	ASAP SERVICE - MISSING ACTIVITY CATEGORY	The <i>ActivityCategoryText</i> field is either empty or the field is missing.
010201	ASAP Service	Reject	ASAP SERVICE - SOURCEID TEXT MISSING	The <i>SourceIDText</i> field is missing (CAD System Only)
010300	ASAP Service	Reject	ASAP SERVICE - MISSING ECC ORI	The <i>AlarmEventDispatchAgency\OrganizationIdentification\IdentificationID</i> field is either empty or missing
010301	ASAP Service	Reject	ASAP SERVICE - ECC ORI FORMAT ERROR	The <i>AlarmEventDispatchAgency\OrganizationIdentification\IdentificationID</i> field does not contain a properly formatted ORI.
010302	ASAP Service	Reject	ASAP SERVICE - ECC IS NOT AUTHORIZED TO COMMUNICATE WITH CENTRAL STATION	The ORI in the <i>AlarmEventDispatchAgency\OrganizationIdentification\IdentificationID</i> field is not authorized to communicate with the Originating Central Station ID contained in <i>AlarmMonitoringStation\OrganizationIdentification\IdentificationID</i>
010400	ASAP Service	Reject	ASAP SERVICE - MISSING CSID	The <i>AlarmMonitoringStation\OrganizationIdentification\IdentificationID</i> is either empty or missing
010401	ASAP Service	Reject	ASAP SERVICE - CENTRAL STATION IS NOT AUTHORIZED TO COMMUNICATE WITH ECC	The Originating Central Station ID contained in <i>AlarmMonitoringStation\OrganizationIdentification\IdentificationID</i> is not authorized to communicate using the IP Address from which the message was sent

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Appendix 6: Change Log

SCOPE

The Change Log is a record of changes introduced with each ASAP version.

Appendix 6.1 Change Log (upgrade from 2.0 to 3.0)

1. Mappings were changed from GJXDM to NIEM 2.0
2. Two elements were added based on lessons learned from implementing Alerts 2.0
 - a. Building Sensor Details Text: free text field used to indicate information specific to a building sensor if available
 - b. Source IP Address: used to verify and validate the source alarm monitoring company
3. The name of the IEPD was updated for clarity (from External Alert to External Alarm)

Appendix 6.2 Change Log (upgrade from 3.0 to 3.1)

1. Changed target namespace from <http://www.apco.com/ExternalAlarm/3.0> to <http://www.apcointl.com/new/commcenter911/external-alarm.xsd>

Appendix 6.3 Change Log (upgrade from 3.1 to 3.2)

1. Expanded the list of possible alarm types

Appendix 6.4 Change Log (upgrade from 3.2 to 3.3)

1. Changed target namespace from <http://www.apcointl.com/new/commcenter911/3.2/external-alarm.xsd> to <http://www.apcointl.com/new/commcenter911/3.3/external-alarm>
2. Expanded the list of possible alarm types
3. The three primary uses were edited for clarity
4. Six elements were added based on new requirements
 - a. Alarm Confirmation URI: a Uniform Resource Locator (URL) that can be used to access additional information such as video that confirms a valid alarm event
 - b. Alarm Service Organization Name: the name of agency that services the alarm system and holds responsibility for their customers' alarm systems
 - c. Alarm Service Organization Identification: a unique identifier assigned to an alarm service company
 - d. Alarm Service Organization Contact Telephone Number: the phone number of the alarm service company
 - e. Map Horizontal Coordinate Text: geo-coordinate latitude of an alarm location expressed in decimal form

- f. Map Vertical Coordinate Text: geo-coordinate longitude of an alarm location expressed in decimal form
- g. Alarm Reject Reason Text: a six digit number corresponding to a uniform list of Reject messages. A 01 in the first two digits would be used to identify the set of codes reserved for the CSAA message broker. Other values would represent other elements. For instance a ECC might be a 02.
- h. Alarm Reject Source Name: source of the Reject message.
- i. Alarm Accept Reason Text: a six digit number corresponding to a uniform list of Accept messages. The source of an Accept message is always the ECC.

ACRONYMS AND ABBREVIATIONS

AHJ	Authority Having Jurisdiction
ANS	American National Standard
ANSI	American National Standards Institute
APCO	Association of Public Safety Communications Officials
ASAP	Automated Secure Alarm Protocol
BJA	Bureau of Justice Assistance
CAD	Computer-Aided Dispatch
CMT	Component Mapping Spreadsheet
CSAA	Central Station Alarm Association (Rebranded The Monitoring Association)
DMZ	Demarcation zone
DOJ	Department Of Justice
ECC	Emergency Communications Center
EMS	Emergency Medical Services
ETA	Estimated Time of Arrival
GJXDM	Global Justice Xml Data Model
IEPD	Information Exchange Package Documentation
IJIS	IJIS Institute
MDC	Mobile Data Computer
NANP	North American Numbering Plan
NENA	National Emergency Number Association
NIEM	National Information Exchange Model
NLETS	International Justice and Public Safety Network
NRTL	Nationally Recognized Testing Laboratory
PSAP	Public Safety Answering Point (Renamed Emergency Communications Center)
PSDI	Public Safety Data Interoperability project
RFID	Radio Frequency Identification
SDC	Standards Development Committee
SDO	Standards Development Organization
SME	Subject Matter Expert
TMA	The Monitoring Association
UL	Underwriters Laboratory
XML	eXtensible Markup Language
XSD	XML Schema Definition
XSL	Extensible Stylesheet Language (a technical artifact within the IEPD)

GLOSSARY

ALARM MONITORING CENTER (Historically defined as a Central Station): A facility or group of facilities that use trained staff to process alarm and supervisory signals, primarily from burglar, fire, and Personal Emergency Response Systems. Workflows within an Alarm Monitoring Center govern public safety and alarm user notification processes. Alarm Monitoring Centers that connect to the ASAP-to-ECC service are required to be listed by a recognized NRTL as adhering to UL Standard 827, the “Standard for Central-Station Alarm Services

CALL-TAKER: A Telecommunicator who processes incoming calls for service through the analyzing, prioritizing, and disseminating of information to aid in the safety of the public and responders.

COMPUTER AIDED DISPATCH (CAD): Software to assist in initiating calls for service, dispatching, and maintaining the status of responding resources in the field.

DEMARCATIION ZONE (DMZ): or perimeter network, is a physical or logical sub-network that contains and exposes an organization's external services to a larger, untrusted network, usually the Internet. The purpose of a DMZ is to add an additional layer of security to an organization's Local Area Network

DISPOSITION CODE: An acronym or other abbreviated combination of alphanumeric characters used to describe the outcome of the real world event managed by a public safety agency. Incident disposition codes typically differ between disparate ECCs and public safety agencies.

EMERGENCY COMMUNICATIONS CENTER (ECC): A facility equipped and staffed to receive emergency and nonemergency calls requesting public safety services via telephone and other communication devices. The FCC further defines a primary ECC as a facility to which 9-1-1 calls are routed directly from the 9-1-1 Control Office. A secondary ECC is defined as a facility to which 9-1-1 calls are transferred from a primary ECC.

INCIDENT TYPE CODE (Also known as CAD Nature Code, Event Type, or Problem Code): An acronym or other abbreviated combination of alphanumeric characters used to describe the nature of the real-world event that is being reported. Incident type codes typically differ between disparate ECCs and public safety agencies.

SHALL: Within the context of this standard, “shall” indicates a mandatory requirement.

SHOULD: Within the context of this standard, “should” indicates a recommendation.

TELECOMMUNICATOR: The individual employed by a public safety agency as the first of the first responders whose primary responsibility is to receive, process, transmit, and/or dispatch emergency and non-emergency calls for service for law enforcement, fire, emergency medical, and other public safety services via telephone, radio, and other communication devices.

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