



District of Columbia
Fire and Emergency Medical Services Department
Office of the Fire and EMS Chief

Response Time Performance Measures

NFPA Standard 1710 Comparative Benchmarks

October, 2016



District of Columbia Fire and EMS Department

Office of the Fire and EMS Chief

OVERVIEW

- Beginning in FY 2016, the Fire and EMS Department (FEMS) will publish **revised Key Performance Indicators (KPIs) that use National Fire Protection Association (NFPA) Standards as response time benchmarks.**
- Previously, FEMS used response time benchmarks recommended by other authorities, including the International City and County Managers Association (ICMA) and literature citations.
- **FEMS will now report response times expressed as percentages of benchmark time objectives described by NFPA Standard 1710 (2016 Edition) Chapter 4, § 4.1.2.1 and other sections of the publication, by incident type groups.** Details concerning these measures, along with target time goal values, are presented in this document.
- Response time performance measures, updated monthly, will be published to the Department website beginning in November, 2015.



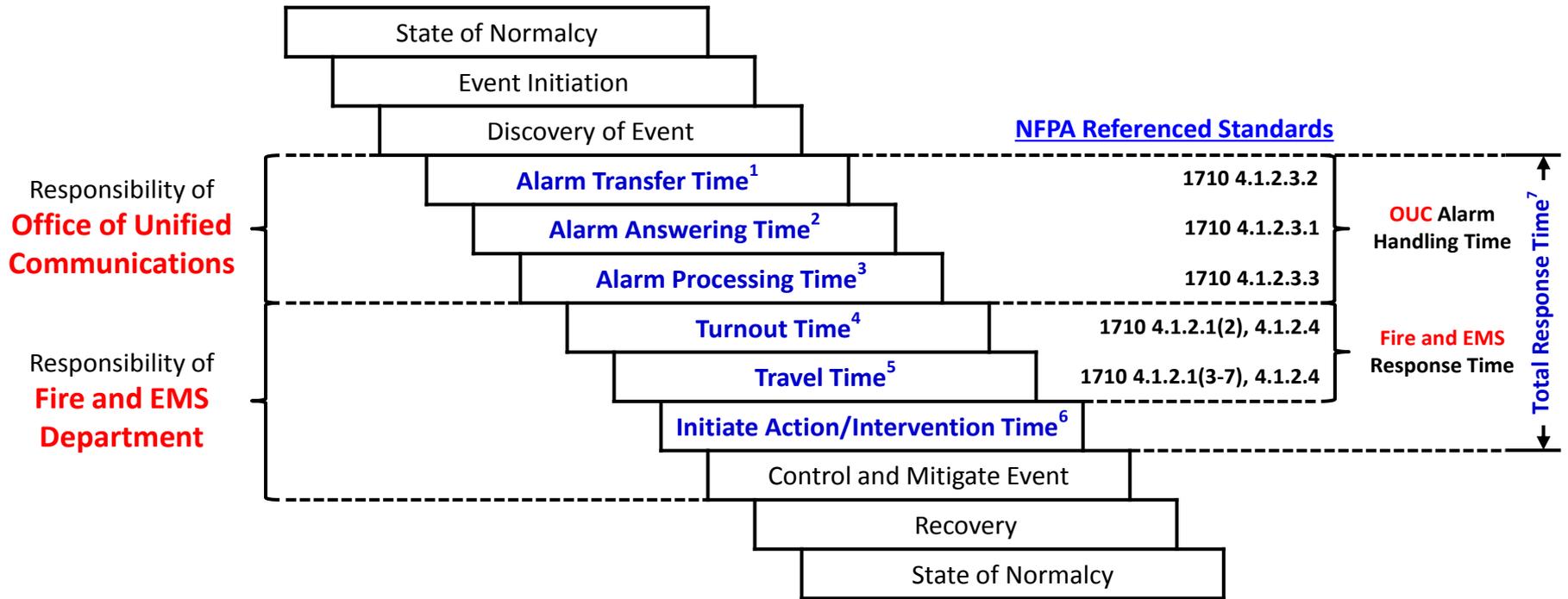
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OVERVIEW

- Both the Office of Unified Communications (OUC) and FEMS have **shared responsibility in answering, processing and responding to 9-1-1 calls and emergency incidents.**
- These responsibilities, as referenced by NFPA Standard 1710, will be described for each response time measure. **FEMS will report percentages of benchmark times measured from the time when an incident is first dispatched until the time when an FEMS emergency vehicle arrives at the location of an incident.**
- NFPA Standard 1710 benchmark times can best be described using a “Cascade of Events Chart.” This chart details the cycle of an emergency incident from beginning to end. Each response time measure is described using this chart.
- An overview chart, **defining agency responsibilities, NFPA Standard 1710 references and benchmark time intervals being measured** is shown on the following page.

Overview of Response Time Performance Measures (NFPA Standard 1710)



(1) Alarm Transfer Time

The time interval from the receipt of the emergency alarm at the PSAP until the alarm is first received at the communication center.

(2) Alarm Answering Time

The time interval that begins when the alarm is received at the communication center and ends when the alarm is acknowledged at the communication center.

(3) Alarm Processing Time

The time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency response facilities (ERFs) and emergency response units (ERUs).

(4) Turnout Time

The time interval that begins when the emergency response facilities (ERFs) and emergency response units (ERUs) notification process begins by either an audible alarm or visual annunciation or both and ends at the beginning point of travel time.

(5) Travel Time

The time interval that begins when a unit is en route to the emergency incident and ends when the unit arrives at the scene.

(6) Initiate Action/Intervention Time

The time interval from when a unit arrives on the scene to the initiation of emergency mitigation.

(7) Total Response Time

The time interval from the receipt of the alarm at the primary PSAP to when the first emergency response unit is initiating action or intervening to control the incident.



- The OUC **receives, processes and dispatches 9-1-1 calls**. NFPA 1710 § 3.3.53.2 describes this responsibility as **“Alarm Handling.”**
- “Alarm Handling” is divided into **“Alarm Transfer Time,” “Alarm Answering Time”** and **“Alarm Processing Time”** measures.
- Because the OUC directly receives all 9-1-1 calls, **“Alarm Transfer Time”** is **not** measured. **“Alarm Answering Time”** can be described as **the time from when a 9-1-1 telephone line begins to ring until the time when an OUC 9-1-1 call taker answers the call.**
- **“Alarm Processing Time”** can be described as **the time from when an OUC 9-1-1 call taker answers the call until the time when an OUC Communicator dispatches the call to FEMS emergency vehicle(s).**
- NFPA 1710 § 4.1.2.3 describes benchmark time goals for both **“Alarm Answering Time”** and **“Alarm Processing Time”** based on how 9-1-1 calls are grouped by call type.



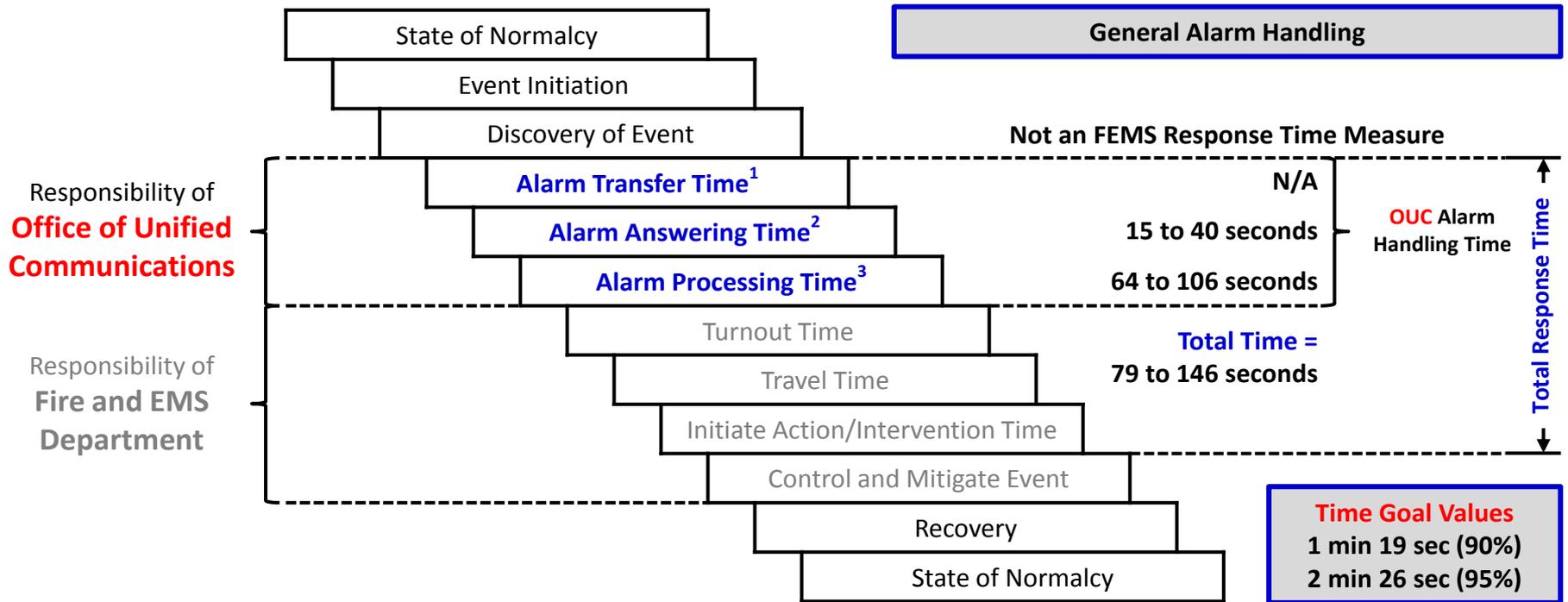
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OUC OBJECTIVES

- NFPA 1710 § 4.1.2.3.1 describes “a performance objective” for having “...an **Alarm Answering Time** of not more than **15 seconds** for **at least 95% of the alarms received** and not more than **40 seconds** for **at least 99% of the alarms received.**”
- NFPA 1710 § 4.1.2.3.3 describes “a performance objective” for having “...an **Alarm Processing Time** of not more than **64 seconds** for **at least 90% of the alarms** and not more than **106 seconds** for **at least 95% of the alarms.**”
- Combined, the above measures of “**Alarm Handling Time**” equate to benchmark time goal values of 79 seconds (**1 minute 19 seconds**) for **more than 90% of alarms received and processed** or 146 seconds (**2 minutes 26 seconds**) for **more than 95% of alarms received and processed**, as shown by the “**General Alarm Handling**” chart on the following page.

Alarm Handling (NFPA Standard 1710)



(1) Alarm Transfer Time – 4.1.2.3.2

When the alarm is received at a public safety answering point (PSAP) and transferred to a secondary answering point or communication center, the agency responsible for the PSAP shall establish a performance objective of having an alarm transfer time of **not more than 30 seconds for at least 95 percent of all alarms processed**, as specified by NFPA 1221.

**0 seconds
(not used)**

(2) Alarm Answering Time – 4.1.2.3.1

The fire department shall establish a performance objective of having an alarm answering time of **not more than 15 seconds for at least 95 percent of the alarms received and not more than 40 seconds for at least 99 percent of the alarms received**, as specified by NFPA 1221.

**15 seconds (95%)
40 seconds (99%)**

(3) Alarm Processing Time – 4.1.2.3.3

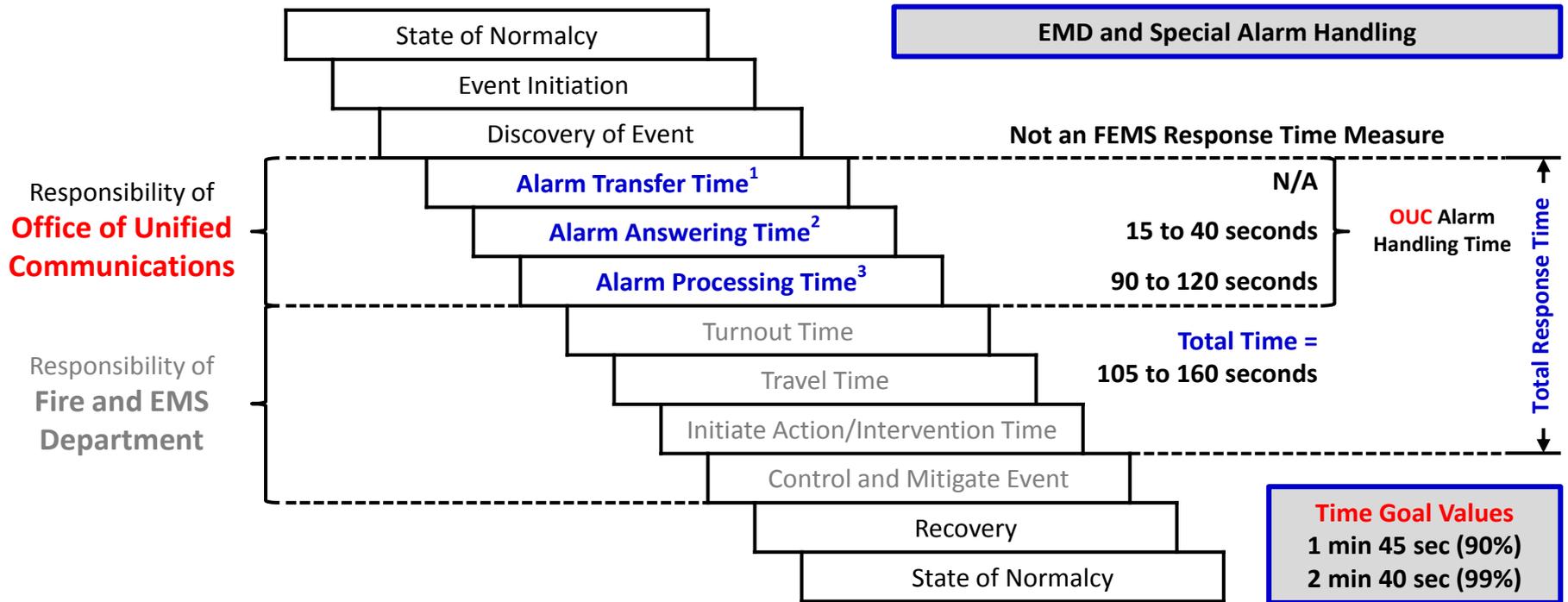
The fire department shall establish a performance objective of having an alarm processing time of **not more than 64 seconds for at least 90 percent of the alarms and not more than 106 seconds for at least 95 percent of the alarms**, as specified by NFPA 1221.

**64 seconds (90%)
106 seconds (95%)**



- However, certain 9-1-1 call type groups (including “calls requiring emergency medical dispatch (EMD) questioning and pre-arrival medical instructions”, “hazardous material incidents” and “technical rescue”) allow for lengthier “Alarm Processing Times.”
- For these 9-1-1 call type groups, NFPA 1710 § 4.1.2.3.3.1 describes “a performance objective” for having “...an **Alarm Processing Time** of not more than **90 seconds** for **at least 90% of the alarms** and not more than **120 seconds** for **at least 99% of the alarms.**”
- Accordingly, for these 9-1-1 call type groups, “**Alarm Handling Time**” benchmark time goal values equate to 105 seconds (**1 minute 45 seconds**) for **more than 90% of alarms received and processed** or 160 seconds (**2 minutes 40 seconds**) for **at least 99% of alarms received and processed**, as shown by the “**EMD and Special Alarm Handling**” chart on the following page.

Alarm Handling (NFPA Standard 1710)



(1) Alarm Transfer Time – 4.1.2.3.2

When the alarm is received at a public safety answering point (PSAP) and transferred to a secondary answering point or communication center, the agency responsible for the PSAP shall establish a performance objective of having an alarm transfer time of **not more than 30 seconds for at least 95 percent of all alarms processed**, as specified by NFPA 1221.

**0 seconds
(not used)**

(2) Alarm Answering Time – 4.1.2.3.1

The fire department shall establish a performance objective of having an alarm answering time of **not more than 15 seconds for at least 95 percent of the alarms received and not more than 40 seconds for at least 99 percent of the alarms received**, as specified by NFPA 1221.

**15 seconds (95%)
40 seconds (99%)**

(3) Alarm Processing Time – 4.1.2.3.3.1

The fire department shall establish a performance objective of having an alarm processing time of **not more than 90 seconds for at least 90 percent of the alarms and not more than 120 seconds for at least 99 percent of the alarms**, as specified by NFPA 1221.

**90 seconds (90%)
120 seconds (99%)**



- **FEMS responds to emergency incidents dispatched by the OUC. NFPA 1710 § 4.1.2 describes differing “service delivery objectives for each major service component” based on dispatched incident classifications.**
- **“Service delivery objectives” reported by FEMS are limited to Emergency Medical Services (EMS) and fire suppression incident groups.**
- **FEMS will report percentages of NFPA Standard 1710 benchmark times measured from the time when an incident is first dispatched until the time when a FEMS emergency vehicle arrives at an incident location. The “service delivery objectives” described by NFPA 1710 § 4.1.2 are specific to the group type of each dispatched incident. All incident groups have different benchmark time goal values depending on the number and type of FEMS emergency vehicles required for response.**



- NFPA 1710 § 3.3.53.7 and § 3.3.53.8 define “Turnout Time” and “Travel Time” as response time components.
- **“Turnout Time”** can be described as **the time from when an OUC Communicator dispatches a call to a FEMS emergency vehicle(s) until the time when a FEMS emergency vehicle acknowledges the call and begins continuous travel to an incident.**
- **“Travel Time”** can be described as **the time from when a FEMS emergency vehicle acknowledges a call and begins continuous travel to an incident until the time when a FEMS emergency vehicle arrives at the incident location.**
- NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **60 second “Turnout Time”** benchmark objective for **“EMS responses”** and an **80 second “Turnout Time”** benchmark objective for **“fire and special operations responses”** for **“not less than 90%”** of dispatched incidents.



- NFPA 1710 § 4.1.2.1(3) to § 4.1.2.1.(7) and § 4.1.2.4 describe **“Travel Time”** benchmark objectives for **“EMS incidents”** and **“fire suppression incidents”** (based on differing criteria by incident group type) for **“not less than 90%”** of dispatched incidents.
- For EMS incidents, NFPA 1710 § 4.1.2.1(6) describes a **“Travel Time”** benchmark objective of **“240 seconds or less”** for **“the arrival of a unit with first responder with AED or higher level capability.”**
- For EMS incidents, NFPA 1710 § 4.1.2.1(7) describes a **“Travel Time”** benchmark objective of **“480 seconds or less”** for **“the arrival of an advanced life support (ALS) unit at an emergency medical incident”** provided that **“a first responder with AED or basic life support (BLS) unit arrived in 240 seconds or less travel time.”**



- For EMS incidents, NFPA 1710 § 5.3.3.3.2 describes that **“personnel deployed to ALS emergency responses shall include a minimum of two members trained at the EMT-Paramedic level and two members trained at the EMT-Basic level arriving on-scene within the established travel time.”**
- For fire suppression incidents, NFPA 1710 § 4.1.2.1(3) describes a “Travel Time” benchmark objective of **“240 seconds or less”** for **“the arrival of the first arriving engine company...”**
- For fire suppression incidents “other than high-rise,” NFPA 1710 § 4.1.2.1(4) describes a “Travel Time” benchmark objective of **“480 seconds or less”** for **“the deployment of an initial full alarm assignment...”**



- For “high rise” fire suppression incidents, NFPA 1710 § 4.1.2.1(5) describes a “Travel Time” benchmark objective of **“610 seconds or less”** for **“the deployment of an initial full alarm assignment...”**
- For both EMS incidents and fire suppression incidents, NFPA 1710 § 3.3.53.5 defines an “Initiating Action/Intervention Time” objective, but § A.3.3.53.5 describes that **“a benchmark time frame isn’t set to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.”**
- Accordingly, **FEMS “Response Time” objectives** described for each incident group type are **the sum of the “Turnout Time” and “Travel Time” components expressed as benchmark time goal values.** These values differ based the number and type of FEMS emergency vehicles required for each incident group type as described by benchmark objectives.



- For EMS incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “60 seconds.”**
- For EMS incidents, NFPA 1710 § 4.1.2.1(6) describes a **“Travel Time” benchmark objective of “240 seconds or less” for “the arrival of a unit with first responder with AED or higher level capability.”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 300 seconds (5 minutes 0 seconds) for not less than 90% of dispatched EMS incidents.**
- The measure reported by FEMS is **limited to “higher priority” EMS incidents (MPDS Cards 1-33) and “other” selected incidents (grouped as “EMS”), all with determinant value classifications of “C, D or E,” for “time sensitive” illness and injury which is potentially or immediately life threatening, as identified by CAD system data analysis.**



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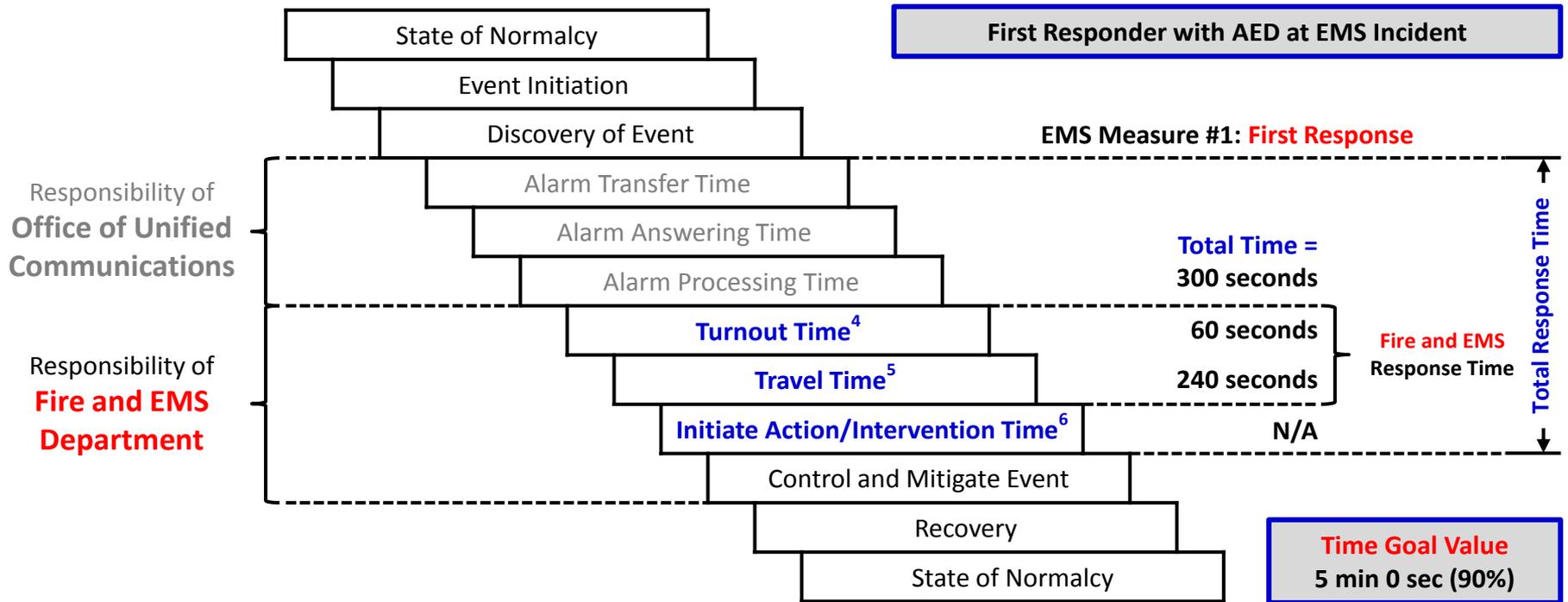
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FEMS OBJECTIVES

EMS Measure #1: **First Response**

- The measure reported by FEMS is **expressed as the percentage of “higher priority” EMS and “other” selected incidents meeting the “Response Time” benchmark time goal value of 300 seconds (5 minutes 0 seconds).**
- EMS incidents of this group and classification **require a first responding fire truck and transport unit, either of which may have an EMT-Paramedic.** Only the response time **of the first arriving FEMS emergency vehicle “equipped with an AED”** is evaluated by this measure.
- All “higher priority” EMS and “other” selected incidents resulting in FEMS emergency vehicle response(s) are evaluated by this measure, as shown by the “First Responder with AED at EMS Incident” chart on the following page.

EMS First Response (NFPA Standard 1710)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response** and **60 seconds turnout time for EMS response**. (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

60 seconds (90%)

(5) Travel Time – 4.1.2.1(6) and 4.1.2.4

The fire department shall establish the following objectives: (6) **240 seconds or less travel time** for the arrival of a **unit with first responder with AED or higher level capability at an emergency medical incident...** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

240 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.53.5. **A benchmark time frame isn't set** to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.

N/A



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FEMS OBJECTIVES

EMS Measure #2: **First Response and First Paramedic**

- For EMS incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “60 seconds.”**
- For EMS incidents, NFPA 1710 § 4.1.2.1(7) describes a **“Travel Time” benchmark objective of “480 seconds or less” for “for the arrival of an advanced life support (ALS) unit at an emergency medical incident”** provided a first responder with AED or basic life support (BLS) unit arrived in **“240 seconds or less travel time.”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 540 seconds (9 minutes 0 seconds) for not less than 90% of dispatched EMS incidents.**
- Additionally, NFPA 1710 § 5.3.3.3.2 describes that **“ALS emergency responses shall include a minimum of two members trained at the EMT-Paramedic level and two members trained at the EMT-Basic level”** arriving within the “Travel Time” benchmark objective.



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FEMS OBJECTIVES

EMS Measure #2: **First Response and First Paramedic**

- Because EMT-Paramedics are deployed individually (with EMT-Basics) on FEMS emergency vehicles, the measures reported by FEMS **categorically divide EMS incidents** into “**higher priority**” and “**highest priority**” classifications.
- The first measure reported by FEMS is **limited to “higher priority” EMS incidents (MPDS Cards 1-33) and “other” selected incidents (grouped as “EMS”), all with determinant value classifications of “C, D or E,”** for “time sensitive” illness and injury which is **potentially or immediately life threatening**, as identified by CAD system data analysis.
- The first measure is **expressed as the percentage of “higher priority” EMS and “other” selected incidents meeting the combined “Response Time” benchmark time goal values** of 300 seconds (5 minutes 0 seconds) for “first response” and 540 seconds (9 minutes 0 seconds) for “ALS unit” response.



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FEMS OBJECTIVES

EMS Measure #3: **First Response and Two Paramedics**

- EMS incidents for this first measure **require a first responding fire truck and transport unit, either of which may have an EMT-Paramedic.** Response times for all FEMS emergency vehicles, “equipped with an AED” and staffed by a minimum of four members “trained at the EMT-Paramedic” or “trained at the EMT-Basic level arriving on-scene within the established travel time” are evaluated by this measure.
- The second measure reported by FEMS is **limited to “highest priority” EMS incidents (MPDS Cards 1-33) and “other” selected incidents (grouped as “EMS”), all with determinant value classifications of “D or E,” for very “time sensitive” illness and injury which is immediately life threatening, as identified by CAD system data analysis.**



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FEMS OBJECTIVES

EMS Measure #3: **First Response and Two Paramedics**

- The second measure is **expressed as the percentage of “highest priority” EMS and “other” selected incidents meeting the combined “Response Time” benchmark time goal values of 300 seconds (5 minutes 0 seconds) for “first response” and 540 seconds (9 minutes 0 seconds) for “ALS unit” response.**
- EMS incidents for this second measure **may require a first responding fire truck, transport unit and EMS Supervisor, at least two of which have an EMT-Paramedic. Response times for all FEMS emergency vehicles, “equipped with an AED” and staffed by “a minimum of two members trained at the EMT-Paramedic level and two members trained at the EMT-Basic level arriving on-scene within the established travel time” are evaluated by this measure.**



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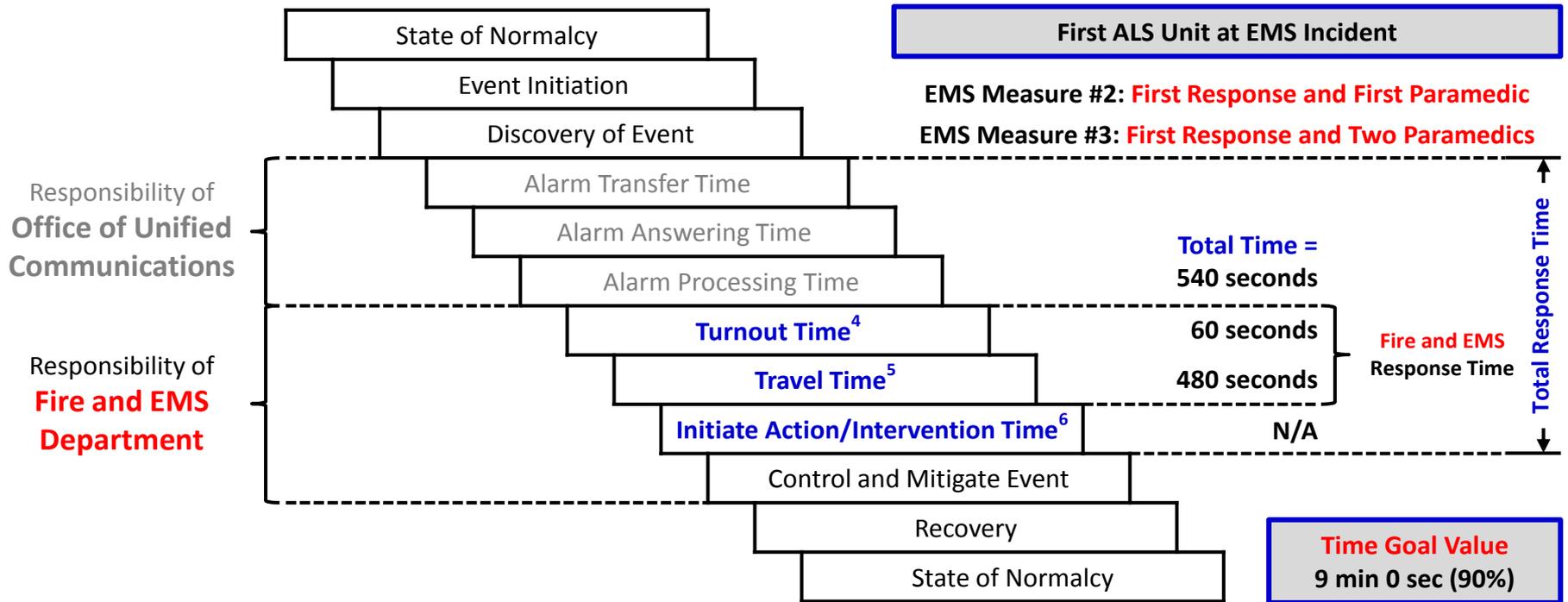
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FEMS OBJECTIVES

EMS Measure #3: **First Response and Two Paramedics**

- All “higher” and “highest priority” EMS and “other” selected incidents resulting in FEMS emergency vehicle response(s) are evaluated by these two measures, as shown by the previous “First Responder with AED at EMS Incident” chart and the “First ALS Unit at EMS Incident” chart on the following page.

EMS First Response and First ALS (NFPA Standard 1710)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response** and **60 seconds turnout time for EMS response**. (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

60 seconds (90%)

(5) Travel Time – 4.1.2.1(7) and 4.1.2.4

The fire department shall establish the following objectives: (7) **480 seconds or less travel time** for the arrival of an **advanced life support (ALS) unit at an emergency medical incident... provided a first responder with AED or basic life support (BLS) unit arrived in 240 seconds or less travel time...** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

480 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.5.3.5. **A benchmark time frame isn't set** to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.

N/A

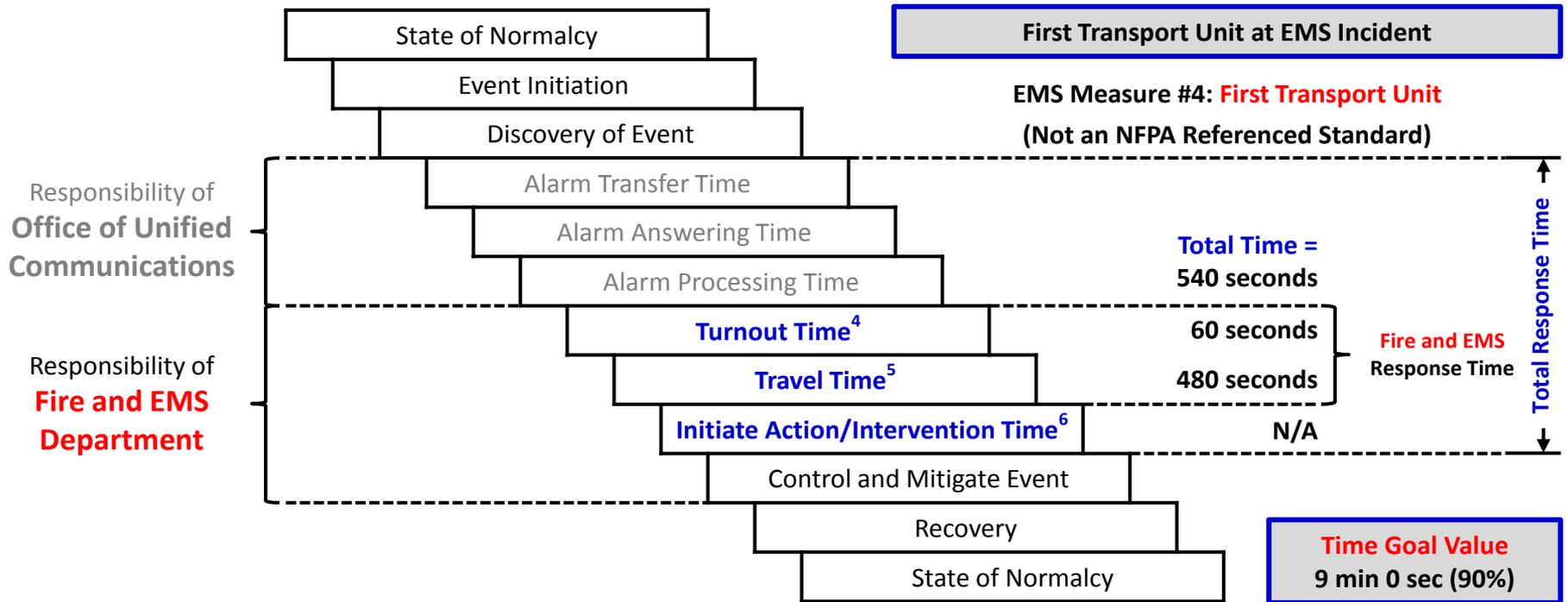


- For EMS incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “60 seconds.”**
- For EMS incidents, FEMS has established a **“Travel Time” benchmark objective of “480 seconds or less” for “for the arrival of the first advanced life support (ALS) or basic life support (BLS) transport unit at an emergency medical incident.”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 540 seconds (9 minutes 0 seconds) for not less than 90% of dispatched EMS incidents.**
- The measure reported by FEMS is **limited to “higher priority” EMS incidents (MPDS Cards 1-33) and “other” selected incidents (grouped as “EMS”), all with determinant value classifications of “C, D or E,” for “time sensitive” illness and injury which is **potentially or immediately life threatening**, as identified by CAD system data analysis.**



- The measure reported by FEMS is **expressed as the percentage of “higher priority” EMS and “other” selected incidents meeting the “Response Time” benchmark time goal value of 540 seconds (9 minutes 0 seconds).**
- EMS incidents of this group and classification **require a first responding fire truck and transport unit, either of which may have an EMT-Paramedic.** Only the response time **of the first arriving FEMS transport unit staffed by at least two members “trained at the EMT-Paramedic” or “trained at the EMT-Basic level arriving on-scene within the established travel time”** are evaluated by this measure.
- All “higher priority” EMS and “other” selected incidents resulting in FEMS emergency vehicle response(s) are evaluated by this measure, as shown by the “First Transport Unit at EMS Incident” chart on the following page.

EMS First FEMS Transport Unit (not an NFPA Standard)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response and 60 seconds turnout time for EMS response.** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

60 seconds (90%)

(5) Travel Time

For this measure (**not an NFPA referenced standard**) FEMS has established the following objective: **480 seconds or less travel time** for the arrival of the **first arriving advanced life support (ALS) or basic life support (BLS) transport unit at an emergency medical incident** (...not less than 90 percent for the achievement of each turnout time and travel time objective as specified by NFPA 1710 4.1.2.1.)

480 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.53.5. **A benchmark time frame isn't set** to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.

N/A



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FEMS OBJECTIVES

Fire Measure #1: **First Engine Company**

- For fire suppression incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “80 seconds.”**
- For fire suppression incidents, NFPA 1710 § 4.1.2.1(3) describes a **“Travel Time” benchmark objective of “240 seconds or less” for “the arrival of the first arriving engine company...”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 320 seconds (5 minutes 20 seconds) for not less than 90% of dispatched fire suppression incidents.**
- The measure reported by FEMS is **limited to “structure fire” incidents (FPDS Card 69) and “other” selected incidents (grouped as “fire”), all with reported smoke or flame visible, resulting in FEMS emergency vehicle “first alarm assignment” response, as identified by CAD system data analysis.**



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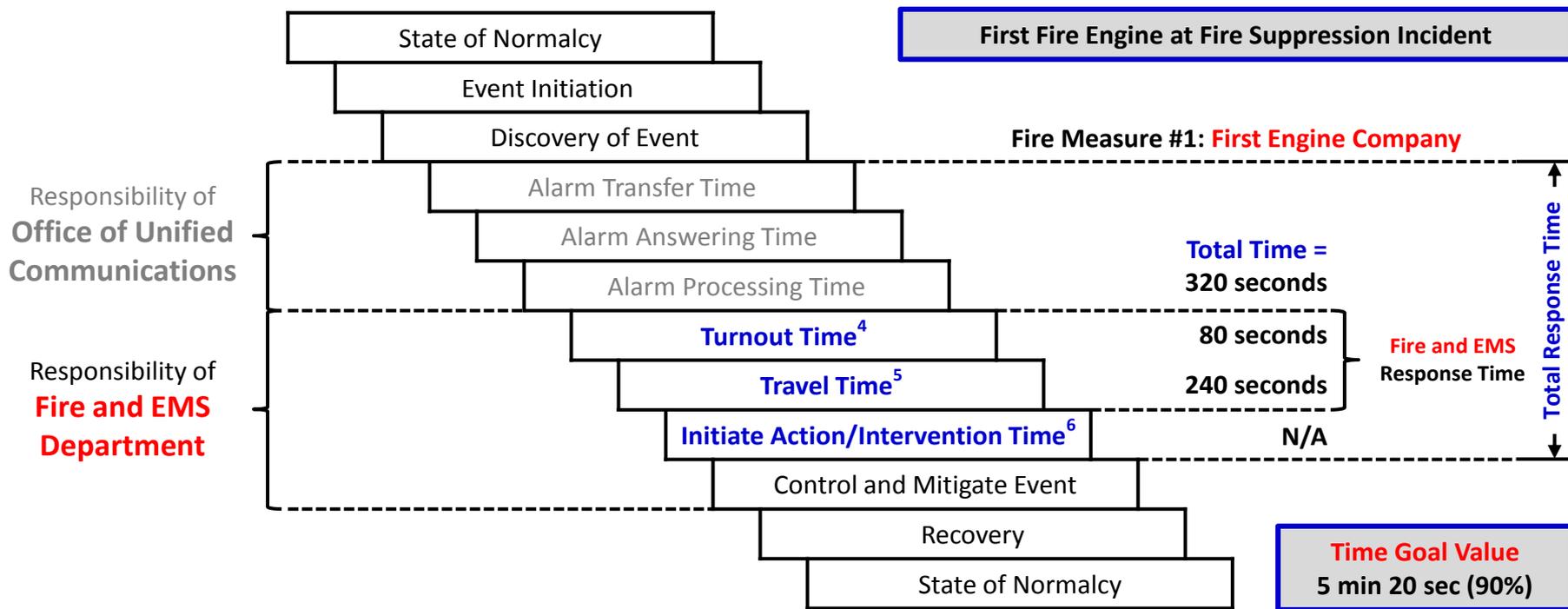
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FEMS OBJECTIVES

Fire Measure #1: **First Engine Company**

- The measure reported by FEMS is **expressed as the percentage of “structure fire” incidents meeting the “Response Time” benchmark time goal value** of 320 seconds (5 minutes 20 seconds).
- Fire suppression incidents of this group and classification **require seven first responding fire trucks, one rescue squad, one transport unit and two Chief Officers**. Only the response time **of the first arriving FEMS fire engine is evaluated by this measure**.
- All “structure fire” and “other” selected incidents, each with reported smoke or flame visible, resulting in a FEMS emergency vehicle “first alarm assignment” response are evaluated by this measure, as shown by the “First Fire Engine at Fire Suppression Incident” chart on the following page.

FIRE First Fire Engine (NFPA Standard 1710)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response** and **60 seconds turnout time for EMS response**. (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

80 seconds (90%)

(5) Travel Time – 4.1.2.1(3) and 4.1.2.4

The fire department shall establish the following objectives: (3) **240 seconds or less travel time for the arrival of the first arriving engine company at a fire suppression incident**... (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

240 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.53.5. **A benchmark time frame isn't set to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.**

N/A



- For fire suppression incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “80 seconds.”**
- For fire suppression incidents, NFPA 1710 § 4.1.2.1(4) describes a **“Travel Time” benchmark objective of “480 seconds or less” for “the deployment of an initial full alarm assignment at a fire suppression incident...”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 560 seconds (9 minutes 20 seconds) for not less than 90% of dispatched fire suppression incidents.**
- The measure reported by FEMS is **limited to “structure fire” incidents (FPDS Card 69) and “other” selected incidents (classified as “fire”), all with reported smoke or flame visible, resulting in FEMS emergency vehicle “first alarm assignment” response, as identified by CAD system data analysis.**



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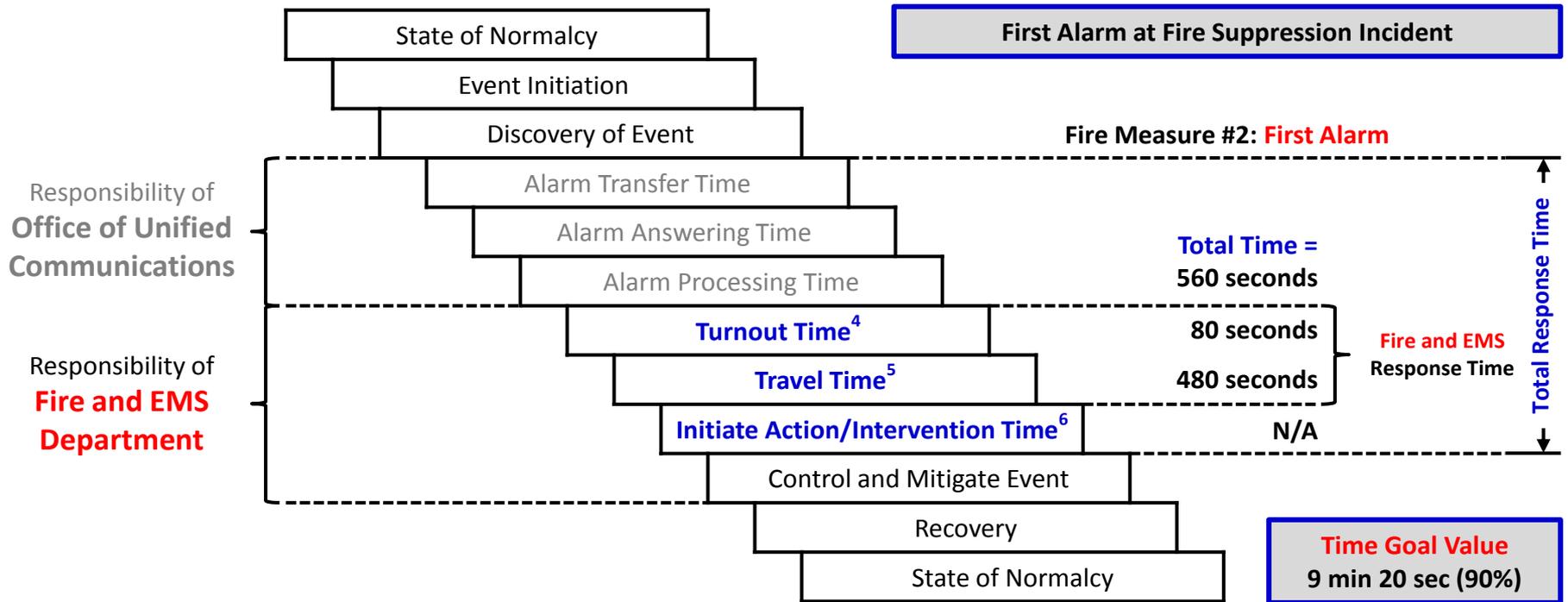
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FEMS OBJECTIVES

Fire Measure #2: **First Alarm**

- The measure reported by FEMS is **expressed as the percentage of “structure fire” incidents meeting the “Response Time” benchmark time goal value** of 560 seconds (9 minutes 20 seconds).
- Fire suppression incidents of this group and classification **require three first responding engine companies and one truck company**. Response times **for all arriving FEMS emergency vehicles are evaluated by this measure**.
- All “structure fire” and “other” selected incidents, each with reported smoke or flame visible, resulting in a FEMS emergency vehicle “first alarm assignment” response are evaluated by this measure, as shown by the “First Alarm at Fire Suppression Incident” chart on the following page.

FIRE First Alarm (NFPA Standard 1710)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response** and **60 seconds turnout time for EMS response**. (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

80 seconds (90%)

(5) Travel Time – 4.1.2.1(4) and 4.1.2.4

The fire department shall establish the following objectives: (4) For other than high rise, **480 seconds or less travel time** for the deployment of **an initial full alarm assignment at a fire suppression incident...** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

480 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.53.5. **A benchmark time frame isn't set** to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.

N/A



- For fire suppression incidents, NFPA 1710 § 4.1.2.1(2) and § 4.1.2.4 describe a **“Turnout Time” benchmark objective of “80 seconds.”**
- For **“high-rise”** fire suppression incidents, NFPA 1710 § 4.1.2.1(5) describes a **“Travel Time” benchmark objective of “610 seconds or less”** for **“the deployment of an initial full alarm assignment at a fire suppression incident...”**
- Combined, the above objectives equate to a **“Response Time” benchmark time goal value of 690 seconds (11 minutes 30 seconds) for not less than 90% of dispatched “high-rise” fire suppression incidents.**
- The measure reported by FEMS is **limited to “structure fire” incidents (FPDS Card 69) and “other” selected incidents (classified as “fire”), all with reported smoke or flame visible at a “high-rise” structure (of 5 or more stories), resulting in FEMS emergency vehicle “first alarm assignment” response, as identified by CAD system data analysis.**



District of Columbia Fire and EMS Department

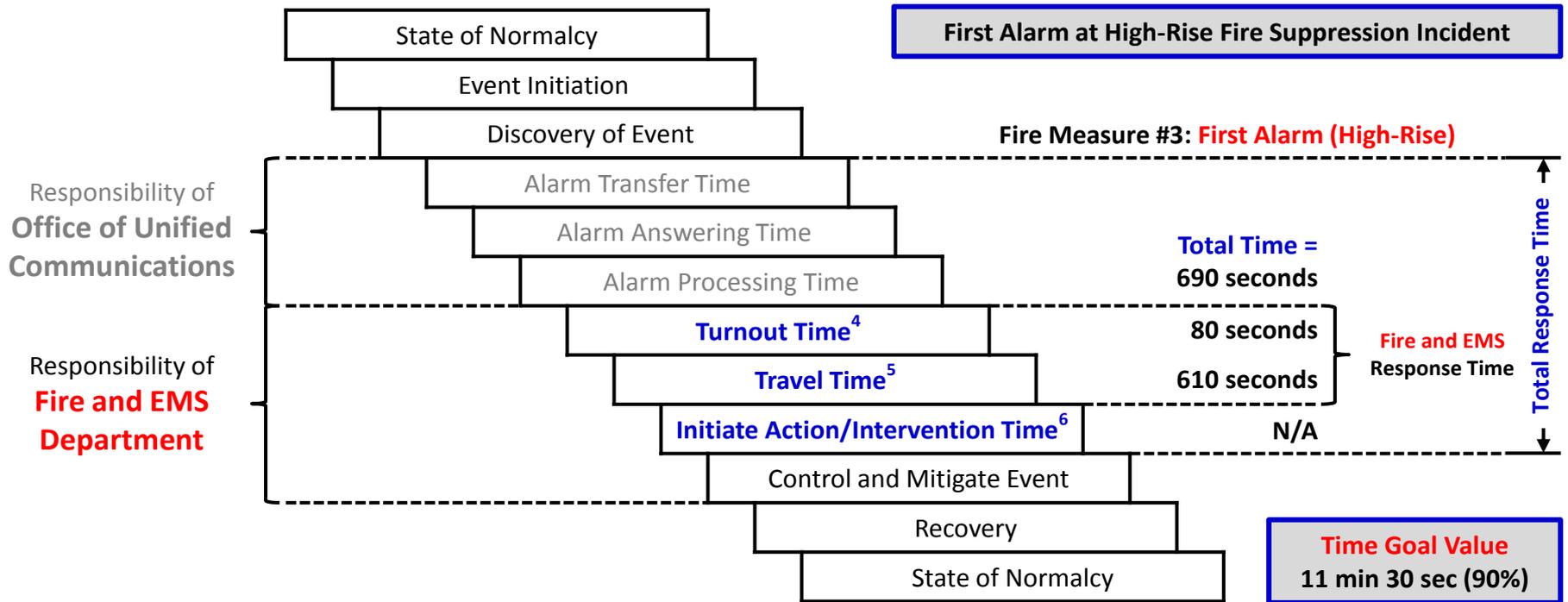
Office of the Fire and EMS Chief

FEMS OBJECTIVES

Fire Measure #3: **First Alarm (High-Rise)**

- The measure reported by FEMS is **expressed as the percentage of “high-rise structure fire” incidents meeting the “Response Time” benchmark time goal value** of 690 seconds (11 minutes 30 seconds).
- Fire suppression incidents of this group and classification **require five first responding engine companies, two truck companies and one rescue squad**. Response times **for all arriving FEMS emergency vehicles are evaluated by this measure**.
- All “structure fire” and “other” selected incidents, each with reported smoke or flame visible at a “high-rise” structure (75 FT or more) resulting in a FEMS emergency vehicle “first alarm assignment” response are evaluated by this measure, as shown by the “First Alarm at High-Rise Fire Suppression Incident” chart on the following page.

FIRE First Alarm at High-Rise (NFPA Standard 1710)



(4) Turnout Time – 4.1.2.1(2) and 4.1.2.4

The fire department shall establish the following objectives: (2) **80 seconds for turnout time for fire and special operations response and 60 seconds turnout time for EMS response.** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

80 seconds (90%)

(5) Travel Time – 4.1.2.1(5) and 4.1.2.4

The fire department shall establish the following objectives: (5) For high-rise, **610 seconds or less travel time for the deployment of an initial full alarm assignment at a fire suppression incident...** (...not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.)

610 seconds (90%)

(6) Initiate Action/Intervention Time – N/A

A.3.3.53.5. **A benchmark time frame isn't set to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident.**

N/A

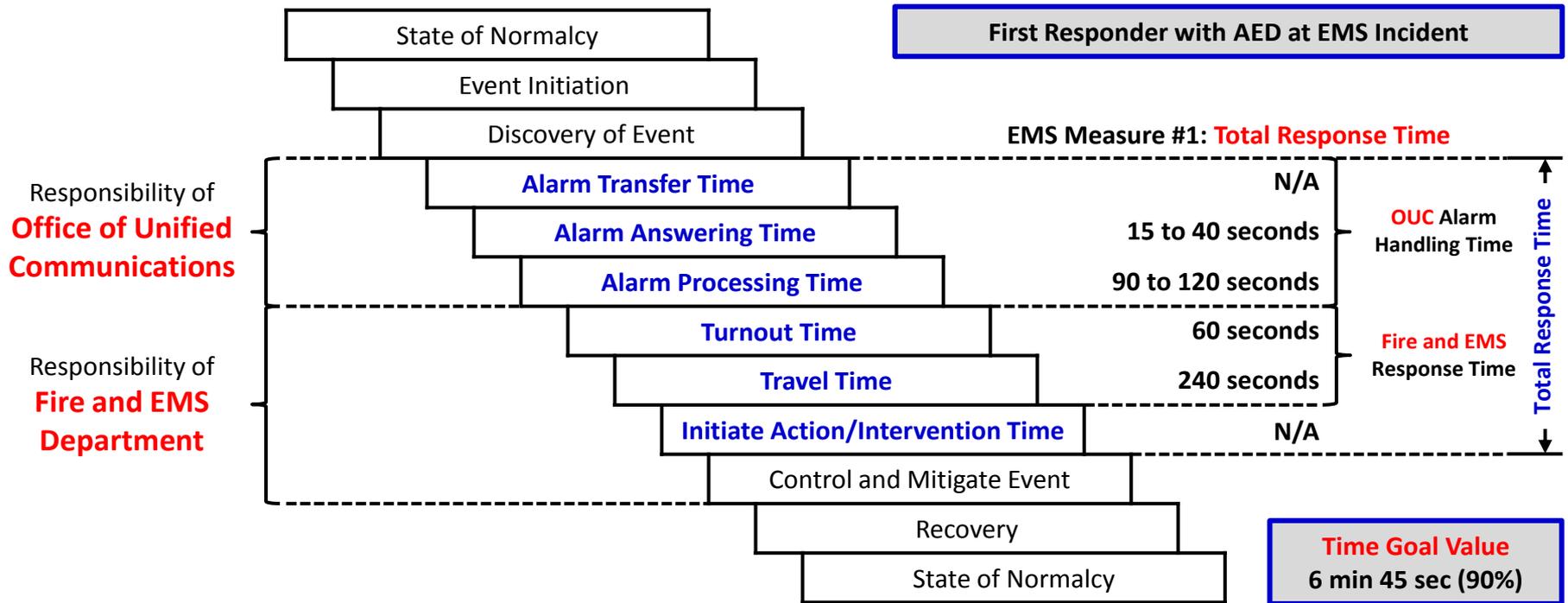


- Because the OUC and FEMS have shared responsibility in answering, processing and responding to 9-1-1 calls and emergency incidents, and NFPA Standard 1710 describes benchmark time goal values for each area of responsibility, “Total Response Time” objectives can be established by 9-1-1 call type and dispatched incident groups.
- **“Total Response Time”** can be described as **the time from when a 9-1-1 telephone line begins to ring until the time when a FEMS emergency vehicle arrives at an incident location.** Although FEMS **“Response Time” objectives** by incident group and classification are fixed, OUC **“Alarm Answering Time”** and **“Alarm Processing Time” objectives** by 9-1-1 call type group are not. Accordingly, combining all time goal objectives into shared “Total Response Time” objectives results in **minimum** and **maximum** time goal values.



- “Total Response Time” objectives are best described **using minimum benchmark time goal values for not less than 90% of 9-1-1 calls and dispatched incidents.** Viewed from this perspective, most 9-1-1 callers requesting assistance **should expect help to arrive within this time (minimum time goal values) when placing a 9-1-1 call.**
- However, “Total Response Time” goals can also be described **using maximum benchmark time goal values for not less than 95% or 99% of 9-1-1 calls and dispatched incidents.** Viewed from this perspective, some 9-1-1 callers requesting assistance **should expect help to arrive within this time (maximum time goal values) when placing a 9-1-1 call.**
- Accordingly, “Cascade of Events Charts” by dispatched incident group and classification for “Total Response Times” are included on the following pages. **Each chart references a 90% time goal value** and includes **minimum** and **maximum** time goal value calculations.

EMS First Response (NFPA Standard 1710)



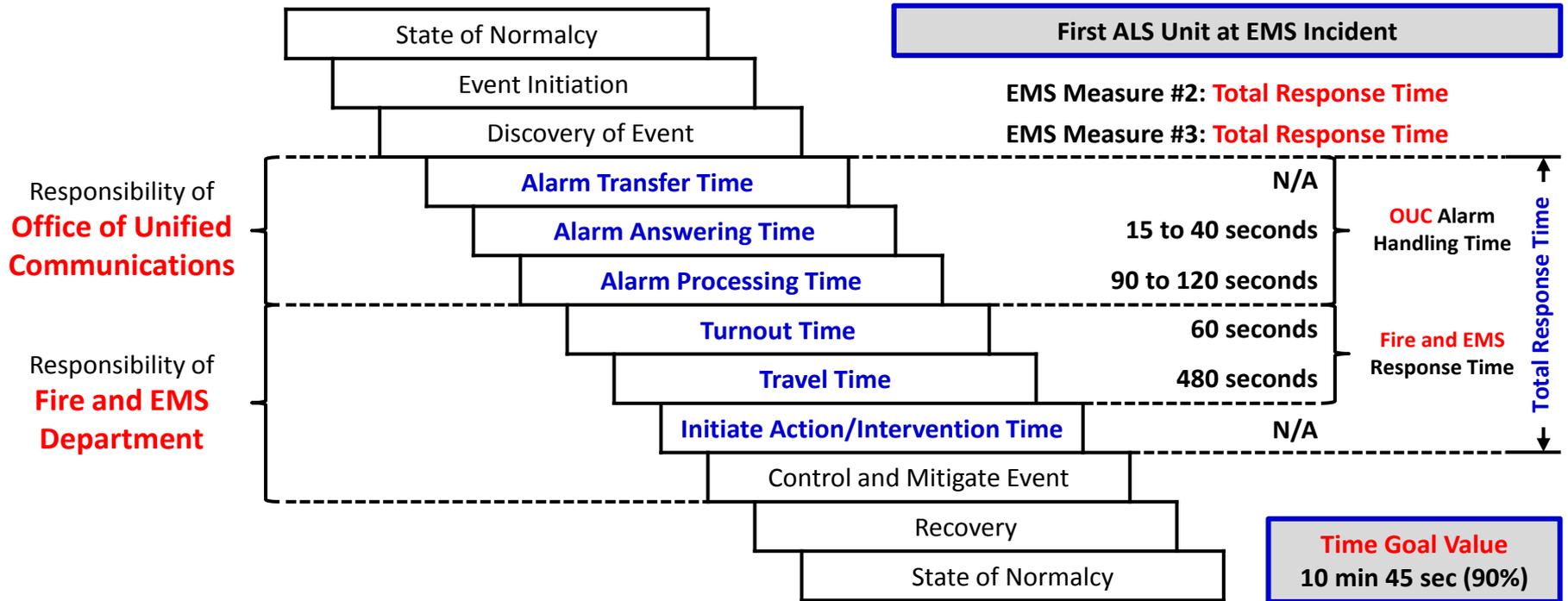
Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 90s \text{ (OUC Alarm Handling)} + 60s + 240s \text{ (FEMS Response)} = 405s \text{ (6 min 45 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 120s \text{ (OUC Alarm Handling)} + 60s + 240s \text{ (FEMS Response)} = 460s \text{ (7 min 40 sec)}$$

EMS First Response and First ALS (NFPA Standard 1710)



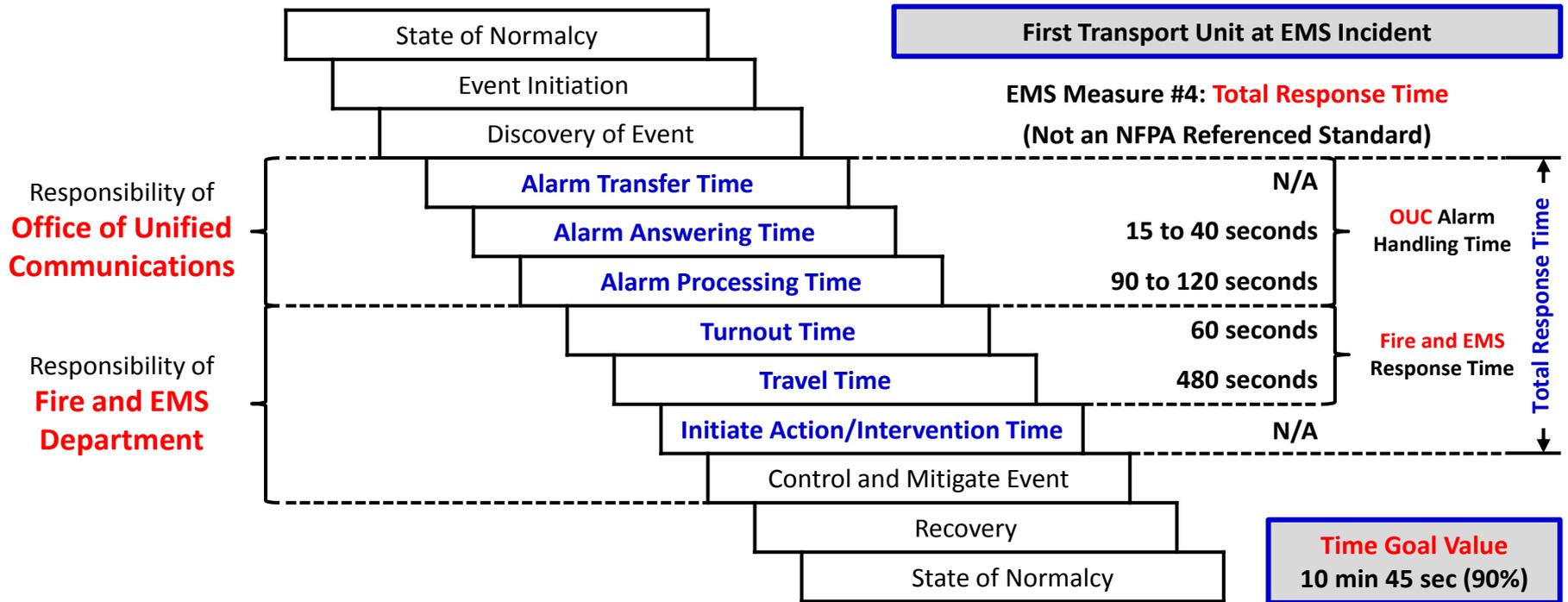
Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 90s \text{ (OUC Alarm Handling)} + 60s + 480s \text{ (FEMS Response)} = 645s \text{ (10 min 45 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 120s \text{ (OUC Alarm Handling)} + 60s + 480s \text{ (FEMS Response)} = 700s \text{ (11 min 40 sec)}$$

EMS First FEMS Transport Unit (not an NFPA Standard)



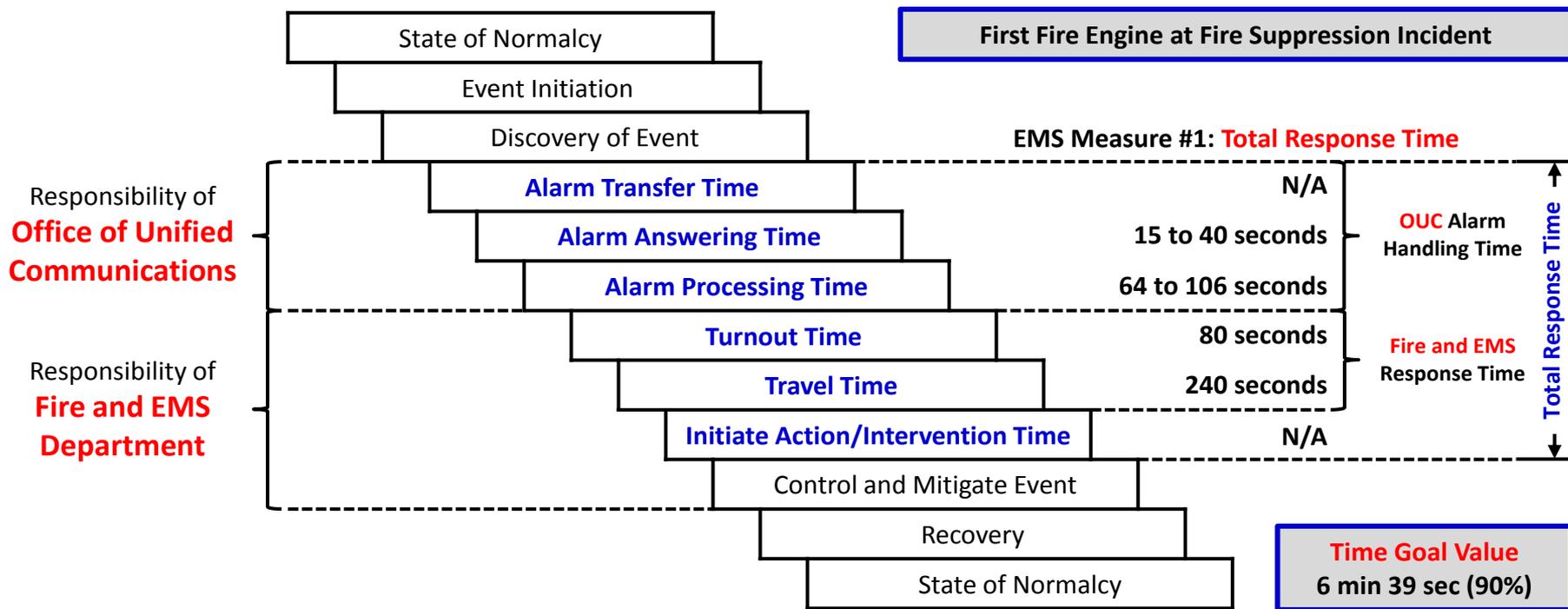
Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 90s \text{ (OUC Alarm Handling)} + 60s + 480s \text{ (FEMS Response)} = 645s \text{ (10 min 45 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 120s \text{ (OUC Alarm Handling)} + 60s + 480s \text{ (FEMS Response)} = 700s \text{ (11 min 40 sec)}$$

FIRE First Fire Engine (NFPA Standard 1710)



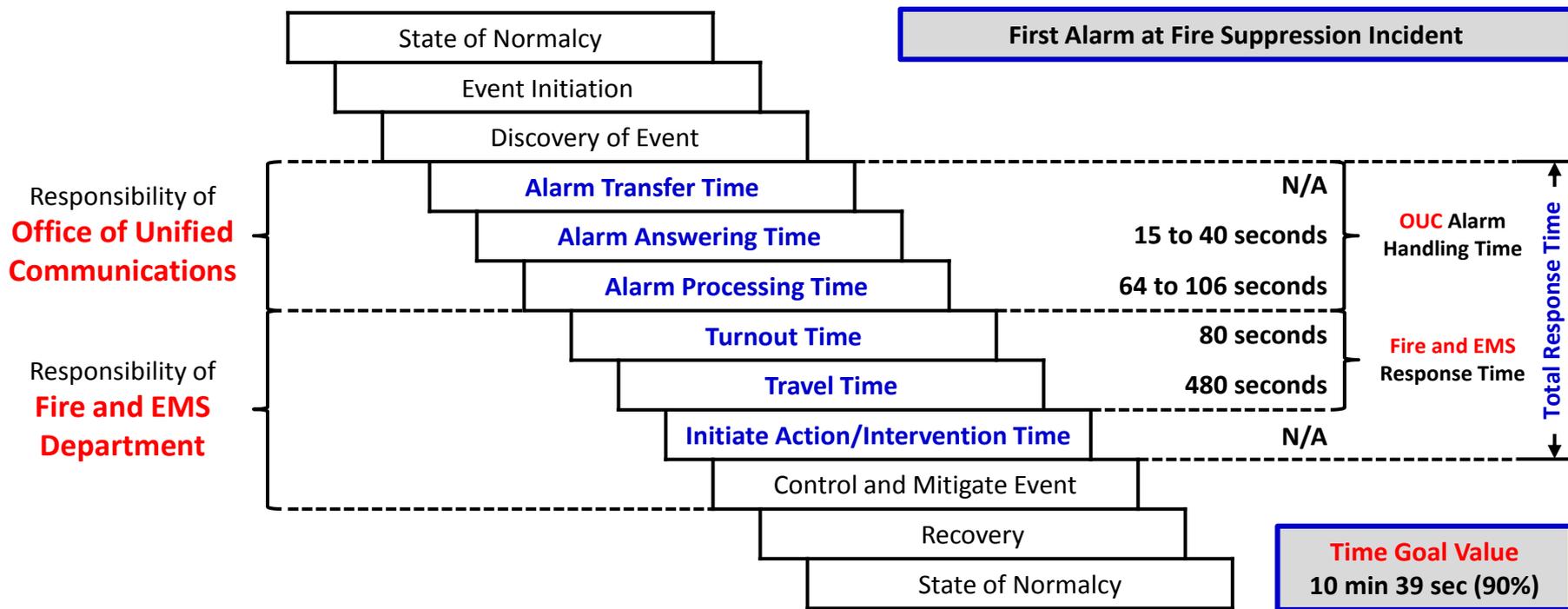
Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 64s \text{ (OUC Alarm Handling)} + 80s + 240s \text{ (FEMS Response)} = 399s \text{ (6 min 39 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 106s \text{ (OUC Alarm Handling)} + 80s + 240s \text{ (FEMS Response)} = 466s \text{ (7 min 46 sec)}$$

FIRE First Alarm (NFPA Standard 1710)



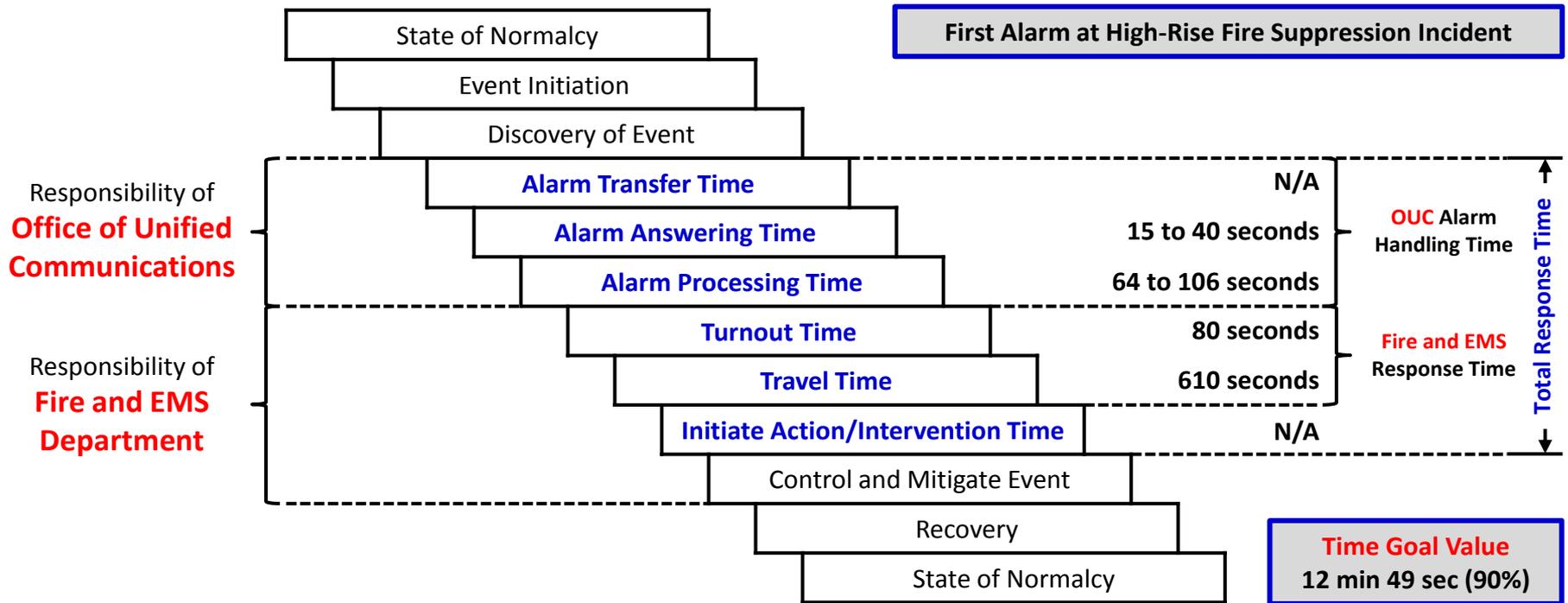
Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 64s \text{ (OUC Alarm Handling)} + 80s + 480s \text{ (FEMS Response)} = 639s \text{ (10 min 39 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 106s \text{ (OUC Alarm Handling)} + 80s + 480s \text{ (FEMS Response)} = 706s \text{ (11 min 46 sec)}$$

FIRE First Alarm at High-Rise (NFPA Standard 1710)



Total Response Time (Using Minimum Time Goal Values for OUC and FEMS)

$$15s + 64s \text{ (OUC Alarm Handling)} + 80s + 610s \text{ (FEMS Response)} = 769s \text{ (12 min 49 sec)}$$

Total Response Time (Using Maximum Time Goal Values for OUC and FEMS)

$$40s + 106s \text{ (OUC Alarm Handling)} + 80s + 610s \text{ (FEMS Response)} = 836s \text{ (13 min 56 sec)}$$



- Because of complexities associated with NFPA Standard 1710 benchmark time goal comparisons by 9-1-1 call type, incident groups and classifications, some **“exceptions”** are required for **assuring data reporting and analytics accuracy**. Such “exceptions” are described below.
- **“Incomplete time value data exception.”** This “exception” occurs **when a time value used as part of a benchmark time goal comparison calculation is missing**. To calculate a FEMS emergency vehicle “Response Time,” **the time when a vehicle arrived at an incident location must be present in the CAD data record**. If this time value is missing, a vehicle “Response Time” **cannot be calculated**. This becomes especially problematic when many FEMS emergency vehicles respond to the same dispatched incident. If any single vehicle’s incident arrival time is missing, the comparative measure calculation for all vehicles cannot be completed. As such, **incidents with “incomplete time value data” are excluded from benchmark time goal comparisons**.



- “Incomplete incident data exception.” This “exception” occurs **when expected time values used as part of a benchmark time goal comparison calculation are missing because a FEMS emergency vehicle stopped responding to an incident.** To calculate a FEMS emergency vehicle “Response Time,” **the time when a vehicle arrived at an incident location must be present in the CAD data record.** If this time value is missing because the vehicle stopped responding to the incident, a “Response Time” **cannot be calculated unless another vehicle was substituted.** Substitutions might not occur if a determination was made by a previously arriving vehicle that other vehicles were not needed. This becomes especially problematic when many FEMS emergency vehicles respond to the same dispatched incident. If any single vehicle stopped responding to the incident, and another vehicle was **not** substituted, the comparative measure calculation for all vehicles cannot be completed. As such, **incidents with “incomplete incident data” are excluded from benchmark time goal comparisons.**



- “Canceled incident exception.” This “exception” occurs **when expected time values used as part of a benchmark time goal comparison calculation are missing because all FEMS emergency vehicles stopped responding to an incident.** In these cases, FEMS emergency vehicles were directed to stop responding to an incident by the OUC, another first responding agency or another authority. Because FEMS emergency vehicles did not arrive at the incident, a “Response Time” **cannot be calculated.** As such, **“canceled incidents” are excluded from benchmark time goal comparisons.**
- “Foreign unit exception.” This “exception” occurs **when expected time values used as part of a benchmark time goal comparison calculation are missing because they were not successfully reported to the OUC by a non-FEMS or “foreign unit.”** In these cases, a “Response Time” **cannot be calculated for a “foreign unit.”** As such, incidents involving **“foreign units” may be excluded from benchmark time goal comparisons.**



- “Outlier time value exception.” This “exception” occurs **when a time value used as part of a benchmark time goal comparison calculation may have been inaccurately recorded.** To calculate a FEMS emergency vehicle’s “Response Time,” the time when the vehicle arrived at an incident location must be accurately recorded in the CAD data record. If this time value **results in a vehicle “Travel Time” duration exceeding 1,800 seconds (30 minutes),** there is high likelihood the time value was inaccurately recorded. As such, **incidents with “outlier time values” may be excluded from benchmark time goal comparisons.**