



Annual Workplace Safety and Health Conference

Does Your Safety Plan End with 911?

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Does Your Safety Plan End with 911?

- Public Safety Response System
- The incidents the system manages on a daily basis
- The incidents the system tries to manage
- System response time
- The need for comprehensive safety plans



Public Safety Response System Focus

Medical and Rescue Response

- Fire
- EMS



What Is the U.S. Fire Response Designed to Accomplish?

Structure fire, typical 2,000-square-foot, two-story family dwelling **without basement and any exposure.** (National Fire Protection Association – NFPA 1710)

- Only 63 percent of U.S. fire departments can provide the mandated minimum staffing required by NFPA 1710.



Typical Fire Response Is Composed of Three Basic Vehicles

- Engine company
- Ladder company
- Quint



Fire Engine: Workhorse of the Fire Service

Carries, on average

- 500 gallons of water,
- 1000 feet of supply hose,
- and 400 feet of attached fire-attack hose.
- Responds to all medical calls.
- Limited rescue equipment.



Ladder Truck

Typically carries

- 100-foot-long aerial ladder
- Carries most of the equipment
- Primary mission is getting building access and vehicle extrication.



Quint

Combined engine and ladder truck capabilities

- Carries as much water as an engine but less supply hose.
- Carries basic truck equipment.



Ambulance

- Third service (Austin/Travis County EMS)
- Fire-based EMS
- Private
- Primary mission is early cardiac arrest intervention.



Response Times

For fires, the national goal is to have:

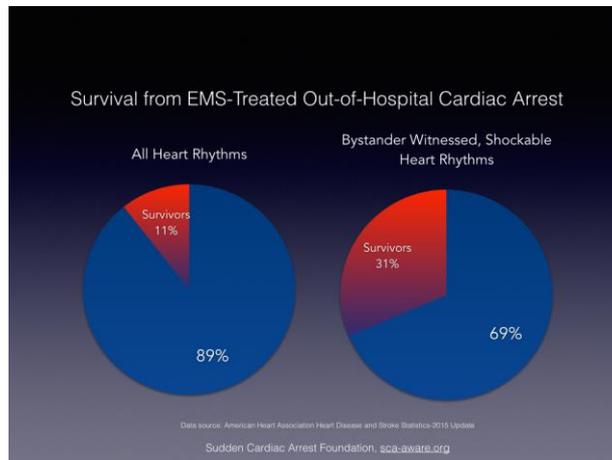
- the first arriving unit on scene in four minutes and the entire complement on scene in nine minutes.

The **average** response time for Austin Fire and Austin/Travis County EMS is closer to five minutes.

- The response time begins when 911 receives the call from the public.



Cardiac Arrest Survival Rates Post-EMS Intervention



Two Typical Construction Rescue Scenarios

- Trench collapse
- Suspension from a harness



Trench Rescue
Kew Gardens, New York, 2013



Trench Rescue
2 ½ hours, 79 firefighters
Kew Gardens, New York



Trench Rescue Fairfax County, Virginia, 2014



Trench Rescue Pacific Palisades, California, 2013 9 hours, 90 firefighters



Rescue from a Harness: Orthostatic Shock

3 Brain Circulation

- Diminished Blood Flow
- Blocked Airway
- Cardiac Arrest or Brain Damage
- Death

2 Heart Circulation

- Anxiety and Onset of Shock
- Heart Rate Increases
- Cardiac Irritability*

1 Leg Circulation

- Straps Impede Blood Return
- Muscle Venous Pump Falls
- Blood Becomes Toxic & Highly Acidic*

TRAUMA

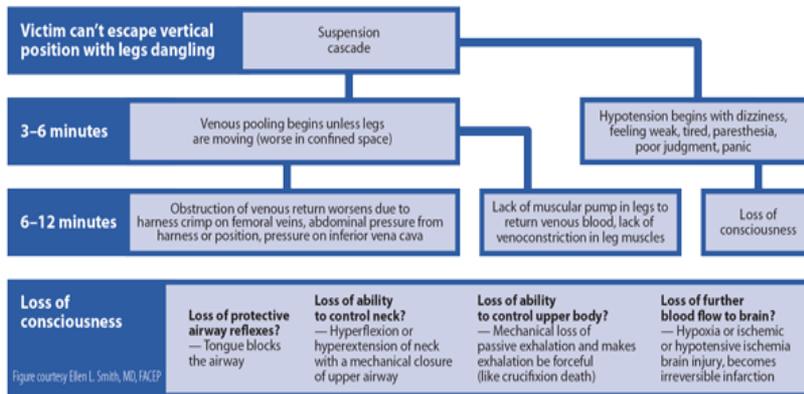
Prolonged Effects of Suspension Trauma

For more information about Suspended Worker Rescue Training visit RocoRescue.com, or call 800-647-7626

20th TEXAS SAFETY SUMMIT

“Death can occur in as little as 10 minutes.” *Journal of Emergency Medical Services (JEMS)*, June 9, 2015

Figure 1: Rapid cascade of events during suspension trauma



Austin Fire Department Spec Ops

Minimum Staffing Levels

- 23 HazMat Technicians (1 BC/CPT, 4 Officers, 18 Technicians)
- 18 Swift Water Technicians (4 Officers, 14 Technicians)
- 18 Technical Rescue Technicians (4 Officers, 14 Technicians)
- 8 Structural Collapse Technicians (2 Officers, 6 Technicians)



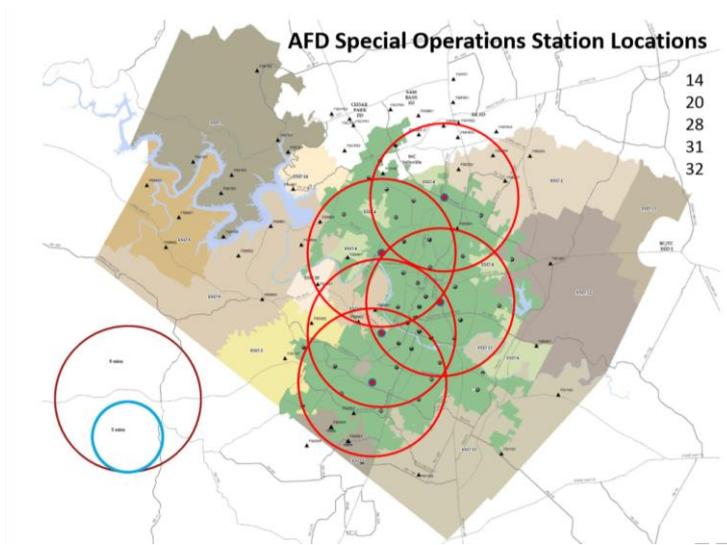
AFD Special Operations Station Locations

Stations 14, 20, 28, 31, 32.

Stations 20 and 32 have the trench rescue equipment.



AFD Special Operations Station Locations



Special Operations Response Types Austin Fire Department, 2010-2012

- Hazardous Condition 4,250 (82%)
- HazMat Taskforce 87 (2%)
- HazMat Alarm 26 (0.5%)
- Rescue Condition 299 (6%)
- Cave Rescue 6 (0.1%)
- High Angle Rescue 29 (0.6%)
- Search and Rescue 20 (0.4%)
- Rescue Task Force 8 (0.2%)
- Still Water Rescue 212 (4%)
- Wilderness Rescue 213 (4%)
- Swift Water 35 (0.7%)

TOTAL 5,185

Minus HC 935



