

North Texas Urban Search and Rescue Team Becomes a Deployable Resource

by Tom Izbicki, P.E.



In 2004, the Dallas Fire-Rescue Department (DF-RD) proposed the development of a regional Urban Search and Rescue (USAR) task force capable of responding immediately to incidents involving structural collapse throughout the 12,800 square miles served by the North Central Texas Council of Government. As a result, Texas Task Force 2 (TX-TF2) was created to respond to any significant incident or disaster, whether natural or man-made. The team, trained and equipped to locate trapped victims in collapsed structures, trenches and confined spaces in highly populated urban areas, has hazardous materials, swift water and high-angle rescue response components.

The Federal Emergency Management Agency (FEMA) USAR model for a Type III task force was used to establish standards for organizational structure, equipment cache, position descriptions and training requirements for TX-TF2, which can provide an immediate response with a 28-member component followed by deployment of various support personnel. Using the FEMA USAR equipment cache list for reference, the task force has acquired equipment including highly technical listening devices, search cameras, hydraulic and manual shoring devices, victim extrication tools, saws, drills, lifting devices and the full complement of necessary equipment to complete virtually any rescue.

After months of individual training exercises for the separate task force disciplines—learning how to use the sophisticated rescue equipment, acquiring individual skills and practicing various rescue techniques—the team was ready for the final operational readiness exercise. Over the course of three, two-day exercises in March of this year, each of the task force shifts gathered at the DF-RD Training Academy (located at the Dodd J. Miller Training Center, a 40-acre facility in southeast Dallas) to participate in a simulated disaster. The goal was to give team members an opportunity to experience the tasks associated with a real deployment and get used to working with other disciplines, and proved to be a great opportunity for team members to see the capabilities of other team members and their equipment.

The Scenario

Task force members reported to the training facility early in the morning for their assignments. At approximately 9:00 a.m., the Task Force Leader informed the team that a tornado had touched down in the Dallas area, causing significant damage to a number of buildings, and that there were reports of missing individuals and gas leaks. The team was then split into four squadrons and told to report to the Base of Operations to receive a detailed briefing and their individual assignments.

The first order of business was to hand out radio communications assignments and get a reconnaissance team to the disaster site. Once in the field, the recon team—which consisted of a structures specialist, two search dogs and their handlers, a four-person technical search crew with listening equipment, and a hazardous materials specialist with gas detection equipment—was to report back to the Task Force Leader with an initial assessment and list of priorities to be used in developing an action plan.

The observed damage was concentrated in one section of the downtown area and encompassed a total of four buildings. There was a one-story brick building with a flat roof, which showed no signs of exterior structural damage and was cleared for an internal search. There was also a three-story office building that had suffered a complete collapse and was reduced to a pile of unstable rubble covering an area measuring 75 by 100 feet. The search dogs showed mild interest in a couple of areas of the rubble pile and it was reported that people were in the building when the tornado hit, raising the possibility that there were potential victims in the pile. The determination was made that further search activities, including a hazardous materials evaluation, could only be completed if the pile was stabilized and the larger sections of debris were removed.

In addition, there was a one-story reinforced concrete structure that was still standing but showed signs of significant exterior damage. The search dogs were very active around this structure and the technical search team picked up the sound of voices inside the building. However, the building was determined to be too compromised to permit

an internal search without first stabilizing the exterior damage and establishing a secure point of entry for the search team.

Finally, the largest of the potential hazards was a six-story high-rise office building with an attached two-story apartment building. Much of the building exterior had been damaged but no collapsed areas were visible. Two access points appeared to be available but would have to be secured before the search teams could enter the building. The search dogs were very active around one of these potential points of entry, which was only accessible through a very small area under a pile of rubble and would require cutting through a concrete slab. In addition, the search team reported hearing voices and tapping from inside the building and the hazardous materials specialist reported a natural gas leak inside the building.

Operations

Over the course of the next two days, the various elements of TX-TF2 applied their respective skills to affect the safe rescue of potential victims. A task force squad was assigned to each of the impaired buildings. Structural collapse technicians began by building and installing shoring as needed to secure damaged portions of the buildings and removing or relocating any large pieces of debris to permit the search

teams to do their jobs. Then other team members converged on access points with cutting torches, hammer drills and breaching tools, and installed shoring in various positions using both prefabricated pieces and custom-made configurations to support stairs, walls, window openings, floors and ceilings. In addition, the disaster site was mapped using handheld global positioning system (GPS) units and the damage was documented for communication with other agencies or authorities and future analysis.

A total of 11 “victims” (rubber training dummies) were rescued or recovered during the training exercises, and the successful demonstration of operational readiness led to TX-TF2 becoming available for deployment as a Type III USAR team in the North Texas area and throughout the State of Texas effective May 16. ♦

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