

Looking Back:

Lowe's Motor Speedway Bridge Collapse

Three times a year the NASCAR Sprint series events at Lowe's Motor Speedway and the 160,000 fans they bring pose a unique challenge to the Concord Department of Fire and Life Safety. On May 20, 2000, the resources of not only the fire department, but also the resources of the entire region were tested. At approximately 11:13 p.m., immediately following the conclusion of the Winston All-Star Race, the north pedestrian bridge, filled with exited fans, collapsed onto U.S. Highway 29.

At approximately 11:13 p.m., without notice, the bridge collapsed onto the highway below, taking the pedestrians with it.

Planning Ahead

Recognizing that the large number of race fans and gridlocked traffic had the potential to stress the Concord Fire Department's resources — resources ordinarily designed to provide emergency response to a 50-square-mile municipal area, with 70,000 residents — the Concord Office of Emergency Management in 1992 outlined the plan for the Concord Fire Department to respond to all emergency incidents at the speedway during the NASCAR events.

In May 2000, the Concord Fire Department had six stations housing six engines, one ladder, and three rescue squads; and a manpower strength of 108. Because fan traffic in and around the track would hinder, if not halt, emergency response from the fire stations, the plan allowed the Department to tactically distribute resources around the track and infield to minimize travel time to emergency locations. These resources usually consist of reserve fire apparatus with three or four responders and brush units with two responders. The tactical expectations of each unit are defined by the location of the resource and the type of unit. Brush trucks are assigned to the front and back stretches, outside, and one to the infield area. They are tasked with responding throughout their assigned area. These units are free to roam on a

limited basis. Engines and ladders are assigned to specific areas and are not intended to move a great deal, since they are assigned to areas of pre-determined risk. Other pick-up trucks are assigned to areas of unique high-rise risk and are expected to react to fire and rescue emergencies in their particular area.

One operational command post was established in the infield to coordinate activities and facilitate communication. Other emergency response agencies had similar structures in place to meet their unique response

demands, including Concord Police Department, Cabarrus County EMS, and the N.C. State Highway Patrol. Additionally, Lowe's Motor Speedway has arrangements with rescue and fire services across the state to provide transport ambulances around the facility.

The Scene and Response

As the crowd exited the speedway on May 20, 2000, traffic was re-routed off of U.S. Highway 29 to allow fans to move more quickly from the grandstands to the parking areas. One of the most convenient exit routes from the turn four grandstands is over one of two pedestrian bridges that crossed directly over the highway. That night one bridge was filled to capacity with fans moving toward the parking areas. At approximately 11:13 p.m., without notice, the bridge collapsed onto the highway below, taking the pedestrians with it. Fortunately, it collapsed in a "lean-to" fashion on the northbound lane. Immediately, reports of the incident began to flow in, primarily from State Highway Patrol units who were in the area to direct pedestrian and vehicular traffic. Within minutes, the fire units in the area arrived on the scene and began to assess the situation and provide information to the infield command post. These units were soon joined by paramedics from Cabarrus County EMS and responders began providing

aid to the pedestrians who were free from the bridge sections. Calls came in for more help and additional resources to gain access to the trapped patients.

At this point each primary agency involved established its own command structure. Concord Fire, Concord Police, State Highway Patrol and Cabarrus County EMS all had a person in charge of their resources; while there was significant communication and coordination, a unified command structure was not established. Communications was a continuing problem; however because of the acute nature of the incident, it was overcome as on site emergency responders began to get more organized.

Initial assessment showed that the fencing surrounding the bridge to keep pedestrians from falling had become a barrier keeping responders from reaching the injured. Those assigned to rescue initially struggled to gain access to the patients, however once it was discovered that bolt cutters were the most effective way to remove the fencing barrier, this hurdle was quickly overcome.

Once the patients were immediately accessible, triage and treatment began under the supervision of Cabarrus County EMS. Triage identified the need for air-lift capability and a landing area was established at the Outlaws dirt track infield. The FAA restricted the airspace around the incident scene.

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Ground transport was the next big hurdle as most of the transport units on site were not using the same communications system as the local emergency responders and Cabarrus County EMS transport capacity was quickly exhausted. The need for mass transport units was quickly overcome when standby units began to stream to the incident site. These units were organized on the fly and transported patients based upon triage

instructions. Fortunately, traffic was not an issue as the N.C. Highway Patrol was in position to control all intersections at the time of the collapse, and they simply held the exiting cars in the parking lots.

Eventually, 107 patients were treated and transported to three hospitals and seven patients were transported by air, taking a total of 56 minutes.

A Learning Experience

Performance reviews from emergency personnel revealed several points that would lay the groundwork for improved command and control organization at future races.

- The 101 first responders, pre-positioned at the track are sufficient to handle incidents on site.
- Though resources are sufficient, the organization must centralize a single command unit.
- Unified command must be pre-planned and reviewed before events.
- Communication should be coordinated among all involved agencies.
- Cross training among agencies is needed at regular intervals.

While the incident caused no fatalities, and in retrospect, was considered successful based on the above points, the planning and command structure at race events has been significantly improved. A pre-planning process has been adopted that improves information exchange,

preparation coordination, communications plans, and security. While it's impossible to prepare for every type of emergency, the May 2000 bridge collapse was the catalyst for bringing all the different emergency response disciplines under one umbrella to better serve the people of Concord and make a safer professional sports event.

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