Public Works and Terrorism Response: Black Sunday
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Executive Summary

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The study covers transportation services, operations, engineering services, fleet, and the mass transit system and their requisite requirements in the event of a major attack on an event like the Super Bowl. It is meant to clarify how public works fits into the disaster continuum and why our personnel, equipment and experience are so critical to a successful response. The case study vividly illustrates that public works is the backbone of any response and recovery operation.

- The most effective, efficient response depends heavily on local public works officials.
- Public works departments are the logistical experts who make the response work more smoothly for all involved: the responders, the public, and government officials.
- Public works officials are involved in every stage of any event involving terrorism or natural disasters: detection, prevention, protection, response, recovery, rebuilding and mitigation.
- All first responders must be fully integrated into any response plan. This includes, police, fire, public works, emergency services, public health officials and others identified in Homeland Security Presidential Directive 8 (Appendix I).
- Responders must be adequately equipped and trained to respond.
- Responders must be interoperable with other first responders.

In 1977, the movie Black Sunday depicted a plot to attack the Super Bowl from a blimp flown over the stadium. The plan was to kill 100,000 people.

At the time, the fictional plot was incredulous. But after 9-11 and with the threat of attacks that will “pale” in comparison, no one is quite so sure anymore. All across this country, millions of people annually attend spectator events in large capacity venues. On any given Saturday in the fall, football stadiums are filled to capacity with 60,000+ spectators concentrated in a single venue. The constant threat of domestic terrorism has required that the owners and operators of these venues to examine more than attendance and profit margins.

This case study of the role of public works in preparing for an attack, responding to a terrorist event, and aiding in the recovery illustrates the work and preparation that goes into protecting our nation’s citizens. It also provides a detailed view of the critical role of public work in every stage of response. It is important to note that this case study addresses one particular public works department. In some cases, the responsibilities are broader, in others, narrower. In any case, however, the
The public works department is the backbone of any response and recovery plan. Daily operations for the Gainesville public works department consists of the regional transit system; county-wide traffic signal operations; parking programs; solid waste; transportation and stormwater management; engineering; and operations.

Ben Hill Griffin Stadium

Ben Hill Griffin Stadium on the campus of the University of Florida is a large venue with a capacity in excess of 94,000 spectators. Stadium security has always been a priority for the University of Florida and their policies are known as some of the strictest in the Southeastern Conference (SEC).

The University Of Florida Police Department is responsible for Incident Command for events on campus. Over the years, the University Police Department has expanded the members of its game day Unified Command Team (UCT). Initially, the UCT consisted strictly of law enforcement: University Police Department, Florida Highway Patrol, Alachua County Sheriff’s Office & Gainesville Police Department. In the early 90’s, Law Enforcement recognized the need to provide coordinated traffic control and added Public Works to their UCT. Since that time, the UCT has been expanded to include a multi-disciplinary emergency response group to include the following agencies:

- University of Florida Police Department (Lead Agency);
- University Of Florida Athletic Association (Stadium Owner / Operator);
- Florida Highway Patrol;
- Alachua County Sheriff’s Office;
- Gainesville Police Department;
- Alachua County Fire Rescue;
- Gainesville Fire Rescue;
- Alachua County Public Health; and,
- Gainesville Public Works Department.

Each agency has specific game day responsibilities. During a potential emergency, the Unified Command Team is already assembled and each agency assumes its respective role in the Emergency Support Functions. The University of Florida has developed a Stadium Emergency Plan and other Agencies are brought in as necessary.

The Role of Public Works

Transportation Services

Transportation Services includes everything related to traffic engineering, traffic management, traffic signalization, traffic signs & markings and maintenance of traffic.

Traffic Control & Emergency Routing

Public works develops and implements the Traffic control plan--designed to facilitate additional resources responding to the stadium for emergency response and to aid in providing emergency access to local hospitals / emergency care centers.

Placement of signs and barricades

To assist in providing emergency traffic control and implementing emergency routes, proper signage and barricades must be installed. This protects the integrity of the emergency routes as well as provides proper traffic control to motorists. On a typical game day, special traffic control signs and barricades are strategically deployed around the stadium and on major roadways leading to and from the stadium. On a game to game basis, public works equipment and personnel is used to assist in traffic control for blocking streets, limiting access, effecting turn restrictions and converting streets to one-way only routes to effectively manage the post game mass-exodus traffic. The UCT has worked for approximately 10 years at developing, implementing and modifying as necessary this traffic control plan. This plan is reviewed each summer prior to the start of a new football season. In an emergency, with minimal
staffing, the public works department is prepared to immediately set-up equipment to provide emergency response routes both to and from the stadium.

**Use of variable message signs**
A crucial component of any emergency response is informing the public of what to do, where to go, etc. On a game day, the Transportation Services Division deploys two variable message signs to provide traffic control information to motorists. Public works uses these variable message signs to provide motorist information regarding an emergency.

**Signal system operations facilitate evacuations and route emergency responders.**
To properly facilitate emergency response, major routes to and from the stadium must provide effective traffic flow. This will allow the public to get away from danger and provide a clear path for emergency responders to the scene. On a typical game day, Transportation Services operates our Computerized Traffic Control System from the Unified Command Post. This allows traffic signals along major corridors to be coordinated and provide for managed traffic flow. Pre-developed traffic signal patterns are implemented to provide long continuous green bands for traffic exiting the stadium. These are the same routes that emergency responders would utilize to access the stadium and the same routes that lead to the local hospitals and emergency care centers. In an emergency, this plan would be implemented to facilitate the emergency response operations.

**Traffic Management**
To adequately meet the needs of emergency responders in an emergency of this potential magnitude, it is necessary to have an overall coordinated traffic management plan. It is the role of Transportation Services to provide that overall guidance and to work with all agencies in the UCT to ensure that proper traffic management and control are utilized throughout the event. We coordinate traffic control, emergency routing and diversion routes with the University Police Department, Alachua County Sheriff’s Office and the Gainesville Police Department. We also utilize information provided by the Gainesville Police Department’s Aviation Unit to assist in proper traffic management. It is essential that properly trained professionals take their respective roles and make informed decisions regarding emergency traffic routing and establishing diversion routes. That allows management from other emergency service providers to focus on their respective issues.

The City currently has 3 video cameras adjacent to the University of Florida and is working to provide fiber optic communications to the Unified Command Post so that the video signal from the cameras can be utilized by the UCT.

**Perimeter Control**
In an emergency of the potential magnitude illustrated by Black Sunday or some other nightmarish scenario, establishing a perimeter is essential for the safety of both the public and the emergency responders. The perimeter also helps maintain the integrity of the crime scene. At the perimeter, traffic control is set up to limit access into the area by emergency responder personnel and equipment only. This perimeter must be jointly established by Law Enforcement (Security), Fire-Rescue (Safe Zone) and Public Works (Traffic Control and physical assets). Once the perimeter is determined, it is the responsibility of Public Works to establish diversion routes to detour traffic unrelated to the stadium event. Public Works utilizes their Incident Management Trailer to establish a perimeter. This trailer contains traffic cones, barricades and emergency signs. It also contains space for a mini-mobile command post as well as facilities to produce temporary signs on site. This trailer is always on standby and ready for rapid deployment.

**Operations Services**
The Operations Services division of the public works department is responsible for the personnel for labor and heavy equipment operation. On a day to day basis, the Operations Services area is responsible for maintenance & construction of streets, maintenance & construction of drainage systems and mosquito control.

**Structure Stabilization and Demolition**
Public Works crews provide the labor, equipment and knowledge of structures to assist in urban search and rescue efforts. They are prepared to utilize specialized equipment to assist in stabilizing, shoring and/or demolishing structures to aid in search and rescue operations. They have ready access to contractors that can be called upon to assist in these operations as well.

**Contaminated Water and Hazardous Materials Containment and Clean-up**

Anytime there is suspected use of chemical, biological and nuclear/radiological agents, hazardous runoff resulting from the event or from decontamination operations following the event that could threaten the community’s water, wastewater and storm water systems. Public works may be required to establish a perimeter around the affected area and contain and disposal of any hazardous runoff resulting from the event and the decontamination operation. Knowledge of the various support systems is critical to ensure this protection. A working knowledge of the various watersheds is also vital for downstream protection. After the immediate threat is addressed, Public Works will also be responsible for implementing a clean-up plan to eliminate all contaminated and hazardous materials.

**Emergency Pumping Operations**

In an explosive or incendiary event, there may be flooded areas within structures from ruptured water/wastewater pipes. Pumping operations may need to be set up to assist in response activities. This may also involve the pumping / containment of contaminated water.

**Restoration of lifeline services**

Any terrorism event will most likely impact one or more lifeline systems that may be privately or publicly owned and operated. Damaged systems may hinder response activities and create life safety hazards, so problems must be identified rapidly in the damage assessment and repaired immediately. Public works personnel provide the conduit for response actions whether the local agency is directly responsible for the system or has the relationship with the agency that is directly responsible.

**Debris Management**

**Urban Search & Rescue**

The first phase of debris management is clearing the debris that is hindering immediate life saving actions and posing a threat to life, public health, and/or public safety. This is generally performed in conjunction with law enforcement and fire-rescue operations. Generally, no debris is removed from the site during phase one operation to preserve the crime scene to the maximum extent possible to preserve evidence.

**Debris Removal**

The second phase of Debris Management is the removal of debris from the site. There may be a need to continue preservation of evidence at a secondary location while law enforcement officials sift through the debris. Once law enforcement has completed their investigation, non-evidentiary debris must be removed and properly disposed. If it is contaminated, it must receive special treatment.

**Engineering**

Engineers are tasked with preparation of engineering designs, engineering reviews and providing construction management and inspection for public works projects. Public Works Engineers are prepared to provide risk assessment, damage assistance and provide engineering expertise to emergency services providers to help with Search and Rescue Operations.

**Risk Assessment**

Prior to an event there must be a risk assessment undertaken to identify vulnerabilities and measures necessary to provide maximum protection of a facility and to limit exposure of risks. For example, during a risk assessment of the stadium at the University of Florida it was found that fertilizers for maintenance of the field were being stored within the stadium structure. It was determined that it would be more appropriate that these fertilizers be stored in an off-site location. Although this creates a greater burden for field maintenance personnel, it eliminates a risk of exposure.
Damage Assessment  A rapid, thorough damage assessment is critical immediately following a terrorism event. Public works personnel are most knowledgeable and therefore can perform the most thorough assessment of essential facilities, lifelines (water/sewer, electric, gas and communications), surface water systems, transportation systems, and structural hazards. Construction documents for the facility are generally maintained by the local public works agency, having a set for review during damage assessment is advantageous.

Engineering Assistance for Search and Rescue  Engineers are needed to evaluate stability of structures and direct public works operations during the search and rescue operation to ensure protection of personnel and prevent further injuries and deaths. These assessments will also determine the level of search & rescue involving heavy equipment assistance.

Record Keeping / Resource Tracking  Documentation is essential for providing valuable information for every aspect of a response. It will be used for debriefings, after-action reporting, liability issues, recouping expenditures, and investigations. Documentation can include event logs, purchase orders, time sheets, action plans, notes, video tapes, photographs, drawings, recordings, etc.

Fleet  Fleet Management is responsible for the procurement, repair and maintenance of Public Works’ Fleet. This requires that Fleet Management be able to work with a variety of vehicles and specialty equipment.

Fueling  Depending on the length of time the response activities are in operation, there will be refueling needs for the equipment and vehicles that are being utilized. Of particular concern will be making sure that items such as water pumps and heavy equipment or properly fueled on site. A mobile fueling facility should be provided to ensure minimum disruption of operations.

Repair and Maintenance  It is inevitable that repairs will be required on equipment being utilized in the response operations. Backup equipment and vehicles must be available upon demand. Mobile vehicle repair, particularly of specialty equipment, is essential to facilitate emergency response operations. It is also essential to properly maintain vehicles and equipment to prevent pre-mature failure of the equipment.

Mass Transit System  The Mass Transit System (RTS) of the public works department is responsible for providing mass transit for the Gainesville Urban Area and the University of Florida. On game days, RTS operates the “Gator Park & Ride” Service. This provides mass transit for spectators from major activity centers to the stadium pre-game and back to their centrally located vehicles after the game. During emergency operations, RTS assumes a support role for mass transit. On a typical game day RTS provides 45 buses for the Park & Ride Service.

Mass Casualty Transport  Mass transit vehicles and operators provide transport to hospitals and emergency care centers. This transportation is for victims with non-life threatening injuries. Utilization of mass transit vehicles for this service, allows ambulances and other EMS vehicles to transport victims with serious injuries and those requiring advanced care.

Emergency Responder Transport / Rest Stations  RTS provides mass transport of first responders who are arriving from outside the confines of Ben Hill Griffin Stadium. Depending on the event, the “safe” area may be as far as two miles from the scene of the event. First Responders from outside the area will report to pre-designated staging areas and are bused, as needed, to the stadium. Air-conditioned buses provide rest areas for first responders, during an incident particularly those that are required to wear Personal Protective Equipment.

Evacuation  The remaining non-deployed buses will be utilized to evacuate non-effected spectators and other non-essential people inside the designated perimeter.
What does it all mean?
Public works departments around the nation are gearing up for their responsibilities during an emergency. Most are very familiar with disaster response as first responders to hurricanes, tornadoes, fires and other calamities. Terrorism, however, adds a new component, and the American Public Works Association urges the following steps be taken to assure that public works departments have the support they need to assure that their resources and assistance are utilized most effectively.

Full integration
The most effective, efficient response depends heavily on local public works officials. The American Public Works Association believes that public works is the backbone of any response. There is no response without water in the fire hoses, paths cleared of debris for emergency rescue, staging areas for decontamination, public works equipment and personnel, etc. The list goes on and on. To that end, public works departments across the nation must be fully integrated for a successful response.

Public works departments are the logistical experts who make the response work more smoothly for all involved: the responders, the public and the government officials. Public works personnel add their skill, personnel, equipment, experience and wisdom to every stage of the disaster and must be integrated as a vital resource during any response.

Public works officials are involved in every stage of any event involving terrorism or natural disasters, from detection, prevention, protection to response recovery, rebuilding and mitigating against future loss.

Interoperability
As illustrated above, public works departments must be included in communications plans. Messages to assure that the public remains safe, transmitted on variable message signs, cannot be delayed due to lack of adequate communication capacity. The fire department’s need for additional equipment or debris removal cannot be delayed due to lack of adequate communication capacity. The public works department must be included in any comprehensive interoperability plan.

Training and Equipment
The threat of terrorism and the added dangers it presents, specifically biological and radiological attacks, presents a new challenge for all responders, including public works departments. Are backhoe operators equipped with personal protective equipment? Are they familiar with the National Incident Management System? Do they have access to communications? Are they trained on protocols for weapons of mass destruction attacks? The answer to these questions must be YES. A resounding yes. We must protect and train all of our first responders so that they may work to protect our citizens against the effects of a terrorist attack.

Working in the public interest, the 27,000 members of APWA design, build, operate, and maintain the transportation, water supply, sewage and refuse disposal systems, public buildings, and other structures and facilities essential to our nation’s economy and way of life.

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