



Hardened First Responder Facility

Full Mitigation Best Practice Story

Smith County, Texas

Tyler, TX - Smith County is located in east Texas, approximately 100 miles east of Dallas. It is largely rural, with only one metropolitan area, the City of Tyler. The Sheriff of Smith County and the Police Chief of the City of Tyler saw a need for a consolidated emergency operations and communications center that would serve the entire county. Judging from past experiences, they believed this consolidation would reduce fragmentation and duplication of emergency services and allow services to be provided in a more efficient and cost-effective manner.



In January 2003, the County begun construction of a state-of-the-art facility to serve as the centralized 911 communications dispatch and emergency operations center (EOC) for approximately 30 agencies (serving a population of approximately 175,000). Administrative staff moved into the new facility in November 2003. Dispatching from the facility began in January 2004.

Notable features of this 15,000-square-foot facility include a roof and exterior walls hardened to resist tornadic forces, a lobby designed to minimize blast effects, multiple security access levels, and an area specifically planned for press conferences, interviews, and other interaction with members of the media. The project architects consulted FEMA 361, Design and Construction Guidance for Community Shelters, to determine the specific design loads that the new communications and emergency operations center would have to be able to withstand.

For an EOC, one of the main goals of site design is ensuring the security of the facility and its staff. Smith County addressed site security for its facility by providing secure parking, controlling vehicular access, locating buildings away from the site perimeter, and minimizing vegetative cover. Four key concepts should be considered in the design of building systems for a critical facility:

1. Backup systems should be provided.
2. All points of access to the systems – including entry points, control panels, and maintenance access – should be located in secured areas.
3. All systems should be protected from potential hazards.
4. All systems should be physically separated.

Smith County's EOC has an on-site emergency generator with the capacity to operate the entire facility and function independently from the normal electric service. The emergency generator is housed in a secured, reinforced concrete masonry mechanical yard covered with a steel screen designed to protect the generator from windborne debris impacts.

The facility was designed to be self-contained for two weeks at a time. It is equipped with enough cots and mattresses for 25 people, and is stocked with enough food to feed up to 50 people for two weeks. Washers and dryers are also available on site, as well as showers and separate dressing rooms.

The extended EOC stays often required of emergency workers, the urgency of emergency response, and the need to deal with injuries, loss of life, damage and destruction, all place extreme pressure and stress on emergency managers and staff. Recognizing the effects of this difficult working environment, the Research and Planning Committee put high priority on keeping the staff as comfortable as possible during their stay at the EOC.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region VI**

State: **Texas**

County: **Smith County**

City/Community: **Tyler**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Tornado**

Activity/Project Type: **Safe Rooms/Community Shelters**

Activity/Project Start Date: **01/2003**

Activity/Project End Date: **11/2003**

Funding Source: **Local Sources; State sources**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Unknown**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: <http://www.fema.gov/pdf/plan/prevent/bestpractices/hardened.pdf>

Reference URL 2: <http://www.fema.gov/plan/prevent/bestpractices/casestudies.shtm>

Main Points

- The consolidated emergency operations and communications center serves Smith County.
- Facility designed to be self-contained for 2 weeks at a time.
- The project architects consulted FEMA 361, Design and Construction Guidance for Community Shelters, to determine the specific design loads the facility would have to withstand given the regional hazards.



Construction of the steel truss roof system



Workers constructing the reinforced ICF walls.