



# FORT CHAFFEE IGLOOS: TECHSPAN AMMUNITION STORAGE

**Military**  
Ammunitions shelters

United States, Arkansas, NEAR LITTLE ROCK



15 COMPLETED IGLOO MAGAZINES

**Owner / Client :**  
UNITED STATES DEPARTMENT OF  
DEFENSE

**Engineer :**  
BENCHMARK GROUP

**Main contractor :**  
DEL-JEN CONSTRUCTION, FLUOR  
SUBSIDIARY

**Terre Armée entity :**  
The Reinforced Earth Company  
(United States)

**Date :**  
2007

**Activity :**  
Concrete arches and boxes

**System :**  
TechSpan

**Key figures :**  
Span : 8.2 m  
Length : 366 m

**Activity :**  
Reinforced Earth

**System :**  
TA "Classic"

**Reinforcement :**  
HA / HAR steel strips

**Key figures :**  
Area : 300 m<sup>2</sup>  
Rise : 6 m



FRONT AND REAR WALLS BEING READIED FOR  
ARCHES

## The Project

A project to construct a safe storage facility for ammunition used for military training exercises. The unique TechSpan design considers blast loading to control propagation in the event of an explosion inside or nearby the storage "magazine".

## The Solution

RECo USA utilized STAAD Finite Element Modeling in developing the efficient arch shape that is easy to manufacture and simple to install.

## The Advantages

The design provides the U.S. Military department with alternative solutions for other than pour-in-place concrete for constructing complex arch structures that are difficult to accomplish in the field. In addition, the design required that all steel parts throughout are continuous, interconnected as protection against the effects of lightning strikes. This provision is inclusive of the arches, the headwalls, footings, floor slabs, and crown beams.

RECo #10923

