

Sunset Report Answered:



The Polly Rosenbaum Archives and History Building

The 1999 Sunset Review of the State Library by the National Conference of State Legislators stated:

Finding One: Preservation of Arizona's Historical Materials. Arizona statutes require that the Department oversee the collection and preservation of all materials that pertain to Arizona history. However, the Department is unable to comply with these statutory requirements because it lacks adequate storage space and because current storage conditions jeopardize the archival material.

It listed the top recommendation for the agency as:

Recommendation 1. The Legislature should expand space for the Arizona archives collection. This legislative action should be based upon a systemic review and evaluation of storage expansion options and costs conducted by the Department.

Polly Rosenbaum State Archives and History Building Facts and Figures

- The Archives building is approximately 124,000 square foot under roof. This is 2.85 acres of building or 50 new homes.

Concrete:

- Building contains approximately 12,000 cubic yards of concrete, or 1,200 concrete trucks, and weighs 45,000,000 pounds.
- The building rests on a foundation consisting of 80 caissons each 9' in diameter and 22' deep. Each caisson contains approximately 52 cubic yards of concrete, for a total of 4,160 cubic yards, 420 concrete trucks and weighs 15,600,000 pounds.

Structure:

- The reinforcing steel placed in the concrete weighs 1,045 tons or 2,090,000 pounds.
- There are approximately 80,000 concrete blocks (each block is 8" X 16" X 8")
- The exterior of the building is covered by 88 precast panels. Each panel is approximately 10' wide, 35' tall and 12" thick and weighs an average of 22.5 tons or 45,000 pounds. The surface area of the precast is approximately 32,000 square feet. Total weight of the precast exterior is 3,960,000 pounds.

Shelving and Rails:

- There are approximately 11,000 linear feet, 2.2 miles, of rails to support the moveable shelving.
- One half the building shelving as designed as part of this project consists of 81,477 linear feet or 15.43 miles of shelves. If laid end to end, it would reach from the Arizona State Capital to downtown Tempe.

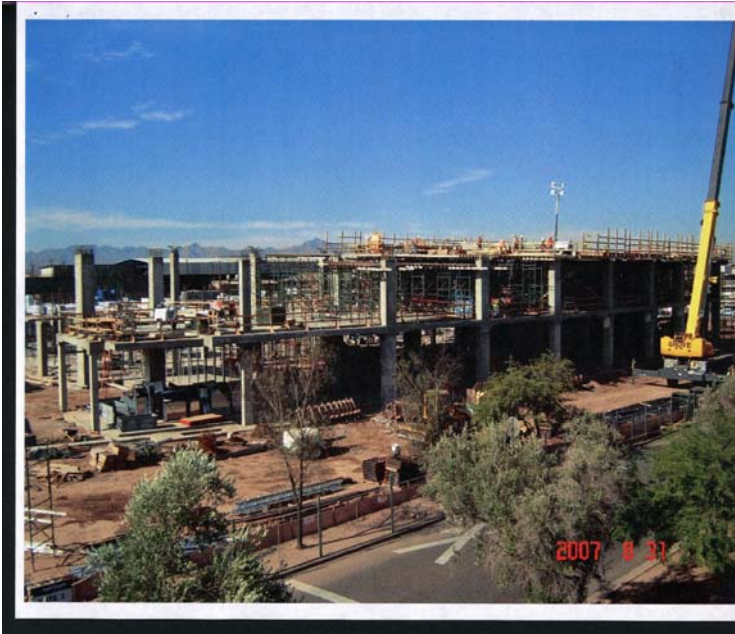
Mechanical/Electrical:

- The air distribution system is designed to move 200,000 cubic feet per minute. The average home in Phoenix moves less than 2,000 cubic feet per minute.
- There is 400 tons of cooling in the building. The average home in Phoenix has 3 tons. This building has the cooling equivalent of over 130 homes.
- The electrical service is a 3,000 amp service. The average new home in Phoenix has a 200 amp service.

Other Special Features:

- The facility is designed to maintain a temperature of 55 degrees F with 30% relative humidity in all collections areas.
- A humid room with 0 – 100% RH capability is included to allow a controlled high humidity area for processing rolled/brittle documents.
- The Archives building has been raised 4' above existing grade to maintain the first floor above the 500 year flood plane.
- A system designed to “blast freeze” archival material of approximately 5000 # to a – 40 degrees F in a 24 hour period.
- A “cold room” designed for as an environmental chamber for photo archive storage will include humidity capabilities from 0 – 100% RH and temperature controls to maintain the room to between 38-40 degrees F and variation within + / - 1 degree F. It also contains charcoal air filters and an air lock to prevent dust or contamination.
- A 225 kVA uninterruptible power supply (UPS) will be installed to provide backup emergency power for 15 minutes for critical functions. An emergency generator is provided with 12 hours of backup capability and a utility transfer switch is installed to allow an external generator to power the facility.

- The facility has been designed and is being constructed to prevent water and vermin intrusion or migration through the building. This is accomplished by waterproofing on the exterior walls, a vapor sheet under the concrete floors, caulking of vertical joints and a sealant system installed under all interior walls. In addition to sealant of the joints, steel cover plates are installed at all vertical interior masonry wall joints. All walls are designed to prevent water (in the event of a sprinkler discharge or fire) from being able to move from one collections area to another.
- Security is designed to control access into and throughout the building with capability of closed circuit TV monitoring and card access on interior and exterior doors.



Polly Rosenbaum Building. August 31, 07.
Facing southwest from the Records Building.



July 07. Preparing the first floor
for an all-night concrete pour.



August 22, 07. Concrete Block stacked on the
first floor.



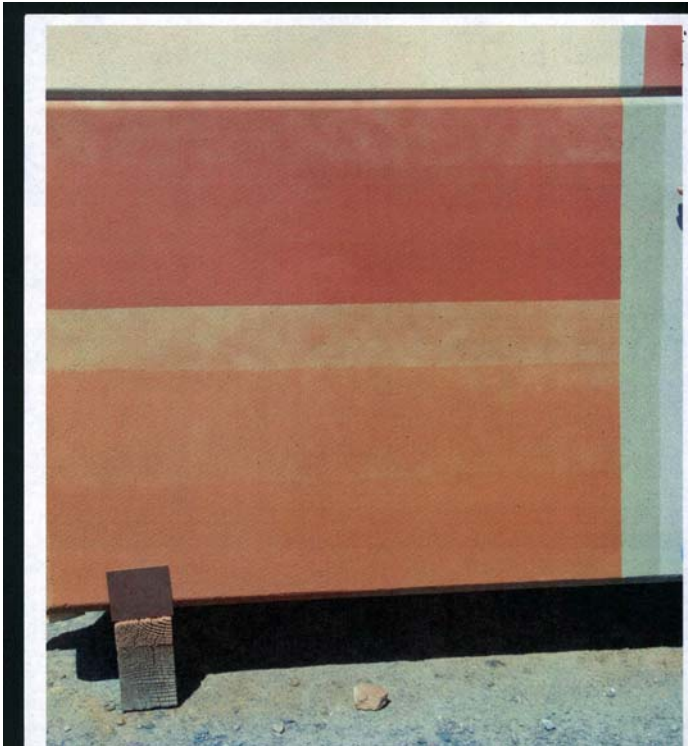
September 12. 07. Hanging
ductwork from the ceiling.



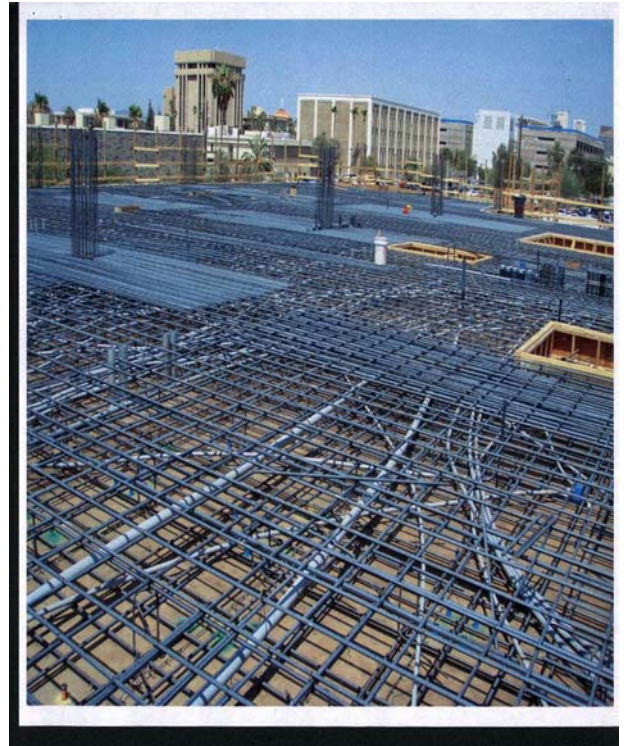
September 07. Flash-freeze isolation rooms.
The fan is curing concrete.



August 07. Attaching a pre-fab
piece onto a foundation column.



An example of the colored concrete exterior.



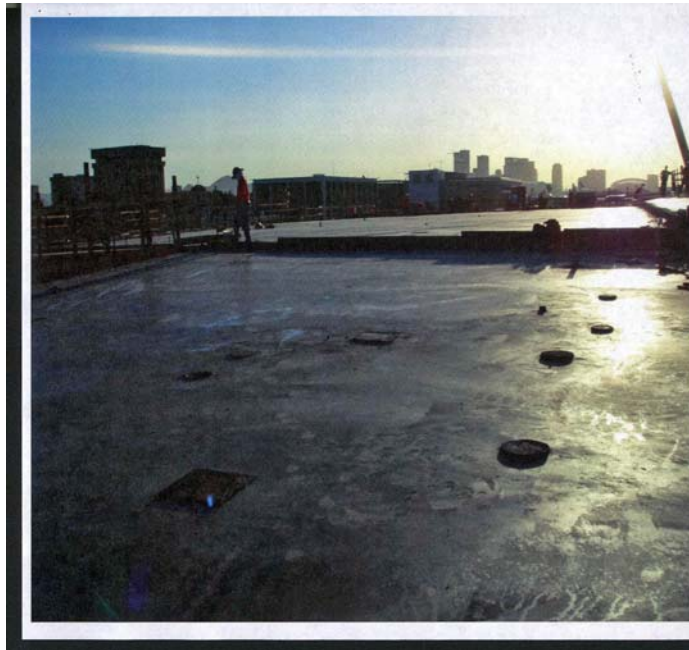
Facing the Capitol Complex atop the 2nd floor.



August 07. Fresh concrete after pouring all night.



September 07 Spraying sealant underneath the top floor



September 07. Concrete curing in the morning.