Managing the Inter-Institutional, Multi-Year Re-Encasement Project

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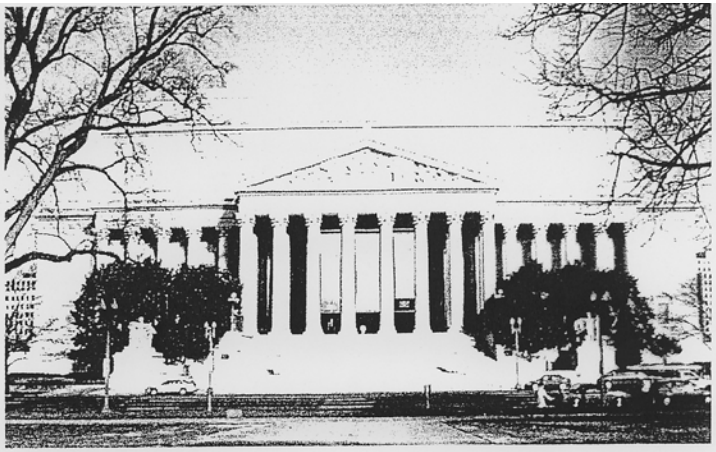


ARCHIVES I
THE CHARTERS ENCASEMENT PROTOTYPE

CONCEPT REPORT
July 1998

Prepared For:

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
AND GENERAL SERVICES ADMINISTRATION - NCR

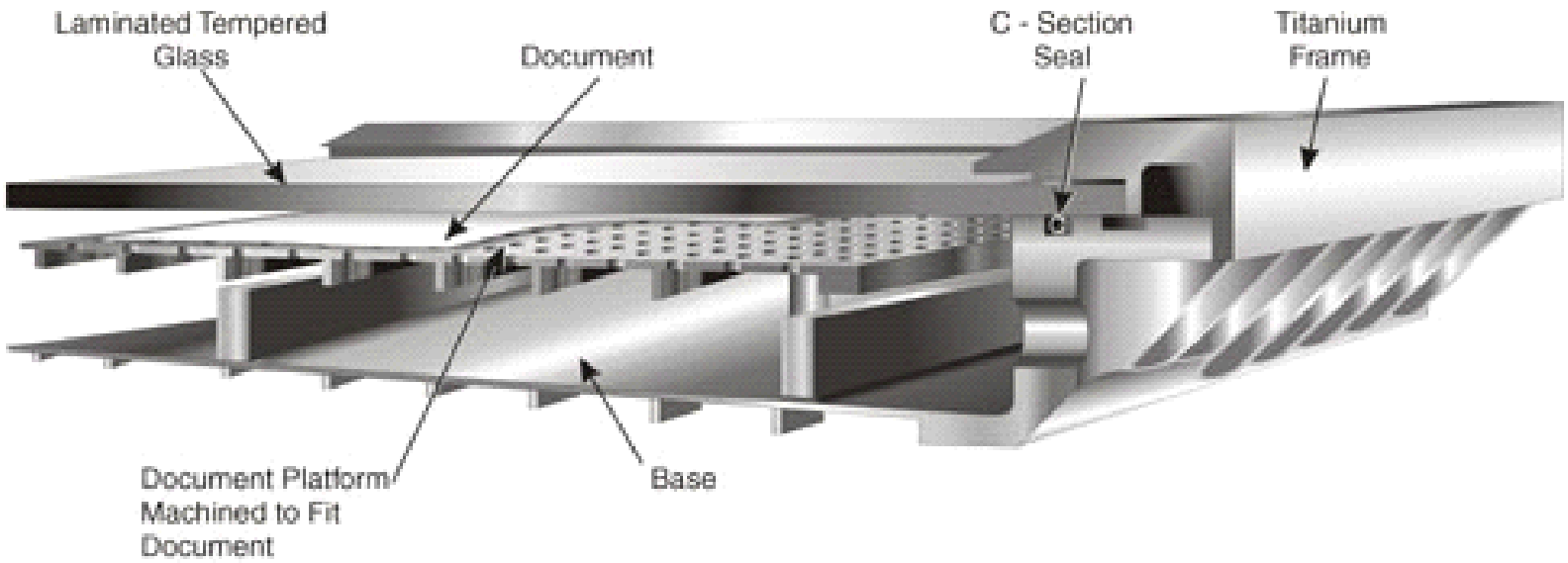
Prepared By:

HEERY INTERNATIONAL, INC.

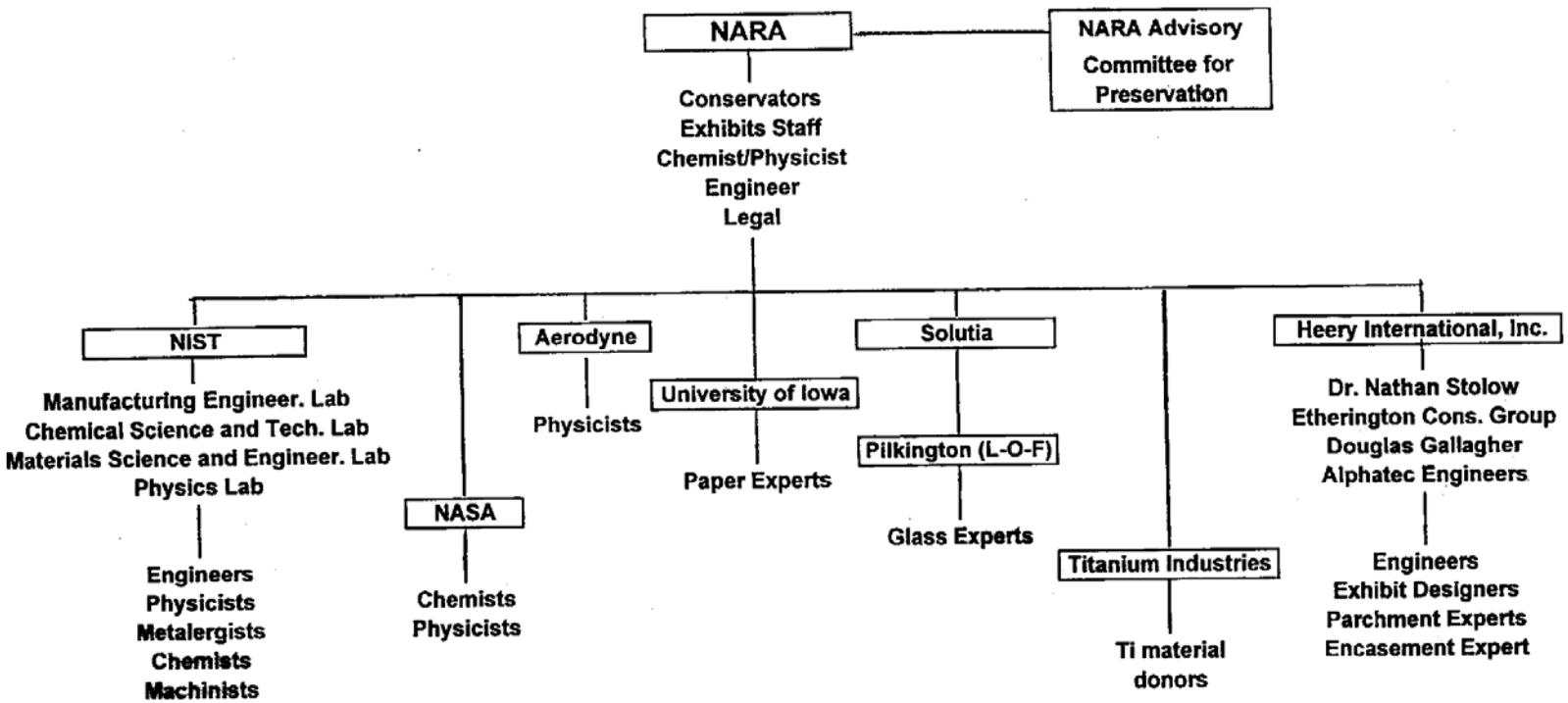
Heery International, Inc.

Concept Report

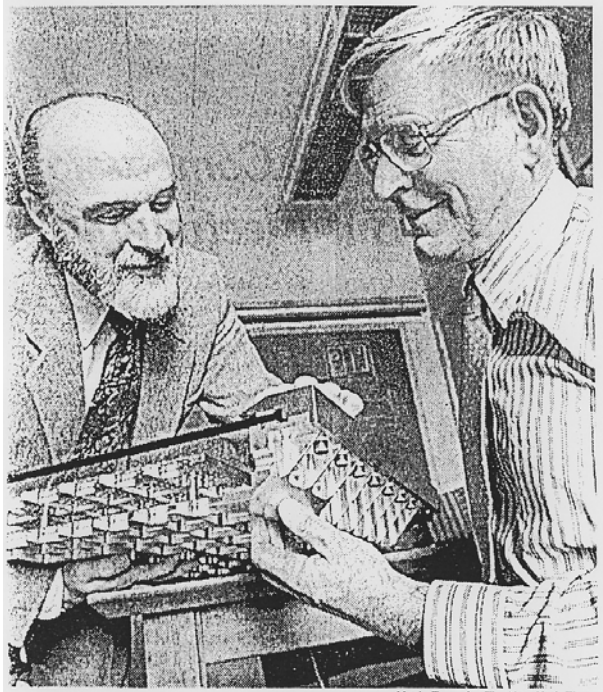
Encasement Design



Coordination and Cooperation



New York Times Article



Mario Tama for The New York Times

Leslie E. Smith, left, and Richard Rhorer with a model casement for the Declaration of Independence, the Constitution and the Bill of Rights.

titanium metal frame that clamps the glass against the seal ring when 80 bolts are screwed through the base into the frame and tightened.

Dr. Leslie E. Smith, a chemist who directs materials science work at NIST, the standards institute, said argon will be used instead of helium in the enclosure because it is easier to handle and has a bigger molecule, which is less likely to diffuse out of the enclosure. Relative humidity in the new cases will be kept at 40 percent, slightly higher than planned for the old enclosures, because that more closely matches conditions outside the cases if they have to be opened, he said. This helps prevent shock to the document under these circumstances.

The institute's engineers, led by Richard Rhorer and Christopher Evans, have built a manufacturing model of the casement for testing in the spring before making a prototype.

Engineers are also sending samples of titanium, which has a gray finish, to metal-coating companies to see if the tough metal can be given the bronze color desired for the frame. Mr. Rhorer said it was unclear whether anodization, an electrolytic process that can put a colored, oxide film on metal, will be able to produce the color and tone that designers want. "This shows how many interests are involved in this project," he said. "We normally don't have to be concerned if the color of a metal is 'warm' enough and such things."

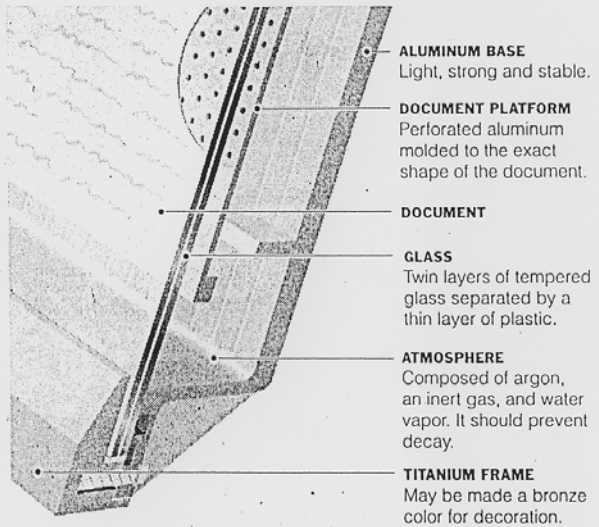
The standards institute is to make nine new encasements, seven to house the documents and two backups. Two of the cases will be slightly larger than the others, measuring 39¼ inches tall, 37⅞ inches wide and 3 1/16 inches deep, because the Bill of Rights is larger than the other documents. The other cases will be the same height and depth but 33⅝ inches wide.

After testing, the prototype, containing the transmittal page of the Constitution, will be unveiled in the summer of 2000. The permanent encasements, containing the seven Charter documents, are expected to go on display in 2003.

IN DETAIL

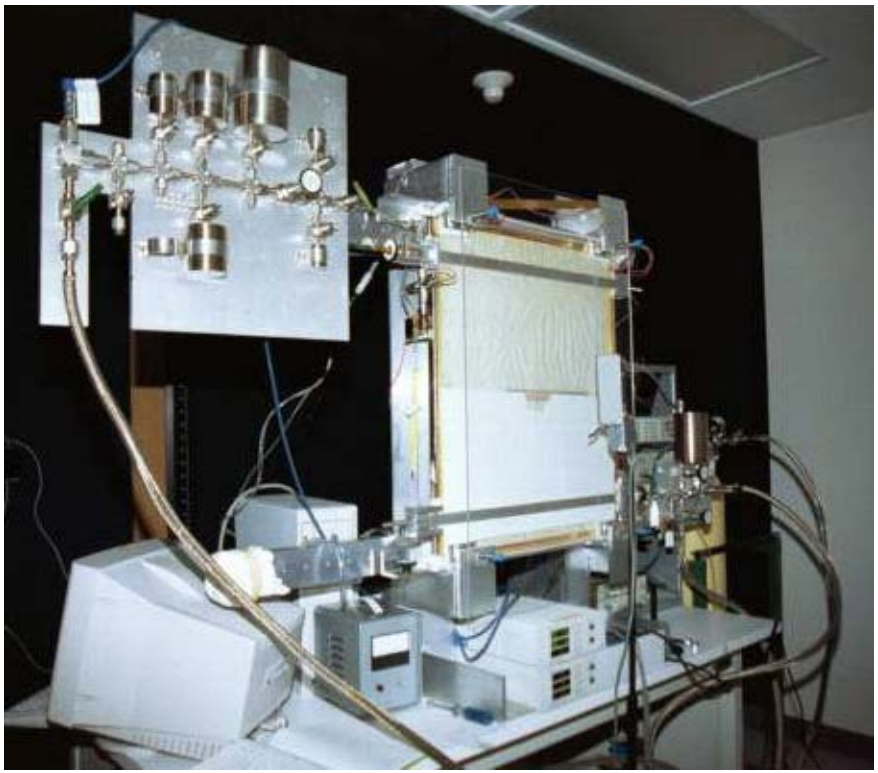
Preserving the Nation's Heritage

The National Institute of Standards and Technology has commissioned a new design for the cases that display the nation's most revered documents.



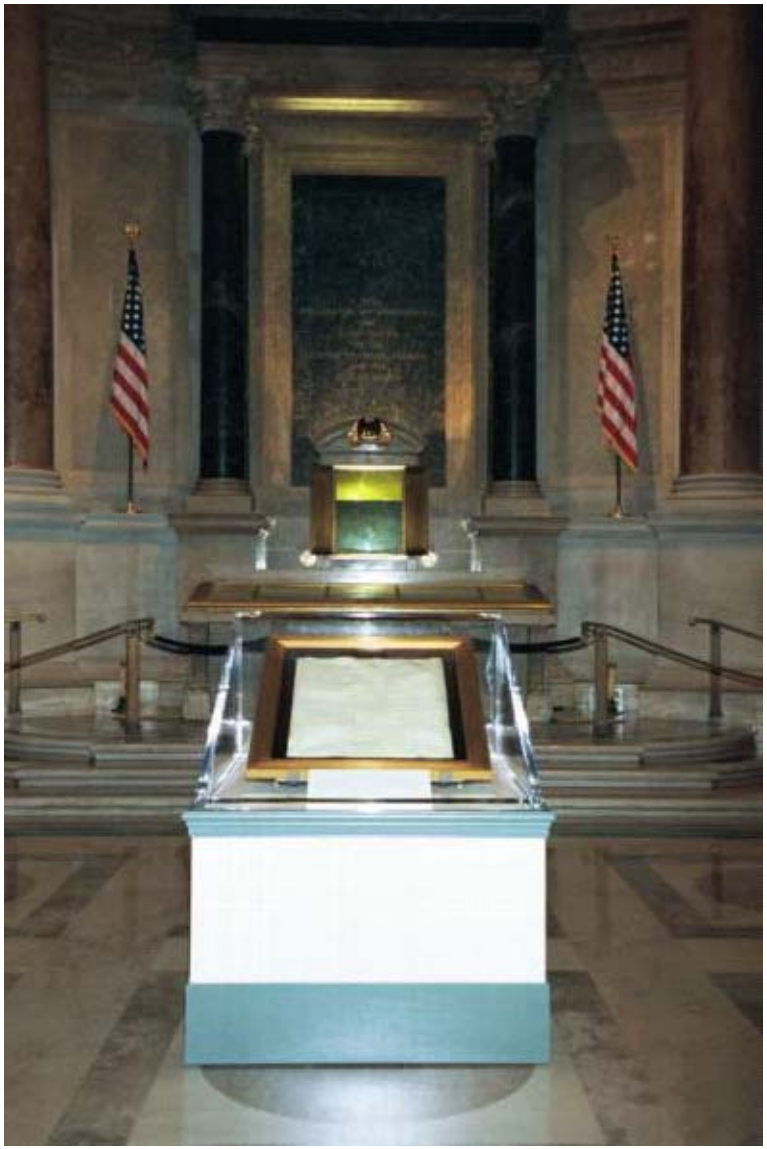
Source: National Institute of Standards and Technology

The New York Times; Illustration by Frank O'Connell



Transmittal Page
Gas Extraction

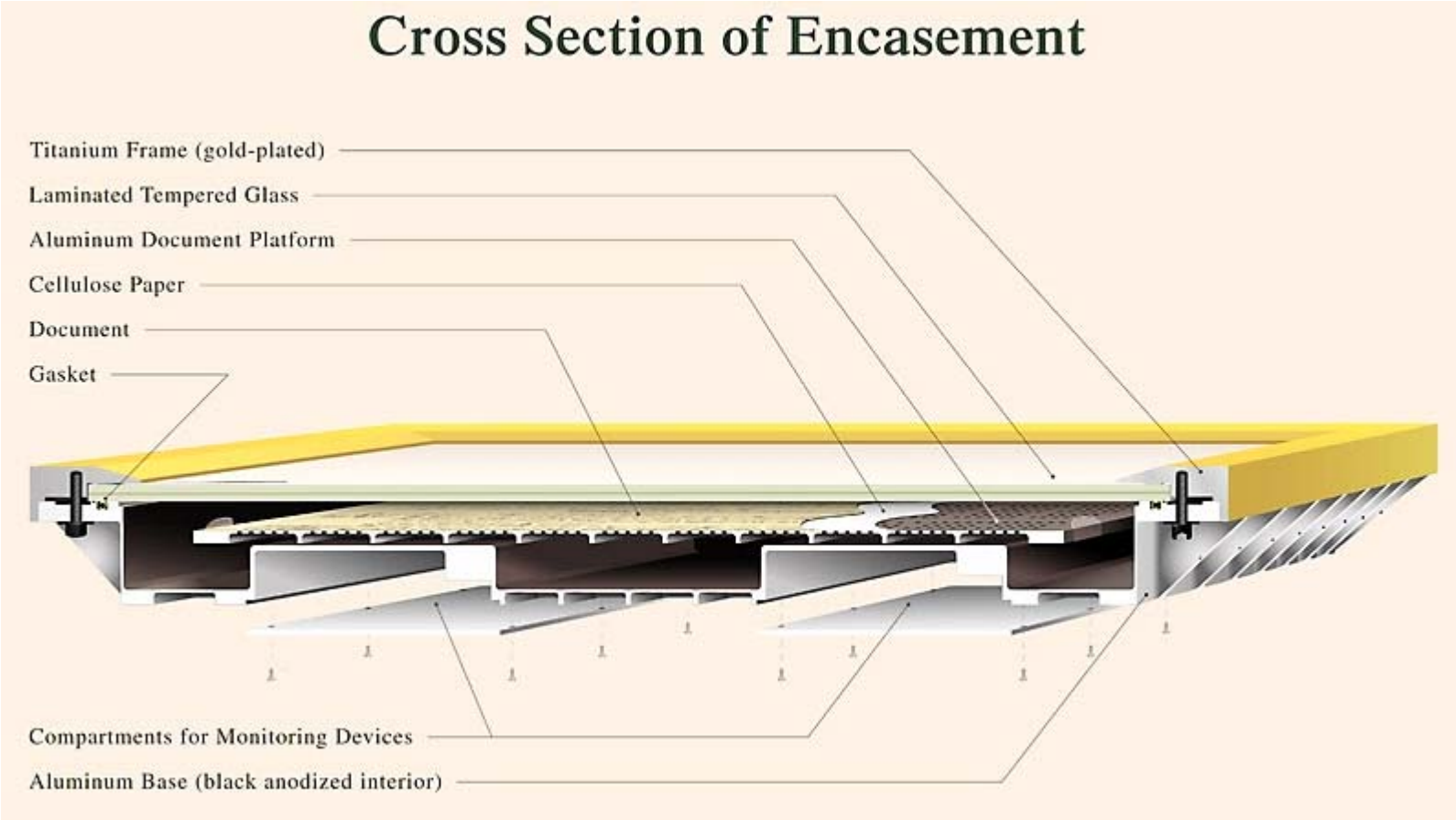
Constitution Page 2 Installed in Prototype 2 Encasement



Constitution Page 2 unveiled in Rotunda

Prototype 2 Encasement

Final Encasement Design



Final Rotunda Installation

Inter-Agency Cooperation Gets the Job Done!