

CONSTRUCTION OF AN ARCHIVAL VAULT

Capuchin Province of St. Joseph

1820 Mt. Elliott St.

Detroit, MI 48207



524 SQ. FT. REFERENCE ROOM



1,064 SQ. FT. ARCHIVAL VAULT



- ▶ Archival vault repository with a capacity to house 1 428 linear feet of archival materials.
- ▶ Repository maintains temperature and humidity levels within standard range to accommodate for various archival materials.
- ▶ Types of archival materials include: blueprints, historical cartography, artifacts, saint relics, paintings, statuary, textiles, photographs, newspaper clippings, scrapbooks, as well as paper based archival materials.
- ▶ Obsolete format audio visual materials including acetate film, polyester audio film, VHS, Beta, vinyl records, cassette tapes, floppy discs, glass plate negatives, and CD/DVDs.

- ▶ Dedicated HVAC installed: Liebert PDX Verativ HVAC with back up Generac generator on the roof.
- ▶ Liebert unit has a touchscreen that shows constant monitoring of temperature, humidity, and any power outages. When there is an issue, an alert is sent.
- ▶ Temperature is kept between a range of 60-65°F with humidity levels maintained between 35-45% for the preservation of varying types of archival materials.
- ▶ Compact size requires 36" x 36" of floor space.



HEATING AND VENTILATION

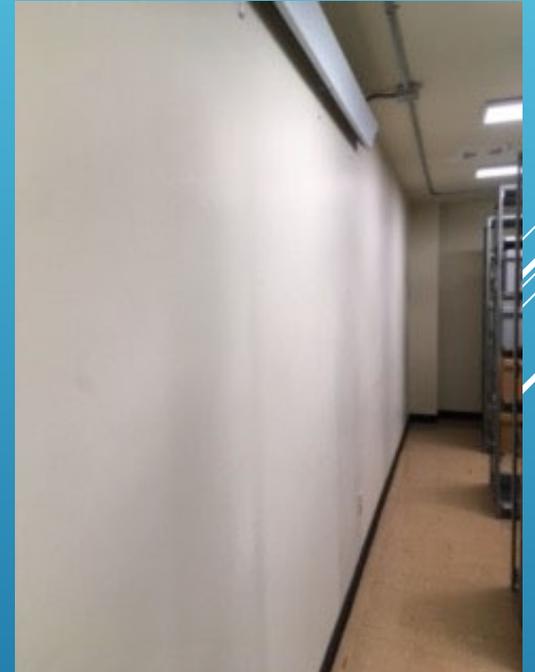
- ▶ Novec 1230 gaseous clean agent fire suppression system was chosen for its ability to put out a fire without water. Instead of water, it emits a fluorinated ketone from the ceiling when a fire is present.
- ▶ This fluorinated analog of ethyl isopropyl ketone takes out the heat from the flames to put the fire out.
- ▶ Leaves no residue on surfaces.
- ▶ Safe to use in occupied rooms with no suffocation hazard when it is discharged.
- ▶ Heat detectors alert when the room is out of temperature range.
- ▶ Directly connected to the local fire department for immediate assistance in the event of a fire.

FIRE SUPPRESSION



- ▶ Walls and ceiling are insulated with an insulation rating (R value) of R-40, which reduces the flow of heat/cold into the room to maintain the inside temperature. Fiberglass insulation was chosen.
- ▶ Insulation with a double 5/8" drywall was used on both sides of the interior wall. Exterior cinder block walls were covered with 2" insulation and 5/8" drywall. Fire rated for 3 hours of a hot fire.
- ▶ Ceiling has 8" blown in insulation and 5/8" drywall with metal roof.
- ▶ Sufficient insulation means the HVAC unit does not have to work as hard to keep the room at the set temperature, making it more cost effective.
- ▶ Additionally, if there is a power outage and the backup generator fails, the vault could still maintain its temperature for two days or longer depending on the time of year.

INSULATION

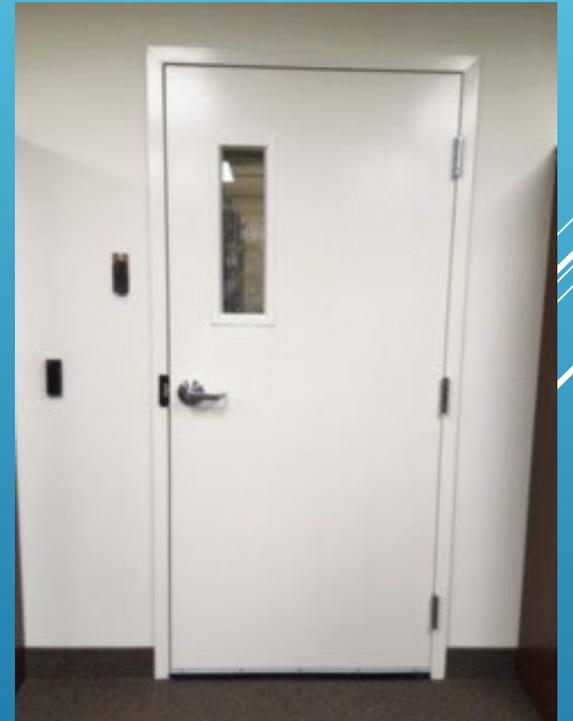


- ▶ Interior wall is 8" thick and extends to the roof line, providing no possible entry through tray ceiling in reference room.
- ▶ No windows: four windows were blocked out with a vapor barrier film, 6" insulation and drywall.
- ▶ Exterior walls have an auxiliary heat source for subzero weather.
- ▶ Ceiling is 9" thick with metal rafters and roof above ceiling.
- ▶ There is no plumbing above or adjacent to the vault room.

WALLS AND CEILING



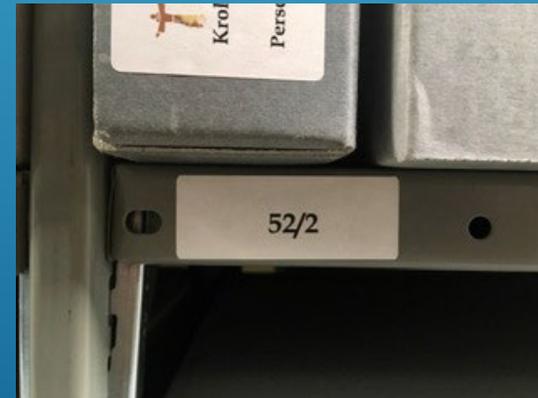
- ▶ Vault door is made of 18 gauge steel and is guaranteed to withstand 90 minutes of a hot fire.
- ▶ Door frame is fire rated for 3 hours of a hot fire.
- ▶ Fire rated 3/16" glass with wire mesh is guaranteed for 90 minutes of a hot fire. The added security of wire in the glass mitigates potential break in.
- ▶ Fire glass is not permitted in 3 hour fire rated doors.
- ▶ Key fob entrance with back up key entry. Vault door is always locked whether archivist is working in the vault or in the reference room.
- ▶ Key fob system records who opened the door with the time and date.



SECURITY DOOR



- ▶ 20 gauge steel shelving with rounded edges so boxes don't get snagged.
- ▶ Free standing shelving units are bolted together for increased stability.
- ▶ Each shelf is 42" x 15" to accommodate 3 standard size archival boxes per shelf. Six shelves per bay.
- ▶ 60 shelving bays, 2 map cabinets and 10 lateral filing cabinets.
- ▶ All shelves are numbered with box locations in AdLib archival software.
- ▶ Aisle width is 35" between the stacks and 45" in the oversized area.
- ▶ No shelving is against an exterior wall.



METAL SHELVING

- ▶ Long-term Preservation of over 165 years of historical materials for the Capuchin Province of St. Joseph that includes the four states of Wisconsin, Illinois, Montana, and Michigan as well as other locations where our Capuchins have served.
- ▶ Archives for the Blessed Solanus Casey Center and the Midwest Capuchins.
- ▶ Private repository; visitors seen by appointment.
- ▶ This presentation is dedicated in memory of Jose Soberal, who was the Maintenance Director during the archival vault renovation.

CAPUCHIN ARCHIVES IN DETROIT

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