FLOOD PROOFING – STATE OWNED BUILDINGS

FIELD DATA SHEET

Building No.: 06016 (Old No. 5002)
111 State Street
Location: Montpelier Complex

100-Year Flood Elev. 525.3

Total No. of Floors: 3
Floors including basement - 4
Gross Floor Area: 62,000 sq ft
Rentable Area: 59,639 sq ft
Lowest Level Floor Elev. 521.5
First Floor Level Elev. 532.8

Type of Structure: Basement walls and floors constructed of concrete. This building is connected to the State Building (115 State Street) and the Pavillion Building (109 State Street) via the tunnel at lower unknown elevation.

Primary Area Usage:

Supreme Court office space, storage of miscellaneous court documents. Contents of stored court documents unknown. There are bathrooms with showers on the basement floor.

Small kitchen area with sink.

Mechanical rooms with electrical, HVAC, and communication located on basement floor

Primary Flood Damage:

Mechanical rooms:
- Cooling units +/- 23 inches above the floor.
- Control panels for cooling units +/- 48 inches above the floor.
- Condensate pumps on floor with control panel +/- 24 inches above floor.

Area near Tunnel Entrance appears to be +/- 5 feet below the basement elevation)
- Five circulation pumps mounted on wall +/- 9 feet above the floor.
- Electrical panel mounted on wall +/- 9 feet above the floor.

Electrical control panels mounted on the wall and transformer mounted on the floor near tunnel entrance.

Communication panels mounted on wall +/- 9 to +/-32 inches above floor.

Plumbing, restrooms with shower, toilets and sinks located in basement. Possible flood damage from sewer connection backing up. Based on the reports of the 1992 flood event (ice jam flooding) the floodwaters entered the basement through the shower drain. Not able to determine if a sanitary sewer back-flow valve is installed for this building.

Elevator located in the basement would be flooded during the 100-year flood, however the majority of the operating equipment is located on the roof.

Potential Methods for Damage Reduction:

Electrical distribution panels, switch panels, service connections, wall penetrations below the 100-year flood elevation protect from water infiltration or elevate above 100-year flood elevation.

HVAC equipment below the 100-year flood elevation protect from water infiltration or elevate above 100-year flood elevation.

Plumbing wall penetrations, water heaters, toilets, sinks, floor drains, and shower drains below 100-year flood elevation protect from water infiltration or elevate above 100-year flood elevation. Typically toilets, sinks and floor drains below the 100-year flood elevation require back-flow valve installations. If back-flow prevention not practical, all restrooms, sinks, toilets and showers could be relocated to the first floor above the 100-year elevation.

Dry-floodproofing this building or individual rooms may not be practical; the difference between the 100-year flood elevation and the basement floor is 46 inches. Typically the rule of thumb for dry-floodproofing is only used for flood depths less than three feet (36 inches). Dry-floodproofing old existing buildings may be technically feasible, however sealing the walls and floors of older buildings have a high probability of failure due to unforeseen factors in the older buildings.

Another option would be to seal the building as much as possible, reduce areas where large amounts of water can enter the building (windows). The interior basement floor and walls be designed of flood-resident material, install a number of sump pumps at low points to remove water from the building (discharging to appropriate locations) reducing the flood water level depths in the building which in turn reduces flood damages. The power supply to the sump pumps would need to be elevated above the 100-year flood

NOTE: Building has been modified since the 1983 Flood proofing Study. Not able to take photograph, ground elevation unknown.