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Who Needs Earthquake Insurance? Why we Under-Prepare for Disasters

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Dear Neighbors,

Many of the questions coming to the office ahead of next week’s Special Meeting to discuss the proposed Special Assessment of $15,000,000 are not specifically related to the Special Assessment. We have received questions pertaining to the need for the work, the Engineer’s estimates, the 20% contingency, financial oversight of construction expenses, and the like. These are all good questions, and all of them have been discussed and presented over the past year—some many times. All the presentations and meeting minutes are available on Concierge Plus for your review.

The purpose of next week’s meeting is only to discuss the proposed Special Assessment. This seems a good moment to give a summary of our progress to date, so that we can focus on the Special Assessment itself at the meeting. As this work has become so all-consuming for us, this summary could perhaps be called a report on the “State of the Building.”

terms of the 40-year inspection, which comes due later this year. Among other things, that estimate indicated that the concrete damage observed would begin to multiply exponentially over the years, and indeed the observable damage such as in the garage has gotten significantly worse since the initial inspection. When you can visually see the concrete spalling (cracking), that means that the rebar holding it together is rusting and deteriorating beneath the surface.

Please note that the original scope of work in the 2018 report has expanded. The concrete deterioration is accelerating. The roof situation got much worse, so extensive roof repairs had to be incorporated. Other previously identified projects have been rolled under the main project. New problems have been identified. Also, costs go up every year. This is how we have gone from the estimated $9,128,433.60 cited in Frank Morabito’s 2018 report, to the much larger figure we have today.

2. A committee was formed to evaluate possible Supervising Engineers to oversee this work. That committee recommended Frank Morabito as the Engineer. Morabito was selected as our Engineer by the Board in 2019.

3. A Manager with 40-year experience and an engineering background was hired (Scott Stewart).

The above work was accomplished over a 2-year period through several different Boards. The process has continued with the current Board:

4. Contracted Morabito as the Supervising Engineer. He identified additional professionals such as landscape architect, architect, and MEPF (mechanical/electrical/plumbing/fire)
The paradox of protection
Identification numbers for helicopters to identify which buildings are damages and which are not

Rolling weights on roof

Shutters that come down automatically

Reinforced lift shafts with tensioned cables

Safe open areas for people to gather

Lattice work steel cage to stabilise building

Rubber shock absorbers between foundations and building above ground

Latticework steel foundations into the BEDROCK
Why preparedness has not improved:

Most modern philosophies for risk management assume that people are, at their core, rational in how they make decisions in the face of risk. Given complete information about a prospective risk, people will:

a. Understand its personal consequences;
b. Undertake appropriate preventive action
Why preparedness has not improved:

Unfortunately, this assumption is rarely true. If we want to improve preparedness, we first need to understand how people *actually* think about risk, and then design risk-management schemes that acknowledge and conform to these cognitive limitations, NOT compete with them.
Today

• A brief (but necessary) primer on disaster psychology
• A new approach to assessing and designing preparedness plans---the behavioral risk audit
How we think: a confluence of two systems

System 1:
Fast,
Automated,
Reflexive.

Requires Training

System 2:
Slower,
Deliberative

Requires Accurate
“Mental Models”
Southgate, KY, May 28, 1977

BEVERLY HILLS COUNTRY CLUB

KY. ROUTE 27—10 MINUTES SOUTH OF CINCINNATI
BEVERLY HILLS SUPPER CLUB FIRE

Site of Beverly Hills Supper Club, popular night spot from 1930s-70s. Burnt May 28, 1977 killing 165. Third worst nightclub fire in U.S.; changed building-code enforcement. First disaster case tried as class action suit, merging 300 claims. Landmark litigation lasted years. Settlements of some $30 million. First mass tort action in USA.
How might we better prevent such disasters?

• Predicting hazardous event and having tools to mitigate losses is only half the solution. Predicting how people will respond to these predictions and use these tools is, in many cases, even more important.
The Key

• Because of the rarity of extreme events, it will be fruitless to try to correct biases. The best risk-management strategies will be those that acknowledge biases and design systems that are resilient to them.
# The Behavioral Risk Audit

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<th>Bias</th>
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<th>Consequence</th>
<th>Remedy</th>
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The Core biases

- Optimism
- Myopia
- Amnesia
- Herding
- Inertia
- Simplification
Example 1: Excessive Optimism

• Disasters are unlikely
• Disasters ARE likely---but they won’t happen to me
• My preparations will be enough
• I have enough time to prepare
EYE-YI! WATCH IT, N.Y.

'Cane expected to deal a blow
How we think of likelihood

- Way the disaster could occur
- Way the disaster could NOT occur

Actual Risk: 2/3

Perceived Risk: 1/10

“Are you worried?”

“No, not all all!”
Hence, why bother to move my car?
Remedy: nudge the mental sampling

• Geo-targeting warnings
• Describe likely specific effects and actions
• Use vivid imagery
...Instilling fear can sometimes work
Example 2: Simplification

- The “single action” bias
EARTHQUAKE PREPAREDNESS KIT

Below is an abridged checklist. For more info, please visit http://tinyurl.com/yfuhgz for a complete list and tips.

WATER
☐ 1 gallon / person / day
  change every 6 months

FOOD
☐ Canned meats, soups, fruits & vegetables
☐ Dry milk & juice drinks
☐ Sugar, salt & pepper
☐ High energy foods: peanut butter, jelly, crackers, granola bars & trail mix
☐ Comfort foods: cookies, candy, instant coffee, tea
☐ Vitamins
☐ Special needs: infants, special diet, pet food

FIRST AID
☐ Band-aids
☐ Gauze
☐ Roller bandages
☐ Scissors
☐ Antiseptic
☐ Soap/anti-bacterial
☐ Moist towelettes
☐ Petroleum jelly
☐ Pain reliever
☐ Other non-prescription medications
☐ Sunscreen
☐ Latex gloves
☐ Tweezers
☐ Thermometer
☐ Safety pins

SUPPLIES
☐ Paper plates & napkins
☐ Plastic utensils
☐ Flashlight
☐ Battery powered radio
☐ Batteries
☐ Cash
☐ Can opener
☐ Tape
☐ Matches in waterproof container
☐ Foil
☐ Tape
☐ Paper & pencil
☐ Needle & thread
☐ Wrench
☐ Pliers
☐ Signal flare
☐ Ponchos
☐ Blankets or sleeping bags/warm clothes

SANITARY
☐ Toilet paper
☐ Garbage bags
☐ Soap
☐ Feminine supplies
☐ Plastic bucket
☐ Disinfectant
☐ Household bleach

DOCUMENT COPIES
☐ Will/insurance
☐ Passport/social security cards
☐ Immunization records
☐ Bank account #’s
☐ Credit card #’s
☐ Contracts/Stocks

Avoid foods like rice and pasta that require more water to prepare. Restock 1/year. Best to store these items in a water proof zip lock bag.
Example 3: Inertia

A common decision heuristic: when in doubt, choose the default or status quo.
Making Safety the Default

• Provide residents with “free” annual preparedness kits paid for with local taxes that they can opt-out of for a refund

• Make earthquake insurance opt-out rather than opt-in in high-risk areas (e.g., part of property taxes for which you can request a refund)

• Health club model: design long-term insurance policies where renewal is automatic and committed to ex-ante
# Behavioral Risk Audit: Flood Preparedness

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<tr>
<td>Optimism</td>
<td>Belief that probability of a flood is remote</td>
<td>Tendency to see flood insurance as too expensive</td>
<td>Home-specific assessment of risk and annualized expected losses</td>
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<tr>
<td>Myopia</td>
<td>Tendency to see better immediate uses for premium money</td>
<td>Procrastination of purchasing policies</td>
<td>Time-sensitive promotions on policies; e.g., early-purchase discounts</td>
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<td>Amnesia</td>
<td>Poor memory for past floods</td>
<td>Failure to renew flood policy</td>
<td>Long-term policies where renewal is automatic</td>
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<td>Herding</td>
<td>Tendency to base insurance decision on whether neighbors have policies</td>
<td>Imitation of community reluctance to adopt policies</td>
<td>Communication programs that emphasize social norms of safety</td>
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Conclusion

• Effective risk management will require a fundamental change in the mindset of how we think about strategies for risk management. Good engineering and information is not enough; we need to develop strategies that take into account the psychology of how people utilize and process these inputs