

## Exhibit A - Top 5 Recommendations and Associated Resources

Equity needs to be a central consideration as the City implements resiliency initiatives. Use the Equity Tool implemented as part of the Austin Climate Equity Plan process.

- [https://docs.google.com/presentation/d/1izC1JfbRlx-LF7pYWvicOitNkBWAYl6gdgisJu2h8uA/edit#slide=id.g80f9447277\\_0\\_0](https://docs.google.com/presentation/d/1izC1JfbRlx-LF7pYWvicOitNkBWAYl6gdgisJu2h8uA/edit#slide=id.g80f9447277_0_0)

Recommendation: The City of Austin should require all applicants for new construction and existing building renovation permits to complete a Resiliency Assessment and Action Plan.

- At minimum, this should be a requirement for any publicly funded projects and the Austin Energy Green Building Program should require applicants to complete a Resiliency Assessment and Action Plan as part of the pre-requisites for a 1-5 Star Rating

Potential format and applicant resources for Resiliency Assessment and Action Plan:

<https://www.aia.org/articles/6097684-how-to-integrate-resilience-into-your-prac>

- Step 1: Identify Your Region based on the *National Climate Assessment Regions* - <https://nca2014.globalchange.gov/highlights#section-5681>
- Step 2: Identify extreme heat and cold weather events - <https://crt-climate-explorer.nemac.org/>
- Step 3: Identify future extreme rain increase - <https://nca2014.globalchange.gov/report/our-changing-climate/heavy-downpours-increasing#graphic-16693>
- Step 4: Identify if site is in flood plain - <https://msc.fema.gov/portal/search?AddressQuery=55410#searchresultsanchor>
- Step 5: Identify site's sea level rise vulnerability - <https://coast.noaa.gov/slr/> or [https://cwbi-app.sec.usace.army.mil/rccslc/slcc\\_calc.html](https://cwbi-app.sec.usace.army.mil/rccslc/slcc_calc.html)
- Step 6: Identify measurable conventional climate risks per predicted events: <http://www.usa.com/55410-mn-natural-disasters-extremes.htm#OtherWeatherExtremes>
- Step 7: Evaluate potential actions to address risks (taken from Reli):
  - Panoramic Approach (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=20>)
  - Hazard Emergency Preparedness (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=25>)
  - Hazard Adaptation (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=29>)
  - Community Cohesions, Social and Economic Vitality (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=37>)
  - Productivity, Health + Diversity (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=40>)
  - Energy, Water + Food (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=49>)
  - Materials + Artifacts (<http://online.anyflip.com/zyqc/ojoi/mobile/index.html#p=52>)

Reference:

- Toronto Green City: [Resilience Planning New Construction Checklist](#)
- NYC: [Climate Resiliency Design Guidelines](#), Risk Assessment Toolkit
- [Resilient Design Institute](#)

Recommendation: Coordinate with Austin Historic Preservation Board to expand the definition of “building significance” to preserve a greater volume of existing building stock (which significantly reduces embodied carbon

associated with the building construction industry). In addition, increase standards for reducing operational carbon of existing historic buildings being renovated (comply with AIA 2030 Challenge Standards).

- Meeting the 2030 Challenge [https://architecture2030.org/2030\\_challenges/2030-challenge/](https://architecture2030.org/2030_challenges/2030-challenge/)

Recommendation: Strong building codes save lives, protect our homes, and help keep businesses open and operating. Align the City Code adoption process to the International Code Council release cycle (every 3 years) to uphold minimum standards for building performance. Consider additional local amendments to increase code minimums to be more hazard resistant.

- FEMA's National Risk Index identifies Travis County, TX as "relatively high" risk for "expected annual loss due to natural hazards". [Map | National Risk Index \(fema.gov\)](#)
- Buildings currently emit roughly 40 percent of national greenhouse gas emissions, which directly contributes to more frequent and more intense hazard events. Regulations and incentives to reduce greenhouse gas emissions caused by building construction and operation is an important part of developing a resilient city
- Community cornerstones such as schools, hospitals, affordable housing, and government civic centers, and other buildings that serve as emergency shelters in times of crisis should be built to be resilient and compliant with the latest building codes like the 2021 IRC and IBC, so that disadvantaged and at-risk communities have a place for safe shelter when inevitable disasters strike
- While designing buildings to meet Building Code requirements will provide a governmentally acceptable level of disaster mitigation, the National Institute of Building Science (NIBS) has shown that additional mitigation, above code requirements, can result in significant safety and financial rewards. The [NIBS study](#) shows that building to standards above Building Code can result in savings of up to \$11 for every \$1 spent on mitigation measures
- Consider adopting [ZeroCode](#) for all new buildings

Recommendation: Engage the private sector. Identify opportunities to incentivize and/or require the development community to improve the City's resiliency response.

- Start to ask the development community to imagine what resilience means and how to achieve it. We CAN innovate around this! We as a community can decide that we want a certain level of resilience
- Potential Model - resiliency as a service. Third parties are in standby mode and they are paid when they deliver a service (during an event/outage)
- The City should be looking to attract capital through innovation in Resilience and Climate Action

Recommendation: Develop a citywide Neighborhood Resilience Program (Resilience Hubs). Engage City of Austin Architecture and Design professionals in design workshops and public listening sessions to identify public and private opportunities within and beyond existing ASID partnership.

- More robust communication with the public before, during and after extreme climate events is required. Once the Hubs are in place the community needs to know where they are, what services they provide, and have the confidence that the Hubs will be staffed and functional before, during and after extreme climate events

City of Austin Existing Resources:

- Austin Energy Green Building Innovation Guide
  - Innovation\_Guide\_V2021.1.pdf  
<https://www.greenbuildingsystem.austinenergy.com/Login/Help.aspx>
  - IPS9 Community Asset in Event Response
  - IPS10 Shelter-in-Place

Resources from other Cities:

- City of Vancouver Resilient Neighborhoods Program  
[Resilient Neighborhoods Program | City of Vancouver](#)

## Exhibit B - List of Recommendations and Requests from AIA Austin Members via online survey and Resiliency Roundtable January 24, 2022

### City Level Regulation

- Require yearly updated database of building emergency equipment and supplies from public and private sector building management. (salt storage, etc.)
- Require yearly updated emergency preparedness plan from public and private sector building management
- Require on-site potable water and food storage (36 hour supply)
- Increase minimum requirement for building envelope insulation (helps maintain indoor air temperature during extreme heat and extreme cold events)
- Require more stringent air leakage test minimum performance
- Require lower percentage Window to Wall Ratios. Performance and size of windows makes a big difference - a glass box makes a poor refrigerator!
- Require Frost Free Hose Bibs as standard
- Require separate water shut-off valve for each individual unit (Multifamily)
- Prevent sewage back flow and leakage, ensure works without grid power
- Require winterization of gas supply
- Increase energy efficiency, especially in existing buildings to decrease energy demand
- Allow for ramping up residential loads during emergencies
- Upgrade the infrastructure and policy to allow for neighborhood microgrids with solar on residential roofs and local, small-scale retail
- Adopt [ZeroCode](#) for all new buildings

### Incentives/Initiatives

- On-site emergency power generation or UPS
- Incentivize private sector use of renewables!
- Pool equipment location and protection measures
- Incentivize waterless toilets
- Emergency on-site water treatment and storage
- Resiliency Hubs
- More robust Public Service Emergency Announcement
- Provide emergency water supply cutoff override capabilities
- Provide clearer, more robust instructions for home/business owners, renters and landlords on how to prepare for and endure extreme weather events
- We live by the minute, day, event - we need to consider climate and energy data in that way instead of on an arbitrary/annual basis
- Consider ramping up residential load - if we did, it would be extremely helpful in bringing power back on.
- Incentivize/encourage participation in potential future neighborhood microgrids
- Change how we value energy storage/resource management and make off-grid energy normative for everyday use

- It is important to provide backup energy supply in concert with backup water supply for the “event” design - parallel conversation to daily water supply sustainability (Austin Water Forward Initiatives)
- Incentivize batteries in homes as an amenity

#### State Level

- Advocate for the State Energy Grid to be connected to the National Grid
- Advocate for ERCOT to have multiple climate experts on staff and to develop a robust climate plan / planning committee
- Require winterization of gas supply
- Create a network of microgrids (i.e. can box store roofs be used to create a network?)