**Proposed Research Project:** Assessment of Inspection Reporting and Building Conditions in South Florida (Miami-Dade and Broward Counties) – Phase II

**Problem Statement:** The 2021 collapse of the Champlain Towers South in Surfside, Florida highlights the need for a broad assessment of building inspection and maintenance practices in the State of Florida. A critical first step toward this assessment is to gain a clear understanding of the reported condition of existing structures through investigation of available building inspection reports in Miami-Dade and Broward Counties. A current project is underway to achieve this objective and has collected ~250 inspection reports from ten municipalities.

With tens of thousands of buildings across both counties subject to building safety inspection and recertification programs, a Phase II project is required to increase the sample size of inspection reports for analysis. Approximately 20 percent of the reports requested in the current project were not received. In addition, some of the inspection reports provided by the municipalities did not include critical information related to the initial 40-year inspections prior to repairs being made, thus inhibiting the ability to assess the presence of deficiencies in buildings of this age. A Phase II project will provide additional time ensure that relevant inspection reporting documentation are obtained, while leveraging the strategies for acquiring, recording, and analyzing inspection report data established in the first project. The average time to acquire inspection reports from the date of request is 42 days. As a result, it is not feasible to request and analyze many additional reports in the remainder of the current project (with the draft final report due May 16, 2022).

An additional source of data for assessing aspects of structural condition are the balcony inspection certificates required every three years by the Florida Division of Hotels and Restaurants for public lodging (Florida Statute 509.2112). Balcony inspection is required for all hotel and apartment buildings in Florida over two stories and the information provided in the inspection forms would enable a limited assessment of building condition and maintenance for areas outside of the two counties included in the original project.

The results of the statewide survey and the initial analysis of inspection reports conducted in current research project indicate that visual inspection alone may not be adequate to assess the condition of a structure in some deterioration cases. In particular, defects hidden behind wall finishes and cladding or corrosion in reinforcement may not be evident with current inspection practices. A review of currently available methods and technologies to supplement current inspection practices is required provide an objective assessment their feasibility, cost, accuracy, and benefit.

**Summary of Phase II Project Objective**:

* Increase the number of inspection reports analyzed for better statistical significance of reported analysis results
* Make more targeted initial and follow-up inspection report requests to municipalities to ensure structural deficiencies found in initial inspections are correctly recorded
* Acquire and catalog balcony inspection data for coastal regions in Florida to gain insight on structural maintenance and condition beyond the original study region
* Conduct a technical review and feasibility assessment of available destructive and non-destructive inspection and testing techniques that may be incorporated into the inspection process to improve outcomes