

October 24<sup>th</sup>, 2025

Honorable Hilda L. Solis  
First District Supervisor  
County of Los Angeles  
856 Kenneth Hahn Hall of Administration  
500 West Temple Street  
Los Angeles, CA 90012  
[firstdistrict@bos.lacounty.gov](mailto:firstdistrict@bos.lacounty.gov)

**RE: Kenneth Hahn Hall of Administration Proposed Seismic Retrofit**

Dear Honorable Solis,

We understand the Kenneth Hahn Hall of Administration (HOA) was identified by the County as a building under the purview of the non-ductile concrete building seismic retrofit ordinance. A seismic retrofit was recently designed and documented using a base-isolation strategy to meet an enhanced seismic performance objective. This base isolated retrofit approach will be referred to in this letter as the proposed retrofit.

This letter has been prepared to provide our professional opinion on the seismic performance of the existing building, the proposed retrofit approach, the performance objectives selected for that retrofit and discuss alternative retrofit approaches to increase the seismic safety of the building. Holmes has worked on the seismic evaluation and design of existing and historic buildings for over 75 years and has extensive experience with buildings of the same vintage and size as the HOA.

**Non-ductile Concrete Ordinance:**

In 2015, the City of Los Angeles enacted a mandatory ordinance that requires buildings defined as “non-ductile” concrete buildings to be seismically retrofit within a certain timeframe. Buildings constructed before 1977 are deemed non ductile as they lack the capacity to undergo seismic deformations during an earthquake and have the potential of experiencing brittle failures that can lead to sudden partial or complete collapse in large seismic events.

LA County enacted a non-ductile concrete building ordinance this year. It appears that the HOA building was flagged as falling within the scope of this ordinance and thus requiring a mandatory seismic retrofit. Based on our review of the buildings structural system, described in detail below, it is our opinion that the HOA should not fall within the scope of the non-ductile concrete building ordinance.

### **The Existing Building:**

The existing building, constructed circa 1960s, appears to be quite robust and is founded on a spread footing foundation in soil that is not expected to liquefy during an earthquake. The building has a steel framed gravity system (steel beams supported by steel columns) encased with concrete for fire protection, typical for steel framing of this era. This independent steel frame is far more reliable than an equivalent concrete gravity structure of the same vintage. The building's lateral (seismic) force resisting system consists of concrete shear walls and is highly redundant with the walls well distributed along the perimeter of the building. This highly redundant system provides greater reliability even in a non-ductile concrete system. It is our opinion that the entire building, gravity and lateral force resisting system, need to be constructed out of non-ductile concrete for it to fall under the scope of the ordinance. As the building has an independent steel framed gravity system, it should not fall under the scope of the ordinance.

While the building has good bones, we recognize that the existing building may not comply with current code seismic performance requirements. Building codes have developed significantly since the building was designed and we would recommend seismic upgrades to be undertaken to improve the seismic performance. However, as it is our opinion that the building falls outside of the ordinance, it would not require a mandatory seismic upgrade and any improvements can be done on a voluntary basis. This provides flexibility to hone in on strengthening the structure's main deficiencies and focus on spending taxpayers' money where it gives the most return.

### **The Proposed Retrofit & Performance Objectives:**

We understand that the current proposed retrofit consists of providing a base isolation system for the building. Although base isolation provides a high level of seismic performance, it is not strictly necessary to achieve the requirements set forth by the ordinance even if the ordinance was to apply to this building. The code/ordinance required performance can easily be achieved through standard construction techniques and seismic systems such as new concrete shear walls, steel braces or energy dissipation dampers. A base isolation system is often the most expensive way to retrofit an existing structure, especially one with a multi-level basement. Typically, we see base isolation restricted to highly historic structures or essential facilities (i.e. existing hospitals, shelter in place structures, etc.).

### **Alternative Retrofit Approaches:**

As discussed above and based on our experience of retrofit of similar buildings, other retrofit approaches can be developed to achieve the requirements of the ordinance, or simply to improve the seismic performance of the existing building. Typically, we recommend strengthening the building with the most compatible system to the existing structural system. In this case, we would study the addition of new concrete walls (overlayed onto the existing walls and/or located at strategic locations in the existing building). The addition of these walls helps stiffen and strengthen the existing structure and improve the seismic performance of the building. Using a more standard construction technique also results in more competitive bidding by General Contractors as a base isolation retrofit will significantly reduce the number of contractors qualified to bid for this work.

In our experience, the retrofit of buildings of this vintage and type typically cost about \$50 to \$150 per square foot (for the seismic work only) and is dependent on the deficiencies in the building. Retrofit costs are generally minimized when performance-based engineering with nonlinear analysis techniques are used in the design. Should this approach be adopted, we expect this cost to be significantly less than what the base isolation retrofit is being priced at.

#### **Recommended Next Steps:**

Given our review of the HOA has been limited, we recommend that the County study an alternative method to base isolation for the retrofit of the building. We would recommend starting with a concept retrofit design. The concept level package would be based on preliminary seismic evaluation of the existing building but will be of sufficient detail to provide enough information to get a Rough Order of Magnitude (ROM) pricing on the construction costs. This would allow the County and your office to make an informed decision on the future of this building.

Moreover, in our opinion this building should not fall under the scope of the non-ductile concrete building ordinance. If the County agrees that this building is indeed not under the ordinance, then a variety of different tiered strengthening options can be studied. We recommend studying a voluntary retrofit that targets the main structural deficiencies. This will improve the safety of the building and its occupants while minimizing the costs and maximizing the return on investment for the tax payers all while preserving this historic building as part of the heritage of Los Angeles.

#### **Limitations:**

Findings presented in this letter are for the sole use of the **First** District Supervisor's office in its evaluation of the subject property. The findings are not intended for use by other parties and may not contain sufficient information for the purposes of other parties or other uses. Our professional opinion is performed using a degree of care and skill normally exercised, under similar circumstances, by reputable consultants practicing in this field at this time. No other warranty, expressed or implied, is made as to the professional advice presented in this letter. No structural evaluation or detailed review of existing structural drawings and of the proposed retrofit drawings have been undertaken. Our preliminary opinion is based on our visual observations and experience with buildings of this type.

Sincerely,



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Principal  
Holmes US



Jose Machuca, SE  
Associate Principal & Technical Director  
Holmes US