OFFICE OF UNIVERSITY BUILDING OFFICIAL
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Structural Review Tips

1. **Structural Design Assumptions**: Include the design loads and assumptions used in the design of the building, preferably on the first page of the structural sheets. These loads include live loads, factors related to snow loads (exposure factors, thermal factors) wind loads including component and cladding, seismic loads, and other special loads as appropriate. Indicate if live load reduction and repetitive member increase is allowed. *(USBC 1603.1.1 through 1603.1.9)*

2. **Geotechnical Information**: Provide information on the drawings from the geotechnical engineer, including allowable soil bearing capacity and lateral earth pressures and expansive soil evaluation if required. (*USBC 1603.1.6)*

3. **Symbols and Abbreviations**: Verify that all symbols and abbreviations used in the structural drawings are identified in the general notes or elsewhere on the plans.

4. **Coordinate the Drawings**: Ensure the structural drawings are complete and coordinated both internally and with other disciplines. Verify each plan callout references the correct detail. Make note of how typical details are to be used.

5. **Structural Calculations**: Provide structural calculations for all new work on a project, including changes made to the structure of an existing building. Calculations shall be organized so as to facilitate the review process**. A summary of each type/area of structural member shall be included (i.e., exterior wall footings, interior spread footings, first floor framing members, exterior cold formed steel wall members).** (*USBC 109.3)*

6. **Components & Cladding:** Indicate in the construction documents and calculations the component and cladding loads the members are designed to support. In the calculations provide a summary of the loads, and combination of loads, that were used to design the members. *(USBC 1603.1.4)*

7. **Structural Analysis**: Organize the calculations in such a way to account for all load effects on individual members as well as the overall structural system. Check the structure both for strength and serviceability. Ensure that the serviceability that the members were designed to are included in the construction documents. Include in the construction documents the serviceability requirements that were used in the design. (*USBC 1604.2 through 1604.4)*

8. **Structural and Special Inspections**: Fill out the HECO-6a6b, HECO-6c, and HECO-13.1b forms as appropriate for each project. These forms relate to *Structural and Special Inspections* and ensure compliance with Chapter 17 of the USBC. Make note of these inspections on the drawings. (*USBC Chapter 17)*

9. **Non-Proprietary Specifications**: Provide specifications that are either generic in nature or name at least three manufacturers with models/series for each specified product.

10. **Delegated Design Items & Deferred Submittals**: Provide sufficient information on the plans and specifications for the design and/or procurement of structural systems not detailed on the plans (i.e., include steel detailing, precast concrete, pre-engineered metal buildings, etc.). Delegated designs, shall be performed by an engineer licensed in the Commonwealth of Virginia, be reviewed by the Engineer of Record, and be approved by the OUBO prior to installation. Provide a list of all delegated designs on the cover sheet for the project.