



Department of Building Inspection Tall Buildings Update

Ronald Tom
Assistant Director, DBI
City Hall, Room 250 – May 16, 2018



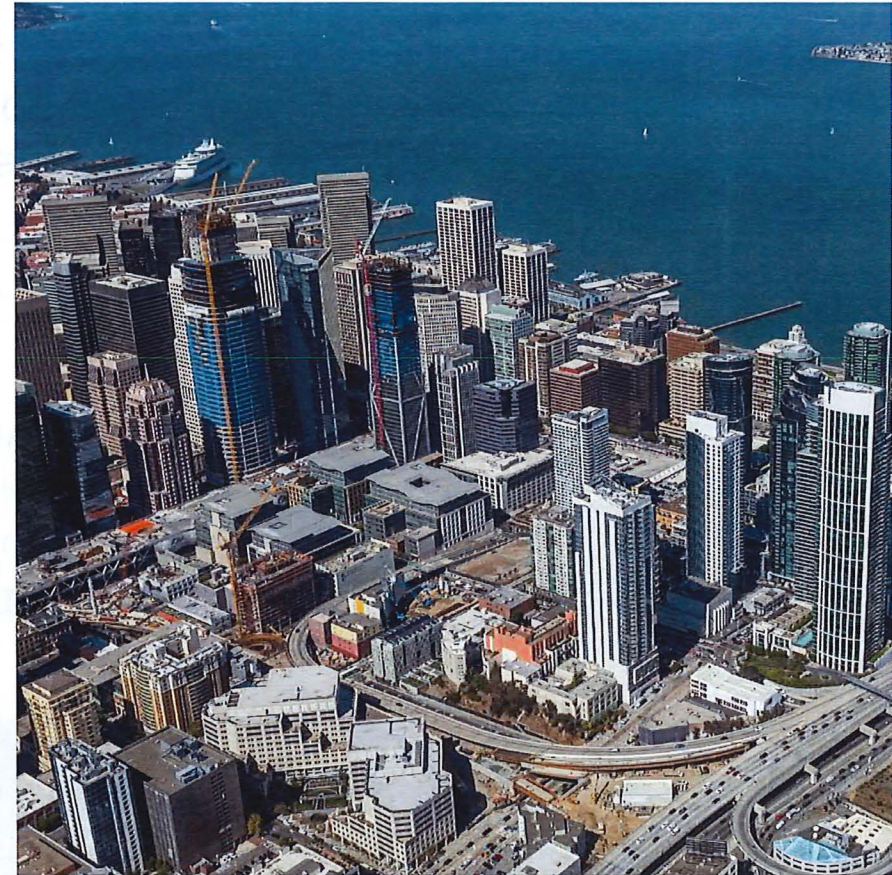
Tall Building Requirements

- DBI has made **several advancements** in its ongoing commitment to improve Tall Building ($\geq 240'$) safety and regulation.
- AB-082 & AB-083 (originally issued in 2008) provide requirements for Tall Buildings in addition to the Building Code.
- Separate from the project's engineers of record, 3rd party Structural Design Reviewers are hired for structural, geotechnical and geological review to advise the design team & DBI.





Tall Buildings in San Francisco



Tall buildings remain rare in San Francisco, representing less than 1 percent of the city's more than 200,000 building stock.



Major Changes since 2016



- **Information Sheet No. S-18** issued: Interim Guidelines & Procedures for Structural, Geotechnical, & Seismic Hazard Engineering Design Review for New Tall Buildings.
- All peer review appointments are now **made by DBI**.
- The Engineering Design Reviewers are now **compensated** by DBI and costs are recovered through fees.
- Two **geotechnical engineers** are required for projects in the city's softest soils unless the foundation reaches bedrock.

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hul, S.E., C.B.O., Director

INFORMATION SHEET

NO. S-18

DATE : December 27, 2017

SUBJECT : Structural and Geotechnical

TITLE : Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings

PURPOSE : To establish interim guidelines and procedures for structural, geotechnical, and seismic hazard engineering design review for new tall buildings, 240 feet or taller, located in the City's softest soils and/or liquefaction zones.

REFERENCE : 2016 San Francisco Building Code (SFBC)
AB-082 Guidelines and Procedures for Structural Design Review
AB-083 Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures

BACKGROUND :

Currently, Administrative Bulletins AB-082 and AB-083 are being reviewed by SEAONC, whose experts may recommend to the Director and to the Building Inspection Commission the adoption of modified guidelines for future tall building safety in San Francisco. This Information sheet provides interim guidelines and procedures to supplement and clarify AB-082 and AB-083.

For the purpose of this information sheet, tall buildings are defined here as buildings 240 feet or taller.

This Information Sheet is applicable to all new tall building projects located in the City's softest soils and/or liquefaction zones, as defined by the California Seismic Hazard maps, including projects under review before the foundation addendum is issued, or at the Director's discretion.

DISCUSSION :

(A) Qualification, Selection and Scope of Review for Geotechnical Reviewers:

- A project subject to this Information Sheet shall include two Geotechnical Reviewers on the Engineering Design Review Team unless the project will include piles/drilled piers anchored to bedrock. Only one Geotechnical Reviewer is required for a project that will anchor piles/piers to bedrock.
- A qualified Geotechnical Reviewer for Engineering Design Review Teams shall be a Geotechnical Engineer (G.E.) registered in California or a Civil Engineer (C.E.) registered in California with substantially demonstrated geotechnical experience who will meet with the Engineer of Record and

Technical Services Division
1660 Mission Street - San Francisco CA 94103
Office (415) 558-6205 - FAX (415) 558-6401 - www.sfdbi.org



Ongoing Improvements

December 2017

Information Sheet S-18: requires monitoring data reports for a duration of 10 years, submitted to DBI annually.

February 2018

Completed and posted a pre-qualified list of experts to serve on future peer review panels.

April 2018

Received SEAONC Board of Directors' Recommendations for AB-082. Next, prepare for BIC approval



Collaborations and Partnerships



301 Mission Seismic
Safety Committee –
Office of the City
Administrator

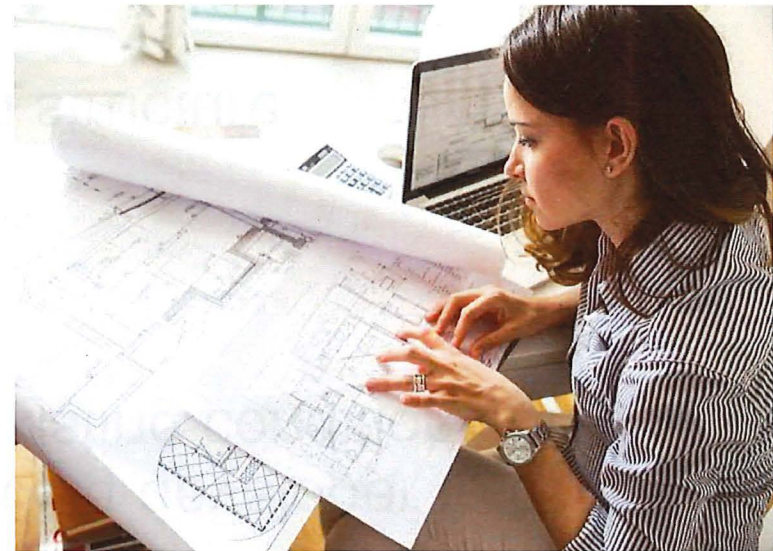
Applied Technology
Council – Tall
Buildings study





Close Monitoring

- July 2017 expert engineering report *Structural Safety Review of Millennium Tower* of 301 Mission, and Feb. 4, 2018 follow-up report find that settlement/tilt do not adversely affect the building's structural safety.
- DBI inspectors conduct life safety inspections every 6 months. Next one is scheduled for June/July 2018





Permits



- Three permits issued to the building developer to conduct exploratory work to determine existing conditions and collect concrete core samples
 - shoring wall
 - mat foundation
 - basement wall of the podium structure
- Work started on 2 permits with several inspections conducted by DBI



Current and Next Steps



Owners/Contractors

- ✓ Develop plan and obtain permits to perform exploratory testing for possible retrofit design



Department of Public Works

- ✓ Issues permits to drill test borings in the public right of way



Engineer of Record

- Hired by the property owner
- Evaluates micropile strategy
- Develops retrofit design and plan, applies for and obtains permits needed



DBI

- Reviews/issues exploratory test permits within the building for possible retrofit plan;
- Assembles peer review to analyze engineer of record's retrofit plan



Thank You!

Ronald Tom, Assistant Director, DBI
ronald.tom@sfgov.org