Engineering Design Review Team
(301 Mission Street Tower Permit)

August 27, 2019

Tom C. Hui, S.E., C.B.O.
Director and Chief Building Official
City and County of San Francisco
Department of Building Inspection
1660 Mission Street
San Francisco, CA 94103-2414

RE: Engineering Design Review
Voluntary Seismic Upgrade and Foundation Stabilization
301 Mission Street Tower
San Francisco, CA
BUILDING PERMIT APPLICATION NOs. 2018.12.04.7402, 2018.12.07.7819, AND 2018.12.07.7828

Dear Tom,

This letter provides a summary of the independent Engineering Design Review of the voluntary seismic upgrade and foundation stabilization for the 301 Mission Street Tower (Permit No. 2018.12.04.7402), and the associated shoring and excavation design (Permit No. 2018.12.07.7819) and indicator pile program (2018.12.07.7828). The Engineer of Record (EOR) for the project is Ronald Hamburger, S.E., of Simpson, Gumpertz & Heger, Inc. (SGH), who has been assisted with supporting geotechnical engineering by John A. Egan, GE and Slate Geotechnical Consultants (Slate). The Engineering Design Review Team (EDRT) consists of Dr. Shahriar Vahdani, Mr. Craig Shields, Dr. Marko Schotanus, and Dr. Gregory Deierlein (chair).

The main features of the structural upgrade are the addition of new piles, extending down to rock on the north and west sides of the building, which will be attached to the building through an extension to the existing mat foundation. Note that the foundation upgrade will require construction beyond the current property line on the north (Mission Street) and west (Fremont Street) sides of the building. Associated with the foundation retrofit is installation and testing of an indicator pile and installation of temporary shoring to retain the sides of the excavation required to construct the foundation upgrade. As stated in the EOR's basis of design, the structural upgrade is designed to meet the requirements of Section 403.9, Voluntary seismic improvements, of the San Francisco Existing Building Code (SFEBC), with the intent to reduce future building settlement and improve the seismic performance of the foundation.

The number and size of piles added is limited mostly by constraints of the site and the capability of the existing construction to transfer loads to the new piles, rather than driven by a targeted improvement in performance. As a result, and consistent with Section 403.9, the focus of the review by the EDRT is an assurance (1) that the altered structure is no less conforming to the

provisions of the San Francisco Building Code with respect to earthquake design than it was prior to the alteration, and (2) that the alterations do not create structural irregularities.

SCOPE OF REVIEW

The EDRT's independent review for the project was performed in accordance with the requirements of AB-082 (Nov. 21, 2018). Specifically, the review addressed the following topics:

- Project design criteria, including performance objectives, site-specific spectra for the Maximum Considered Earthquake (MCE_R) hazard, and MCE_R ground motion histories;
- Review of the geotechnical data and models to estimate resistance of the foundation elements to MCE_R ground motions and settlement under gravity loads;
- Review of structural models and criteria to assess the safety of the superstructure and foundations under MCE_R ground motions and gravity loads;
- Design of new piles and mat extension to meet the San Francisco Building Code requirements for new buildings under MCE_R ground motions and gravity loads;
- Assessment of the existing piles, foundation mat, and superstructure to meeting the requirements of Section 403.9 of the California Existing Building Code.

The EDRT has reviewed material presented to us by SGH, John A. Egan, and Slate during the design process. The following key documents, which reflect the state of the design as of August 23, 2019, include SGH's and Slate's satisfactory responses to EDRT comments.

- Drawings: 301 Mission Street, Perimeter Pile Upgrade. Sheets S001 through S503 (23 sheets total, SGH, dated 8/23/2019).
- Drawings: Perimeter Pile Upgrade – Indicator Pile Program, Sheets T000 through T002 (3 sheets total, SGH, dated 8/23/2019).
- Drawings: Perimeter Pile Upgrade – Temporary Excavation Shoring, Sheets H000 through S527 (12 sheets total, SGH, dated 8/23/2019).
- Project Manual Millennium Tower Perimeter Pile Upgrade (443 pgs., dated 8/23/2019).
- Structural Design Calculations Volumes #1 (R6, 8/21/2019), #2 (R5, 6/7/2019), #3 (R5, 6/7/2019), and #4 (R4, 5/20/2019)
- Final Geotechnical Report_Revision 1 (48 pages plus Appendices A-E, Egan/Slate, dated 8/13/2019).
- Written supplements and reports to EDRT comment log questions (through 8/26/2019).

In addition to providing written comments to the Design Team, which we tracked in a comment log (attached to this letter), we met face-to-face with members of the Design Team eleven times since September 2018. On each occasion we received updates on the design and discussed our most significant comments and the Design Team's responses to those comments. Where appropriate, the Design Team developed supplemental material relating to specific comments for our further review.

FINDINGS

To date, all our comments on the geotechnical and structural design have been adequately addressed by the Design Team, and there are no outstanding or unresolved issues. In our

professional opinion, once the foundation retrofit is constructed, the building is expected to have performance consistent with the stated design objectives and section 403.9 of the SFEBC. Therefore, on the basis of our review we see no reason to withhold approval of the building permit for the structural upgrade of the foundation and the associated permits for shoring and excavation and the indicator pile program.

Given the inherent uncertainties in the foundation settlement and response, we recommend that the building performance be monitored during and upon completion of the proposed construction. Due to the characteristics of the Old Bay clay, which underlies the building foundation, the maximum stress developed within the existing mat and its extension due to uplift forces imposed by the new piles could occur over months, if not years, after jacking of the new piles has been completed. As specified in the design drawings, the EOR (SGH) has proposed a system of monitoring the mat settlement, pile forces, and building movement during jacking of the new piles and continuing for 10 years after completion of construction. The proposed construction has been designed to maintain necessary access to perform the monitoring and inspection of the new piles. The monitoring is to be performed by the Geotechnical Engineer and reported to the EOR and the San Francisco Department of Building Inspection. The EDRT considers the 10-year monitoring program, as specified in the foundation retrofit design drawings, to be appropriate and consistent with San Francisco's building code requirements.

The proposed foundation improvements are not currently considered a required repair according to the provisions of the San Francisco Existing Building Code and are therefore classified as a voluntary seismic retrofit. If the proposed retrofit is not implemented, further building tilt due to continued settlement may increase forces and deformations on the foundation, which in the future, could trigger mandatory repair provisions of the San Francisco Existing Building Code.

Finally, to the extent that successful execution of the proposed design is contingent on field conditions that are consistent with assumptions made in the design and will be validated by (1) testing during the indicator pile program, (2) installation and jacking of the new piles within tolerances, (3) surveys and inspection of structural attachments to the existing mat foundation, and (4) monitoring of building performance after implementation of the proposed foundation upgrade, we recommend that the EDRT remain engaged to advise the City of San Francisco through completion of construction and the 10-year monitoring program.

LIMITATIONS OF SCOPE

The EDRT's scope is limited to Engineering Design Peer Review, where our findings are based on the review of material submitted to us as indicated in our scope of work and the comment log. The responsibility for the design remains fully with the Structural Engineer of Record and Geotechnical Engineer of Record, consistent with AB-082 and Section 6.1.1 of the SEAOC recommendations for Project Design Peer Review [SEAOC, 1999, Recommended Guidelines for the Practice of Structural Engineering in California, Chapter 4, Project Design Peer Review, Professional Practice Committee, Structural Engineers of California, Sacramento California, Fifth Edition, September 1999.]. As outlined in our scope of work, our review has not addressed permitting issues associated with construction that extends outside of the 301 Mission Street building's property line. Moreover, the City of San Francisco is responsible for plan review of the design, including

coordination of the construction work with utilities, transportation, and other infrastructure and activities that are impacted by the construction work.

The EDRT is pleased to continue to assist SFDBI on this important project. Please contact us if you have any questions or need any further discussion in this regard.

Sincerely,

301 Mission Street Foundation Retrofit Engineering Design Review Team

Gregory G. Deierlein, Ph.D., P.E.
Gregory G. Deierlein, Inc.

Shahriar Vahdani, Ph.D., P.E.
Applied GeoDynamics, Inc.

Marko Schotanus, Ph.D., P.E., S.E.
Marx|Okubo Associates, Inc.

Craig Shields, P.E., G.E.
Rockridge Geotechnical

cc: Naomi Kelly (City Administrator), Richard Tam (DBI), Ronald Hamburger (EOR)

Enclosure: 301 Mission Street - EDRT Comment Log - Final, August 27, 2019.

301 Mission Street - Voluntary Foundation Retrofit
Engineering Design Review Team (EDRT) - Log

Review Panel Members

GD	Greg Deierlein, Chair
MS	Marko Schotanus, R&C
CS	Craig Shields
SV	Shah Vadani

Construction Documents Phase		Issue and Revision Dates
1	Calcs V1 - Design Overview	12/3/18
2	Calcs V2 -Gravity	12/3/18
3	Calcs V3 - Lateral	12/3/18
4	Calcs V4 - Details	12/3/18
5	2018_11_30_Geotech Report Combined	11/30/18
6	SGH-301Mission_Permit_Shoring 12-05-2018	12/5/18
7	SGH - 301 Mission_Permit 12-03-2018	12/3/18
8	SGH - 301 Mission_Permit Test Program	12/5/18
9	301 Mission Street-Perimeter Pile Civil-2018.11.2	11/29/18
10	2018-12-05 Shoring Design Report Permit Submit	12/5/18
11	ROHamburger _ Basis of Design (Oct. 9 2018)	10/9/18
12	SGH-301 Mission Specifications 2018-12-03	12/3/18

Comment Log EXCEL filenames, as issued by EDRT

DATE	
1/16/2019	301 Mission Street - EDRT Comment Log V1

Comments by EDRT						Responses by Design Team			Date
No.	**Date**	**Reviewer**	**Document**	**Priority**	**Comment**	**by**	**Date2**	**Response**	**Resolved**
1	1/14/2019	all	1	high	Please confirm the essential basis of the design (e.g., the basis and justification for the retrofit as a voluntary retrofit) as distinguished from other desired objectives (e.g., Calcs V1 - Design Overview (V1), pg. 2). Discuss how the vertical and lateral strength of the foundation system has changed as a result of the settlements, and confirm this should not be considered "Substantial Structural Damage". Confirm how the minimum building code requirements will be demonstrated, including applicable building code (e.g., SF-Existing BC 2016; ASCE 7-10; ACI 318-14) and any exceptions taken to the code (e.g., PEER TBI V2, ASCE 7-16 Chp 6).				
2	1/14/2019	all	1,3		Confirm that the non-symmetric foundation retrofit does not create a plan irregularity (V1, pg. 4) and the effect of any eccentricity on the torsional building response and non-uniform foundation support (i.e., hard points created by installing new piles socketed within rock and variation of axial loads on the existing piles due to unloading on the north and west side of the mat).				
3	1/14/2019	all	1,3,5	high	Confirm the MCE spectrum to be used as the basis of the MCE design evaluation and that it meets the SF building code requirements (e.g., 80% of ASCE 7-10, site class D), and the assumptions and details of ground motion selection and scaling for NLRHA.				
4	1/14/2019	all	1		V1, Table 3-3: Please confirm: (1) if the foundation mat rotation criteria of 0.01 radians applies to the total rotation (including settlement deformations to date), total future rotation (future settlement plus MCE demand), or future earthquakes (MCE demand), and (2) the basis of the 0.01 radian limit, considering induced reinforcing bar strains.				
5	1/14/2019	all	1		V1, Table 3-3: Please confirm how the core wall rebar and wall strains will be determined in the MCE analysis as related to the justification for the specified acceptance criteria.				
6	1/14/2019	all	1		V1, Section 3.6.2.1. Please confirm/edit the language that suggests the geotechnical analyses are not complete, e.g., "layering will include". We note further improvement to the geotechnical study is also referenced at the bottom of Page 12 / 46 of SLATE 11/30/2018 report.				
7	1/14/2019	all	5		Geo Report (Section 9.1, 9.2.3) - Some of the references to pile properties seem to be inconsistent with the latest design as described in the drawings (e.g., reference to 850 kip pile yield force, 18-in dia. steel casing, 3" dia. central bar). Please check and confirm that the geotechnical analysis reflects the proposed final pile foundation design.				
8	1/14/2019	all	5	high	Geo Report (Section 9.4) - Please confirm (1) what additional analyses are included with respect to the settlement analyses and soil-structure interaction (e.g., 3D settlement analyses and consideration of mat/superstructure stiffness in the settlement calculations), and (2) the timetable to complete the "future improvements" that will potentially influence the final foundation design. We note that settlement analysis performed to date is based on a decoupled analysis method (i.e., calculating the stresses within Old Bay clay using FLAC 3D and computing consolidation settlements using one-dimensional consolidation analysis method). If a decoupled analysis approach is adopted for final design, an adequate number of iterations between FLAC 3D and one-dimensional consolidation analyses has to be performed. The last iteration would ensure compatibility between stress calculations from FLAC 3D and one-dimensional consolidation settlement calculations. We note that the settlement values shown on Figure A-6 are the results of the first iteration.				
9	1/14/2019	all	5	high	Geo Report (Sections 9.3 and 9.4) - Please confirm if the effect of tower tilting (e.g., eccentricity caused by tower tilting) is included in the FLAC3D analyses of soil stresses. If not, please include a justification to confirm what effect tilting will have on soil stresses and settlement.				
10	1/14/2019	all	5	high	Effect of Future Consolidation on Integrity of the Existing Mat Foundation – Figure A-6 of the Geotechnical report shows the predicted settlement at the top of the Old Bay clay layer to have significant 'dishing' (distortion from a plane). How much of this distortion will be realized by the mat? Has mat stiffness and its effects on redistribution of settlement at depth been accounted for?				
11	1/14/2019	all	5		Geo Report (Figure A-2, A-3) - Please provide further information on the data and analyses used to create the stress contours in Figures A-2 and A-3. Specifically, please plot preconsolidation pressure values obtained from laboratory testing on Figure A-3-B.				
12	1/14/2019	all	5		Geo Report (Table A-3): Please provide further information on the test data to support the expected soil properties (and variability) in Table A-3. Additionally, identify which of the parameters are based on the total stress method (short term loading) and which parameters are based on the effective stress method (long term loading).				
13	1/14/2019	all	5		Geo Report (Section 9.3.3 and Figures A-7 and A-8). Please confirm the criteria for discarding some of the MC simulations. The claim in the text (that simulations outside of +/- 10% were discarded) seems inconsistent with the histograms in the left panels of A-7 and A-8.				
14	1/14/2019	all	5		Geo Report (Pg. 10/46): Please confirm the assumed water table depths in the settlement calculations.				
15	1/14/2019	all	8	high	Location of Test Pile: Please confirm the location of the test pile. The location shown on Drawing T001 (Beale Street) is different from the location we discussed at the project review meeting (corner of Mission and Fremont).				
16	1/14/2019	all	8		Evaluation of Slick Coat Friction Coefficient: We would suggest considering whether the pile test can be adapted to also evaluate the effective skin friction provided by the Slick Coat material (e.g., by installing another Osterberg cell above the rock and /or installing additional strain gages above the bedrock).				
17	1/14/2019	all	8		Strain Gage Locations: Please include the strain gage locations on Drawing T002.				
18	1/14/2019	all	8	high	Please confirm and specify what steps to take and what instrumentation to provide during the pile test program to record drilling rates and other information to help establish criteria for adjusting the required rock socket lengths during future installation of the foundation piles.				
19	1/14/2019	all	5,7, 12	high	Please include in the geotechnical report, the foundation retrofit drawings, and the specification: (1) the assumed design basis for the rock socket lengths, with provisions to update this based on the test pile, and (2) procedures and criteria for adjusting pile embedment lengths during construction based on drilling rates or other installation data. The procedures for making adjustments to the design pile lengths should include criteria for submittal of design and permit revisions with associated review and approval from DBI. We would recommend that when the adjustments exceed (a) the originally specified values by more than 10% at each pile or (b) affect more than 5 piles, DBI must be informed and review the adjustments.				
20	1/14/2019	all	5, 7	high	Please confirm how the presence of the existing shoring wall between the podium building and tower has been considered in the retrofit design and determination of future mat settlement. Specifically, will the gap between the mat and the top of the shoring wall close and result in additional tower tilt to the west, considering that settlement of the shoring wall is likely to be constrained by the podium building which does not settle at the same rate at the interface with the tower. Please compare the as measured gaps (from the LERA testing program) with the predicted future settlements from analysis.				
21	1/14/2019	all	7, 12	high	Drwgs S402, S502 and Specification: Specify appropriate corrosion protection for the thread rods that will transfer load into the piles.				

Comments by EDRT						Responses by Design Team			Date
No.	Date	Reviewer	Document	Priority	Comment	by	Date2	Response	Resolved
22	1/14/2019	all	7		Drwgs: The EDRT suggests that the design includes provisions for access to the pile anchorage vault so as to permit regular inspection of the pile anchorages. The moisture within the vault should be carefully controlled by a designed system that may include elements such as a drain connecting to the basement drainage discharge system. The EDRT further suggests that the design allows for future adjustment to the jacking load on piles (which would also require access).				
23	1/14/2019	all	7	high	Drwgs S402, S502: Specify how the bond/friction will be eliminated/reduced between the 24" pile casing and the 10' thick mat extension so as to permit preloading of the piles. Please provide supporting information to confirm the effectiveness of the bond/friction break.				
24	1/14/2019	all	7	high	Drwgs S402, S502: Specify how the bond/friction will be eliminated/reduced between the 24" pile casing and the CLSM fill and soil below the mat so as to minimize loading of the underlying clay during pile preloading. Please provide supporting information to confirm the effectiveness of the bond/friction break. Has the variability in the friction coefficient been considered in the evaluation of stresses in the clay layers for settlement calculations?				
25	1/14/2019	all	3,7	high	Calcs V3 - Lateral (V3), Section 7.4: Has the RFI adjustment to mat shear reinforcement (V3, pg. 193) been considered in the evaluation of the mat shear capacity? Perhaps Vs should be neglected in the Vn term (V3, pg. 199); otherwise more analysis is needed to demonstrate that the headed bars will participate in a strut-tie mechanism for shear. Related to this - confirm if the representation of existing headed bars is correct in S401?				
26	1/14/2019	all	4,7		Calcs V4 - Details (V4) and Drwg. S502: Please provide calculations to check the capacity of the anchorage plate attached at the base of the threaded anchor rods.				
27	1/14/2019	all	2,7	high	Calcs V2 - Gravity (V2) and Drwg. S202: Has the influence of the shoring walls (for both the original mat construction and the retrofit) been considered in the response under lateral earthquake effects, including possible effects on pile deformations and/or causing an eccentricity in foundation response?				
28	1/14/2019	all	3,4		Confirm what pile forces are used in the analysis and calculations to check the mat shear/moment capacity and the connection to the new mat extension (Design 800 kips? Thread bar strength 1113 kips? Or Other?)				
29	1/14/2019	all	7,12		Construction Monitoring: What are the plans for monitoring the building settlement (or other response parameters) during the construction and pile prestressing?				
30	1/14/2019	all	6,12		In the shoring drawings and specification, please indicate the type and amount of dewatering that is expected to be necessary for the excavation and construction of the foundation retrofit.				
31	1/14/2019	all	9		Drawings C2.1 and C3: Please confirm whether the proposed pile locations have been coordinated with utilities to ensure that the configuration of new piles will work with the utilities that are to remain in place (e.g., high pressure water on west and north faces)				
32	1/14/2019	all	6		Drwg. S101 - Correct numbering of the construction steps (i.e., change step 7 to step 6/7).				
33	1/14/2019	all	4	high	Interaction between tower and podium: Please confirm how the interaction between the tower and podium has been considered in the MCE analysis and by how much the seismic response of each building is affected by the interaction.				
34	1/14/2019	all	1,5		Please confirm the basis for assuming Site Class D for the design, given that some layers of the underlying soils have low shear wave velocities with Vs(30) below the minimum value (600 ft/sec) specified in ASCE 7-10 for Site Class D w/o accounting for presence of piles, i.e. please demonstrate that presence of piles would increase Vs(30) to a value greater than 600 ft/s.				
35	1/20/2019	SV	5		Section 9.2.1 & Table A1: For OBC, an elastic model of consolidation has been used. Please justify Elastic Modulus for this layer presented on Table A1				
36	1/20/2019	SV	5	Moderate	Section 9.2.3 & 11.7: No load zone has ben specified as 50 feet below the surface of OBC; whereas, in section 11.7 and during the meeting on 12/21/2018, it was stated that all axial pile loads will be transferred to bedrock. Please clarify.				
37	1/20/2019	SV	5		Section 9.2.5 :Please provide site-specific relationships for secondary consolidation based on laboratory testing performed				
38	1/21/2019	SV	5		Table A3 : Please justify degree of consolidation of 0.85. Does using this value result in observed settlement to date? Logically, degree of consolidation varies within OBC layer. Why a uniform shape been assumed for degree of consolidation? Please justify using variation in preconsolidation pressure of -2.64 and +3.96. Why best estimate recompression index (0.1) is outside of minimum to maximum range?				
39	1/21/2019	SV	5	High	Section 9.2.6 : Why calculated settlement at the surface of OBC has been compared with settlement markers at the surface of mat? This assumes OBC settlements are directly transferred to the mat; this assumption ignores mat's rigidity.				
40	1/21/2019	SV	5		Section 9.4 : In the statement " ... the proposed perimeter pile upgrade would be designed to withstand additional settlement as much as 12 inches.", please identify where 12 inches has been assumed to occur.				
41	1/21/2019	SV	5		Section 10.3 : Passive resistance on the south side has been ignored. Please demonstrate that this is not an overly conservative assumption. Also it would be appropriate to capture maximum soil resistance on the south side and compare it with the maximum passive soil pressure the train box has been designed for.				
42	1/21/2019	SV	5		Section 10.4 : It is agreed that due to silo effects, the at-rest and active soil pressure on the side would be minimal. However, train box would interact with the soil in front of south side, and as such, it would be prudent to account for the interaction between the two structures.				
43	1/21/2019	SV	5		Section 10.4 : Please confirm 1 inch gap exists on the east side between the tower and the podium. Other values for the gap has been referred to in various reports. Furthermore, it is not clear how various lateral resistances are combined as presented on Figure B-3. Please provide sketches showing the tower base wall and mat thicknesses / lengths in all four directions for the tower and for the podium.				
44	1/21/2019	SV	5		Section 11.1 : It is stated that "the axial pile resistance will be modeled as a single spring in the vertical direction in the structural model". Please clarify how changes in axial pile loads during static loading condition (due to tilting of the tower) and during design seismic event will be accounted using a single spring representing axial pile group stiffness.				
45	1/21/2019	SV	5		Section 11.3 : What is the best estimate of actual axial pile loads with and w/o consideration for tilting? We note that Figure C-10 provides ratio of individual pile loads to the average pile load, but average pile load hasn't been specified.				
46	1/21/2019	SV	5	High	Section 11.6 : Please comment on computed existing pile lead rotations shown on Figures C-11 and C-12 with those estimated by LERA.				
47	1/21/2019	SV	5	high	Section 11.5.4 : The recommended ultimate skin friction in Franciscan Formation of 12 ksf is somewhat higher than those recently measured at Oceanwide project site which was in the range of 8.5 to 9.0 ksf. Also, for 1,500 kips load, the rock socket length is reported as 32 feet which is in conflict with 12 ksf ultimate frictional capacity. Please clarify.				
48									
49									
50									
	END OF COMMENTS								

San Francisco Planning

SAN FRANCISCO PLANNING DEPARTMENT
1650 MISSION STREET, SUITE 400
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Information Sheet (6/6/2019)
301 Mission/Millennium Tower Perimeter Pile Upgrade Project
Planning Department Case No. 2018-016691ENV

What's the background for this project?
The Millennium Tower (Tower) is a 58-story, 645-foot-tall mixed-use development tower building and a 12-story, 125-foot-tall podium building co-located at 301 Mission Street. Since its construction in 2009, the tower building has experienced settlement due to compression of the soil layer beneath its foundation. The Millennium Tower Homeowner's Association (MTHA) has provided monitoring data indicating that the greatest amount of settlement (17.3 inches) has occurred near the intersection of Mission and Fremont Streets, causing the top of the tower building to tilt approximately 15.5 inches to the northwest.

What's happening now? What isn't happening?
The MTHA is proposing to implement a structural upgrade to the tower building's foundation along Mission and Fremont streets to address the sinking and tilting and prevent further settlement.

Specifically, the proposed Millennium Tower Perimeter Pile Upgrade Project includes the installation of approximately 52 perimeter piles (vertical structural supports) drilled into the ground beneath the sidewalk. The piles would support a new, additional foundation - colloquially referred to as a "collar" foundation - that would be tied to the tower building's existing foundation to provide greater support. The project, if approved, would not change any existing land uses on the Tower site.

The MTHA has applied for various City permits and approvals related to the project. The **San Francisco Planning Department (Planning Department)** is conducting environmental review for the project under the California Environmental Quality Act (CEQA).

Construction activities have not yet started, as the necessary permits cannot be considered for approval until the Planning Department has completed the environmental review and published the results.

What is the project timeline?
Based on the tentative schedule, the Planning Department anticipates publishing a preliminary environmental review document in November 2019. The document will address the project's potential physical environmental impacts, such as effects to transportation, air quality, and noise during the construction period. Review of all necessary permit applications will take place within approximately one-month *after* the environmental review process has been completed. Project construction is anticipated to last approximately 22 months.

What are the other agencies doing?
The **San Francisco Department of Building Inspection (DBI)** is reviewing the proposed structural design and all building permits filed for the project to ensure the structural integrity of the proposed work. DBI is working closely with an independent expert engineering peer review panel to review the project design. The City anticipates completion of the peer review process by approximately June 30, 2019.

San Francisco Public Utilities Commission (SFPUC)
Any groundwater encountered during construction will need to be removed from the site. Prior to any removal, the SFPUC will test groundwater samples to ensure compliance with SFPUC standards. The project team must obtain permit(s) from SFPUC in compliance with federal and state requirements.

San Francisco Public Works (Public Works) is reviewing all permanent and construction-related occupancy of the public right-of-way, along with street tree removal permits.

The **San Francisco Municipal Transportation Agency (SFMTA)** is reviewing the construction logistics plan, including proposed street and sidewalk use as well as traffic, transit, bicycle, and pedestrian rerouting associated with project construction.

The **San Francisco Department of Public Health** is reviewing the project for conformance with applicable City regulations related to soil and groundwater contamination, collectively known as the Maher Ordinance.

How could this project affect me?
During the construction period, large construction equipment would be operated and stored within the public right-of-way along Fremont, Mission, and Beale Streets. These construction areas would be closed to the public.

On weekdays, construction work is anticipated to occur between 7 am and 8 pm as is permitted by the Noise Ordinance (San Francisco Police Code Article 29). There may be occasional weekend work between 7 am and 8 pm. Nighttime equipment and material deliveries are anticipated during an approximately nine-month portion of the project. Construction activities occurring at night (i.e., 8 pm to 7 am) would require special permits from SFMTA and DBI. Residents and employees in nearby buildings may experience noise from project construction activities. Public Works and SFMTA anticipate that some of the travel lanes and sidewalks adjacent to the project site would be closed temporarily to enable the construction to proceed safely. In addition, SFMTA may relocate existing Muni and other bus stops near the project site during construction.

A consultant is developing a transportation management plan with input from the project sponsor and in coordination with City staff to minimize disruption in the project vicinity.

If you have concerns about project construction activities, please contact Nick Roosevelt of J. Abrams Law, P.C. at (415) 549-8650 or nroosevelt@jabramslaw.com.

Is there any public notification of the environmental review?
As part of the environmental review for the project, the Planning Department will distribute a Notification of Project Receiving Environmental Review (also known as a Neighborhood Notice) to the residents and property owners on-site and within 300 feet of the Tower site, as well as to neighborhood organizations in the vicinity and persons who have submitted a written request for a copy of the Neighborhood Notice to the Environmental Review Coordinator listed below.

The Planning Department issues a Mitigated Negative Declaration (MND) if it determines that the proposed project, with mitigation, could not have a significant adverse effect on the environment. If the Planning Department prepares a preliminary MND for the project, it will distribute a Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration to Tower residents and property owners and other residents and property owners within 300 feet of the Tower site, as well as to organizations and individuals who have submitted a written request for a copy of the Notice to the Environmental Review Coordinator listed below. The Planning Department will also post the Notice of Availability of and Intent to Adopt a Mitigated Negative Declaration on the Planning Department's website at https://sfplanning.org/environmental-review-documents. Publication of an MND is not a decision by the City to carry out or not to carry out the proposed project.

Public Works will post additional public notice of public hearing(s) before the Board of Supervisors regarding one or more approval actions associated with the project.

How can I participate/obtain more information?
You can participate in several stages of the project review and approval process.

You can: (1) submit comment during the public comment period following the distribution of the Neighborhood Notice or following publication of the preliminary environmental review document; (2) access the environmental review document and Notice of Availability on the Planning Department's website at https://sfplanning.org/environmental-review-documents; and (3) provide comment at any public hearings that may take place as part of the project review and approval process.

The project-related plans, the Neighborhood Notice, and other information related to the environmental review of the project are available at the Planning Department's Property

Information Map accessible online at http://propertymap.sfplanning.org. Search for 301 Mission Street or 2018-016691ENV.

For questions related to the project's potential physical environmental effects or the CEQA review process, please contact Kei Zushi, Environmental Review Coordinator, at (415) 575-9038 or CPC.301missionCEQA@sfgov.org.

For questions related to the Planning Department's review of the project outside of the CEQA process, please contact Claudine Asbagh, Principal Planner, at (415) 575-9165 or Claudine.Asbagh@sfgov.org.