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June 24, 2021
Project No. 2597-CR

Citivest Commercial Investments, LLC
4340 Von Karman Avenue, Suite 110
Newport Beach, California 92660

Attention: Mr. Dana Haynes

Subject: Geotechnical Evaluation Update
Tract No. 34544
City of Moreno Valley, Riverside County, California

References: See Page 5

Dear Mr. Haynes:

As requested, GeoTek, Inc. (GeoTek) has prepared this letter to update our referenced report (GeoTek, 2014) and to provide updated seismic design parameters consistent with ASCE 7-16 and the 2019 California Building Code.

Site conditions have generally remained the same. It is also our understanding that the proposed development remains unchanged since the referenced evaluation (GeoTek, 2014) was completed.

All recommendations provided in the referenced report remain valid for the project site, unless specifically superseded in this report or future reports prepared by this firm.

GeoTek has reviewed a *Conceptual Grading Plan*, prepared by Blue Enginering & Consulting, Inc., dated March 11, 2021, as provided to us by Citivest Commercial Investments, LLC. Based on our review, it is our opinion that the reviewed plans have been prepared consistent with the geotechnical recommendations provided within the referenced GeoTek report (GeoTek, 2014). These plans are considered to be geotechnically suitable.

The site is located at approximately 33.9255° Latitude and -117.2231° Longitude. Site spectral accelerations (S_s and S_1), for 0.2 and 1.0 second periods for a Class "D" site, was determined from the SEAOC/OSHPD web interface that utilizes the USGS web services and retrieves the seismic design data and presents that information in a report format. As noted, using the ASCE 7-16 option on the SEAOC/OSHPD website, the values for S_{M1} and S_{D1} are reported as "null-See Section 11.4.8" (of ASCE 7-16). As noted in ASCE 7-16, Section 11.4.8, a site-specific ground motion procedure is recommended for Site Class D when the value S_1 exceeds 0.2. The value S_1 for the subject site exceeds 0.2.

For a site Class D, an exception to performing a site-specific ground motion analysis is allowed in ASCE 7-16 where S_1 exceeds 0.2 provided the value of the seismic response coefficient, Cs, is conservatively calculated by Eq 12.8-2 of ASCE 7-16 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Eq. 12.8-3 for $T_L \geq T > 1.5T_s$ or Eq. 12.8-4 for $T > T_L$.

Assuming that the Cs value calculated by and used by the structural engineer allows for the exclusion per ASCE 7-16, noted above, then a site-specific ground motion analysis is not required. For this assumption and condition, the following seismic design parameters, based on the 2015 National Earthquake Hazards Reduction Program (NEHRP), are presented on the following table:

SITE SEISMIC PARAMETERS	
Mapped 0.2 sec Period Spectral Acceleration, S_s	1.707g
Mapped 1.0 sec Period Spectral Acceleration, S_1	0.666g
Site Coefficient for Site Class "D," F_a	1.0
Site Coefficient for Site Class "D," F_v	1.7-see Section 11.4.7 of ASCE 7-16
Maximum Considered Earthquake Spectral Response Acceleration for 0.2 Second, S_{MS}	1.707g
Maximum Considered Earthquake Spectral Response Acceleration for 1.0 Second, S_{M1}	1.133-see Section 11.4.7 of ASCE 7-16g
5% Damped Design Spectral Response Acceleration Parameter at 0.2 Second, S_{DS}	1.138g
5% Damped Design Spectral Response Acceleration Parameter at 1 second, S_{D1}	0.755g-see Section 11.4.7 of ASCE 7-16
PGA_M	0.795g
Seismic Design Category	D

Final selection of the appropriate seismic design coefficients should be made by the project structural engineer based upon the local practices and ordinances, expected building response and desired level of conservatism.

The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to call our office.

Respectfully submitted,
GeoTek, Inc.

Edward H. LaMont
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Principal Geologist

Robert R. Russell
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Anna M. Scott
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REFERENCES

Blue Engineering & Consulting, Inc., 2021, "Conceptual Grading Plan, Cottonwood Village, Tract 34544", dated March 11.

GeoTek, Inc., 2014, "Geotechnical Evaluation, Proposed Single-Family Residential Development, APN 479-140-022, City of Moreno Valley, Riverside County, California", Project No. 1165-CR3, dated April 10.