

## **F-2 Supplemental Geological Lot Evaluation**

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## GEOLOGY REPORT APPROVAL LETTER

April 23, 2015

Champion Real Estate Co.  
11601 Wilshire Boulevard, Suite 1650  
Los Angeles, CA 90025

LOG # 87930  
SOILS/GEOLOGY FILE - 2  
AP

TRACT: 2209  
LOT(S): 3  
LOCATION: 1765 Vista Del Mar Avenue

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Supplemental Report	LA-1183A	04/10/2015	Group Delta
<u>PREVIOUS REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Dept. Approval Letter	85579-01	02/20/2015	LADBS
Addendum Report	LA-1183E	02/12/2015	Group Delta
Dept. Correction Letter	85579	09/17/2014	LADBS
Geology Report	LA-1183A	09/07/2014	Group Delta

The Grading Division of the Department of Building and Safety has reviewed the referenced current report that is supplemental to a previous a fault activity investigation at 1756 and 1760 Argyle Avenue. According to the report, an existing single-family residential lot will be annexed to the southeast corner of the project site. The previous investigation included exploratory trenches, borings and CPT soundings that covers the annexed lot. No active (Holocene) faults were observed on or nearby the project site. Therefore, no building restrictions were recommended by Group Delta. The current referenced report is acceptable, provided the following conditions are complied with during site development:

1. All conditions of the above referenced Department approval letter (dated 02/20/2015, Log #85579-01) shall apply.

DANIEL C. SCHNEIDERREIT  
Engineering Geologist I

DCS/dcs  
Log No. 87930  
213-482-0480

cc: Group Delta, Project Consultant  
LA District Office



# GROUP DELTA

April 10, 2015

GDC Project No. LA-1183A

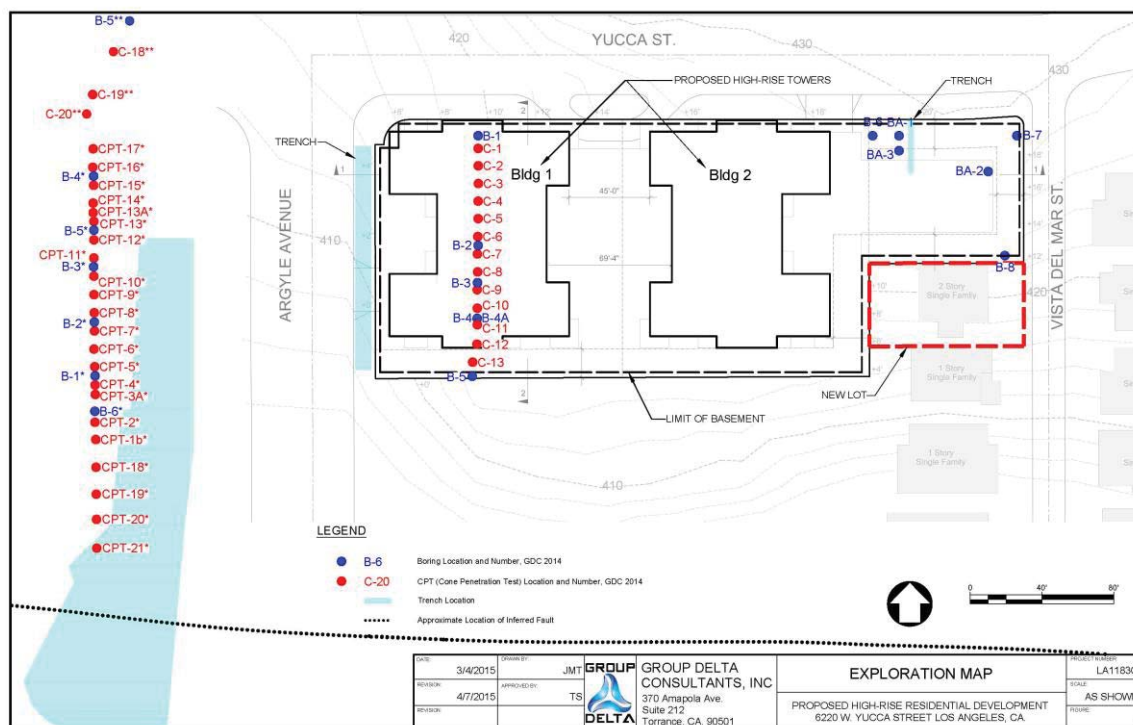
Champion Real Estate Company  
11601 Wilshire Boulevard, Suite 1650  
Los Angeles, CA 90025

Attention: Mr. Greg Beck

Subject: Supplemental Geologic Lot Evaluation  
1765 N. Vista Del Mar Avenue  
Hollywood, California

Mr. Beck:

As requested, Group Delta Consultants, Inc. (GDC) has prepared this Supplemental Geologic Evaluation report for the due diligence for the purchase of the residential property at 1765 N. Vista Del Mar Avenue. This report is a supplement to the previously approval Fault Activity Investigation and other supplemental reports submitted for your project planned at 1756 and 1760 Argyle Avenue in Hollywood. The purpose for this report is to evaluate an additional lot located at 1765 N. Vista Del Mar Avenue which will be annexed to the Champion Development investigated. The location of the lot is shown inside the red dashed box in Figure 1. Also shown is the coverage of the explorations performed from the previous fault activity investigations adjacent to this lot.



**Figure 1: Location of New Lot with Respect to the Proposed Development.**

## SITE EVALUATION

This report conveys a review of our fault investigation reports previously submitted to the City of Los Angeles, including the city approved Champion Development (GDC, 2015a-b; 2014 a-c) to address whether there is any active faulting on the subject lot. The pre-Holocene faulting found during the aforementioned studies have proven that the normal faulting in the area are the result of fold bending resulting in dilation across the crest. In the trench excavated ~50 feet to the north of the 1765 Vista Del Mar property, well-stratified trench deposits were continuous and not broken by faulting. The hollow stem borings, B-7 and B-8 were continuous core samples and bucket auger BA-2 showed that there was a deep Holocene channel trending north to south along Vista Del Mar Avenue. Downhole logging of borings BA-1 and BA-3 provided for a good visual examination of the upper terrace geology in the area of the lot and for the east side of the Development.

Bucket auger BA-1 and BA-3 were located about five feet west of the eastern trench. When logging BA-1, the upper foot of sedimentary materials consisted of a silty clay artificial fill. Below the artificial fill was a typical organic horizon that was on top of the upper older alluvium deposit, as discussed in the city approved Champion Development reports (see references). This upper older alluvium was logged from around three feet to eighteen feet. This deposit was horizontal with no faulting breaking the >135 kya sediments. Below eighteen feet was the lower older alluvium deposits. This deposit had gradational bedding with abundant fractures though no faulting was logged.

Bucket auger B-3 provided the geological information regarding age of the anticline-related faults. That boring penetrated both the nearly horizontal >135 kya older alluvium and the subjacent folded upper Pleistocene lower older alluvium. An easily identifiable, normal fault was present in the boring below the trench in the eastern part of the Development and was truncated by unbroken older ~135 kya (or older) colluvium and the upper older alluvium below the eastern trench as noted on the site plan; Figure 1. Thus, the boring and the trench combine to support the anticline-related faulting to be absence of Holocene slip.

In Bucket Auger BA-3, the fault vertically separates (normal slip) beds of lower older alluvium by 1.8 feet at a depth of 13-17 feet with minor lateral slip as evidenced by the slight stratigraphic mismatch. A bed at about 10 feet is vertically separated by about 2 inches. Thus, at least two Pleistocene slip events are recorded with the last imparting about 2 inches of separation.

The recent investigations illustrated that the fault in BA-3 passes beneath the un-faulted upper older alluvium of the Champion East Trench, judged to be minimally 135 kya. Both the boring and the trench provide good evidence that the fault is not active according to City policies. GDC obtained similar results from a trench study north of Yucca Street that demonstrated that similar anticline-related faults of the same system are not active and was part of the older terrace deposits that overly the lower older alluvium deposits which have an aerial extent under the 1765 Vista Del Mar property, if not graded away during the residential structure development.

The recent investigation of activity levels of the anticline-related faults show them to be pre-Holocene and greater than 135kya. This agrees with earlier studies (GDC, 2015a-b; 2014a-c) which indicate that if step-over structures are extant at the lot, they are pre-Holocene. Available information indicates that if the Argyle and Yucca strands of the Hollywood fault do exist, they are clearly pre-Holocene and thus not indicators of an active step-over zone. Further, the recent GDC investigations strongly suggest that the fault mapped by this firm and others (for example California Geological Survey, 2014) near the base of the slope between Champion and Carlos Avenue (Figure 1) , though not active, extends well west of Argyle Avenue and thus likely precludes a step-over near Argyle Avenue but does not affect this site. Hence, the GDC (2014b) interpretations validates the inactive shear anticline-fault model of this area. The anticline and the associated faults are not active according to Alquist-Priolo definitions.

After evaluating the report to assess the proposed annexing of the 1765 Vista Del Mar Avenue property, our previous fault investigation reporting illustrated that the general trend of the geology and geological structure indicates that the site is covered by earlier studies. The following indicators prove that the studies already preformed in the general area shows that active faulting in the area, including the subject lot, does not exist under the Alquist-Priolo Act provisions.

In summary, interpretation of the four (4) fault investigation reports performed in the area validates the inactive shear anticline-fault model of this area. This conclusion can be projected across the 1765 Vista Del Mar lot. Since the anticline and associated faults are not active according to Alquist-Priolo definitions no active faults project across the Vista Del Mar lot.

## **CONCLUSIONS**

Based on the detailed investigations for the Champion Development of the Champion site and three adjacent properties in the Yucca-Argyle area of Hollywood that included fault trenches, CPT-soundings and soil cores, GDC concludes that:

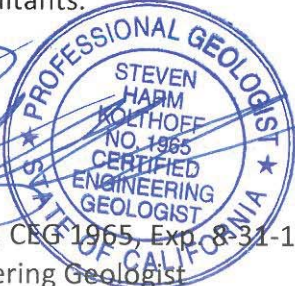
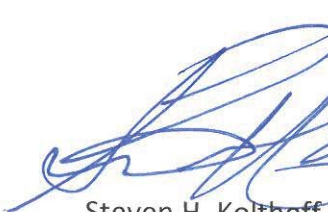
- This updated detailed analysis confirms are findings in the submitted reports that the Champion site is characterized by unbroken Holocene sediments and underlying un-faulted Pleistocene Mud Flow Unit deposits that are at least 135 kya, thereby demonstrating that no active faults are projected onto the 1765 Vista Del Mar lot.



## CLOSURE

We look forward to continue working with you on this project. Please give me a call if you have any questions.

Sincerely,  
Group Delta Consultants.



Steven H. Kolthoff, CEG 1965, Exp. 8-31-15  
Consulting Engineering Geologist



Michael Reader, GE  
CEO, Geotechnical Engineer

## REFERENCES

Group Delta Consultants, Inc., 2015a, Fault Activity Investigation, East and West Millennium Sites 1733-1741 Argyle Avenue; 6236 and 6334 West Yucca Street; 1720-1730, 1740, 1745-1760, and 1762-1770 N. Vine Street; 1746, 1748-1754, 1760, and 1764 N. Ivar Avenue, Hollywood Area, City of Los Angeles, California.

Group Delta Consultants, Inc., 2015b, Response to the City of Los Angeles Geology Correction Letter #85579, Fault Activity Investigation, Yucca-Argyle Apartments - Champion Site, SE Corner of Yucca Street and Argyle Avenue, 1756 and 1760 Argyle Avenue, Hollywood District, City of Los Angeles, California.

Group Delta Consultants, Inc., 2014a, "Fault Activity Investigation," Yucca-Argyle Apartments, 1756 and 1760 Argyle Avenue, Hollywood Area, City of Los Angeles, CA, GDC Project no. LA-1175 A.

Group Delta Consultants, Inc., 2014b, "Fault Activity Investigation," 1756 to 1760 Argyle Avenue, Hollywood Area, City of Los Angeles, CA, GDC Project no. LA-1183 A.

Group Delta Consultants, Inc., 2014c, "Fault Activity Investigation," 1800 Argyle Avenue, Hollywood Area, City of Los Angeles, CA, (Supersedes Previous Version 9/3/14) GDC Project no. LA-1175 A.

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## GEOLOGY REPORT APPROVAL LETTER

February 20, 2015

LOG # 85579-01  
SOILS/GEOLOGY FILE - 2  
AP

Greg Beck  
11601 Wilshire Boulevard, Suite 1650  
Los Angeles, CA 90025

TRACT: 10149  
LOT(S): 1 and 3  
LOCATION: 1756 and 1760 Argyle Avenue

<u>CURRENT REFERENCE</u> <u>REPORT/LETTER(S)</u>	<u>REPORT</u> <u>No.</u>	<u>DATE(S) OF</u> <u>DOCUMENT</u>	<u>PREPARED BY</u>
Addendum Report	LA-1183E	02/12/2015	Group Delta
Oversized Docs.	"	"	"

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Dept. Correction Letter	85579	09/17/2014	LADBS
Geology Report	LA-1183A	09/07/2014	Group Delta

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that present a fault rupture investigation at 1756 and 1760 Argyle Avenue for the future devolvement of the property. The site is currently occupied by 2-story apartment buildings.

The property is located within an Official Earthquake Fault Zone that was established (November 6, 2014) by the California Geological Survey for the Hollywood fault (on the USGS 7.5 minute Hollywood Quadrangle). The investigation included a transect of CPT soundings and continuous core borings in the west portion of the site and an exploration trench along the western edge. Additional exploration was conducted to address the Department correction letter dated 09/17/2014, which included three continuous core borings, three bucket auger borings and a trench just east of the site. Dr. Roy Shlemon (a well-known expert in soil stratigraphy, age-dating of soils and assessment of geologic hazards) provided a detailed soil stratigraphic/pedological analysis by to estimate the age of the soil horizons encountered in the recent trench. Data from offsite projects investigated by Group Delta were also used for the geologic analysis of the site.

The investigation documents folding and faulting of Pleistocene "older" alluvium (designated Qoal in the report). The age of the folding and faulting is estimated to be greater than 135,000 to 150,000



years. No active (Holocene) faults were observed on the site or nearby the site. Therefore, no building restrictions were recommended by Group Delta.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2014 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. Prior to issuance of any permit, a soil engineering report shall be submitted to the Grading Division to provide design recommendations for the proposed grading/construction.
2. During construction, the project engineering geologist shall observe all excavations that expose the natural alluvial soils to verify the conclusions of the fault investigation and that no Holocene faults are exposed. The project engineering geologist shall post a notice on the job site for the City Grading Inspector and the Contractor stating that the excavation (or portion thereof) has been observed and documented and meets the conditions of the report. No fill or lagging shall be placed until the LADBS Grading Inspector has verified the documentation.
3. A supplemental report that summarizes the geologist's observations (including photographs and simple logs of excavations) shall be submitted to the Grading Division of the Department upon completion of the excavations. If evidence of active faulting is observed, the Grading Division shall be notified immediately. (7009)



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cc: Group Delta , Project Consultant  
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