GEOLOGIC FAULT INVESTIGATION

1045 EAST BROADWAY
SAN DIEGO, CALIFORNIA

GEOCON
INCORPORATED
GEOTECHNICAL
CONSULTANTS

PREPARED FOR

LEVINE, STEINBERG, MILLER & HUVER
SAN DIEGO CALIFORNIA

JULY 22, 2010
PROJECT NO. T2439-77-01

Project No. T2439-77-01
July 22, 2010

Levine, Steinberg, Miller & Huver
550 West C Street, Suite 1810
San Diego, California 92101-8596

Attention: Mr. Craig Miller

Subject: 1045 EAST BROADWAY
SAN DIEGO, CALIFORNIA
GEOLOGIC FAULT INVESTIGATION

Dear Mr. Miller:

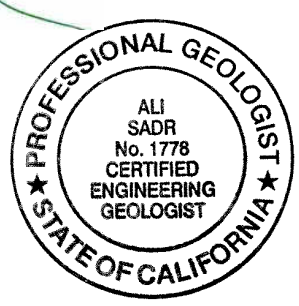
In accordance with your authorization, we herein submit the results of our geologic fault investigation for the subject property. We performed this investigation to assess whether or not faults traverse the property and the activity of faults if encountered at the site. The results of our study indicate that Holocene-age faults are not present on the property.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Ali Sadr
CEG 1778



Shawn Foy Weedon
GE 2714

AS:SFW:dmc

(4/del) Addressee

TABLE OF CONTENTS

GEOLOGIC FAULT INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geologic fault investigation for the northeast portion of the city block located at the southwest corner of East Broadway and Eleventh Street in San Diego, California (see Vicinity Map, Figure 1). The purpose of the fault study is to evaluate if faults traverse the property. The site is located within the *City of San Diego Downtown Special Fault Zone* and requires a detailed fault study to satisfy the City of San Diego Building Department requirements. In addition, the property is located about 30 feet west of a State of California Earthquake Fault Zone.

The scope of this investigation included a review of stereoscopic aerial photographs and readily available published and unpublished geologic literature (see *List of References*). We performed a field investigation that included geologic mapping and the excavation of two fault trenches. We performed the field investigation on June 23 and 26, 2010. The fault trench logs are presented in Appendix A, Figure A-1 (map pocket). The approximate locations of the fault trenches are presented on the Site Plan, Figure 2.

2. SITE DESCRIPTION

The site encompasses the northeast portion of a city block located at the southwest corner of East Broadway and the Eleventh Street of the Centre City area within downtown San Diego, California. The property limits are approximately 150 feet north-south by 100 feet east-west. The site is currently vacant due to recent demolition operations. The site was occupied by a concrete block two-story automotive service facility from 1957 to 2006 (most recently by a Goodyear Tire Company retailer and automotive service center, and an industrial warehouse. The site is bounded by a multi-family residential unit to the east and a paved parking area to the south. Our literature review indicates that the site topography has not changed significantly since the early 20th Century. The site slopes gently from the east and south with an average elevation of approximately 75 feet above mean sea level (MSL).

3. AERIAL PHOTOGRAPH REVIEW

Prior to our field investigation, we reviewed aerial photographs to assist in our evaluation of geomorphic features that could be indicative of faulting on the property. The available 1929 and 1953 aerial photos post-dated the grading of the site. Geomorphic features suggestive of faulting were not observed during our photo review.

4. FAULT TRENCH EXCAVATIONS

Fieldwork consisted of the excavation and logging of two exploratory fault trenches. The locations of the exploratory trenches are shown on the Site Plan, Figure 2. We excavated the trenches to a maximum depth of approximately 13 ½ feet using a large excavator equipped with a 24-inch-wide bucket. Trench logs and an explanation of the geologic units encountered within the trenches are presented on Figure A-1. Both trenches were oriented roughly east-west, at high angles to the local trend of splays within the Rose Canyon Fault Zone. We excavated trench FT-1 near the northern boundary and trench FT-2 near the southern property line. Fault trenches ranged in length from approximately 90 to 95 feet.

We selected trench locations based on previously mapped fault trends and physical constraints related to existing property boundaries and the active utilities. Stationing, gridding, and reference leveling along the trench sidewalls were established during logging for accurate location of geologic features. We cleaned, logged, and examined the entire length of the trench sidewalls for evidence of faulting. Faulting could be indicated by vertical or lateral offsets of bedded units, contacts, laminations, tectonically disturbed or deformed clay layers, clay gouge, soil- or clay-filled fractures, fissures, or slickensides.

5. SOIL AND GEOLOGIC CONDITIONS

We identified soil and geologic conditions at the site by review of published geologic literature for the general area, our observations within the exploratory trenches, and our experience in the general area. Based on the trenching operations and review of the literature, two surficial units and one geologic formation underlie the site. These consist of undocumented fill, topsoil and Old Paralic Deposits Unit 6 (formerly known as the Bay Point Formation). We described the units in order of increasing age.

5.1 Undocumented Fill (Qudf)

We encountered a layer of fill near surface in the trenches. The undocumented fill soil generally consists of loose to medium dense, moist, silty and clayey, fine to coarse sand with some gravel and scattered chunks of asphalt and brick. The maximum observed thickness of the undocumented fill is approximately 4 feet. We encountered a large pocket of slurry fill at Station 65 in trench FT-2, associated with the recent remediation at the site.

5.2 Topsoil

Overlying the formational materials in most locations is well-developed topsoil (where not removed by grading) consisting of an argillic or clay horizon (B_2) and a highly weathered, transitional

layer (B_3). The A horizon had been removed during the grading operations. The B_2 layer consists of soft, moist, dark grayish brown sandy clay and the transitional layer (B_3) consists of medium dense to dense, moist dark brown, clayey sand.

5.3 Old Paralic Deposits Unit 6 (Qop6)

Pleistocene-age Old Paralic Deposits Unit 6, formerly known as the Bay Point Formation, exists below the undocumented fill and topsoil. The formational materials consist of medium dense to very dense, brown, reddish brown, greenish brown to grayish brown, and yellowish brown; clayey to silty sandstone; and interlayers gravelly and cobbley conglomerate with silty sand matrix. Localized areas of the sandstone and gravel beds are weakly to moderately cemented. We observed a large lens of cobbley sand associated with old drainage channel in trench FT-1. The upper portion of this formation has been divided into separate, laterally extensive subunits for the purposes of this report (see Fault Trench Logs, Appendix A). Black manganese oxide mineralization, occurring as horizontal banding parallel to sand interlayers and coatings on gravels, was locally encountered in the fault trench. The manganese oxide mineralization indicates long-term (10,000 or more years before present) exposure to groundwater and diagenesis. The Old Paralic Deposits are considered suitable for the support of a future structure.

6. GROUNDWATER

We did not encounter groundwater in our exploratory excavations. We do not expect groundwater to significantly affect project development. It is not uncommon for groundwater seepage conditions to develop where none previously existed due to the permeability characteristics of the geologic units encountered on site. During the rainy season, seepage conditions may develop within the sidewalls of future excavations that may require special consideration during grading operations. Groundwater elevations are dependent on seasonal precipitation, irrigation and land use, among other factors, and vary as a result. Proper surface drainage will be critical to future performance of the project.

7. GEOLOGIC HAZARDS

7.1 Faulting

The *City of San Diego Seismic Safety Study, Geologic Hazards and Faults, Sheet 17* defines the site with a *Hazard Category 13: Downtown Special Fault Zone.* In addition, the California Geological Survey has issued a revised Earthquake Fault Zone Map for the Point Loma Quadrangle dated May 1, 2003, which includes portions of the downtown San Diego area. The property is located within one of these Earthquake Fault Zones as shown on the Earthquake Fault Zone Map, Figure 3. A review of geologic literature, information obtained during our fault study, and experience with the soil and geologic conditions in the general area indicate that known active faults are not located at the site.

The property is located near the southern onshore portion of the Rose Canyon Fault Zone in an area that is transitional between the predominately right-lateral slip faulting characteristic of the faults north of the downtown area and the predominantly dip slip faulting characteristic of faults making up the southern portion of the Rose Canyon Fault Zone (Treiman, 1993). South of the downtown area, the major faults that compose the southern end of the Rose Canyon Fault Zone are the Spanish Bight, Coronado and Silver Strand Faults. The east side of this zone is represented by the La Nacion Fault (Treiman, 1993). Together, these faults define a wide and complexly faulted basin occupied by San Diego Bay and a narrow section of the continental shelf west of the Silver Strand.

Trenching by Lindvall and others (1990) on the Rose Canyon Fault in Rose Canyon several miles north of the site, by Owen Consultants (referenced by ICG, 1990) for the police station and by Kleinfelder Incorporated at a site near First Avenue and Market Street in the downtown area, have shown that Holocene soils (soils less than 11,000 years old or less) have been displaced by faulting within the Rose Canyon Fault Zone. The property lies west of the police station site.

We have performed a fault investigation for the neighboring blocks to the west (Geocon 2003), southwest (Geocon 1998) and south of the site, between 9th and 14th Streets, south to Island Avenue (Geocon 2001 and 2004). Other geotechnical firms have also performed fault studies south of the property, [Woodward Clyde (1981), CTE (2000 and 2006)]. None of these investigations indicate presence of active or potentially active faults that may have an impact on the project site. Figure 3 presents the approximate locations of fault studies within the vicinity of the subject property.

7.2 On-Site Faulting Evaluation

We performed two fault trenches to a maximum depth of approximately 13½ feet along the northern and southern property boundaries. The trenches were in a generally east-west direction, approximately perpendicular to the dominantly north-south trend of the faulting within the downtown area. The locations of the fault trenches are shown on Figure 2 and the logs of trenches are included as Figure A-1. Faulting in the southern portion of the Rose Canyon Fault Zone, which includes the downtown area, is predominately dip slip (Treiman, 1993). Relatively large offsets and discordance in the stratigraphy would be expected if active faulting were present. For the purposes of our fault evaluation, the Old Paralic Deposits Unit 6 was divided into separate subunits. The stratigraphic position of the units and their lithologic descriptions are presented on the trench log. Stratigraphic correlation within the fault trench indicates that the relative positions of units within the Old Paralic Deposits Unit 6 are continuous or depositionally pinch out. The conglomerate and sandstone layers in the trench are not offset and are nearly horizontal. We observed lighter color silty sand pockets and veins, perhaps indicative of paleo-liquefaction. At several locations along the trench alignment, we also observed carbonate mineralization and manganese oxide deposits. We did not observe indications of faulting, such as discordant bedding, clay gouge, shearing, or slickensides, in the fault

trenches. In our opinion, active, potentially active, or inactive faults do not traverse the site and building setbacks will not be required.

7.3 Seismicity

The historic seismicity or instrumental seismic record in the San Diego area indicates that there have been numerous minor earthquakes in the San Diego Bay area, including events in 1964 and 1985 between M3 and 4+ (Treiman, 1993). Surface rupture has not been recorded with any of the seismic activity. Anderson and others (1989) indicate that the greatest peak acceleration recorded in the downtown area (at San Diego Light and Power) was 34 cm/sec^2 (0.03g) produced by an offshore earthquake in 1964 (M 5.6).

Anderson and others (1989) have also estimated recurrence times for major earthquakes that may affect the San Diego Region. By combining geologic data with their model for ground motion attenuation for each earthquake event, they have provided estimation for the recurrence rate of various levels of peak ground acceleration in the San Diego area. The results of their work indicate that peak accelerations of 10 to 20 percent gravity (g) are expected approximately once every 100 years (Anderson and others, 1989). Higher peak accelerations will also occur but with a lower probability of occurrence or higher return period.

Lindvall and others (1991) have postulated a maximum likely slip rate of about 2 mm per year and a best estimate of about 1.5 mm per year, based on three-dimensional trenching on the Rose Canyon Fault in Rose Canyon several miles north of the site. They found stratigraphic evidence of at least three events during the past 8,100 years. The most recent surface rupture displaces the modern "A" horizon (topsoil), suggesting that this event probably occurred within the past 500 years.

Historically, the Rose Canyon Fault has exhibited low seismicity with respect to earthquakes in excess of magnitude 5.0 or greater. Earthquakes on the Rose Canyon Fault having a maximum magnitude of 7.2 are considered representative of the potential for seismic ground shaking within the property. The "maximum magnitude earthquake" is defined as the maximum earthquake that appears capable of occurring under the presently known tectonic framework.

According to the computer program *EZ-FRISK* (Version 7.42), seven known active faults are located within a search radius of 50 miles from the property. The nearest known active fault is the Rose Canyon Fault, located approximately 0.5 miles west of the site is the dominant source of potential ground motion. Earthquakes that might occur on the Rose Canyon Fault Zone or other faults within the southern California and northern Baja California area are potential generators of significant ground motion at the site. The estimated deterministic maximum earthquake magnitude and peak ground acceleration for the Rose Canyon Fault are 7.2 and 0.62g, respectively. Table 7.3.1 lists the

estimated maximum earthquake magnitude and peak ground acceleration for the most dominant faults in relationship to the site location. We calculated peak ground acceleration (PGA) using Boore-Atkinson (2008) NGA USGS2008, Campbell-Bozorgnia (2008) NGA USGS, and Chiou-Youngs (2008) NGA acceleration-attenuation relationships.

TABLE 7.3.1
DETERMINISTIC SEISMIC SITE PARAMETERS

Fault Name	Distance from Site (miles)	Maximum Earthquake Magnitude (Mw)	Peak Ground Acceleration		
			Boore-Atkinson 2008 (g)	Campbell-Bozorgnia 2008 (g)	Chiou-Youngs 2008 (g)
Rose Canyon	<½	7.2	0.53	0.47	0.62
Coronado Bank	13	7.6	0.21	0.17	0.21
Newport-Inglewood Offshore	34	7.1	0.09	0.07	0.06
Elsinore-Julian	41	7.1	0.07	0.06	0.05
Earthquake Valley	46	6.5	0.04	0.04	0.03
Elsinore-Temecula	46	6.8	0.06	0.04	0.03
Elsinore-Coyote Mountain	49	6.8	0.05	0.04	0.03

We used the computer program *EZ-FRISK* to perform a probabilistic seismic hazard analysis. The computer program *EZ-FRISK* operates under the assumption that the occurrence rate of earthquakes on each mappable Quaternary fault is proportional to the faults slip rate. The program accounts for fault rupture length as a function of earthquake magnitude, and site acceleration estimates are made using the earthquake magnitude and distance from the site to the rupture zone. The program also accounts for uncertainty in each of following: (1) earthquake magnitude, (2) rupture length for a given magnitude, (3) location of the rupture zone, (4) maximum possible magnitude of a given earthquake, and (5) acceleration at the site from a given earthquake along each fault. By calculating the expected accelerations from considered earthquake sources, the program calculates the total average annual expected number of occurrences of site acceleration greater than a specified value. We utilized acceleration-attenuation relationships suggested by Boore-Atkinson (2008) NGA USGS, Campbell-Bozorgnia (2008) NGA USGS, and Chiou-Youngs (2008) in the analysis. Table 7.3.2 presents the site-specific probabilistic seismic hazard parameters including acceleration-attenuation relationships and the probability of exceedence.

TABLE 7.3.2
PROBABILISTIC SEISMIC HAZARD PARAMETERS

Probability of Exceedence	Peak Ground Acceleration		
	Boore-Atkinson, 2007 (g)	Campbell-Bozorgnia, 2008 (g)	Chiou-Youngs, 2008 (g)
2% in a 50 Year Period	0.68	0.63	0.79
5% in a 50 Year Period	0.42	0.43	0.51
10% in a 50 Year Period	0.28	0.29	0.33

The California Geologic Survey (CGS) has a program that calculates the ground motion for a 10 percent of probability of exceedence in 50 years based on an average of several attenuation relationships. Table 7.33 presents the calculated results from the *Probabilistic Seismic Hazards Mapping Ground Motion Page* from the CGS website.

TABLE 7.3.3
PROBABILISTIC SITE PARAMETERS FOR SELECTED FAULTS
CALIFORNIA GEOLOGIC SURVEY

Calculated Acceleration (g) Firm Rock	Calculated Acceleration (g) Soft Rock	Calculated Acceleration (g) Alluvium
0.27	0.29	0.33

While listing peak accelerations is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including the frequency and duration of motion and the soil conditions underlying the site. Seismic design of the structures should be evaluated in accordance with the California Building Code (CBC) and other currently adopted county of San Diego codes.

7.4 Landslides

Examination of aerial photographs in our files and review of available geotechnical reports for the site vicinity indicate that landslides are not present at the property or at a location that could impact the subject site.

7.5 Seiches and Tsunamis

A tsunami is a series of long period waves generated in the ocean by a sudden displacement of large volumes of water. Causes of tsunamis include underwater earthquakes, landslides, or volcanic eruptions. The first order driving force for locally generated tsunamis offshore southern California is

expected to be tectonic deformation from large earthquakes (Legg et al., 2002). Historically, tsunami wave heights have ranged up to 3.7 feet in the San Diego area (URS, 2004). The County of San Diego Hazard Mitigation Plan maps zones of high risk for tsunami run-up for coastal areas throughout the county. The site is not included within one of these hazard areas. The site is more than one mile from San Diego Bay at an elevation of approximately 75 feet MSL.

A seiche is a run-up of water within a lake or embayment triggered by fault- or landslide-induced ground displacement. The site is not located in the vicinity of or down stream from such bodies of water. Therefore, the risk of seiches affecting the site is very low

7.6 Soil Liquefaction Potential

Liquefaction typically occurs when a site is located in a zone with seismic activity, on-site soils are cohesionless/silt or clay with low plasticity, groundwater is encountered within 50 feet of the surface, and soil relative densities are less than about 70 percent. If the four previous criteria are met, a seismic event could result in a rapid pore-water pressure increase from the earthquake-generated ground accelerations. Seismically induced settlement is settlement that may occur whether the potential for liquefaction exists or not. The potential for liquefaction and seismically induced settlement occurring within the site soil is considered to be very low due to the relatively high density of the formational materials.

8. CONCLUSIONS

8.1 The site is located within a fault study zone established by the City of San Diego. The site is not located within a currently established State of California Earthquake Fault Zone; however, the property is located about 30 feet west of a fault zone. We performed this investigation in compliance with the City of San Diego Building Department and the *City of San Diego Seismic Safety Study, Geologic Hazards and Faults*, 2008.

8.2 We did not observe evidence of Holocene-age faulting in the Quaternary-age Old Paralic Deposits Unit 6 (formerly Bay Point Formation) encountered in the trenches. A Fault is mapped by the state within the 13th Street, two blocks to the east of the site.

8.3 It is our opinion an active, potentially active, or inactive fault does not exist on the property. However, a fault does likely exist east of the property within 13th Street. Special seismic design considerations for future development, other than that typical for the downtown San Diego area, will not be required.

8.4 Plans for the development of the site were not available for our review at the time of this report. A geotechnical investigation will be required to provide specific design parameters for the proposed development. The investigation should include subsurface investigation and laboratory testing to aid in the preparation of foundation and retaining wall design criteria, seismic design criteria, recommendations for remedial grading and temporary shoring, if required.

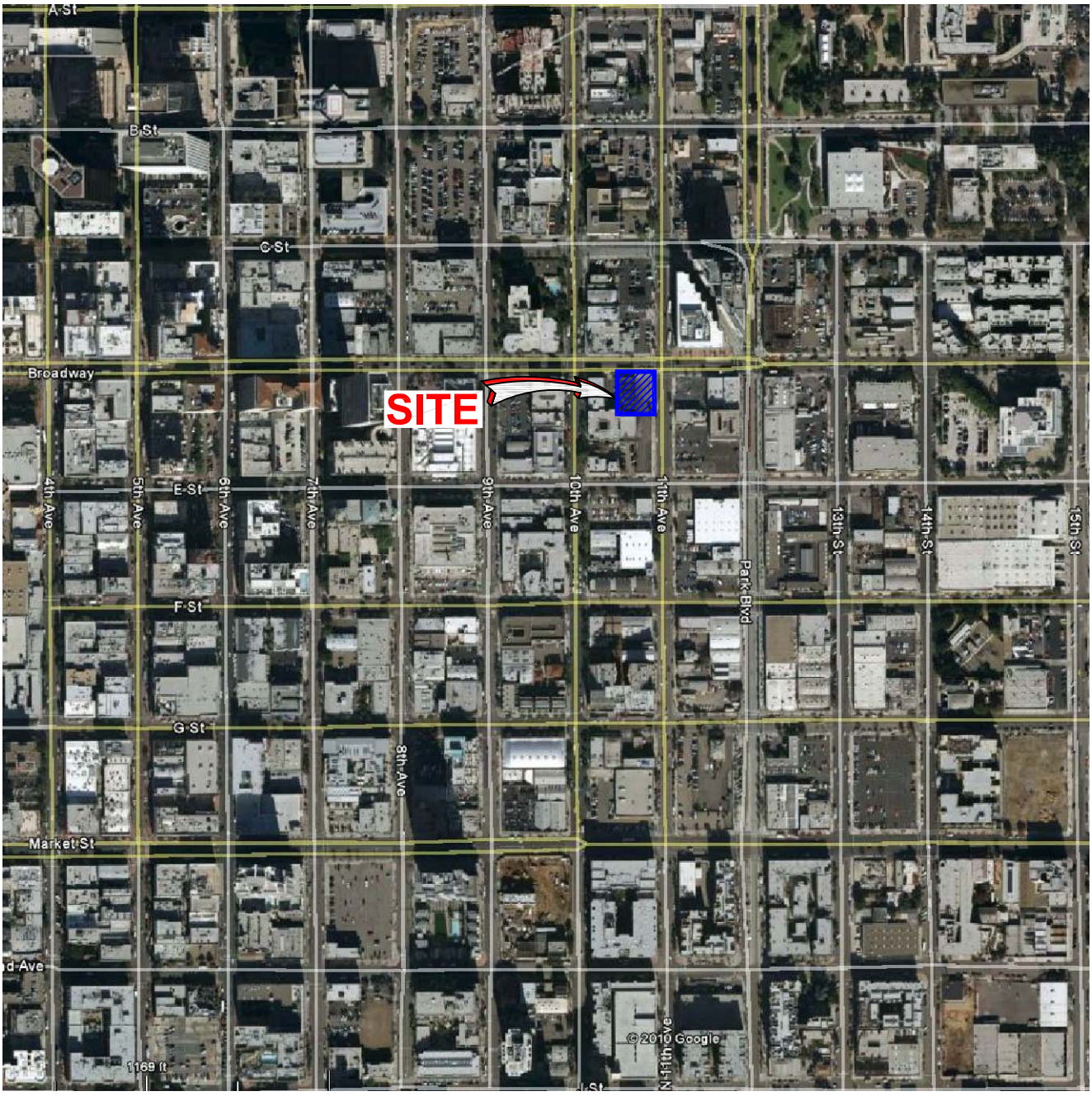
LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.



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NO SCALE

GEOCON
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TR / RA		DSK/GTYPD

VICINITY MAP

1045 EAST BROADWAY
SAN DIEGO, CALIFORNIA

DATE 07 - 22 - 2010	PROJECT NO. T2439 - 77 - 01	FIG. 1

Vicinity Map

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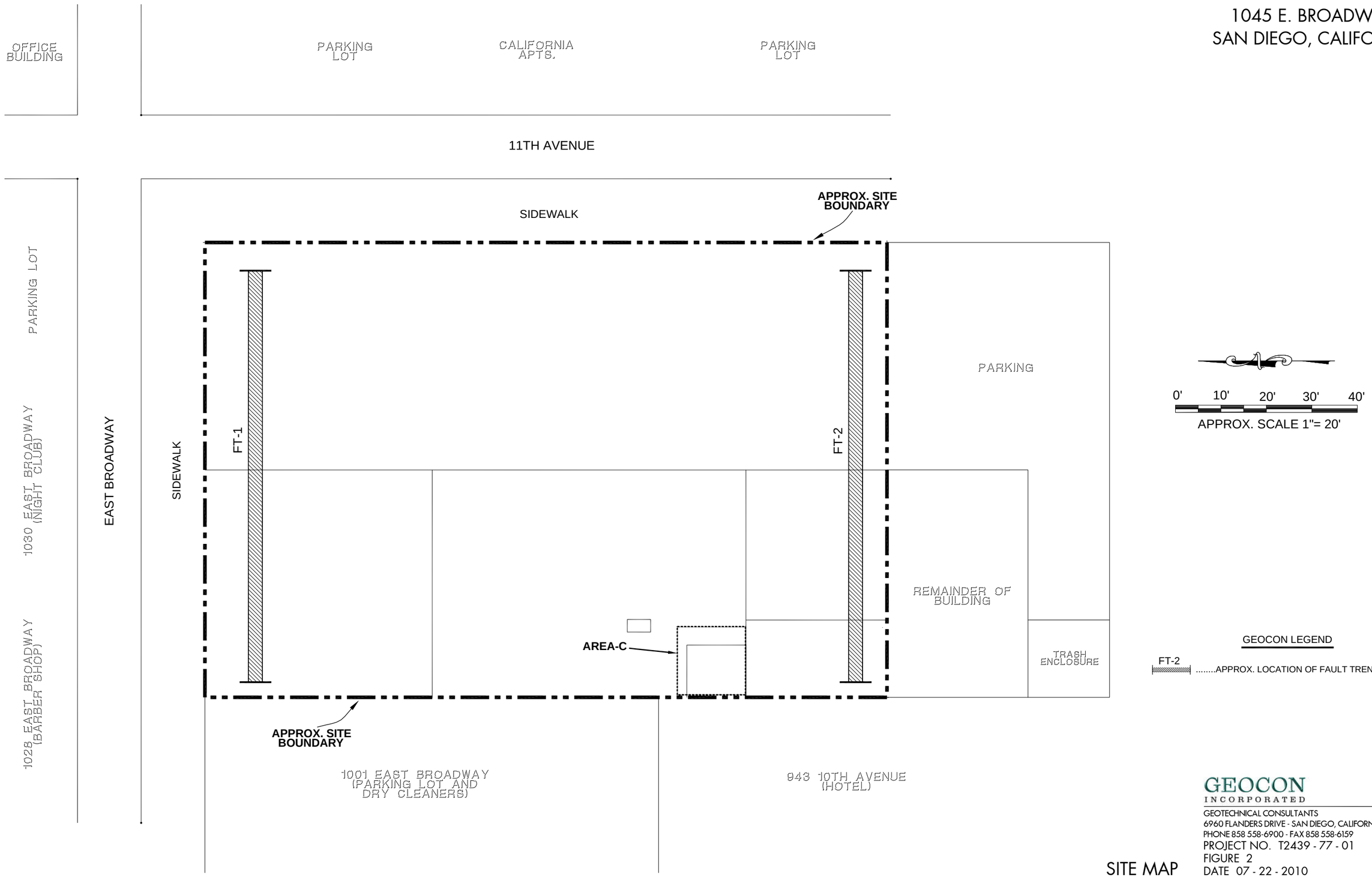
1045 E. BROADWAY
SAN DIEGO, CALIFORNIA



0' 10' 20' 30' 40'

APPROX. SCALE 1"= 20'

GEOCON LEGEND

FT-2 .....APPROX. LOCATION OF FAULT TRENCH

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PROJECT NO. T2439 - 77 - 01
FIGURE 2
DATE 07 - 22 - 2010

SITE MAP

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1045 EAST BROADWAY
SAN DIEGO, CALIFORNIA

SCALE: 1" = 200'

LEGEND

- .....APPROX. LOCATION OF EXPLORATORY TRENCH, COMPANY THAT PERFORMED THE TRENCH (Year Reported)
- .....APPROX. LOCATION OF STATE OF CALIFORNIA FAULT ZONE
- .....APPROX. LOCATION OF MAPPED ACTIVE FAULTS; CALIFORNIA GEOLOGIC SURVEY, May 1, 2003 (Queried Where Uncertain)
- .....APPROX. LOCATION OF ENCOUNTERED FAULT (Queried Where Uncertain)

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PROJECT NO. T2439 - 77 - 01
FIGURE 3
DATE 07 - 22 - 2010

EARTHQUAKE FAULT ZONE MAP

DOWNTOWN FAULT

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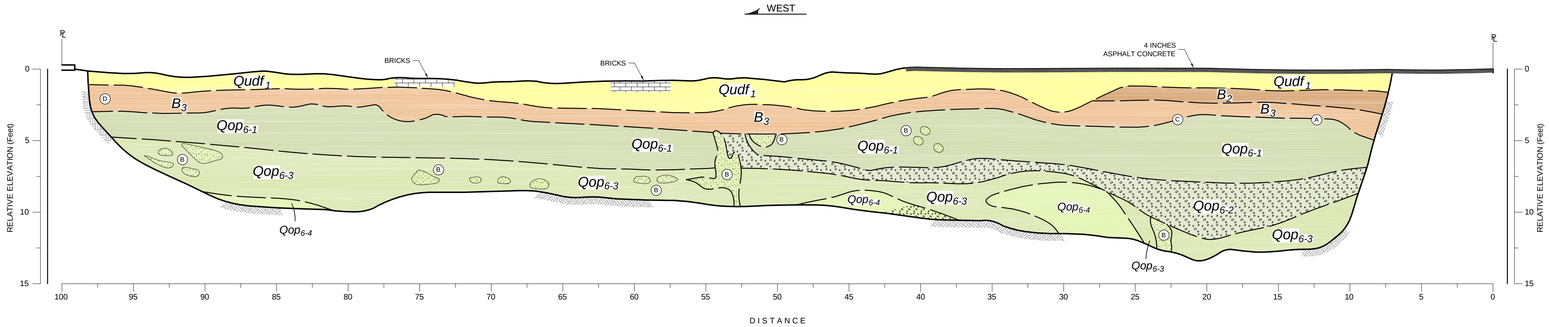
APPENDIX A

APPENDIX A

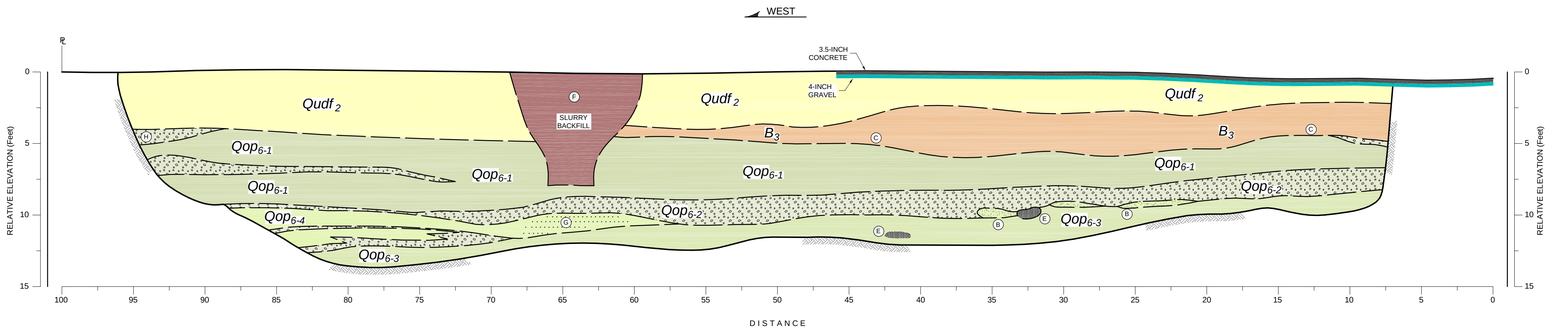
FIELD INVESTIGATION PERFORMED BY GEOCON INCORPORATED

We performed the field investigation on June 23 and 24, 2010. We excavated two fault trenches at the approximate locations shown on the Site Map, Figure 2. The trenches extended to a maximum depth of about 13½ feet using a large excavator equipped with a 24-inch-wide bucket. The logs of the fault trenches at an approximate scale of 1 inch equals 5 feet are included in Appendix A, Figure A-1 (map pocket). We backfilled the excavations with properly compacted fill subsequent to logging the trenches.



FAULT TRENCH FT-1

SCALE: 1" = 5 (Vert. = Horiz.)



FAULT TRENCH FT-2

SCALE: 1" = 5 (Vert. = Horiz.)

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Qudf .....UNDOCUMENTED FILL

- $Qudf_1$ ...Medium dense, moist, yellowish brown, Silty, fine to medium SAND with gravel and clay, scattered chunks of asphalt and brick (SM/SP)
- $Qudf_2$ ...Medium dense, moist to saturated, dark brown to reddish brown, fine to medium Sandy CLAY with chunks of asphalt and brick (CL)

.....TOPSOIL

- B_2 ...Soft, moist, dark grayish brown, Sandy CLAY, Argillic B_2horizon (CL)
- B_3 ....Medium dense, moist, dark brown, Clayey, fine to medium SAND, B_3 horizon (SC)

Qop_6 .....OLD PARALIC DEPOSITS UNIT 6 (PREVIOUSLY BAY POINT FORMATION)

- Qop_{6-1} ...Dense to very dense, moist, grayish brown to reddish brown, clayey, fine to medium SANDSTONE; with some gravel, cemented in places (SC)
- Qop_{6-2} ...Dense to very dense, moist, reddish yellowish brown to yellowish brown, fine to coarse, Sandy CONGLOMERATE (GP)
- Qop_{6-3} ...Dense to very dense, moist, yellowish brown, Silty, fine to medium SANDSTONE (SM)
- Qop_{6-4} ...Dense, moist, yellowish brown to light gray, Silty, fine to medium SANDSTONE (SM); mostly cohessionless, partially cemented

(A) ...Rich carbon layer

(B) ...Cohessionless sand pockets - yellowish reddish brown to light gray, fine to medium SAND (SP)

(C) ...Transitional contact between topsoil and Old Paralic Deposits unit 6

(D) ...Pinhole voids and rootlets

(E) ...Yellowish to reddish brown GRAVEL lense

(F) ...Slurry backfill

(G) ...Interbedded gravel and sand layers

(H) ...Two inch thick, dark brown, claystone layer, horizontal

FAULT TRENCH LOGS

1045 EAST BROADWAY
SAN DIEGO, CALIFORNIA

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SCALE	1" = 5'	DATE	07 - 22 - 2010
PROJECT NO.	T2439 - 77 - 01	FIGURE	A-1
SHEET	1 OF 1		

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