REPORT OF LIMITED GEOTECHNICAL INVESTIGATION

Steel Residence Remodel and Additions
7991 Prospect Place
La Jolla, California

JOB NO. 16-11075
07 June 2016

Prepared for:

Mr. Kevin Steel

Geotechnical Exploration, Inc.

SOIL AND FOUNDATION ENGINEERING ● GROUNDWATER ● ENGINEERING GEOLOGY

07 June 2016

Mr. Kevin Steel
7870 Torrey Lane
La Jolla, CA 92037

Job No. 16-11075

Subject: **Report of Limited Geotechnical Investigation**
Steel Residence Remodel and Additions
7991 Prospect Place
La Jolla, California

Dear Mr. Steel:

In accordance with your request, and our proposal of April 11, 2016, ***Geotechnical Exploration, Inc***. has performed a limited geotechnical investigation for the subject remodel project. If the conclusions and recommendations presented in this report are incorporated into the design and construction of the proposed remodel, it is our opinion that the site is suitable for the project.

This opportunity to be of service is sincerely appreciated. Should you have any questions concerning the following report, please do not hesitate to contact us. Reference to our **Job No. 16-11075** will expedite a response to your inquiries.

Respectfully submitted,

GEOTECHNICAL EXPLORATION, INC.

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A. Unified Soil Classification System

REPORT OF LIMITED GEOTECHNICAL INVESTIGATION
Steel Residence Remodel and Additions
7991 Prospect Place
La Jolla, California

Job No. 16-11075

The following report presents the findings and recommendations of ***Geotechnical Exploration, Inc.*** for the subject proposed residential remodel and basement addition project (for the project location see Figure No. I).

I. PROJECT SUMMARY AND SCOPE OF SERVICES

It is our understanding that the proposed remodel and additions will include the construction of a full basement beneath the existing residence and adjacent garage addition with two upper level floors.

The scope of work performed for this investigation included a site reconnaissance and subsurface exploration program, review of previous exploratory work and laboratory testing, geotechnical engineering analysis of the field and laboratory data, and the preparation of this report. The data obtained and the analyses performed were for the purpose of providing design and construction criteria for the project earthwork, building foundations, and slab on-grade floors.

II. SITE DESCRIPTION

The subject property is a gently sloping, rectangular shaped parcel measuring about 50 feet across the front and rear and about 100 feet deep, located on the north side of Prospect Place (see Site Plan, Figure No. II). The existing residence is a single-story raised wood floor structure with a detached garage. Existing residences bound the property on the north, east, and west, and Prospect Place bounds the property to the south.

III. FIELD INVESTIGATION

The field investigation consisted of a surface reconnaissance and a subsurface exploration program using hand equipment to investigate and sample the subsurface soils. In addition, we reviewed previous exploratory test pits placed on adjacent residential properties to a maximum depth of 4 feet. The soils encountered in the hand pits were continuously logged in the field by our representative and described in accordance with the Unified Soil Classification System (refer to Appendix A).

Representative samples were obtained from the hand pits at selected depths appropriate to the investigation. All samples were returned to our laboratory for evaluation and testing. Test pit logs have been prepared on the basis of our observations and laboratory test results. Logs of the hand pits are attached as Figure Nos. IIIa-d.

IV. LABORATORY TESTS AND SOIL INFORMATION

Laboratory tests were performed on disturbed soil samples in order to evaluate their index, strength, expansion, and compressibility properties. The following tests were conducted on the sampled soils and the results are presented on the hand pit logs:

1. *Laboratory Compaction Characteristics (ASTM D1557)*
2. *Determination of Percentage of Particles Smaller than a No. 200 (ASTM D1140)*
3. *Expansion Index (ASTM D4829)*

Laboratory compaction tests establish the laboratory maximum dry density and optimum moisture content of the tested soils and are also used to aid in evaluating the strength characteristics of the soils.

The particle size smaller than a No. 200 sieve analysis tests aid in classifying the soils in accordance with the Unified Soil Classification System and provide qualitative information related to engineering characteristics such as expansion potential, permeability, and shear strength.

The expansion potential of the more clayey soils encountered was determined utilizing the procedures specified in ASTM D4829.

EXPANSION INDEX	***POTENTIAL EXPANSION***
0 to 20	Very low
21 to 50	Low
51 to 90	Medium
91 to 130	High
Above 130	Very high

Based on the test results, the more clayey soils on the site have a low to medium expansion potential, with a measured expansion index value of 58. The laboratory test results are shown on the exploratory hand pit logs.

V. SOIL DESCRIPTION

Existing fill and topsoils consisting of loose to medium dense, silty and clayey sands were encountered in all the hand pits to depths of 1½ to 2 feet. The materials encountered below the existing fill and topsoils consisted of dense clayey sands of

the Old Paralic Deposits (Qop). Although not encountered, the site is underlain at depth by the Point Loma Formation (Kp).

VI. GROUNDWATER

Free groundwater was not encountered in the exploratory hand pits at the time of excavation. It must be noted, however, that fluctuations in the level of groundwater may occur due to variations in ground surface topography, subsurface stratification, rainfall, and other possible factors that may not have been evident at the time of our field investigation.

It should be kept in mind that grading operations can change surface drainage patterns and/or reduce permeabilities due to the densification of compacted soils. Such changes of surface and subsurface hydrologic conditions, plus irrigation of landscaping or significant increases in rainfall, may result in the appearance of surface or near-surface water at locations where none existed previously. The appearance of such water is expected to be localized and cosmetic in nature, if good positive drainage is implemented, as recommended in this report, during and at the completion of construction.

It must be understood that unless discovered during initial site exploration or encountered during site grading operations, it is extremely difficult to predict if or where perched or true groundwater conditions may appear in the future. When site fill or formational soils are fine-grained and of low permeability, water problems may not become apparent for extended periods of time.

Water conditions, where suspected or encountered during construction, should be evaluated and remedied by the project civil and geotechnical consultants. The project developer and property owner, however, must realize that post-construction appearances of groundwater may have to be dealt with on a site-specific basis.

VII. GEOLOGIC HAZARDS AND SEISMIC CONSIDERATIONS

Our review of some available published information including the City of San Diego Seismic Safety Study, Geologic Hazards and Faults Map (Sheet 29), indicates that the site is located in a geologic hazard area designated as Category 43 and 12. Category 43 is identified as generally unstable coastal bluffs with *"unfavorable jointing and local high erosion."* Category 12 is identified as Ground Rupture Faults that are *"active, inactive, presumed inactive or activity unknown"* with a *"low to moderate relative risk."* Based on the aforementioned information and distance away from the bluff edge, it is our opinion bluff stability and relative geologic hazard risk should be considered low. An excerpted portion of the Geologic Hazards Map Sheet 29 and the legend are presented as Figure No. V.

Reference to the geologic map of the area, *"Geologic Map of San Diego, 30'x60' Quadrangle* (Kennedy and Tan, 2008, Figure No. IV), indicates the site is underlain by the Point Loma Formation overlain by Old Paralic Deposits.

Based on the Geologic Map of San Diego and the City of San Diego Seismic Safety Study, Geologic Hazards Map No. 29, and our review of the fault trench investigation conducted by our firm on the adjacent property to the east, the concealed portion of the mapped fault on the property is considered inactive.

The San Diego area, as most of California, is located in a seismically active region. The San Diego area has been referred to as the eastern edge of the Southern California Continental Borderland, an extension of the Peninsular Ranges Geomorphic Province. The borderland is part of a broad tectonic boundary between the North American and Pacific Plates. The plate boundary is dominated by a complex system of active major strike-slip (right lateral), northwest-trending faults extending from the San Andreas Fault about 70 miles east, to the San Clemente Fault, about 50 miles west of the San Diego metropolitan area.

The prominent fault zones generally considered having the most potential for earthquake damage in the vicinity of the site are the active Rose Canyon and Coronado Bank fault zones mapped approximately 1 mile northeast and 11 miles southwest of the site, respectively, and the active Elsinore and San Jacinto fault zones mapped approximately 39 and 61 miles northeast of the site, respectively.

Although research on earthquake prediction has greatly increased in recent years, geologists and seismologists have not yet reached the point where they can predict when and where an earthquake will occur. Nevertheless, on the basis of current technology, it is reasonable to assume that the site may be subject to the effects of at least one moderate to major earthquake during the design life of the project. During such an earthquake, the danger from fault offset through the site is remote, but relatively strong ground shaking is likely to occur.

Strong ground shaking not only can cause structures to shake, but it also has the potential for including other phenomena that can indirectly cause substantial ground movements or other hazards resulting in damage to structures. These phenomena include seismically induced waves such as tsunamis and seiches, inundation due to dam or embankment failure, soil liquefaction, landsliding, lateral

spreading, differential compaction and ground cracking. Available information indicates that the location of and geotechnical conditions at the site are not conducive to any of these phenomena.

VIII. CONCLUSIONS AND RECOMMENDATIONS

From a geotechnical engineering standpoint, it is our opinion that the site is suitable for construction of the proposed basement addition provided the conclusions and recommendations presented in this report are incorporated into its design and construction.

Detailed earthwork and foundation recommendations are presented in the following paragraphs. The opinions, conclusions, and recommendations presented in this report are contingent upon ***Geotechnical Exploration, Inc***. being retained to review the final plans and specifications as they are developed and to observe the site earthwork and installation of foundations. Accordingly, we recommend that the following paragraph be included on the grading and foundation plans for the project.

> *If the geotechnical consultant of record is changed for the project, the work shall be stopped until the replacement has agreed in writing to accept the responsibility within their area of technical competence for approval upon completion of the work. It shall be the responsibility of the permittee to notify the City Engineer in writing of such change prior to the recommencement of grading and/or foundation installation work.*

A. Site Preparation and Earthwork

1. *Clearing and Stripping*: Areas of any new flatwork should be cleared of obstructions to be abandoned and the ground surface stripped of surface vegetation as well as associated root systems. Holes resulting from the removal of buried obstructions that extend below the proposed finished site grades should be cleared and backfilled with suitable material compacted to the requirements given under Recommendation No. 5, "Compaction." The cleared and stripped materials should be properly disposed of off-site.

2. *Treatment of Existing Fill Soils:* In order to provide suitable support for any new flatwork, we recommend that all existing fill and disturbed natural materials resulting from demolition and clearing of the site, that are not removed by the planned excavations, be removed and recompacted. The areal extent and depth required to remove these materials should be confirmed by our representatives during the site preparation work based on their examination of the soils being exposed. Any unsuitable materials (such as oversize rubble and/or organic matter) should be selectively removed as directed by our representative and disposed of off-site. We recommend a depth of removal and recompaction of 2 to 3 feet in areas of hardscape or flatwork around the building and in areas of shallow foundations for the new structure (where there is no basement).

3. *Subgrade Preparation:* After the area of new construction has been cleared, stripped, and the required excavations made, the exposed subgrade soils in those areas to receive fill or new exterior flatwork should be scarified to a depth of 6 inches, moisture conditioned, and compacted to the requirements of Recommendation No. 5, "Compaction."

4. *Materials for Fill:* All on-site soils with an organic content of less than 3 percent by volume are in general suitable for reuse as fill in exterior flatwork areas. Fill material should not, however, contain rocks or lumps over 6 inches in greatest dimension and not more than 15 percent larger than 2½ inches. No more than 25 percent of the fill should be larger than ¼-inch. In addition to the preceding size requirements, any required imported fill material should be a granular soil with an Expansion Index of 50 or less as determined by ASTM D4829.

5. *Compaction:* All structural fill and backfill should be compacted to a minimum degree of compaction of 90 percent at a moisture content at least two percent above the optimum moisture content based upon ASTM D1557-12. Fill material should be spread and compacted in uniform horizontal lifts not exceeding 8 inches in uncompacted thickness. Before compaction begins, the fill should be brought to a moisture content that will permit proper compaction by either aerating the fill if it is too wet or wetting the fill with water if it is too dry. Each lift should be thoroughly mixed before compaction to ensure a uniform distribution of moisture. On-site medium expansive soils should be moisture conditioned to not less than 3 percent above optimum.

6. *Permanent Slopes:* We recommend that any required permanent cut or fill slopes be constructed to an inclination no steeper than 2 to 1 (horizontal to vertical). The project plans and specifications should contain all necessary design features and construction requirements to prevent erosion of the on-site soils both during and after construction. Slopes and other exposed ground surfaces should be appropriately planted with a protective ground cover.

7. *Temporary Slopes:* Based on our subsurface investigation work, laboratory test results, and past experience with similar soils, temporary cut slopes for the proposed basement excavation should be safe against mass instability at an inclination of 1.0:1.0 (horizontal to vertical) in the existing fill and topsoil materials and 0.75:1.0 in the formational cemented materials. Some localized sloughing or ravelling of the soils exposed on the slopes, however, may occur. Since the stability of temporary construction slopes will depend largely on the contractor's activities and safety precautions (storage and equipment loadings near the tops of cut slopes, surface drainage provisions, etc.), it should be the contractor's responsibility to establish and maintain all temporary construction slopes at a safe inclination appropriate to the methods of operation. Due to space constraints and the adjacent common driveway, temporary shoring will most likely be required along the east property line and in areas where the recommended temporary slope excavations cannot be implemented.

8. *Trench and Retaining/Basement Wall Backfill:* All backfill soils placed in utility trenches or behind retaining/basement walls should be compacted to a minimum degree of compaction of 90 percent. Backfill material should be placed in lift thicknesses appropriate to the type of compaction equipment utilized and compacted to a minimum degree of 90 percent by mechanical means. Temporary slope excavations should extend behind the heel of retaining wall foundations.

   Our experience has shown that even shallow, narrow trenches, such as for irrigation and electrical lines, which are not properly compacted, can result in problems, particularly with respect to shallow groundwater accumulation and migration.

9. *Drainage:* Positive surface gradients (at least 5 percent fall) should be provided adjacent to the structure, and roof gutters and downspouts should be installed to direct water away from foundations and slabs toward suitable discharge facilities. Ponding of surface water should not be allowed, especially adjacent to the structure.

B. Foundations

10. *Footings:* We recommend that the proposed remodeled residence and basement addition be supported on conventional, individual-spread and/or continuous footing foundations bearing on the dense, undisturbed, formational materials that were encountered at depths of 2 to 3 feet or in properly compacted fills. In addition, all footings should be founded at least 18 inches below the lowest adjacent finished grade, which for the basement footings would be 18 inches below the top of the basement slab surface.

    At the recommended depth, footings may be designed for allowable bearing pressures of 2,500 pounds per square foot (psf) for combined dead and live loads and 3,300 psf for all loads, including wind or seismic. The footings should, however, have a minimum width of 12 inches.

11. *General Criteria For All Footings*: Footings located adjacent to the tops of slopes or on sloping natural ground should be extended sufficiently deep so as to provide at least 8 feet of horizontal cover between the slope face and outside edge of the footing at the footing bearing level. Footings located adjacent to utility trenches should have their bearing surfaces situated below an imaginary 1.0 to 1.0 plane projected upward from the bottom edge of the adjacent utility trench.

All continuous footings should contain top and bottom reinforcement to provide structural continuity and to permit spanning of local irregularities. We recommend that a minimum of two No. 5 top and two No. 5 bottom reinforcing bars be provided in the footings. A minimum clearance of 3 inches should be maintained between steel reinforcement and the bottom or sides of the footing. In order for us to offer an opinion as to whether the footings are founded on soils of sufficient load bearing capacity, it is essential that our representative inspect the footing excavations prior to the placement of reinforcing steel or concrete.

NOTE: The project Civil/Structural Engineer should review all reinforcing schedules. The reinforcing minimums recommended herein are not to be construed as structural designs, but merely as minimum reinforcement to reduce the potential for cracking and separations.

12. *Seismic Design Criteria:* Site-specific seismic design criteria for the proposed structure are presented in the following table in accordance with Section 1613 of the 2013 CBC, which incorporates by reference ASCE 7-10 for seismic design. We have determined the mapped spectral acceleration values for the site, based on a latitude of 32.8486 degrees and longitude of -117.2701 degrees, utilizing a tool provided by the USGS, which provides a solution for ASCE 7-10 (Section 1613 of the 2013 CBC) utilizing digitized files for the Spectral Acceleration maps. In addition, we have assigned a Site Soil Classification of S_D.

TABLE I
Mapped Spectral Acceleration Values and Design Parameters

S_s	S_1	F_a	F_v	S_{ms}	S_{m1}	S_{ds}	S_{d1}
1.270	0.490	1.0	1.51	1.270	0.740	0.847	0.493

In addition, the 2013 CBC requires that retaining walls 6 feet or more in height be designed to resist seismic loads. For seismic design of unrestrained walls, if required, we recommend that the seismic pressure increment be taken as a fluid pressure distribution utilizing an equivalent fluid weight of 15.0 pcf. For restrained walls, the soil increment may be waived. For unrestrained retaining walls with level backfill, we recommend an active soil pressure of 56 pcf. This also applies to restrained retaining walls with similar low-expansive, level backfill. Surcharges acting within the influence area of retaining wall backfill may be converted to uniform lateral soil pressure by multiplying the surcharge by conversion factors of 0.31 and 0.47 for unrestrained and restrained retaining walls, respectively.

13. *Lateral Loads:* Lateral load resistance for the structure supported on footing foundations may be developed in friction between the foundation bottoms and the supporting subgrade. An allowable friction coefficient of 0.35 is considered applicable. An additional allowable passive resistance equal to an equivalent fluid weight of 275 pcf acting against the foundations may be used in design provided the footings are poured neat against the adjacent undisturbed natural materials and/or properly compacted fill materials. These lateral resistance values assume a level surface in front of the footing for a minimum distance of three times the embedment depth of the footing and any shear keys.

14. *Settlement:* Settlements under building loads are expected to be within tolerable limits for the proposed structure. For footings designed in accordance with the recommendations presented in the preceding paragraphs, we anticipate that total settlements should not exceed ¾-inch

and that post-construction differential settlements should be less than ¼-inch in 25 feet.

C. ***Concrete Slab On-grade Criteria***

15. *Minimum Floor Slab Thickness and Reinforcement:* Based on our experience, we have found that, for various reasons, floor slabs occasionally crack, causing brittle surfaces such as ceramic tiles to become damaged. Therefore, we recommend that all slabs-on-grade contain at least a minimum amount of reinforcing steel to reduce the separation of cracks, should they occur.

15.1 Interior floor slabs should be a minimum of 5 inches actual thickness and be reinforced with No. 3 bars on 18-inch centers, both ways, placed at midheight in the slab. Slab subgrade soil should be verified by a ***Geotechnical Exploration, Inc***. representative to have the proper moisture content within 48 hours prior to placement of the vapor barrier and pouring of concrete.

15.2 Following placement of any concrete floor slabs, sufficient drying time must be allowed prior to placement of floor coverings. Premature placement of floor coverings may result in degradation of adhesive materials and loosening of the finish floor materials.

16. *Concrete Isolation Joints:* We recommend the project Civil/Structural Engineer incorporate isolation joints and sawcuts to at least one-fourth the thickness of the slab in any floor designs. The joints and cuts, if properly placed, should reduce the potential for and help control floor slab cracking.

We recommend that concrete shrinkage joints be spaced no farther than approximately 20 feet apart, and also at re-entrant corners. However, due to a number of reasons (such as base preparation, construction techniques, curing procedures, and normal shrinkage of concrete), some cracking of slabs can be expected.

17. *Slab Moisture Emission:* Although it is not the responsibility of geotechnical engineering firms to provide moisture protection recommendations, as a service to our clients we provide the following discussion and suggested minimum protection criteria. Actual recommendations should be provided by the architect and waterproofing consultants.

Soil moisture vapor can result in damage to moisture-sensitive floors, some floor sealers, or sensitive equipment in direct contact with the floor, in addition to mold and staining on slabs, walls and carpets.

The common practice in Southern California has been to place vapor retarders made of PVC, or of polyethylene. PVC retarders are made in thickness ranging from 10- to 60-mil. Polyethylene retarders, called visqueen, range from 5- to 10-mil in thickness. These products are no longer considered adequate for moisture protection and can actually deteriorate over time.

Specialty vapor retarding and barrier products possess higher tensile strength and are more specifically designed for and intended to retard moisture transmission into and through concrete slabs. The use of such products is highly recommended for reduction of floor slab moisture emission.

The following American Society for Testing and Materials (ASTM) and American Concrete Institute (ACI) sections address the issue of moisture transmission into and through concrete slabs: ASTM E1745-97 (2009) Standard Specification for Plastic Water Vapor Retarders Used in Contact Concrete Slabs; ASTM E154-88 (2005) Standard Test Methods for Water Vapor Retarders Used in Contact with Earth; ASTM E96-95 Standard Test Methods for Water Vapor Transmission of Materials; ASTM E1643-98 (2009) Standard Practice for Installation of Water Vapor Retarders Used in Contact Under Concrete Slabs; and ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.

Based on the above, we recommend that the vapor barrier consist of a minimum 15-mil extruded polyolefin plastic (no recycled content or woven materials permitted). Permeance as tested before and after mandatory conditioning (ASTM E1745 Section 7.1 and sub-paragraphs 7.1.1-7.1.5) should be less than 0.01 perms (grains/square foot/hour inHg) and comply with the ASTM E1745 Class A requirements. Installation of vapor barriers should be in accordance with ASTM E1643. The basis of design is 15-mil StegoWrap vapor barrier placed per the manufacturer's guidelines. Reef Industries Vapor Guard membrane has also been shown to achieve a permeance of less than 0.01 perms. We also recommend that the slabs be poured directly on the vapor barrier which is placed directly on the finished slab subgrade surface; no sand layers are utilized.

17.1 Common to all acceptable products, vapor retarder/barrier joints must be lapped and sealed with mastic or the manufacturer's recommended tape or sealing products. In actual practice, stakes are often driven through the retarder material, equipment is dragged or rolled across

the retarder, overlapping or jointing is not properly implemented, etc. All these construction deficiencies reduce the retarder's effectiveness. In no case should retarder/barrier products be punctured or gaps be allowed to form prior to or during concrete placement.

17.2 Vapor retarders/barriers do not provide full waterproofing for structures constructed below free water surfaces. They are intended to help reduce or prevent vapor transmission and/or capillary migration through the soil and through the concrete slabs. Waterproofing systems must be designed and properly constructed if full waterproofing is desired. The owner and project designers should be consulted to determine the specific level of protection required.

18. *Exterior Slab Thickness and Reinforcement:* As a minimum for protection of on-site improvements, we recommend that all exterior pedestrian concrete slabs be 4 inches thick and founded on properly compacted and tested fill, with No. 3 bars at 18-inch centers, both ways, at the center of the slab, and contain adequate isolation and control joints. The performance of on-site improvements can be greatly affected by soil base preparation and the quality of construction. It is therefore important that all improvements are properly designed and constructed for the existing soil conditions. The improvements should not be built on loose soils or fills placed without our observation and testing.

For exterior slabs with the minimum shrinkage reinforcement, control joints should be placed at spaces no farther than 15 feet apart or the width of the slab, whichever is less, and also at re-entrant corners. Control joints in

exterior slabs should be sealed with elastomeric joint sealant. The sealant should be inspected every 6 months and be properly maintained.

The concrete driveway and garage should be constructed with 3,500 psi compressive strength concrete and be at least 5½ inches thick, provided with control joints every 12 feet apart or the width of the slab, whichever is less, and at re-entrant corners. Joints should be sealed with elastomeric joint sealants.

D. General Recommendations

19. *Retaining Wall Drainage:* Retaining walls should be provided with waterproofing, geodrain boards and a subdrain system placed at the bottom of the wall. Subdrains may consist of Ameridrain or TotalDrain. The geodrain boards may consist of Tremco Drain 1000. Subdrains should discharge to an approved drainage facility.

20. *Project Start Up Notification:* In order to minimize any work delays during site development, this firm should be contacted 24 hours prior to any need for observation of footing excavations or field density testing of compacted fill soils. If possible, placement of formwork and steel reinforcement in footing excavations should not occur prior to observing the excavations; in the event that our observations reveal the need for deepening or redesigning foundation structures at any locations, any formwork or steel reinforcement in the affected footing excavation areas would have to be removed prior to correction of the observed problem (i.e., deepening the footing excavation, recompacting soil in the bottom of the excavation, etc.).

21. *Construction Best Management Practices (BMPs):* Sufficient BMPs must be installed to prevent silt, mud or other construction debris from being tracked into the adjacent street(s) or storm water conveyance systems due to construction vehicles or any other construction activity. The contractor is responsible for cleaning any such debris that may be in the street at the end of each work day or after a storm event that causes breach in the installed construction BMPs. All stockpiles of uncompacted soil and/or building materials that are intended to be left unprotected for a period greater than 7 days are to be provided with erosion and sediment controls. Such soil must be protected each day when the probability of rain is 40% or greater.

    A concrete washout should be provided on all projects that propose the construction of any concrete improvements that are to be poured in place. All erosion/sediment control devices should be maintained in working order at all times. All slopes that are created or disturbed by construction activity must be protected against erosion and sediment transport at all times. The storage of all construction materials and equipment must be protected against any potential release of pollutants into the environment.

IX. GRADING NOTES

Geotechnical Exploration, Inc. recommends that we be retained to verify the actual soil conditions revealed during site grading work and footing excavations to be as anticipated in this "*Report of Limited Geotechnical Investigation*" for the project. In addition, the compaction of any fill soils placed during site grading work must be observed and tested by the soil engineer. It is the responsibility of the grading contractor to comply with the requirements on the grading plans and the local grading ordinance. All trench backfill should be properly compacted.

Geotechnical Exploration, Inc. will assume no liability for damage occurring due to improperly or uncompacted backfill placed without our observation and testing.

X. LIMITATIONS

Our conclusions and recommendations have been based on available data obtained from our field investigation and laboratory analysis, as well as our experience with similar soils and formational materials located in this area of the City of San Diego. Of necessity, we must assume a certain degree of continuity between exploratory borings. It is, therefore, necessary that all observations, conclusions, and recommendations be verified at the time grading operations begin or when footing excavations are placed. In the event discrepancies are noted, additional recommendations may be issued, if required.

The work performed and recommendations presented herein are the result of an investigation and analysis that meet the contemporary standard of care in our profession within the City of San Diego. No warranty is provided.

This report should be considered valid for a period of two (2) years, and is subject to review by our firm following that time. If significant modifications are made to the building plans, especially with respect to the height and location of any proposed structures, this report must be presented to us for immediate review and possible revision.

It is the responsibility of the owner and/or developer to ensure that the recommendations summarized in this report are carried out in the field operations and that our recommendations for design of this project are incorporated in the structural plans. We should be retained to review the project plans once they are

available, to see that our recommendations are adequately incorporated in the plans.

This firm does not practice or consult in the field of safety engineering. We do not direct the contractor's operations, and we cannot be responsible for the safety of personnel other than our own on the site; the safety of others is the responsibility of the contractor. The contractor should notify the owner if any of the recommended actions presented herein are considered to be unsafe.

The firm of ***Geotechnical Exploration, Inc.*** shall not be held responsible for changes to the physical condition of the property, such as addition of fill soils or changing drainage patterns, which occur subsequent to issuance of this report and the changes are made without our observations, testing, and approval.

Once again, should any questions arise concerning this report, please feel free to contact the undersigned. Reference to our **Job No. 16-11075** will expedite a reply to your inquiries.

Respectfully submitted,

GEOTECHNICAL EXPLORATION, INC.

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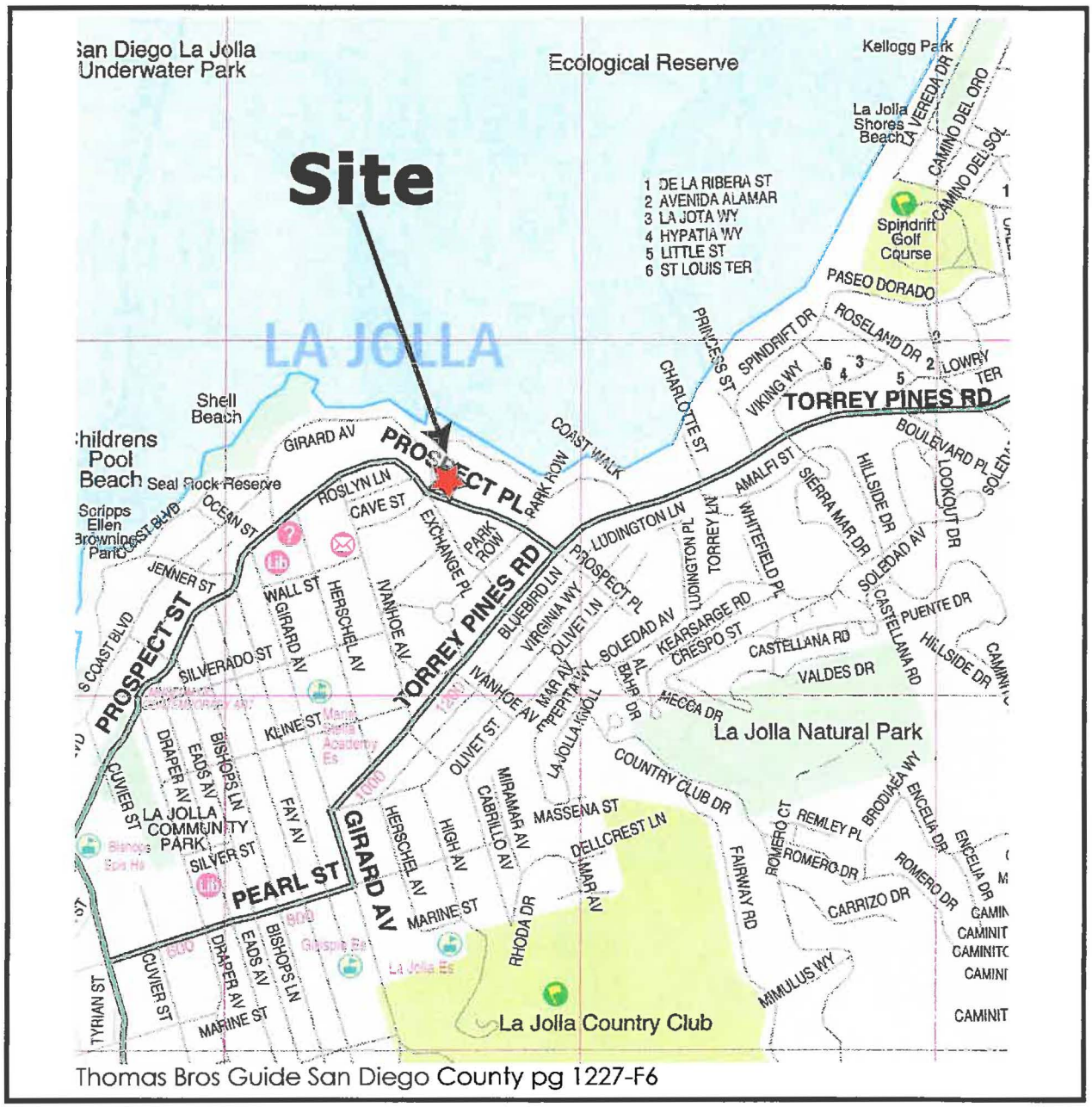
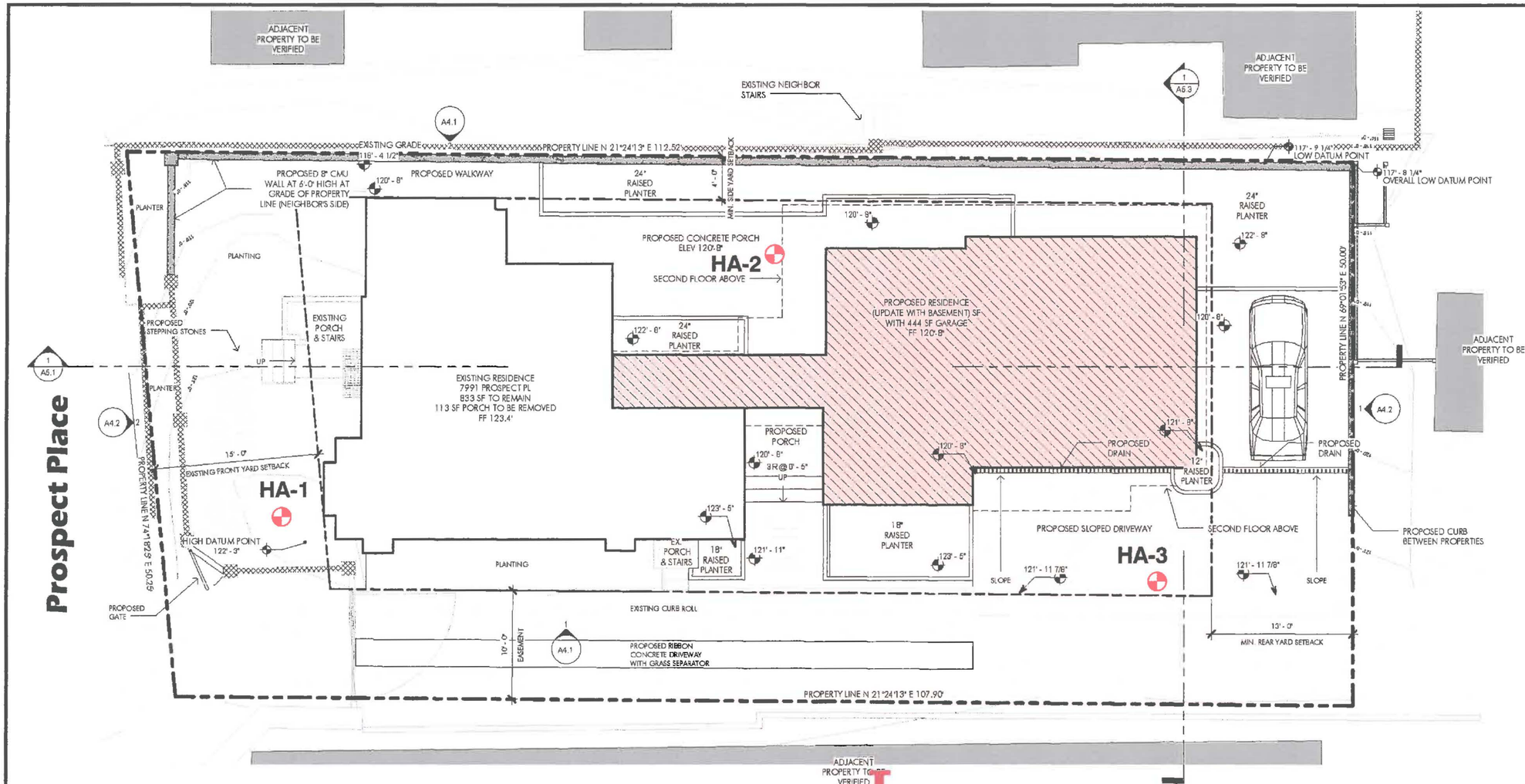
VICINITY MAP



Thomas Bros Guide San Diego County pg 1227-F6

Steel Residence
7991 Prospect Place
La Jolla, CA.

Figure No. I
Job No. 16-11075



0' 20' 50' 100'

Scale: 1" = 40' (approximate)

SITE PLAN

LEGEND

HA-3 — Approximate Location of Hand Auger Boring

T-1 — Approximate Location of Exploratory Trench (from adjacent property)

Wall Legend

- NEW CONSTRUCTION WALL
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE DEMOLISHED

ALL WALLS 2x4 U.N.O.
CONTRACTOR TO VERIFY EXISTING WALL CONDITIONS.

EXISTING WINDOWS TO BE REFINISHED

Area Legend

- CONCRETE, HARDSCAPE
- EXISTING TO REMAIN STRUCTURE
- PROPOSED STRUCTURE

REFERENCE: This Plot Plan was prepared from an existing SITE PLAN by ISLAND ARCHITECTS dated 3/1/2016 and from on-site field reconnaissance performed by GEI.

SITE PLAN

Steel Residence
7991 Prospect Place
La Jolla, CA.
Figure No. II
Job No. 16-11075

Geotechnical Exploration, Inc.

May 2016

16-11075-p.ai

EQUIPMENT	DIMENSION & TYPE OF EXCAVATION	DATE LOGGED
Hand Auger	**4-inch diameter Auger Hole**	**5-6-16**
SURFACE ELEVATION	GROUNDWATER/ SEEPAGE DEPTH	LOGGED BY
± 122' Mean Sea Level	**Not Encountered**	**JKH**

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.D.D.)	EXPAN. + (%) CONSOL. -	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
1			**SILTY/ CLAYEY SAND**, fine- to medium-grained, with some roots and rock fragments. Loose to medium dense. Dry to damp. Dark brown. **FILL/ TOPSOIL (Qaf)**	SM/SC								
2			**SILTY SAND**, fine- to medium-grained, with slight clay binder. Medium dense. Damp. Red-brown. **OLD PARALIC DEPOSITS (Qop_6)**	SM/SC								
3												
4			Bottom @ 4'									
5												

EXPLORATION LOG 11075 STEEL.GPJ GEO_EXPL.GDT 6/9/16

PERCHED WATER TABLE
BULK BAG SAMPLE
IN-PLACE SAMPLE
MODIFIED CALIFORNIA SAMPLE
NUCLEAR FIELD DENSITY TEST
STANDARD PENETRATION TEST

JOB NAME
Steel Residence Remodel

SITE LOCATION
7991 Prospect Place, La Jolla, CA

JOB NUMBER
16-11075

REVIEWED BY
LDR/JAC

FIGURE NUMBER
IIIa

GEI Geotechnical Exploration, Inc.

LOG No.
HA-1

EQUIPMENT	DIMENSION & TYPE OF EXCAVATION	DATE LOGGED
Hand Auger	**4-inch diameter Auger Hole**	**5-6-16**
SURFACE ELEVATION	GROUNDWATER/ SEEPAGE DEPTH	LOGGED BY
± 121' Mean Sea Level	**Not Encountered**	**JKH**

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.D.D.)	EXPAN. + (%) CONSOL. -	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
1			**SILTY/ CLAYEY SAND**, fine- to medium-grained, with some roots and rock fragments. Loose to medium dense. Dry to damp. Dark brown. **FILL/ TOPSOIL (Qaf)**	SM/SC								
2			**SILTY SAND**, fine- to medium-grained, with slight clay binder. Medium dense. Damp. Red-brown. **OLD PARALIC DEPOSITS (Qop_6)**	SM/SC								
4			Bottom @ 4'									
5												

EXPLORATION LOG 11075 STEEL.GPJ GEO_EXPL.GDT 6/9/16

- PERCHED WATER TABLE
- BULK BAG SAMPLE
- IN-PLACE SAMPLE
- MODIFIED CALIFORNIA SAMPLE
- NUCLEAR FIELD DENSITY TEST
- STANDARD PENETRATION TEST

JOB NAME: **Steel Residence Remodel**		
SITE LOCATION: **7991 Prospect Place, La Jolla, CA**		
JOB NUMBER: **16-11075**	REVIEWED BY: **LDR/JAC**	LOG No. **HA-2**
FIGURE NUMBER: **IIIb**	Geotechnical Exploration, Inc.	

EQUIPMENT	DIMENSION & TYPE OF EXCAVATION	DATE LOGGED
Hand Auger	**4-inch diameter Auger Hole**	**5-6-16**
SURFACE ELEVATION	GROUNDWATER/ SEEPAGE DEPTH	LOGGED BY
± 122' Mean Sea Level	**Not Encountered**	**JKH**

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.D.D.)	EXPAN. + (%) CONSOL. -	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
1			**SILTY/ CLAYEY SAND**, fine- to medium-grained, with some roots and rock fragments. Loose to medium dense. Dry to damp. Dark brown. **FILL/ TOPSOIL (Qaf)**	SM/SC								
2			**SILTY SAND**, fine- to medium-grained, with slight clay binder. Medium dense. Damp. Red-brown. **OLD PARALIC DEPOSITS (Qop_6)**	SM/SC								
4			Bottom @ 4'									
5												

EXPLORATION LOG 11075 STEEL.GPJ GEO_EXPL.GDT 6/9/16

- PERCHED WATER TABLE
- BULK BAG SAMPLE
- [1] IN-PLACE SAMPLE
- MODIFIED CALIFORNIA SAMPLE
- [S] NUCLEAR FIELD DENSITY TEST
- STANDARD PENETRATION TEST

JOB NAME
Steel Residence Remodel

SITE LOCATION
7991 Prospect Place, La Jolla, CA

JOB NUMBER
16-11075

REVIEWED BY
LDR/JAC

FIGURE NUMBER
IIIc

Geotechnical Exploration, Inc.

LOG No.
HA-3

EQUIPMENT	DIMENSION & TYPE OF EXCAVATION	DATE LOGGED
Hand Tools	**2' X 50' X 4' Trench**	**3-20-97**
SURFACE ELEVATION	GROUNDWATER/ SEEPAGE DEPTH	LOGGED BY
Pad Grade	**Not Encountered**	**LDR**

DEPTH (feet)	SYMBOL	SAMPLE	FIELD DESCRIPTION AND CLASSIFICATION DESCRIPTION AND REMARKS (Grain size, Density, Moisture, Color)	U.S.C.S.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	DENSITY (% of M.D.D.)	EXPAN. + (%) CONSOL. -	BLOW COUNTS/FT.	SAMPLE O.D. (INCHES)
			Landscape Topsoil and lawn placed on old parking surface.									
			Parking Surface consisting of 1/4" gravel. Dry. Gray.	SM								
1			**SILTY SAND**, fine-grained. Medium dense. Moist. Dark brown. **"A" HORIZON TOPSOIL**									
			SAND, fine- grained; slightly argillic. Moist. Dark brown. **"B" HORIZON TOPSOIL**	SP								
2			-- rounded cobble from 2"- 12" in diameter in lower 6"- 12" (basal cobbles).									
3			**SLIGHTLY CLAYEY SAND**, fine- to medium-grained. Dense. Moist. Mottled light brown to yellow-brown and red-brown. **BAY POINT FORMATION (Qbp)**	SC								
4												
5			Bottom @ 4'									
6												

EXPLORATION LOG 8449 SEACLIFF.GPJ GEO_EXPL.GDT 9/28/11

- PERCHED WATER TABLE
- LOOSE BAG SAMPLE
- [1] IN-PLACE SAMPLE
- MODIFIED CALIFORNIA SAMPLE
- [S] FIELD DENSITY TEST
- STANDARD PENETRATION TEST

JOB NAME
Seacliff Cottage Remodel

SITE LOCATION
7985 Prospect Place, La Jolla, California

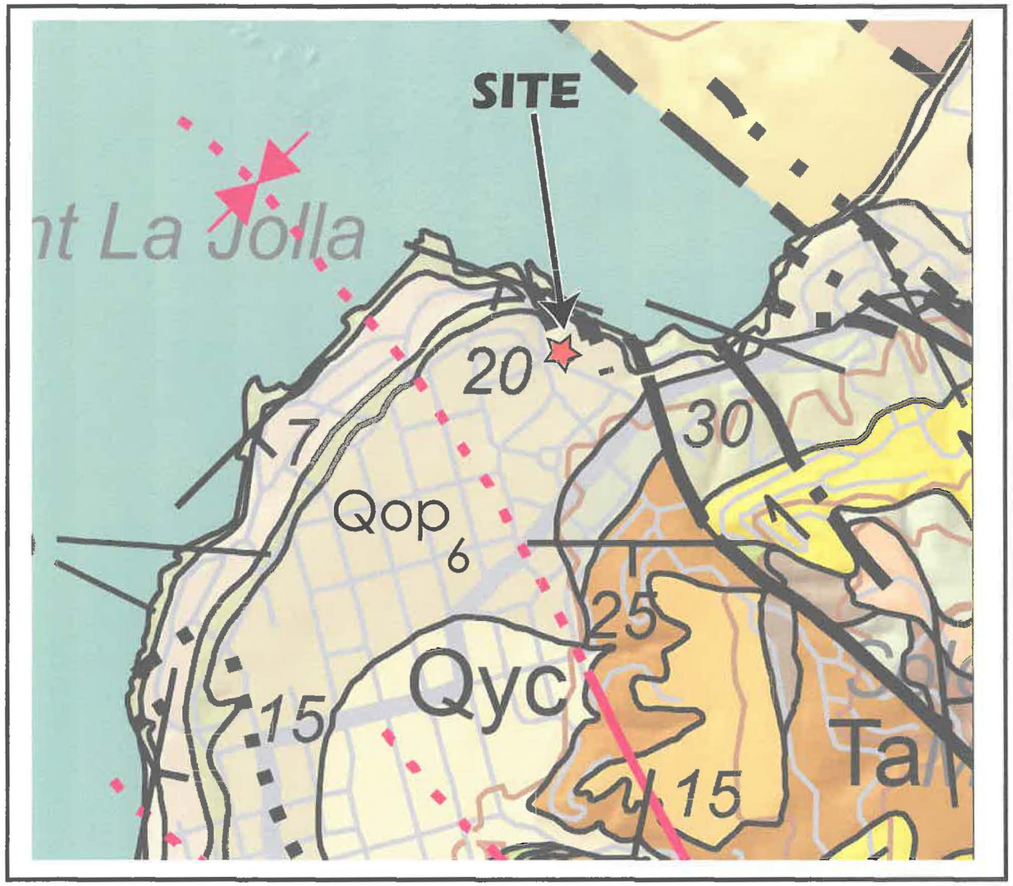
JOB NUMBER
03-8449

REVIEWED BY
LDR/JAC

Geotechnical Exploration, Inc.

LOG No.
T-1

FIGURE NUMBER
IIId



Steel Residence
7991 Prospect Place
La Jolla, CA.

EXCERPT FROM GEOLOGIC MAP OF THE SAN DIEGO 30' x 60' QUADRANGLE, CALIFORNIA

By
Michael P. Kennedy[1] and Siang S. Tan[1]
2008
Digital preparation by
Kelly R. Bovard[2], Anne G. Garcia[2], Diane Burns[2], and Carlos I. Gutierrez[1]

1. Department of Conservation, California Geological Survey
2. U.S. Geological Survey, Department of Earth Sciences, University of California, Riverside

DESCRIPTION OF MAP UNITS

Qop$_6$ Old paralic deposits, undivided (late to middle Pleistocene)

Unit 6

ONSHORE MAP SYMBOLS

Contact - Contact between geologic units; dotted where concealed.

Fault - Solid where accurately located; dashed where approximately located; dotted where concealed. U = upthrown block. D = downthrown block. Arrow and number indicate direction and angle of dip of fault plane.

Anticline - Solid where accurately located; dashed where approximately located; dotted where concealed. Arrow indicates direction of axial plunge.

Syncline - Solid where accurately located; dotted where concealed. Arrow indicates direction of axial plunge.

Landslide - Arrows indicate principal direction of movement. Queried where existence is questionable.

Strike and dip of beds

Inclined

Strike and dip of igneous joints

Inclined

Vertical

Strike and dip of metamorphic foliation

Inclined

Base Map

Onshore base (hypsography, hydrography, and transportation) from U.S.G.S. digital line graph (DLG) data, San Diego 30' x 60' metric quadrangle. Shaded topographic base from U.S.G.S. digital elevation models (DEM's). Offshore bathymetric contours and shaded bathymetry from N.O.A.A. single and multibeam data. Projection is UTM, zone 11, North American Datum 1927.

This map was funded in part by the U.S. Geological Survey National Cooperative Geologic Mapping Program, STATEMAP Award no. 98HQAG2049

Prepared in cooperation with the U.S. Geological Survey, Southern California Areal Mapping Project

Figure No. IV
Job No. 16-11075

Geotechnical Exploration, Inc.

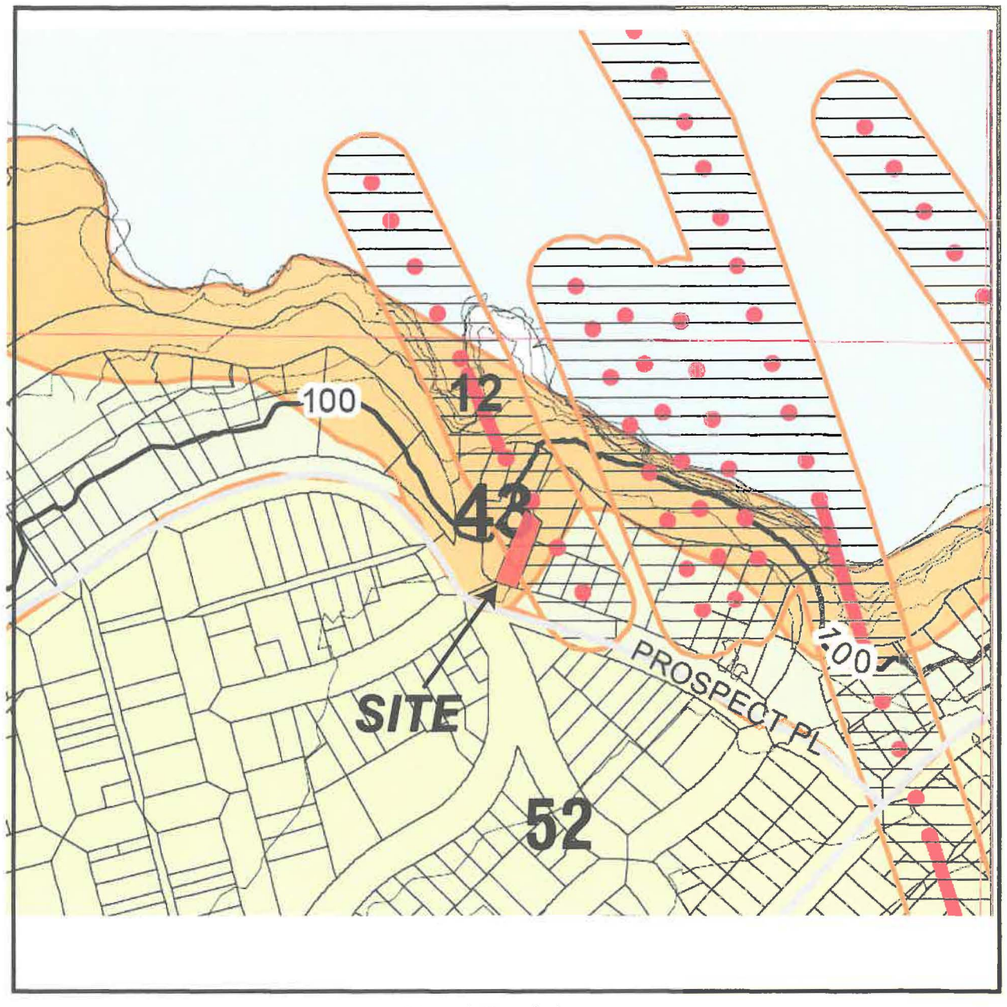
June 2016

Steel-Res-2008-geo.ai

Geologic Hazards Map Excerpt from City of San Diego Geologic Hazards and Fault Map Sheet 29

Development Services Department

DATE: 4/3/2008



Steel Residence
7991 Prospect Place
La Jolla, CA.

LEGEND

Geologic Hazard Categories

FAULT ZONES

- 11 Active, Alquist-Priolo Earthquake Fault Zone
- 12 Potentially Active, Inactive, Presumed Inactive, or Activity Unknown
- 13 Downtown special fault zone

LANDSLIDES

- 21 Confirmed, known, or highly suspected
- 22 Possible or conjectured

SLIDE-PRONE FORMATIONS

- 23 Friars: neutral or favorable geologic structure
- 24 Friars: unfavorable geologic structure
- 25 Ardath: neutral or favorable geologic structure
- 26 Ardath: unfavorable geologic structure
- 27 Otay, Sweetwater, and others

LIQUEFACTION

- 31 High Potential -- shallow groundwater major drainages, hydraulic fills
- 32 Low Potential -- fluctuating groundwater minor drainages

COASTAL BLUFFS

- 41 Generally unstable Numerous landslides, high steep bluffs, severe erosion, unfavorable geologic structure
- 42 Generally unstable Unfavorable bedding plains, high erosion
- 43 Generally unstable Unfavorable jointing, local high erosion
- 44 Moderately stable Mostly stable formations, local high erosion
- 45 Moderately stable Some minor landslides, minor erosion
- 46 Moderately stable Some unfavorable geologic structure, minor or no erosion
- 47 Generally stable Favorable geologic structure, minor or no erosion, no landslides
- 48 Generally stable Broad beach areas, developed harbor

OTHER TERRAIN

- 51 Level mesas -- underlain by terrace deposits and bedrock nominal risk
- 52 Other level areas, gently sloping to steep terrain, favorable geologic structure, Low risk
- 53 Level or sloping terrain, unfavorable geologic structure, Low to moderate risk
- 54 Steeply sloping terrain, unfavorable or fault controlled geologic structure, Moderate risk
- 55 Modified terrain (graded sites) Nominal risk

Water (Bays and Lakes)

FAULTS

- Fault
- Inferred Fault
- Concealed Fault
- Shear Zone

Figure No. V
Job No. 16-11075

Geotechnical Exploration, Inc.

June 2016

Steel-seis-combo.ai

APPENDIX A
UNIFIED SOIL CLASSIFICATION CHART
SOIL DESCRIPTION

Coarse-grained (More than half of material is larger than a No. 200 sieve)

GRAVELS, CLEAN GRAVELS (More than half of coarse fraction is larger than No. 4 sieve size, but smaller than 3")	GW	Well-graded gravels, gravel and sand mixtures, little or no fines.
	GP	Poorly graded gravels, gravel and sand mixtures, little or no fines.
GRAVELS WITH FINES (Appreciable amount)	GC	Clay gravels, poorly graded gravel-sand-silt mixtures
SANDS, CLEAN SANDS (More than half of coarse fraction is smaller than a No. 4 sieve)	SW	Well-graded sand, gravelly sands, little or no fines
	SP	Poorly graded sands, gravelly sands, little or no fines.
SANDS WITH FINES (Appreciable amount)	SM	Silty sands, poorly graded sand and silty mixtures.
	SC	Clayey sands, poorly graded sand and clay mixtures.

Fine-grained (More than half of material is smaller than a No. 200 sieve)

SILTS AND CLAYS		
Liquid Limit Less than 50	ML	Inorganic silts and very fine sands, rock flour, sandy silt and clayey-silt sand mixtures with a slight plasticity
	CL	Inorganic clays of low to medium plasticity, gravelly clays, silty clays, clean clays.
	OL	Organic silts and organic silty clays of low plasticity.
Liquid Limit Greater than 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
	CH	Inorganic clays of high plasticity, fat clays.
	OH	Organic clays of medium to high plasticity.
HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils

(rev. 6/05)

Geotechnical Exploration, Inc.
SOIL AND FOUNDATION ENGINEERING ● GROUNDWATER ● ENGINEERING GEOLOGY

18 October 2016

Kevin Steel
7870 Torrey Lane
La Jolla, CA 92037

Job No. 16-11075

Subject: **Response to City of San Diego Cycle Review Comments LDR-Geology: Project No. 497507, Cycle Issue 1**
Steel Residence Remodel and Additions
7991 Prospect Place
La Jolla, California

Dear Mr. Steel:

In accordance with your request, ***Geotechnical Exploration, Inc.*** herein responds to City of San Diego LDR-Geology review comments in a memo with completion date July 28, 2016, with respect to the planned residential remodel and additions at the subject property. We are providing this update letter to address the City of San Diego Cycle Review Comments. The LDR-Geology reviewer has reviewed our "Report of Limited Geotechnical Investigation, Steel Residence Remodel and Additions", dated June 7, 2016, and "Preliminary Grading and Site Plan prepared by Christensen Engineering & Surveying", dated June 6, 2016.

COMMENTS AND RESPONSES

Issue No. 5: "An addendum geotechnical report that addresses all geologic hazards potentially affecting the site must be submitted for environmental review of the proposed development." (New Issue)

GEI Response: We provide this update letter that addresses the cycle review issues listed below.

Issue No. 6: "The geotechnical report must provide an explicit opinion by the geotechnical consultant of record whether or not an "active" or "potentially active" fault trace passes beneath the proposed project. The opinion must be supported by adequate data. Subsurface exploration should intercept potential faults within 30-degrees of the expected trend." (New Issue)

GEI Response: Based on our review of geotechnical investigations conducted by our firm on several adjacent properties, it is our professional opinion that the concealed fault trace mapped to the north of the property is presumed inactive. Our opinion is based on our evaluation of an open trench that was logged by our firm on the adjacent property to the east (7985 Prospect Place) that did not reveal the concealed fault trace as indicated on the City of San Diego Seismic Safety Study Map Sheet 29. In addition, we performed a geotechnical investigation and geologic reconnaissance at 1369 Coast Walk. Please refer to Figure No. Ia, attached with this update letter for reference of mapped bluff edge, back of sea caves and projected minor faults in the vicinity of the subject site. Our geologic reconnaissance revealed that the minor faults in the bluffs north and northwest of the property formed during the uplift and folding of Mount Soledad. Most, if not all, of these minor fault features are most likely related to various periods and degrees of activity within the Rose Canyon Fault Zone and the Country Club Fault.

We acknowledge that a fault trench investigation was not performed at the subject site due to the lack of access required for this type of investigation. To comply with the *"City of San Diego Guidelines for Geotechnical Report, Fault Rupture Hazard Investigations"* we propose to perform subsurface mapping and geologic reconnaissance of the basement excavation and open trenches during the construction phase of the site where site conditions and access will be feasible. The additional subsurface exploration, in conjunction with our previous subsurface exploration and geologic reconnaissance conducted on adjacent properties will suffice the *"Fault Rupture Hazard Investigation"* requirements. The findings of our additional subsurface exploration will be provided in an addendum geotechnical report submitted to the city. As such, we ask the LDR-Geology reviewer to place a temporary hold on the project to allow further subsurface exploration on the subject site. If this option is not considered acceptable by the city, a notice of Geologic and Geotechnical Hazards may have to be recorded against the property.

Issue No. 7: "Provide a geotechnical map on a topographic base that shows the geologic conditions, field explorations and proposed construction. Indicate the locations of any sea caves if they exist in the vicinity of the site. Show the location of the cross section." (New Issue)

GEI Response: We have updated the site plan with the geotechnical/geologic conditions, location of cross section, field exploration and proposed construction. The existing property is located approximately 300 feet from an exposed bluff, and approximately 250 feet from a mapped sea cave. Please refer to Figure No. Ia, attached with this update letter for reference of mapped bluff edge, back of sea caves and projected minor faults in the vicinity of the subject site.

Issue No. 8: "Provide a geologic cross section. Depict the geologic/ geotechnical conditions in relationship to the proposed development." (New Issue)

GEI Response: We have attached a geologic cross section with this update letter that depicts the geologic/geotechnical conditions in relationship to the proposed site development.

Issue No. 9: "The geotechnical consultant must comment whether or not the proposed development as recommended will measurably destabilize neighboring properties or induce the settlement of adjacent structures." (New Issue)

GEI Response: In our professional opinion, the proposed site development will not measureable destabilize or induce settlement of adjacent structures if the conclusions and recommendations are followed in accordance to our geotechnical report.

*Issue No. 10: "The geotechnical report must be prepared in accordance with the City's "Guidelines for Geotechnical Reports."
http://www.sandiego.gov/development-services/industry/pdf/geoguidelines.pdf
(New Issue)*

GEI Response: Our "Report of Preliminary Geotechnical Investigation" dated June 7, 2016 was prepared in accordance to the City's "Guidelines for Geotechnical Reports". We acknowledge that a fault trench investigation was not performed at the subject site due to the lack of access required for this type of investigation. To comply with the *"City of San Diego Guidelines for Geotechnical Report, Fault Rupture Hazard Investigations"* we propose to perform subsurface mapping and geologic reconnaissance of the basement excavation and open trenches during the construction phase of the site where site conditions and access will be feasible. The additional subsurface exploration, in conjunction with our previous subsurface exploration and geologic reconnaissance conducted on adjacent properties will suffice the *"Fault Rupture Hazard Investigation"* requirements. The findings of our additional subsurface exploration will be provided in an addendum geotechnical report submitted to the city. As such, we ask the LDR-Geology reviewer to place a temporary hold on the project to allow further subsurface exploration on the subject site.

Issue No. 11: "Submit original quality prints and digital copies (on CD/DVD/or USB data storage device) of the geotechnical report listed as "References" and the requested addendum for our records." (New Issue)

GEI Response: We are providing a quality copy print of the referenced geotechnical investigation report and our update letter, as well as, copies on CD.

LIMITATIONS

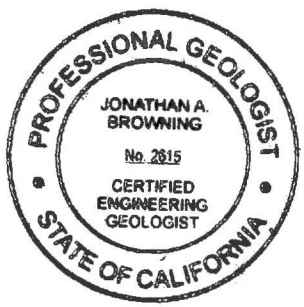
Our findings and opinions have been based upon all available data obtained from the field investigation and our research, as well as our experience with the soils and native materials located in the La Jolla area of the City of San Diego.

The work performed and recommendations presented herein are the result of an investigation and analysis that meet the contemporary standard of care in our profession within the County of San Diego. Should you have any questions, please feel free to contact our office. Reference to our **Job No. 16-11075** will help expedite a reply to your inquiries.

Respectfully submitted,

GEOTECHNICAL EXPLORATION, INC.

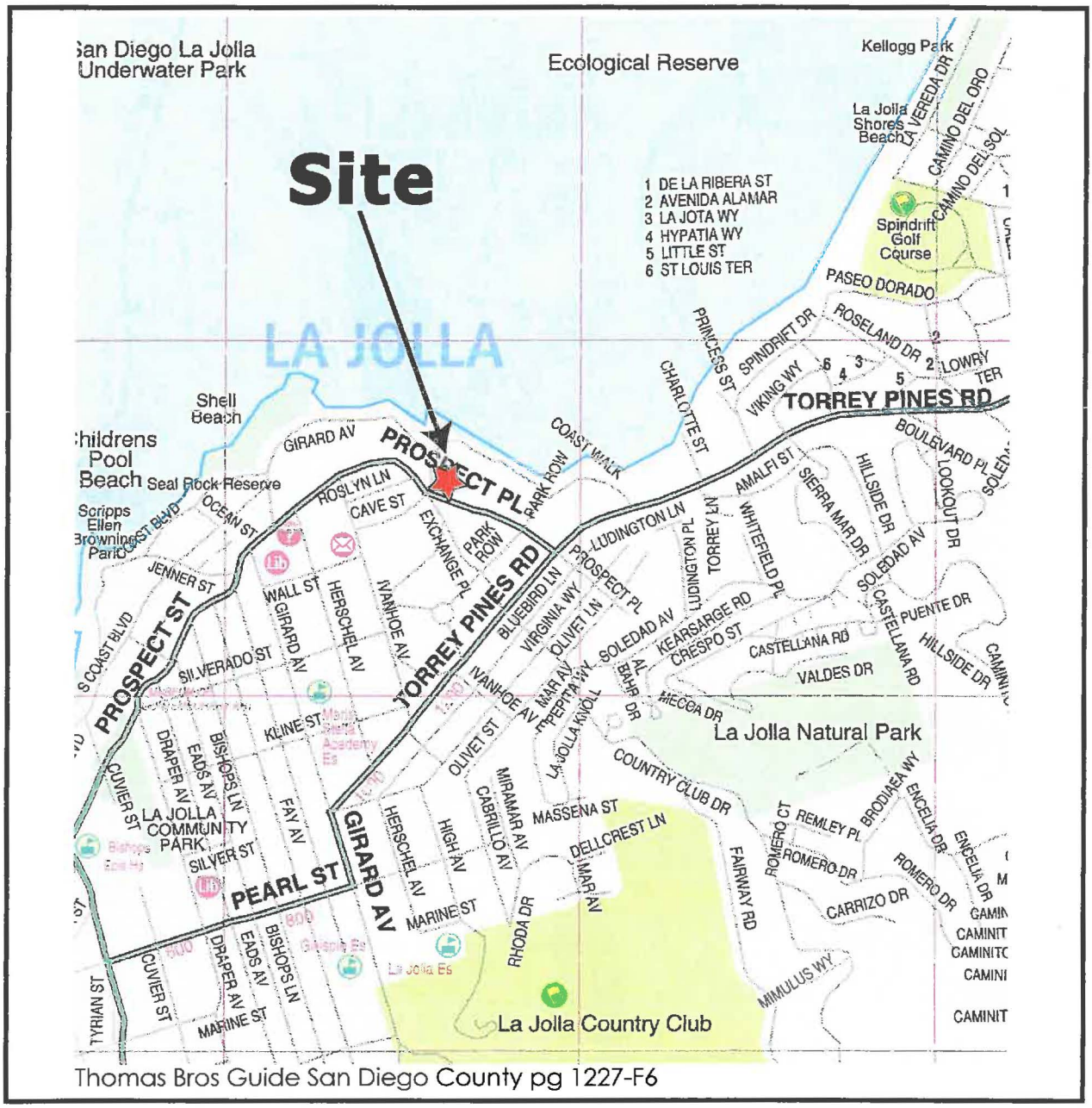
Jonathan A. Browning
P.G. 9012/C.E.G. 2615
Senior Project Geologist



Jaime A. Cerros, P. E.
R.C.E. 34422/G.E. 2007
Senior Geotechnical Engineer

Attachments:

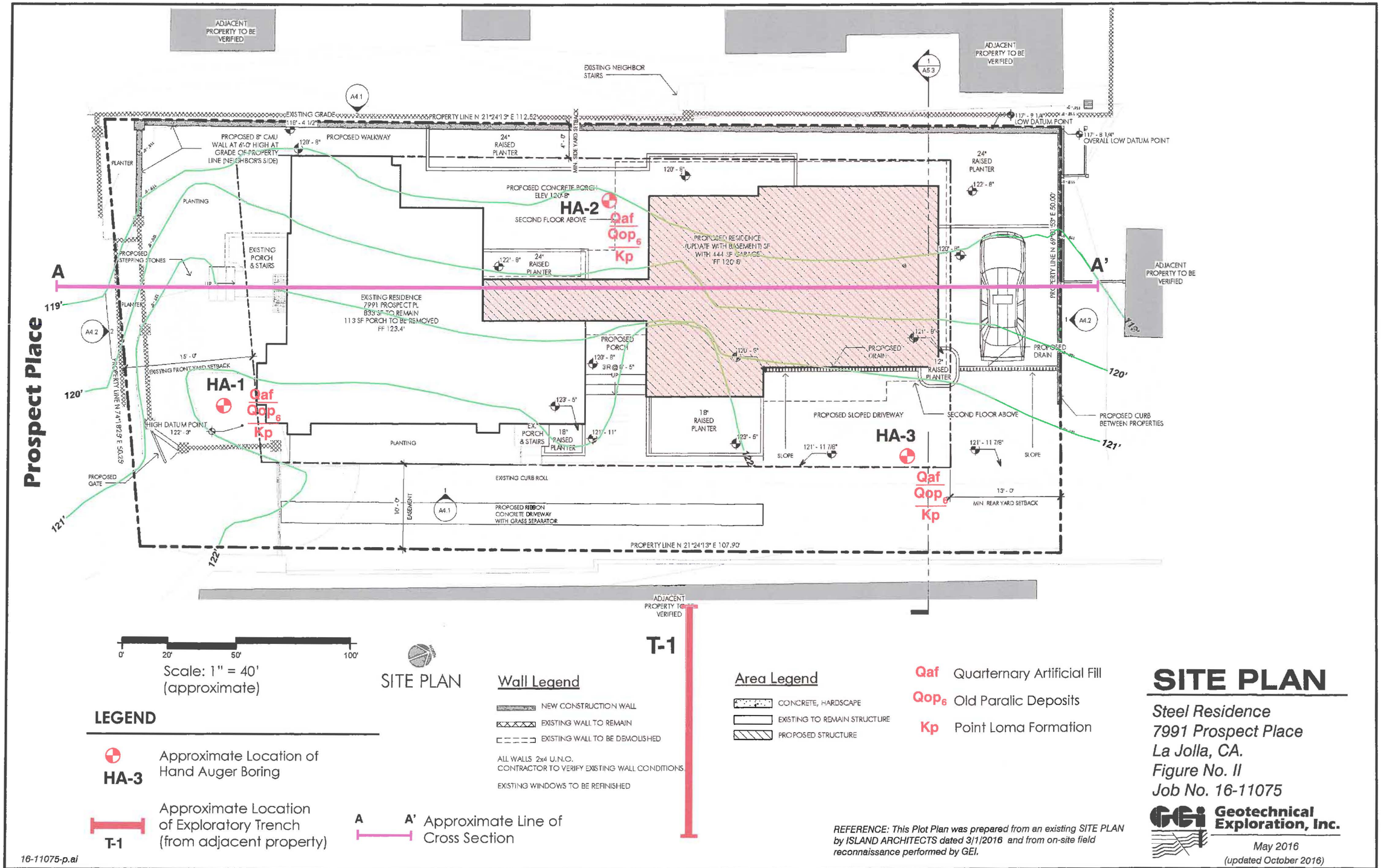
VICINITY MAP



Thomas Bros Guide San Diego County pg 1227-F6

Steel Residence
7991 Prospect Place
La Jolla, CA.

Figure No. I
Job No. 16-11075

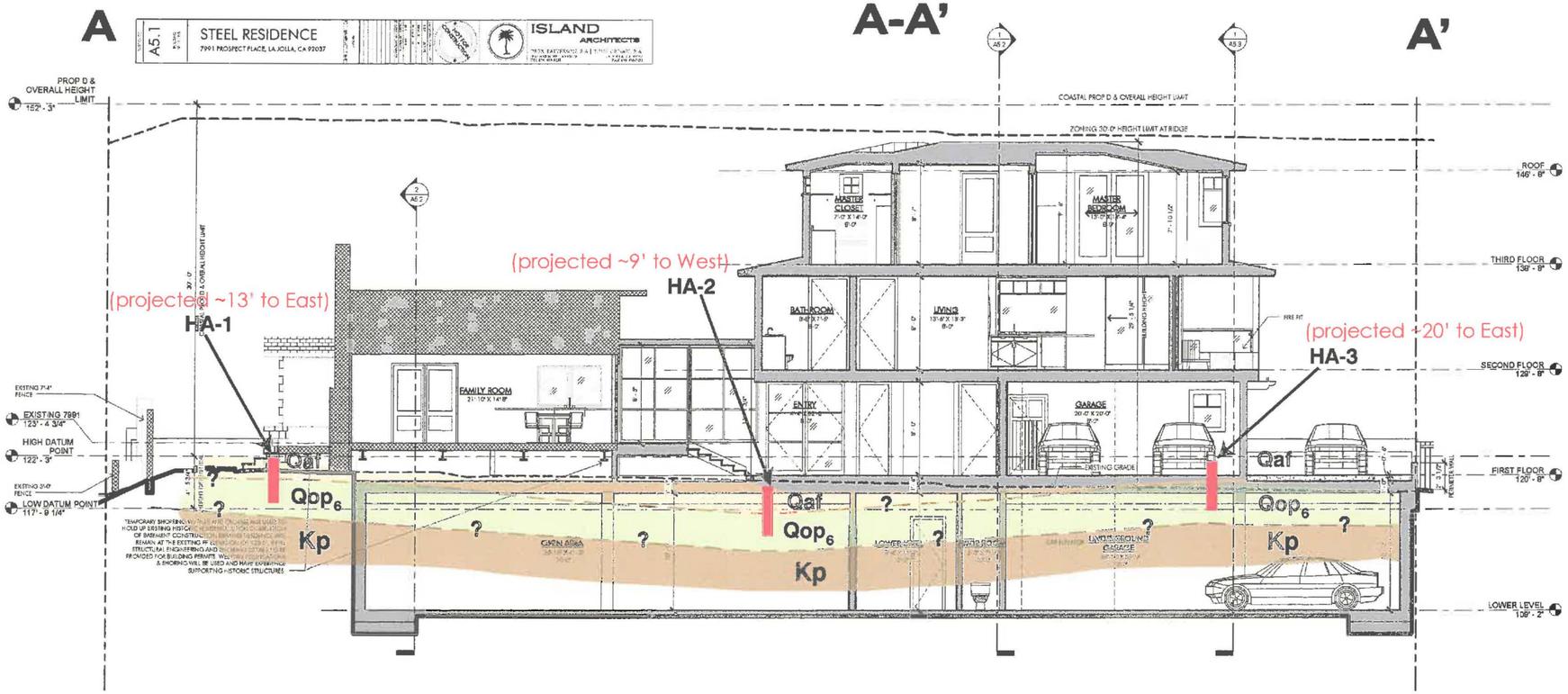

Prospect Place
ADJACENT PROPERTY TO BE VERIFIED
EXISTING NEIGHBOR STAIRS
EXISTING GRADE
PROPERTY LINE N 21°24'13" E 112.52'
PROPOSED 8" CMU WALL AT 6'-0" HIGH AT GRADE OF PROPERTY LINE (NEIGHBOR'S SIDE)
PROPOSED WALKWAY
24" RAISED PLANTER
MIN. SIDE YARD SETBACK
PLANTER
PLANTING
PROPOSED CONCRETE PORCH ELEV 120'-8"
HA-2
SECOND FLOOR ABOVE
Qaf
Qop6
Kp
PROPOSED RESIDENCE (UPDATE WITH BASEMENT) SF WITH 444 SF GARAGE FF 120'-8"
PROPOSED STEPPING STONES
EXISTING PORCH & STAIRS
EXISTING RESIDENCE 7991 PROSPECT PL 833 SF TO REMAIN 113 SF PORCH TO BE REMOVED FF 123.4'
A
A'
119'
120'
HA-1
15'-0" EXISTING FRONT YARD SETBACK
PROPERTY LINE N 74°18'25" E 50.25'
HIGH DATUM POINT 122'-3"
PROPOSED PORCH 120'-8" 3 R @ 6" - 5" UP
EX. PORCH & STAIRS
18" RAISED PLANTER
123'-5"
121'-11"
123'-6"
PROPOSED SLOPED DRIVEWAY
SLOPE
121'-11 7/8"
HA-3
PROPOSED DRAIN
12" RAISED PLANTER
SECOND FLOOR ABOVE
PROPOSED CURB BETWEEN PROPERTIES
121'
PROPERTY LINE N 68°41'53" E 50.00'
117'-8 1/4" LOW DATUM POINT
117'-8 1/4" OVERALL LOW DATUM POINT
122'-8"
PROPOSED GATE
EXISTING CURB ROLL
10'-0" EASEMENT
PROPOSED RIBBON CONCRETE DRIVEWAY WITH GRASS SEPARATOR
13'-0" MIN. REAR YARD SETBACK
PROPERTY LINE N 21°24'13" E 107.90'
122'
ADJACENT PROPERTY TO BE VERIFIED
T-1
0' 20' 50' 100'
Scale: 1" = 40' (approximate)
SITE PLAN
LEGEND
HA-3 Approximate Location of Hand Auger Boring
T-1 Approximate Location of Exploratory Trench (from adjacent property)
A A' Approximate Line of Cross Section
Wall Legend
NEW CONSTRUCTION WALL
EXISTING WALL TO REMAIN
EXISTING WALL TO BE DEMOLISHED
ALL WALLS 2x4 U.N.O.
CONTRACTOR TO VERIFY EXISTING WALL CONDITIONS
EXISTING WINDOWS TO BE REFINISHED
Area Legend
CONCRETE, HARDSCAPE
EXISTING TO REMAIN STRUCTURE
PROPOSED STRUCTURE
Qaf Quarternary Artificial Fill
Qop6 Old Paralic Deposits
Kp Point Loma Formation
SITE PLAN
Steel Residence
7991 Prospect Place
La Jolla, CA.
Figure No. II
Job No. 16-11075
Geotechnical Exploration, Inc.
May 2016
(updated October 2016)
REFERENCE: This Plot Plan was prepared from an existing SITE PLAN by ISLAND ARCHITECTS dated 3/1/2016 and from on-site field reconnaissance performed by GEI.
16-11075-p.ai

CROSS SECTION
A-A'

A

A5.1 | STEEL RESIDENCE
7991 PROSPECT PLACE, LA JOLLA, CA 92037
ISLAND ARCHITECTS

A'



SECTION 1 (1)

Scale: 1" = 10'
(approximate)

CITY STANDARD TITLE BLOCK

Wall Legend

- NEW CONSTRUCTION WALL
- EXISTING WALL TO REMAIN
- EXISTING WALL TO BE DEMOLISHED

ALL WALLS 2x4 U.N.O.
CONTRACTOR TO VERIFY EXISTING WALL CONDITIONS.

EXISTING WINDOWS TO BE REFINISHED

LEGEND

Qaf	Quaternary Artificial Fill
Qop_6	Old Paralic Deposits
Kp	Point Loma Formation
HA-1	Approximate Location of Exploratory Hand Auger Pit

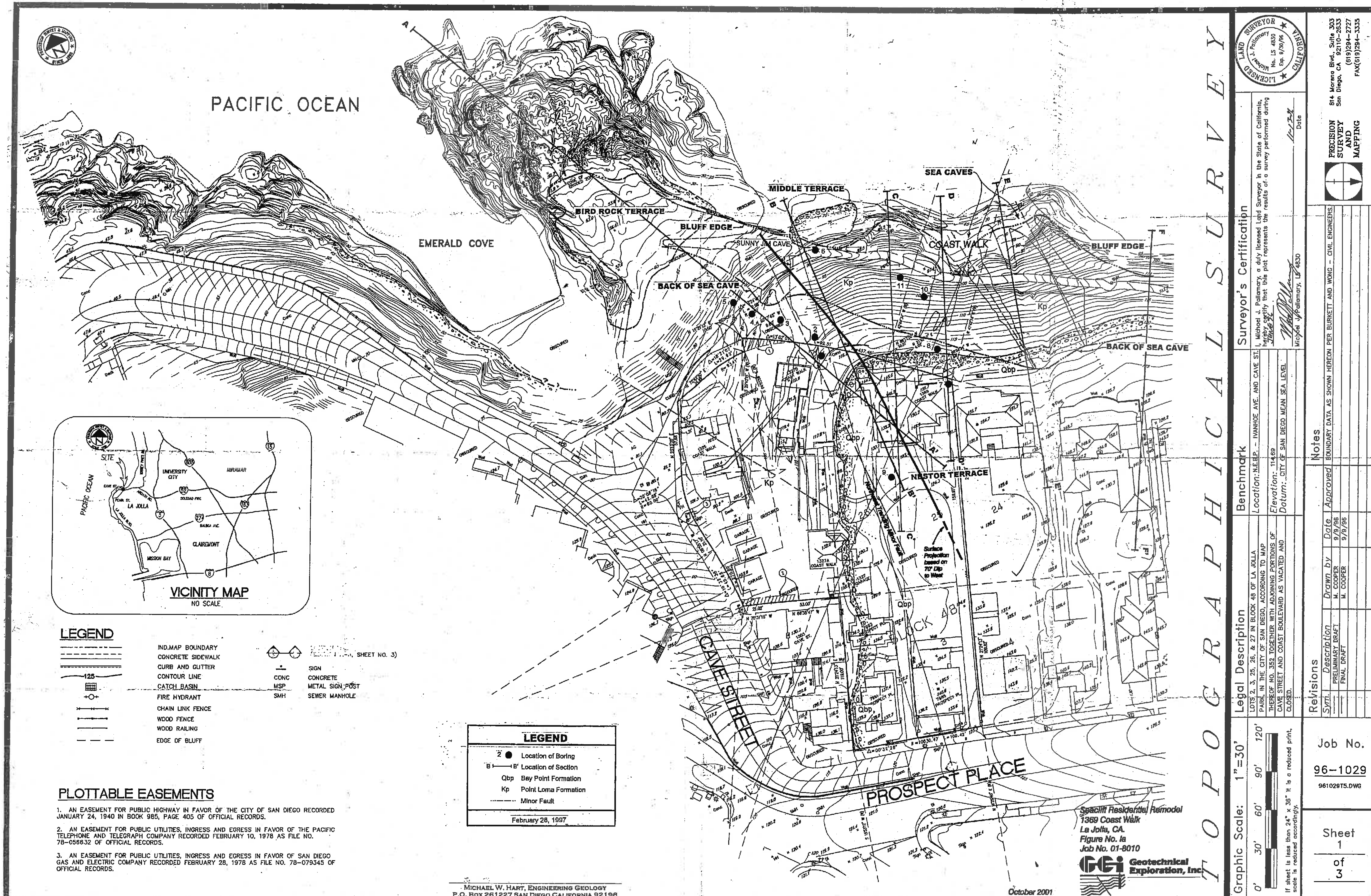
REFERENCE: This Cross Section was prepared from an existing BUILDING SECTIONS PLAN by ISLAND ARCHITECTS dated 08/18/2016 and from on-site field reconnaissance performed by GEI.

CROSS SECTION

Steel Residence
7991 Prospect Place
La Jolla, CA.
Figure No. III
Job No. 16-11075

Geotechnical Exploration, Inc.
October 2016

16-11075-AA.ai



PACIFIC OCEAN
EMERALD COVE
BIRD ROCK TERRACE
MIDDLE TERRACE
SEA CAVES
BLUFF EDGE
SUNNY JIM CAVE
COAST WALK
BACK OF SEA CAVE
NESTOR TERRACE
Kp
Qbp
Surface Projection based on 70° Dip to West
CAVE STREET
PROSPECT PLACE
VICINITY MAP
NO SCALE
PACIFIC OCEAN
SITE
LA JOLLA
UNIVERSITY CITY
MIRAMAR
CLAIREMONT
MISSION BAY
LEGEND
IND.MAP BOUNDARY
CONCRETE SIDEWALK
CURB AND GUTTER
CONTOUR LINE
CATCH BASIN
FIRE HYDRANT
CHAIN LINK FENCE
WOOD FENCE
WOOD RAILING
EDGE OF BLUFF
SIGN
CONC CONCRETE
MSP METAL SIGN POST
SMH SEWER MANHOLE
LEGEND
Location of Boring
Location of Section
Qbp Bay Point Formation
Kp Point Loma Formation
Minor Fault
February 28, 1997
PLOTTABLE EASEMENTS
1. AN EASEMENT FOR PUBLIC HIGHWAY IN FAVOR OF THE CITY OF SAN DIEGO RECORDED JANUARY 24, 1940 IN BOOK 985, PAGE 405 OF OFFICIAL RECORDS.
2. AN EASEMENT FOR PUBLIC UTILITIES, INGRESS AND EGRESS IN FAVOR OF THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY RECORDED FEBRUARY 10, 1978 AS FILE NO. 78-056632 OF OFFICIAL RECORDS.
3. AN EASEMENT FOR PUBLIC UTILITIES, INGRESS AND EGRESS IN FAVOR OF SAN DIEGO GAS AND ELECTRIC COMPANY RECORDED FEBRUARY 28, 1978 AS FILE NO. 78-079345 OF OFFICIAL RECORDS.
MICHAEL W. HART, ENGINEERING GEOLOGY
P.O. BOX 261227 SAN DIEGO CALIFORNIA 92196
Seacliff Residential Remodel
1369 Coast Walk
La Jolla, CA.
Figure No. Ia
Job No. 01-8010
Geotechnical Exploration, Inc.
October 2001
TOPOGRAPHICAL SURVEY
Graphic Scale: 1"=30'
Legal Description
LOTS 2, 3, 25, 26, & 27 IN BLOCK 48 OF LA JOLLA PARK, IN THE CITY OF SAN DIEGO, ACCORDING TO MAP THEREOF NO. 352 TOGETHER WITH ADJOINING PORTIONS OF CAVE STREET AND COAST BOULEVARD AS VACATED AND CLOSED.
Benchmark
Location: N.E.B.P. - IVANHOE AVE. AND CAVE ST.
Elevation: 114.69
Datum: CITY OF SAN DIEGO MEAN SEA LEVEL
Surveyor's Certification
I, Michael J. Pallamary, a duly licensed Land Surveyor in the State of California, hereby certify that this plat represents the results of a survey performed during
Michael J. Pallamary, LS 4830
Date
Revisions
PRELIMINARY DRAFT M. COOPER 9/9/96
FINAL DRAFT M. COOPER 9/9/96
Notes
BOUNDARY DATA AS SHOWN HEREON PER BURKETT AND WONG - CIVIL ENGINEERS.
PRECISION SURVEY AND MAPPING
814 Morena Blvd., Suite 303
San Diego, CA 92110-2633
(619)294-2727
FAX(619)294-3335
Job No.
96-1029
961029TS.DWG
Sheet 1 of 3