

## **EXHIBIT H**



Winston H. Hickox  
Secretary for  
Environmental  
Protection

## San Diego Region

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Gray Davis  
Governor

January 29, 1999

Mr. Garth Koller  
City of San Marcos  
1 Civic Center Drive  
San Marcos, CA 92069-2949

Dear Mr. Koller:

### RESPONSE TO YOUR LETTER DATED DECEMBER 3, 1998 REGARDING PRELIMINARY SITE PLAN FOR BRADLEY PARK

We have reviewed your letter dated December 3, 1998 and the limited geotechnical investigation for the proposed expansion of Bradley Park. As noted in our letter dated November 15, 1998, we believe that the addition of moisture to the landfill may exacerbate existing impacts to ground water quality. The description of the proposed irrigation system does not appear to provide adequate mitigation to prevent additional moisture from being added to the buried waste.

#### Comments on the Limited Geotechnical Investigation

The limited geotechnical investigation includes soil logs from fourteen trenches and evaluates the effectiveness of the landfill "cap" based on soil classification, sieve analysis and estimated relative compaction of the soil. Trenching was performed in the proposed parking area and the proposed turf/picnic area. The investigation assumed that a landfill cap was installed and met hydraulic conductivity requirements at the time of landfill closure. The soil logs show the presence of clayey materials at different depths in the expansion areas. However, it does not demonstrate that the assumption of the installation of a low permeable clay cap as final cover is correct.

The soil logs indicate that all trenches were either moist or very moist throughout the entire depth. Based on this information, it appears the soil cover is moist in an area which is currently nonirrigated open space and that the existing cover does not provide adequate protection against infiltration from the proposed irrigation system.

It is imperative that mitigation measures which prevent infiltration be implemented. Mitigation measures could include, but not be limited to, an irrigation system designed with a moisture monitoring system which would determine when irrigation of the turf area is necessary and would detect failure of the irrigation system, an alarm system which would detect failure of the irrigation system and mitigation measures to offset the effects of landfill settlement.

*California Environmental Protection Agency*



CSM 005193

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PLANNING DIVISION

**Conclusion**

In conclusion, we do not concur with the limited technical investigation's assertion that adequate mitigation measures have been added to the proposed irrigation system. If you proceed with the project as described without additional mitigation measures for the proposed irrigation system, we will recommend the Regional Board adopt an enforcement action, such as a Cease and Desist Order against the City of San Marcos.

If you have any questions, please contact Ms. Carol Tamaki at (619) 467 - 2982.

Sincerely,



JOHN H. ROBERTUS  
Executive Officer

Enclosures

cc: Bill Lindquist, Inactive Waste Site Management, Department of Public Works, County  
of San Diego

Michele Stress, Department of Environmental Health, County of San Diego

Glenn Young, California Integrated Waste Management Board, Sacramento

Leah Rose, City of San Marcos



# California Regional Water Quality Control Board

## San Diego Region



Winston H. Hickox  
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Gray Davis  
Governor

June 30, 1999

Mrs. Leah Rose-Goodwin  
Administrative Analyst  
City of San Marcos  
1 Civic Center Drive  
San Marcos, California 92069-2949

Paul: Thought you'd  
be interested in the  
last paragraph.  
(This is part of our Bradley  
FILE NO. 06-0022.02  
Park Environ. Processing-  
Final Hurdle)

Dear Mrs. Rose-Goodwin:

### MITIGATION MEASURES PROPOSED FOR BRADLEY PARK

As you know, by letters dated November 17, 1998 and January 29, 1999, we expressed our concern regarding the potential adverse impact of additional moisture from the proposed irrigation system and turf area above the former Linda Vista Landfill (also known as San Marcos D). In response to our concerns, you transmitted an engineering report, by letter dated May 11, 1999, which recommends the use of a drainage blanket consisting of a 10 mil visqueen liner, sand layer and filter fabric, along with a subdrain, to minimize infiltration of moisture from the proposed irrigation system. Based on a telephone conversation with Mr. Omar Dayani of your staff, a 20 mil visqueen liner will be utilized for this project instead of the 10 mil liner proposed in the engineering report. We also understand that the subdrain will discharge to a dry creek bed, a tributary to San Marcos Creek. Other mitigation measures have also been designed, including an irrigation system with an emergency alarm and shut off system. We believe that these mitigation measures will help in preventing infiltration from the irrigation system.

Although the affects of infiltration into the landfill may be mitigated by the above design, we will continue to be concerned regarding the impacts of landfill settlement on the proposed irrigation system. Your information in the Negative Declaration for the project indicates that the City of San Marcos will routinely inspect Bradley Park for evidence of subsidence and/or broken water lines. We also recommend that the subdrain to the dry creekbed be included in your site inspections.

The engineering report also states that in the near future, the remaining unused areas of Bradley Park (which overly the Linda Vista Landfill) may be converted to turf areas with a landscape irrigation system. If the City of San Marcos decides to provide additional turf areas above the landfill footprint, we expect the City of San Marcos to implement equivalent protection against infiltration of irrigation water into the landfill.

In our letter dated November 17, 1998, we stated that we may consider adding the Linda Vista Landfill to Order No. 97-11, General Waste Discharge Requirements for Post-Closure

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Mrs. Rose-Goodwin

- 2 -

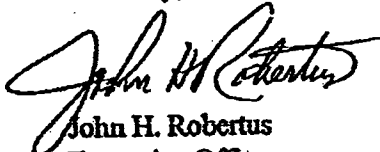
June 30, 1999

**Maintenance of Inactive Nonhazardous Waste Landfills Within the San Diego Region.** At this time, we are planning to add Linda Vista Landfill to the list of inactive landfills subject to Order No. 97-11 which will include both the City of San Marcos and the County of San Diego as responsible parties for permit compliance. This will require that both the City of San Marcos and the County of San Diego to: 1) develop post-closure maintenance plans to minimize erosion and ponding on the landfill cover; and 2) develop water quality monitoring programs. As part of the monitoring program for the Linda Vista Landfill, you will be required to monitor the discharge from the subdrain pipe to the dry creekbed.

We will notify you when the update to Order No. 97-11 is presented to the Regional Board.

If you have any questions, please contact Ms. Carol Tamaki at (858) 467 - 2982.

Sincerely,

  
John H. Robertus  
Executive Officer

7/6/99  
Spoke w/ Carol.  
She said we'd be  
notified prior to  
the order being  
issued.

cc: Jon Rollin, Inactive Waste Site Management, County of San Diego  
Michele Stress, Department of Environmental Health, County of San Diego

**California Environmental Protection Agency**

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CSM 003831

# **EXHIBIT I**

Rec 8/13/01

**GEOTECHNICAL INVESTIGATION**  
**PROPOSED BALL FIELD LIGHT POLES AND**  
**RESTROOM/ UTILITY BUILDING REPAIR**  
**BRADLEY PARK**  
**SAN MARCOS, CALIFORNIA**

**JOB NO. 01-34**

**JUNE 30, 2001**

**WESTERN**  
**SOIL AND FOUNDATION ENGINEERING, INC.**

**WESTERN  
SOIL AND FOUNDATION ENGINEERING, INC.**

PHONE: (760) 746-3553  
FAX: (760) 748-4912

423 HALE AVENUE  
ESCONDIDO, CALIFORNIA 92029

June 30, 2001

Mr. William B. Schramm  
Community Services Department  
3 Civic Center Drive  
San Marcos, CA 92069

**Project:** Job. No. 01-34  
Proposed Ball Field Light Poles and  
Restroom/ Utility Building Repair  
Bradley Park  
San Marcos, California

**Subject:** Report of Geotechnical Investigation

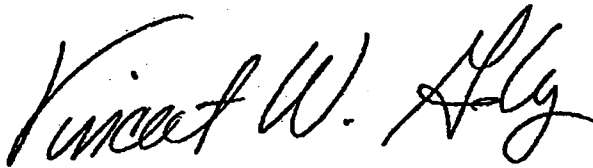
Dear Mr. Schramm:

In accordance with your request, we have completed a geotechnical investigation for the referenced project. We are presenting to you, herewith, our findings and recommendations for the proposed improvements anticipated at this site. The findings of this study indicate that the site is suitable for development if the recommendations provided in the attached report are incorporated into the design and construction of this project.

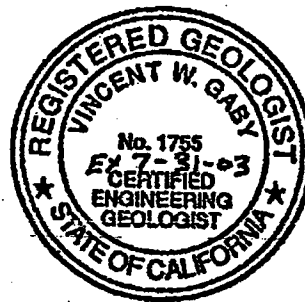


If you have any questions after reviewing the findings and recommendations contained in the attached report, please do not hesitate to contact this office. This opportunity to be of professional service is sincerely appreciated.

Respectfully submitted,  
WESTERN SOIL AND FOUNDATION ENGINEERING, INC.



Vincent W. Gaby, CEG 1755, Expires 7/31/03  
Engineering Geologist



Dennis E. Zimmerman, C 26676, GE 928, Expires 3/31/04  
Geotechnical Engineer



Distribution: (3) Addressee  
(3) Mr. Tim Regello, Senior Civil Engineer

VWG:DEZ/kmg

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**GEOTECHNICAL INVESTIGATION**

**PROPOSED BALL FIELD LIGHT POLES AND  
RESTROOM/ UTILITY BUILDING REPAIR  
BRADLEY PARK  
SAN MARCOS, CALIFORNIA**

**Prepared For:**

**Mr. William B. Schramm  
Community Services Department  
3 Civic Center Drive  
San Marcos, CA 92069**

**JOB NO. 01-34**

**JUNE 30, 2001**

**WESTERN  
SOIL AND FOUNDATION ENGINEERING, INC.**

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## ATTACHMENTS

Plate No. 1

Site Plan

Plate No. 2

Unified Soil Classification Chart

Plate No. 3 through Plate No. 8

Exploratory Excavation Logs

Plate No. 9 through Plate No. 11

Laboratory Test Results

APPENDIX I

Specifications for Construction of  
Controlled Fills

APPENDIX II

References

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**GEOTECHNICAL INVESTIGATION**  
**PROPOSED BALL FIELD LIGHT POLES AND**  
**RESTROOM/ UTILITY BUILDING REPAIR**  
**BRADLEY PARK**  
**SAN MARCOS, CALIFORNIA**

**Introduction and Project Description**

This report presents the results of our geotechnical investigation performed on the above referenced site. The purpose of this investigation was to evaluate the existing surface and subsurface conditions from a geotechnical perspective, to provide recommendations for the foundation design of new light poles and recommendations to improve the foundation support of an existing building.

The proposed project will be the replacement of four existing light poles around the Otis Hughes Baseball Field and the installation of one new light pole on the east side of Baseball Field Number Four. According to the light pole designer, the foundations will consist of 30-inch diameter cast-in-place concrete footings embedded approximately 12 feet below grade. The poles are expected to reach heights on the order of 50 feet.

The scope of our investigation also evaluated the soil conditions adjacent to an existing restroom/utility building. This building, which is located south of the referenced baseball fields, has exhibited symptoms of significant soil movement. These symptoms have included cracking and separation of the building walls and rotation of the foundation.

It should be recognized that re-evaluation of our analysis may be necessary as construction documents are produced. We should be provided the opportunity to amend our recommendations if necessary, once the building and improvement plans are finished.

The site configuration and the approximate locations of our subsurface explorations are shown on the enclosed Site Plan, Plate No 1.

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### Project Scope

This investigation consisted of a surface reconnaissance coupled with a subsurface exploration. Representative samples of soil material were obtained from the site and returned to our laboratory for observation and testing. The results of the field and laboratory data collected are presented in this report.

Specifically, the intent of this investigation was to:

- a) Explore the subsurface conditions to the depths that could be influenced by the proposed construction;
- b) Evaluate, by laboratory tests, the pertinent static physical properties of the various soil and rock stratigraphic units which could influence the development of this project;
- c) Describe the site geology, including potential geologic hazards and their effect upon the proposed development;
- d) Present recommendations for foundation design, including bearing capacity, estimated settlements, lateral pressures, and expansion potential of the on-site soils; and
- e) Provide remedial foundation and earthwork recommendations for the restroom/utility building.

This report has been prepared for the City of San Marcos to be used in the design of the proposed improvements. This report has not been prepared for use by other parties, and may not contain sufficient information for purposes of other parties or other uses. The information in this report represents professional opinions that have been developed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, express or implied, is made as to the professional advice included in this report.

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### Findings

**Site Description:** The project site is located in the northeast portion of Bradley Park, along the south side of Linda Vista Road and approximately 300 feet west of Pacific Street, in the city of San Marcos, California. The site vicinity can be found in the northwest quarter of grid D-1, Page 1138, of the Thomas Brothers Guide for San Diego County, 1999 edition.

The area investigated consists of a series of youth baseball fields and associated improvements.

The site is situated within a large alluvial basin. The terrain varies from nearly flat to gently inclined. Elevations across the area investigated ranged from 540 to 550 feet above mean sea level (m.s.l.). A narrow tributary drainage course of the San Marcos Creek flows along the southern edge of the area investigated.

Improvements observed on the site at the time of our investigation included several single story structures, light standards and metal bleachers. Vegetation consisted primarily of well tended landscaping and ornamental trees.

**Subsurface Conditions:** The subject site is underlain by Eocene age lagoonal sediments that have been mapped by Tan and Kennedy (1996) as the Santiago Formation. However, the lithologic content of these sediments appear to be more characteristic of the Delmar Formation. The formational materials are covered by alluvium and artificial fill. Each unit is described below beginning with the oldest.

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**Delmar Formation:** The Delmar Formation is represented on site by a sequence of silty to clayey, fine and fine to medium grained sandstone interbedded with sandy to clayey siltstone. The sandstone beds range in color from pale yellow, gray and green, to brownish-yellow, bluish-green and yellowish-gray. The siltstone beds are typically green to grayish-green. Individual beds vary from one to five feet in thickness and dip gently (0 to 5 degrees) to the southwest. These sediments appear to be well indurated and locally cemented. It has been our experience that the clayey portion of the Delmar Formation in this area exhibits a medium expansion potential.

The Delmar Formation was encountered in our exploratory borings at depths ranging from 5 to 16 feet below existing grade. Boring number B-2 was terminated before reaching the formational sediments. This was due to the entanglement of landfill debris within the drilling auger. It is estimated that the formational materials at this location would occur at 16 to 20 feet below the existing ground surface.

**Alluvium:** A relatively thin layer of alluvium was observed covering the Delmar Formation in borings B-1 and B-5. It was composed of dark grayish-brown, sandy clay to clayey sand. It appeared to be very moist and in a medium stiff to stiff condition.

**Artificial Fill:** Fill materials were exposed in all five exploratory borings and the hand-dug test pit. In boring numbers B-2 and B-4, it was observed capping landfill refuse. At the other boring locations, it was covering natural soil. The fill is also suspected of capping landfill refuse in the vicinity of the restroom/utility building.

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The artificial fill consisted of interlayered silty to clayey sands and clayey silt. The results of laboratory testing indicate that the fill is poorly compacted and prone to settlement. In its present condition, the fill soil is not considered suitable to support improvements or new fill. Thicker or poorer quality materials may be encountered at locations that were not explored.

**Rippability:** The exploratory borings were drilled using a 8-inch diameter auger on a truck-mounted drilling rig. Little difficulty was experienced during excavation. The borings were advanced to depths ranging from 12 to 20 feet. Based on our field observations, it appears that the majority of the materials to be exposed during construction may be excavated with conventional earthmoving equipment. It is possible that resistant bedrock and/or boulders may be encountered at locations that were not explored.

**Groundwater:** Free groundwater was observed in only one of our small diameter borings (B-4) at a depth of approximately 5 feet. Seepage was not seen in any of the other observation borings. It appeared that the water was a perched zone trapped near the contact between the landfill debris and the clayey soil cap.

It should be noted that for the last three years precipitation levels have been below average. Fluctuations of subsurface water will be affected by variations in annual precipitation and local irrigation. Moreover, it has been our experience that periodic events of seepage will occur in areas of significant "cut" or any "below-grade" structures. Therefore, consideration must be given to appropriate surface and subsurface drainage systems such as underdrains and swales as recommended further in this report

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### Geologic Hazards

**Faults and Seismic Hazards:** The numerous fault zones in southern California include active, potentially active, and inactive faults. Active faults are those which display evidence of movement within Holocene time (from the present to approximately 11 thousand years). Faults that have ruptured geologic units of Pleistocene age (11 thousand to 2 million years) but not Holocene age materials are considered potentially active. Inactive faults are those which exhibit movement that is older than 2 million years. According to available published information, there are no known active or potentially active faults which intercept the project site. The site is not located within an Alquist-Priolo Special Studies Zone. Therefore, the potential for ground rupture at this site is considered low. There are, however, several faults located in close proximity that movement associated with them could cause significant ground motion at the site.

The table below presents the maximum credible earthquake magnitudes and estimated peak accelerations anticipated at the site. These accelerations are based on the assumption that the maximum credible earthquake occurs on specific faults at the closest point on that particular fault to the site. The maximum credible earthquake is defined as the maximum earthquake that appears to be reasonably capable of occurring under the conditions of the presently known geologic framework. The probability of such an earthquake occurring during the lifetime of this project is considered low. The severity of ground motion is not anticipated to be any greater at this location than in other areas of San Diego County.

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Fault	Distance (Miles)	Magnitude (Richter)	Estimated Bedrock Acceleration (1) (g)
Coronado Banks	25	7.6 L(2)	0.21
Elsinore	18	7.5 L(3)	0.27
Rose Canyon	14	7.0 L(2)	0.27
San Andreas	66	8.3 L(3)	0.10
San Jacinto	41	7.8 L(3)	0.14

L = Local Magnitude

(1) Seed and Idriss, 1982

(2) Slemmons, 1979

(3) Greensfelder, C.D.M.G. Map Sheet 23, 1994

**Liquefaction:** The potential for seismically induced liquefaction is greatest where shallow groundwater and poorly consolidated, well sorted, fine grained sands and silts are present. Liquefaction potential decreases with increasing density, grain size, clay content and gravel content. Conversely liquefaction potential increases as the ground acceleration and duration of seismic shaking increase.

Although subsurface water was observed within one of our explorations, it appears to be localized; and, therefore, shallow subsurface water is not expected to occur on this portion of the site. Furthermore, the site is underlain by well indurated sediments with significant clay content. Based on the consistency of the underlying materials, the potential for generalized liquefaction in the event of a strong to moderate earthquake on nearby faults is considered low.

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**Landslides and Slope Stability:** No evidence indicating the presence of deep-seated landslides were observed on the site or in the immediate site vicinity. In general, the site is flat to very gently inclined. In addition, no slopes will be constructed in conjunction with this project. Therefore, it is our opinion that the potential for slope failure on this project is low if grading and construction is performed in accordance with the recommendations contained in this report.

### **Recommendations and Conclusions**

#### **Foundation Recommendations**

**General:** Landfill materials were not exposed in borings B-1, B-3 or B-5. At these locations, the light towers may be supported on deep foundations in accordance with the recommendations presented below. In exploratory boring B-4, firm formational sediments occurred beneath landfill material at a depth of approximately 16 feet. Boring B-2 was terminated before formational soils were encountered because wire debris within the landfill material became entangled in the auger. It is estimated that formation sediments may occur at a depth of around 16 to 20 feet at this location. If deep foundations are used to penetrate the landfill, then appropriate procedures should be followed as provided by an environmental consultant.

It is recommended that structures supported in the existing artificial fill, including both the Utility/Restroom Building and light standards, be supported on a mat slab foundation in accordance with the recommendations presented below.

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