Disney | ABC Studios at The Ranch

Draft Environmental Impact Report

Volume III

SCH No. 2010011010
County Project No. TR071216-(5)
Plan Amendment No. 200900010
Zone Change No. 200900012
Vesting Tentative Tract Map No. 071216
Conditional Use Permit No. 200900126
Oak Tree Permit No. 200900041
Parking Permit No. 201000002
Environmental Review No. 200900112

Lead Agency:
County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012

May 2012

Disney | ABC Studios at The Ranch

Draft Environmental Impact Report

Volume III

SCH No. 2010011010
County Project No. TR071216-(5)
Plan Amendment No. 200900010
Zone Change No. 200900012
Vesting Tentative Tract Map No. 071216
Conditional Use Permit No. 200900126
Oak Tree Permit No. 200900041
Parking Permit No. 201000002
Environmental Review No. 200900112

Lead Agency:
County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012

May 2012

Prepared By:

matrix environmental

6701 Center Drive West, Suite 900
Los Angeles, California 90045

TABLE OF CONTENTS

Page

VOLUME I

I. INTRODUCTION I-1

II. EXECUTIVE SUMMARY II-1

III. ENVIRONMENTAL SETTING III-1

IV. PROJECT DESCRIPTION IV-1

V. ENVIRONMENTAL IMPACT ANALYSIS V.A-1
- A. Geotechnical Hazards V.A-1
- B. Flood Hazards V.B-1
- C. Noise V.C-1
- D. Water Quality V.D-1
- E.1 Air Resources Air Quality V.E.1-1
- E.2 Air Resources Global Climate Change V.E.2-1
- F. Biological Resources V.F-1
- G. Cultural and Paleontological Resources V.G-1
- H. Agricultural and Forestry Resources V.H-1

VOLUME II

- I. Visual Qualities V.I-1
- J. Traffic, Access, and Parking V.J-1
- K.1 Public Services Law Enforcement V.K.1-1
- K.2 Public Services Fire Protection V.K.2-1
- L.1 Utilities and Service Systems Water Supply V.L.1-1
- L.2 Utilities and Service Systems Wastewater/Sewage Disposal V.L.2-1
- L.3 Utilities and Service Systems Solid Waste V.L.3-1
- L.4 Utilities and Service Systems Energy V.L.4-1
- M. Environmental Safety/Fire Hazards V.M-1
- N. Land Use V.N-1

VI. PROJECT ALTERNATIVES VI-1
- A. Alternative 1: No Project/No Build VI-16
- B. Alternative 2: Development in Accordance with Existing Plans VI-27
- C. Alternative 3: Reduced Program VI-46

Page

D. Alternative 4: Alternative Design with Reduced Program VI-64
E. Environmentally Superior Alternative VI-83

VII. OTHER ENVIRONMENTAL CONSIDERATIONS VII-1

VIII. LIST OF PREPARERS VIII-1

IX. REFERENCES IX-1

X. ACRONYMS AND ABBREVIATIONS X-1

LIST OF APPENDICES

VOLUME III

Appendix A NOP/Initial Study/NOP Comment Letters

Appendix B.1 Preliminary Geotechnical Report

Appendix B.2 Preliminary Geotechnical Report

VOLUME IV

Appendix C Drainage Concept/SUSMP/LID Plan

VOLUME V

Appendix C Drainage Concept/SUSMP/LID Plan (Continued) (Sediment Transport Analyses)

VOLUME VI

Appendix D Noise Worksheets

Appendix E.1 Air Quality Worksheets

Appendix E.2 GHG Worksheets

Appendix F.1 Biological Resources Assessment

Appendix F.2 Biological Resources Assessment Supplement

Appendix F.3 Biological Resources Assessment Addendum

Appendix F.4 County Oak Tree Report

Appendix F.5 City Oak Tree Report

Appendix F.6 Oak Tree and Woodland Mitigation and Monitoring Plan

Appendix F.7 Jurisdictional Waters Report

Appendix F.8 Preliminary Fuel Modification Plan

Appendix F.9 Wildlife Impacts Analysis

Appendix F.10 Sensitive Species Surveys

Appendix F.11 Habitat Mitigation and Monitoring Plan

VOLUME VII

Appendix G.1 Historic Resources Assessment

Appendix G.2 Archaeological and Paleontological Resources Assessment

Appendix G.3 Supplement to Archaeological and Paleontological Resources Assessment

Appendix H.1 Design Guidelines

Appendix H.2 Light Memo

VOLUME VIII

Appendix I Traffic Study

VOLUME IX

Appendix J.1 Los Angeles County Sheriff s Department and California Highway Patrol Correspondence

Appendix J.2 Los Angeles County Fire Department Correspondence

Appendix K.1 Water Supply Assessment

Appendix K.2 Water Report

Appendix K.3 Sewer Report

Appendix K.4 Sewer Area Study

Appendix K.5 Dry Utilities Report

Appendix L.1 Environmental Records Search I

Appendix L.2 Environmental Records Search II

Appendix L.3 Soil Sampling Analytical Report

Appendix M Sunnyvale Analysis

LIST OF FIGURES

Figure		Page
III-1	Location of Related Projects	III-42
IV-1	Regional and Local Vicinity Map	IV-2
IV-2	Aerial Photograph of Golden Oak Ranch	IV-4
IV-3	Existing Uses	IV-6
IV-4	Proposed Uses	IV-11
IV-5	Proposed Uses Outside of Golden Oak Ranch	IV-12
IV-6	Conceptual Site Plan Soundstage Option	IV-14
IV-7	Conceptual Site Plan Studio Office Option	IV-16
IV-8	Site Circulation Soundstage Option	IV-25
IV-9	Site Circulation Studio Office Option	IV-26
IV-10	Landscaping Concept Soundstage Option	IV-29
IV-11	Landscaping Concept Studio Office Option	IV-30
IV-12	Proposed Trail	IV-34
IV-13	Temporary Construction Road	IV-47
IV-14	Retaining Walls Soundstage Option	IV-49
IV-15	Retaining Walls Studio Office Option	IV-50
IV-16	Tract Map	IV-53
IV-17	Exhibit A Map	IV-55
V.A-1	Regional Faults in Southern California	V.A-6
V.A-2	Seismic Hazard Zone Map	V.A-9
V.A-3	Project Grading Plan	V.A-19
V.A-4	Grading Profiles	V.A-20
V.A-5	Water Tank Grading Plan	V.A-21
V.A-6	Conditional Parking Areas Grading Plan	V.A-22
V.A-7	Proposed Placerita Canyon Connector Trail	V.A-23

Figure **Page**

V.B-1 Existing Drainage Conditions V.B-4

V.B-2 Existing Floodplain Map V.B-7

V.B-3 Conceptual Drainage Conditions and Facilities V.B-15

V.B-4 Post-Project Floodplain Map V.B-28

V.B-5 Debris Basins V.B-33

V.C-1 Noise Measurement Locations V.C-16

V.E.1-1 SCAQMD Source Receptor Areas V.E.1-17

V.E.1-2 MATES III Total Cancer Risk for Project Area V.E.1-20

V.E.1-3 Air Quality Sensitive Receptors Locations V.E.1-21

V.F-1 Plant Communities and Jurisdictional Features Development Area V.F-17

V.F-2 Plant Communities and Jurisdictional Features Water Tank Area and Trail Area V.F-18

V.F-3 Plant Communities Conditional Parking Areas and Potential Mobile Home Relocation Areas V.F-19

V.F-4 Plant Communities Off-Site Infrastructure Improvement Areas (Southwest of Development Area) V.F-20

V.F-5 Plant Communities Off-Site Infrastructure Improvement Areas and SR-14 Interchange Improvements (Southwest of Development Area) V.F-21

V.F-6 Plant Communities Off-Site Infrastructure Improvement Areas (West of Development Area) V.F-22

V.F-7 Plant Communities Off-Site Infrastructure Improvement Areas (West of Development Area) V.F-23

V.F-8 Plant Communities Off-Site Infrastructure Improvement Areas (West of Development Area) V.F-24

V.F-9 Plant Communities Off-Site Infrastructure Improvement Areas and SR-14 Interchange Improvements (North of Development Area) V.F-25

V.F-10 Plant Communities Off-Site Infrastructure Improvement Areas (North of Development Area) V.F-26

V.F-11 Plant Communities Off-Site Infrastructure Improvement Areas (North and West of Development Area) V.F-27

V.F-12 California Gnatcatcher Final Designated Critical Habitat V.F-37

Figure **Page**

V.F-13 Oak Tree Map (On-Site) V.F-41
V.F-14 Oak Tree Map (Off-Site) V.F-43
V.F-15 Impacts to Plant Communities and Jurisdictional Features Development Area V.F-65
V.F-16 Impacts to Plant Communities and Jurisdictional Features Water Tank Area and Trail Area V.F-66
V.F-17 Impacts to Oak Trees V.F-73
V.F-18 Oak Tree Assessment Trail Area V.F-75
V.F-19 Potential Oak Woodland Expansion and Restoration Areas V.F-79
V.F-20 Impacts to Jurisdictional Features (With Site Development Plan) V.F-82
V.F-21 Impacts to Jurisdictional Features Drainage B Detail V.F-83
V.F-22 Impacts to Jurisdictional Features Water Tank Area and Trail Area Detail V.F-84
V.F-23 Placerita Creek Restoration Plan V.F-85
V.I-1 Photo Location Map V.I-4
V.I-2 Photographs of Project Site and Surrounding Area V.I-5
V.I-3 Existing and Proposed Views SR-14 NB Off-Ramp V.I-6
V.I-4 Existing and Proposed Views SR-14 NB V.I-7
V.I-5 Existing and Proposed Views Placerita Canyon Road V.I-8
V.I-6 Existing and Proposed Views SR-14 SB On-Ramp V.I-9
V.I-7 Existing and Proposed Views Placerita Canyon Road V.I-10
V.I-8 Conceptual Rendering of Project Main Entrance V.I-24
V.I-9 Conceptual Rendering of Proposed Soundstages V.I-25
V.I-10 Conceptual Rendering of Proposed Plaza V.I-26
V.I-11 Conceptual Rendering of Creek View V.I-27
V.I-12 Conceptual Rendering of Aerial View of Project V.I-28
V.J-1 Existing Conditions (2010) Peak-Hour Levels of Service V.J-5
V.J-2 Proposed Parking Plan Soundstage Option V.J-24
V.J-3 Alternative Parking Plan Studio Office Option V.J-25

Figure **Page**

V.J-4 Existing plus Ambient Growth Conditions (2020) Peak-Hour Levels of Service V.J-31

V.J-5 Project Trip Distribution V.J-33

V.J-6 Existing plus Ambient Growth plus Project Conditions (Soundstage and Studio Office Options) Peak-Hour Levels of Service V.J-35

V.J-7 Existing plus Ambient Growth plus Project with Mitigation (Soundstage and Studio Office Options) Peak-Hour Levels of Service V.J-65

V.J-8 Existing plus Ambient Growth plus Project with Mitigation plus Related Projects with Cumulative Mitigation (Soundstage and Studio Office Options) Peak-Hour Levels of Service V.J-72

V.K.1-1 Law Enforcement Stations Within the Project Vicinity V.K.1-2

V.K.2-1 Existing and Proposed Fire Stations Within the Project Vicinity V.K.2-2

V.K.2-2 Preliminary Fuel Modification Plan V.K.2-14

V.L.1-1 Proposed Off-Site Water Improvements V.L.1-23

V.L.1-2 Proposed On-Site Water Improvements V.L.1-26

V.L.2-1 Proposed Off-Site Sewer Line Oak Orchard Alignment V.L.2-7

V.L.2-2 Proposed On-Site Sewer System V.L.2-9

V.L.3-1 County of Los Angeles Landfills V.L.3-3

V.N-1 Applicable and Proposed Area Plan Designations V.N-3

V.N-2 Existing and Proposed Zoning Designations V.N-4

LIST OF TABLES

Table		Page
II-1	Summary of Environmental Impacts, Project Design Features, Mitigation Measures, and Resulting Levels of Significance	II-9
III-1	List of Related Projects	III-41
IV-1	Project Buildout Soundstage Option	IV-15
IV-2	Project Buildout Studio Office Option	IV-17
V.C-1	Typical Noise Levels	V.C-2
V.C-2	Land Use Compatibility for Community Noise Exposure	V.C-6
V.C-3	County of Los Angeles Exterior Noise Standards	V.C-8
V.C-4	County of Los Angeles Construction Noise Limits	V.C-10
V.C-5	City of Santa Clarita Exterior Noise Limits	V.C-11
V.C-6	FTA Vibration Impact Criteria Typical Human Annoyance Levels	V.C-12
V.C-7	FTA Vibration Impact Criteria Typical Levels for Building Damage	V.C-12
V.C-8	Caltrans Guidelines Typical Vibration Annoyance Thresholds	V.C-13
V.C-9	Caltrans Guidelines Typical Vibration Damage Thresholds	V.C-13
V.C-10	Measured Off-Site Ambient Noise Levels	V.C-17
V.C-11	Traffic Noise Model Calibration	V.C-18
V.C-12	Calculated Existing Roadway Traffic Noise Levels	V.C-19
V.C-13	Noise Levels Generated by Typical Construction Equipment	V.C-25
V.C-14	Construction Noise Impacts from On-Site Activities	V.C-26
V.C-15	Off-Site Roadway Traffic Noise Impacts Soundstage Option	V.C-34
V.C-16	Off-Site Roadway Traffic Noise Impacts Office Studio Option	V.C-34
V.C-17	Construction Vibration Impacts	V.C-44
V.C-18	Cumulative Off-Site Roadway Traffic Noise Impacts Soundstages within Northern Portion of the Site Option	V.C-47
V.C-19	Cumulative Off-Site Roadway Traffic Noise Impacts Studio Offices within Northern Portion of the Site Option	V.C-47

Table **Page**

V.E.1-1 Ambient Air Quality Standards V.E.1-3

V.E.1-2 Summary of Ambient Air Quality In the Project Vicinity V.E.1-18

V.E.1-3 Unmitigated Project Estimate of Construction Emissions (Pounds per Day) V.E.1-37

V.E.1-4 Unmitigated Project Maximum Ambient Construction Pollutant Impacts at the Closest Sensitive Receptors V.E.1-39

V.E.1-5 Unmitigated Project Regional Operational Emissions (Pounds per Day) V.E.1-43

V.E.1-6 Unmitigated Project Localized Operational Emissions (Pounds per Day) V.E.1-44

V.E.1-7 Local Area Carbon Monoxide Dispersion Analysis V.E.1-45

V.E.2-1 Global Warming Potentials V.E.2-3

V.E.2-2 California GHG Inventory (Million Metric Tons CO_2e) V.E.2-4

V.E.2-3 Construction Related Emissions with 2020 Mandates (Metric Tons of CO_2e) V.E.2-32

V.E.2-4 Annual GHG Emissions Summary (Metric Tons of CO_2e) V.E.2-33

V.F-1 Existing Plant Communities V.F-16

V.F-2 Tree Assessment Summary V.F-42

V.F-3 Temporary and Permanent Impacts to Plant Communities V.F-64

V.G-1 Alterations to Ranch Resources V.G-26

V.J-1 Study Intersection Summary and Existing (2010) Levels of Service V.J-4

V.J-2 Existing Plus Ambient Growth Conditions, Both without and with Soundstage Option (2020) Intersection V/C and Levels of Service V.J-30

V.J-3 Soundstage Option Trip Generation V.J-32

V.J-4 Existing Plus Ambient Growth Conditions, Both without and with Studio Office Option (2020) Intersection V/C and Levels of Service V.J-34

V.J-5 Studio Office Option Trip Generation V.J-36

V.J-6 Caltrans Intersection Analysis Soundstage and Studio Office Options V.J-39

V.J-7 Caltrans On-Ramp Analysis Soundstage and Studio Office Options V.J-40

V.J-8 Caltrans Off-Ramp Analysis Soundstage and Studio Office Options V.J-41

Table **Page**

V.J-9 CMP Intersection Analysis (Soundstage and Studio Office Options).....V.J-43

V.J-10 Future Conditions, Both without and with Soundstage Option (2020) Freeway Segment Levels of Service V.J-44

V.J-11 Future Conditions, Both without and with Studio Office Option (2020) Freeway Segment Levels of Service V.J-46

V.J-12 Soundstage Option Parking Code and Demand Requirements.....V.J-52

V.J-13 Studio Office Option Parking Code and Demand Requirements V.J-53

V.J-14 Existing Plus Ambient Growth Plus Project with Mitigation Plus Related Projects Conditions (Soundstage Option, 2020) Intersection Peak-Hour Levels of Service V.J-57

V.J-15 Existing Plus Ambient Growth Plus Project with Mitigation Plus Related Projects Conditions (Studio Office Option, 2020) Intersection Peak-Hour Levels of Service.....V.J-58

V.J-16 Existing Plus Ambient Growth Plus Project with Mitigation Conditions (Soundstage Option, 2020) Intersection Levels of Service V.J-64

V.J-17 Existing Plus Ambient Growth Plus Project with Mitigation Conditions (Studio Office Option, 2020) Intersection Levels of Service.....V.J-66

V.J-18 Existing Plus Ambient Growth Plus Project with Mitigation Conditions, with Related Projects (Soundstage and Studio Office Options, 2020) Access Analysis.....V.J-68

V.J-19 Existing Plus Ambient Growth Plus Project with Mitigation Plus Related Projects, with Cumulative Mitigation (Soundstage Option, 2020) Intersection Peak-Hour Levels of Service.....V.J-70

V.J-20 Existing Plus Ambient Growth Plus Project with Mitigation Plus Related Projects, with Cumulative Mitigation (Studio Office Option, 2020) Intersection Peak-Hour Levels of Service.....V.J-73

V.K.2-1 Existing and Proposed County Fire Department Stations Located In the Project Vicinity V.K.2-4

V.K.2-2 Fire and Paramedic Response Data for 2009..... V.K.2-5

V.L.1-1 Long-Term Water Available to CLWA for Average/Normal Years (2006 Reliability Report) V.L.1-8

V.L.1-2 Water Available to CLWA for Single- and Multiple-Dry Years (2006 Reliability Report) V.L.1-8

Table **Page**

V.L.1-3 Long-Term Water Available to CLWA for Average/Normal Years (2009 Draft Reliability Report).....V.L.1-10

V.L.1-4 Water Available to CLWA for Single- and Multiple-Dry Years (2009 Draft Reliability Report).....V.L.1-10

V.L.1-5 SWP Table A Supply Reliability (af).....V.L.1-11

V.L.1-6 Historical Water Use for Newhall County Water District (Acre-Feet) (SCVWR, 2008).....V.L.1-16

V.L.1-7 Past, Current, and Projected Water Demands (By Customer Type) Newhall County Water District.....V.L.1-18

V.L.1-8 CWLA Total Water Supply Vs. Estimated Demand (af).....V.L.1-19

V.L.2-1 Project Wastewater Generation (Studio Office Option).....V.L.2-13

V.L.3-1 Solid Waste Disposal and Estimated Remaining Capacity for Los Angeles County Landfills..... V.L.3-4

V.L.3-2 Solid Waste Disposal and Estimated Remaining Capacity for Out-Of-County Landfills..... V.L.3-7

V.L.3-3 Estimated Construction and Demolition Waste Generation.....V.L.3-17

V.L.3-4 Project Solid Waste Disposal.....V.L.3-19

V.L.3-5 Related Projects Estimated Solid Waste Generation.....V.L.3-22

V.L.4-1 Estimated Project Electricity Usage (Soundstage Option).....V.L.4-15

V.L.4-2 Estimated Project Natural Gas Usage (Soundstage Option).....V.L.4-16

V.L.4-3 Related Projects Electricity Usage.....V.L.4-20

V.L.4-4 Related Projects Natural Gas Usage.....V.L.4-21

V.M-1 Hazardous Materials and Fire Hazards Regulatory Setting..... V.M-2

V.N-1 Project Consistency with the Los Angeles County General Plan.....V.N-37

V.N-2 Project Consistency with the 1990 Santa Clarita Valley Area Plan.....V.N-55

V.N-3 Project Consistency with SCAG RTP and Compass Growth Vision.....V.N-67

VI-1 Comparison of Land Uses Under the Alternatives..... VI-4

VI-2 Comparison of Impacts Associated with the Proposed Project and Impacts of the Alternatives..... VI-9

VI-3 Trip Generation of Project Alternatives (Year 2020)..... VI-21

Appendix A

NOP/Initial Study/NOP Comment Letters

Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead

Jon Sanabria, AICP
Acting Director of Planning

NOTICE OF PREPARATION
AND
NOTICE OF SCOPING MEETING

DATE: January 5, 2009

PROJECT TITLE: DISNEY | ABC STUDIOS AT THE RANCH
Tract Map No. TR071216
Conditional Use Permit No. RCUPT200900126
Zone Change No. RZCT200900012
Local Plan Amendment No. RPAT200900010
Oak Tree Permit No. ROAKT200900041
Environmental Review No. RENVT200900112

PROJECT ADDRESS: 19802 Placerita Canyon Road
Newhall, California 91321

PROJECT APPLICANT: Golden Oak Ranch Properties
19802 Placerita Canyon Road
Newhall, California 91321
(818)560-8952

CEQA LEAD AGENCY: County of Los Angeles
Department of Regional Planning
320 W. Temple Street, Room 1348
Los Angeles, California 90012

The County of Los Angeles is the lead agency and will prepare an Environmental Impact Report (EIR) for the Proposed Project identified below. In compliance with Section 15082 of the California Environmental Quality Act (CEQA) Guidelines, the County of Los Angeles is sending this Notice of Preparation (NOP) to each responsible agency, interested parties and federal agencies involved in approving the Proposed Project and to trustee agencies responsible for natural resources affected by the Proposed Project. Within 30 days after receiving the Notice of Preparation, each agency shall provide the County of Los Angeles with specific written details about the scope and content of the environmental information related to that agency's area of statutory responsibility.

320 West Temple Street ▪ Los Angeles, CA 90012 ▪ 213-974-6411 ▪ Fax: 213-626-0434 ▪ TDD: 213-617-2292

The purpose of this NOP is to solicit the views of your agency as to the scope and content of the environmental information germane to your agency's statutory authority with respect to the Proposed Project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the Proposed Project.

PROJECT LOCATION AND ENVIRONMENTAL SETTING

Golden Oak Ranch (the Ranch) is located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County. The Ranch is bordered to the west and north by State Route 14 (SR-14). In addition, Placerita Canyon Road, a secondary highway, runs through the southern portion of the Ranch in an east-west direction.

The Ranch is situated at the bottom of Placerita Canyon with relatively steep hillsides and ridgelines to the north and south measuring approximately 350 feet in height. The proposed Development Area is comprised of approximately 56 acres of the westernmost portion of the Ranch property. The Development Area is separated from the remainder of the Ranch by a 330-foot strip of land traversing the Ranch in generally a northwest to southeast direction owned by the Los Angeles Department of Water and Power (LADWP).

The Ranch has been used over the past decades for agriculture, horse breeding, cattle ranching and some oil production activities as well as motion picture and television film production. Since even before Walt Disney Productions purchased significant holdings within the Ranch in 1959, the property has been used for a variety of film production and agricultural uses with some oil production. Within the 890-acre Ranch, approximately 225 acres are currently used for outdoor filming/movie ranch and some agricultural uses, with the remaining areas of the Ranch used primarily as a filming backdrop with some agricultural and oil production uses. Over the years, the approximately 225 acres used for filming have been modified continuously to provide for such uses, including the construction of large filming sets.

Existing buildings within the Development Area include an uninhabited structure and the Ranch Foreman's mobile home. A substantial portion of the Development Area is located on two large, mostly barren fill pads formed when Caltrans deposited dirt and gravel from grading during construction of SR-14 in the early 1970s. Minimal vegetation exists on the fill pads. The remainder of the Development Area is vegetated with non-native grassland communities, non-native and ruderal plant communities, ornamental plantings on and around the two gravel pads, and pockets of coast live oaks primarily around the southern fill pad. The two fill pads are separated by Placerita Creek, which extends in an east-west direction across the Development Area and contains a small riparian woodland community.

PROJECT SUMMARY

Disney | ABC Studios at The Ranch (the Proposed Project) would provide for the development of state-of-the-art studio uses and associated film and television production facilities on the westernmost portion of the Ranch. Specifically, the proposed project would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a

commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a 220-foot long bridge over Placerita Creek, drainage devices, associated onsite parking, and two surplus parking lots on 11.72 acres (of which 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right of way) within the proposed development area of approximately 56 acres of the 890-acre Golden Oak Ranch. These uses would comprise approximately 555,950 gross square feet of building area. The Proposed Project also includes an option to develop studio office uses in lieu of four soundstages and six mills within the northern portion of the Development Area. Buildout of the Proposed Project with the studio office uses option would result in a total of approximately 510,000 gross square feet of building area. The proposed project would also require the relocation of the foreman's mobile home from the Development Area to one of two tentative sites located east of the Development Area within the outdoor filming portion of the Ranch with a new septic system. In addition, offsite traffic and utilities improvements as well as vacation of the portion of Delden Road through the Development Area are also proposed as part of the project. Approximately 30 acres of the existing 225-acre outdoor filming area are located within the proposed Development Area. Thus, with implementation of the Proposed Project, approximately 195 acres of the Ranch would continue to be used for outdoor filming/movie ranch uses with some agricultural uses. In addition, approximately 639 acres of the Ranch would be used primarily as a filming backdrop with some agricultural and oil production uses.

The Proposed Project would recognize the synergy of having outdoor filming and indoor film production consolidated on the same site and would help satisfy the increased demand for film production studio space in the Los Angeles area. An expanded description of the Proposed Project is provided below.

ENTITLEMENT REQUIREMENTS AND DISCRETIONARY APPROVALS

Discretionary approvals required for implementation of the Proposed Project may include, but are not limited to, the following:

- Certification of an Environmental Impact Report;
- Approval of a Vesting Tentative Tract Map to create 18 lots located on 44.28 acres of the Development Area;
- Approval of a Local Plan Amendment to change the land use designation in the Santa Clarita Valley Area Plan for the 44.28-acre area covered by the proposed Vesting Tentative Tract Map from HM (Hillside Management) to C (Regional Commercial) for approximately 20 acres and from W (Floodway/Flood Plain) to C (Regional Commercial) for approximately 24.28 acres. The remaining portion of the 56-acre Development Area, most of which is owned by the City of Los Angeles Department of Water and Power, would remain designated as HM (Hillside Management) and W (Floodway/Flood Plain);

- Approval of a Zone Change to change the zone from A-2-1 (Heavy Agriculture – one acre minimum area) to C-M-DP (Commercial Manufacturing, Development Program) on the 44.28-acre area covered by the proposed Vesting Tentative Tract Map. The remaining portion of the 56-acre Development Area, most of which is owned by the City of Los Angeles Department of Water and Power, would remain zoned A-2-1;

- Approval of a Conditional Use Permit to authorize 700,000 cubic yards of grading including 500,000 cubic yards of export and 200,000 cubic yards of onsite fill; allow the proposed development within a Development Program zone; and allow the continued operation and maintenance of the existing outdoor filming/movie ranch uses with some agricultural uses on 195 acres with the remaining 639 acres of the property to be used primarily as filming backdrop with some agricultural and oil production uses;

- Approval of an Oak Tree Permit to County remove of 174 and encroach upon 8 oak trees within the Development Area;

- Vacation of the portion of Delden Road through the Development Area;

- Approval by the Los Angeles County Local Agency Formation Commission (LAFCO) to annex the Ranch into the Santa Clarita Valley Sanitation District of Los Angeles County and potentially the Santa Clarita Water Division of the Castaic Lake Water Agency;

- Approval by the California Department of Transportation of off-site traffic improvements;

- Issuance of a U.S. Army Corps of Engineers Nationwide Permit pursuant to Clean Water Act Section 404;

- Issuance of a streambed alteration agreement from the California Department of Fish and Game pursuant to the Fish and Game Code Section 1603;

- Issuance of a Water Quality Certification from the Regional Water Quality Control Board pursuant to Clean Water Act Section 401;

- Approval of Fuel Modification Plan from the Los Angeles County Fire Department; and

- Additional County and other governmental actions as may be determined necessary.

POTENTIAL PROJECT IMPACTS: Because of the requested entitlement requirements identified above, and based on the Initial Study determination, an Environmental Impact Report (EIR) is necessary for the proposed Project. Based on a preliminary assessment of potential environmental impacts that may occur as a result of the proposed Project (see Attached Initial Study), the areas of potential environmental impact to be addressed in the Project EIR will include at least the following:

Potential Hazards

- Geotechnical

- Flood
- Fire
- Noise

Potential Impacts to Resources

- Water Quality
- Air Quality
- Biota
- Cultural Resources
- Agricultural Resources
- Visual Qualities

Potential Impacts to Services

- Traffic/Access
- Sewage Disposal
- Fire/Sheriff Services
- Utilities/Other Services

Potential Other Impacts

- General (Change in pattern, scale, or character; reduction in agricultural land)
- Environmental Safety
- Land Use
- Population/Housing/Employment/Recreation

To provide a complete record of the County's environmental decision-making, environmental issues that do not rise to the level of significant impacts will be addressed in the EIR in a separate section entitled "Impacts Found to Be Less than Significant."

NOTICE OF PREPARATION REVIEW AND COMMENTS

The review period for the NOP will be from January 7, 2010 to February 8, 2010.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date, but not later than February 10, 2010. Please direct all written comments to the following address. In your written response, please include the name of a contact person in your agency.

Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012
Tel: (213) 974-6461
Fax: (213) 626-0434
Email: ctran@planning.lacounty.gov

SCOPING MEETING

To assist in local participation, a Scoping Meeting will be held to present the proposed project and to solicit suggestions from the public and responsible agencies on the content of the Draft EIR. The Scoping Meeting will be held in Hart Hall at William S. Hart Regional Park, located at 24151 Newhall Avenue, Newhall, California 91321, on January 21, 2010 from 7:00 p.m. to 9:00 p.m.

REVIEW MATERIALS

The County of Los Angeles Department of Regional Planning is soliciting input based on your views and opinions concerning the scope of the EIR for the Proposed Project. To facilitate your review, the following materials are attached:

- Expanded Project Description
- Los Angeles County Initial Study
- 500-foot Radius Land Use Map

Additional copies of the Notice of Preparation are available for public review on the Department of Regional Planning website http://planning.lacounty.gov/case, as well as at the follow libraries:

Castaic Library
27971 Sloan Canyon Road
Castaic, CA 91384

Newhall Library
22704 W. 9th St.
Newhall, CA 91321

Canyon Country Jo Anne Darcy Library
18601 Soledad Canyon Road
Santa Clarita, CA 91351

Valencia Library
23743 W. Valencia Blvd.
Santa Clarita, CA 91355

ATTACHMENT A
EXPANDED PROJECT DESCRIPTION

1. Project Location and Setting

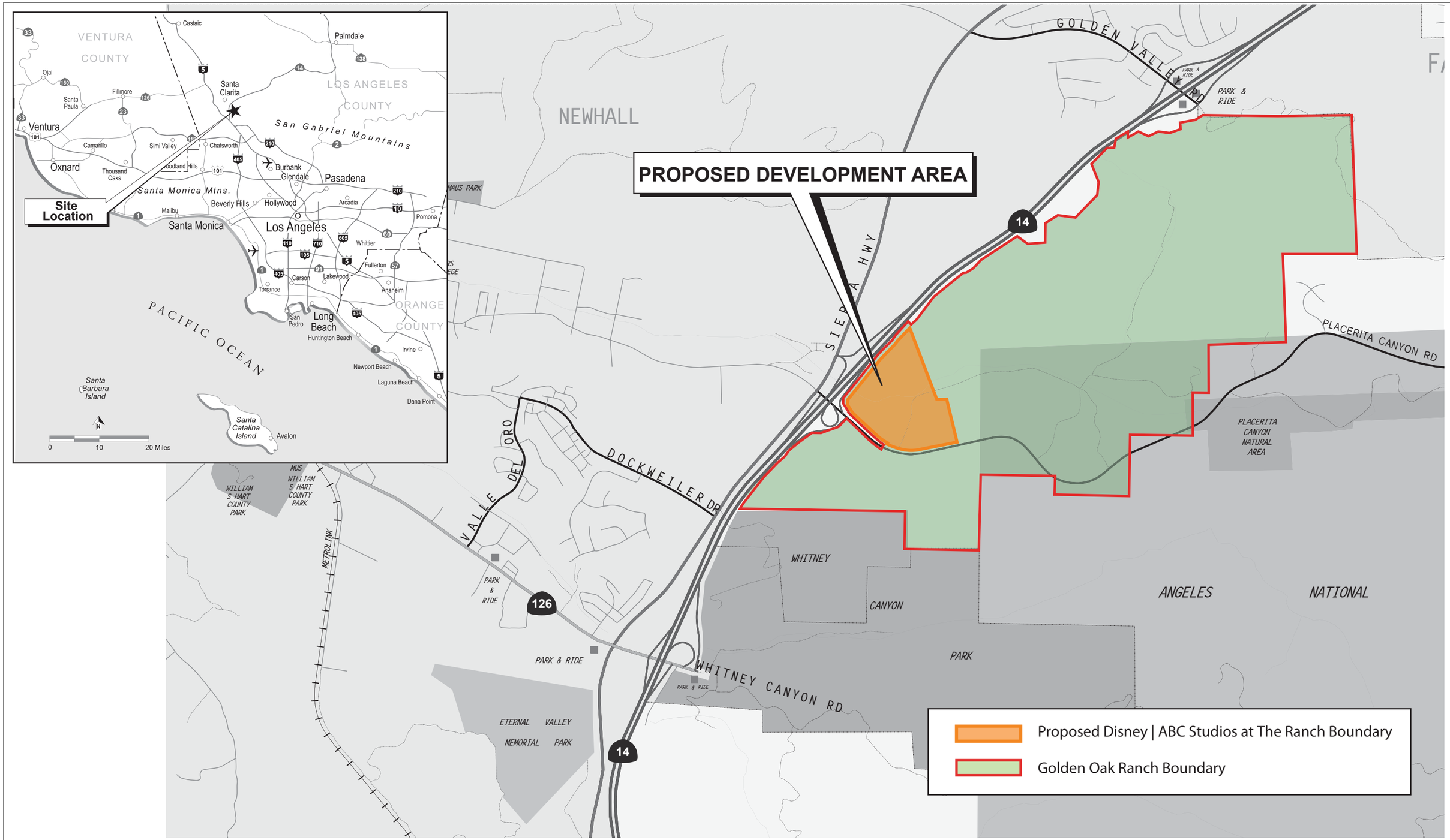
Golden Oak Ranch (the Ranch) comprises approximately 890 acres located in the unincorporated Santa Clarita Valley area of Los Angeles County.[1] The Ranch is located within the Thirty Mile Zone, the area within a 30-mile radius of the intersection of Beverly and La Cienega Boulevards in the City of Los Angeles which is home to the greatest concentration of studio-related activities in California. The Santa Clarita Valley, part of which lies within the Thirty Mile Zone, has become an established location for filming and is one of the most filmed areas in southern California due to its location, varied topography, and abundance of settings. The Santa Clarita Valley area is home to a substantial number of filming ranches, including Golden Oak Ranch. As such, the film industry is an important contributor to the local and regional economy.

Within a regional context, the Ranch is located within the unincorporated Santa Clarita Valley area of Los Angeles County, immediately east of State Route 14 (SR-14). In addition, Placerita Canyon Road, a secondary highway, runs through the southern portion of the Ranch in an east-west direction. Other major roadways in the Project vicinity include Sierra Highway (SR-126), San Fernando Road, and Interstate 5 (I-5). The location of the Ranch from both a regional and local perspective is depicted in Figure A-1 on page A-2.

The Ranch is situated at the bottom of Placerita Canyon with relatively steep hillsides and ridgelines to the north and south measuring approximately 350 feet in height. The bottom of the canyon is relatively flat with topography descending gently toward the west. The eastern portion of the Ranch property includes private in-holdings within the Angeles National Forest. The Development Area is comprised of approximately 56 acres of the westernmost portion of the Ranch, a substantial portion of which is located on two large, mostly barren fill pads (described later in this Project Description). The Development Area is separated from the remainder of the Ranch by a 330-foot strip of land that traverses the Ranch in a generally northwest to southeast direction and is owned by the City of Los Angeles Department of Water and Power (LADWP) and used to support existing electrical transmission lines. The proposed Development Area is shown in Figure A-1.

---

[1] *The 890-acre Ranch includes an approximately 30-acre strip of land that traverses the Ranch in a generally northwest to southeast direction and is owned by the City of Los Angeles Department of Water and Power.*



Source: Source: Thomas Bros. Maps, 2009; Matrix Environmental, 2009

matrix environmental

0 2250 4500
Approximate Scale in Feet

Figure A-1
Regional and Local Vicinity Map

As shown in the aerial photograph provided in Figure A-2 on page A-4, the Proposed Project vicinity includes a variety of uses. New development within the recently approved Golden Valley Ranch planned community is underway to the north of the Ranch within the City of Santa Clarita. Upon completion, new uses within the 1,259-acre Golden Valley Ranch will include approximately 500 single-family residential units, approximately 610,000 square feet of community-serving commercial uses, a school, parks, and a fire station. While these uses are located just to the north of the Ranch, steep ridgelines separate and preclude visibility of these uses from the Ranch. Residential subdivisions are also located to the northwest of the Ranch on the other side of SR-14 within the City of Santa Clarita and are generally not visible from the Ranch due to distance and topography. To the south of the Ranch are the Angeles National Forest and State Park lands as well as residential subdivisions further to the southwest. To the east of the Ranch are undeveloped areas and a small residential subdivision that is also separated from uses within the Ranch by steep ridgelines. The primarily undeveloped ridgelines are used as a backdrop for the filming activities on the Ranch floor and are referred to as the Filming Backdrop. This eastern residential subdivision is located approximately 1.25 miles from the proposed Development Area within the Ranch. To the west of the Ranch and the Development Area across SR-14 in the City of Santa Clarita are oil production wells and industrial uses, with The Master s College and residential subdivisions further to the west.

2. Project Background and Existing Uses

The Ranch has been used over the past decades for agriculture, horse breeding, cattle ranching, and some oil production activities as well as motion picture and television film production. Since even before Walt Disney Productions purchased significant holdings within the Ranch in 1959, the property has been used for a variety of film production and agricultural uses with some oil production. Specifically, within the 890-acre Ranch, approximately 225 acres are used for outdoor filming/movie ranch and some agricultural uses, with the remaining areas of the Ranch, which are mostly undeveloped hillsides, used primarily as a filming backdrop with some agricultural and oil production uses.[2] Over the years, the approximately 225 acres used for filming have been modified continuously to provide for such uses, including the construction of large filming sets.

The film production uses at the Ranch are currently permitted by a Conditional Use Permit (CUP) issued by the County of Los Angeles. Specifically, CUP No. 04-089-(5), granted in 2006, allows the Ranch to be used for motion picture and television filming, film set construction, and agricultural activities consistent with the operation of a working filming

[2] *The 890-acre Ranch includes an approximately 30-acre strip of land that is owned by the City of Los Angeles Department of Water and Power. This land traverses the Ranch, including the outdoor filming area, in a generally northwest to southeast direction.*

Golden Oak Ranch Boundary
Proposed Disney | ABC Studios at The Ranch Boundary
LADWP Transmission Corridor

14

Source: David Evans and Associates Inc. 2009; Marix Environmental 2009

Disney | ABC Studios at The Ranch

matrix environmental

0 1500 3000
Approximate Scale in Feet

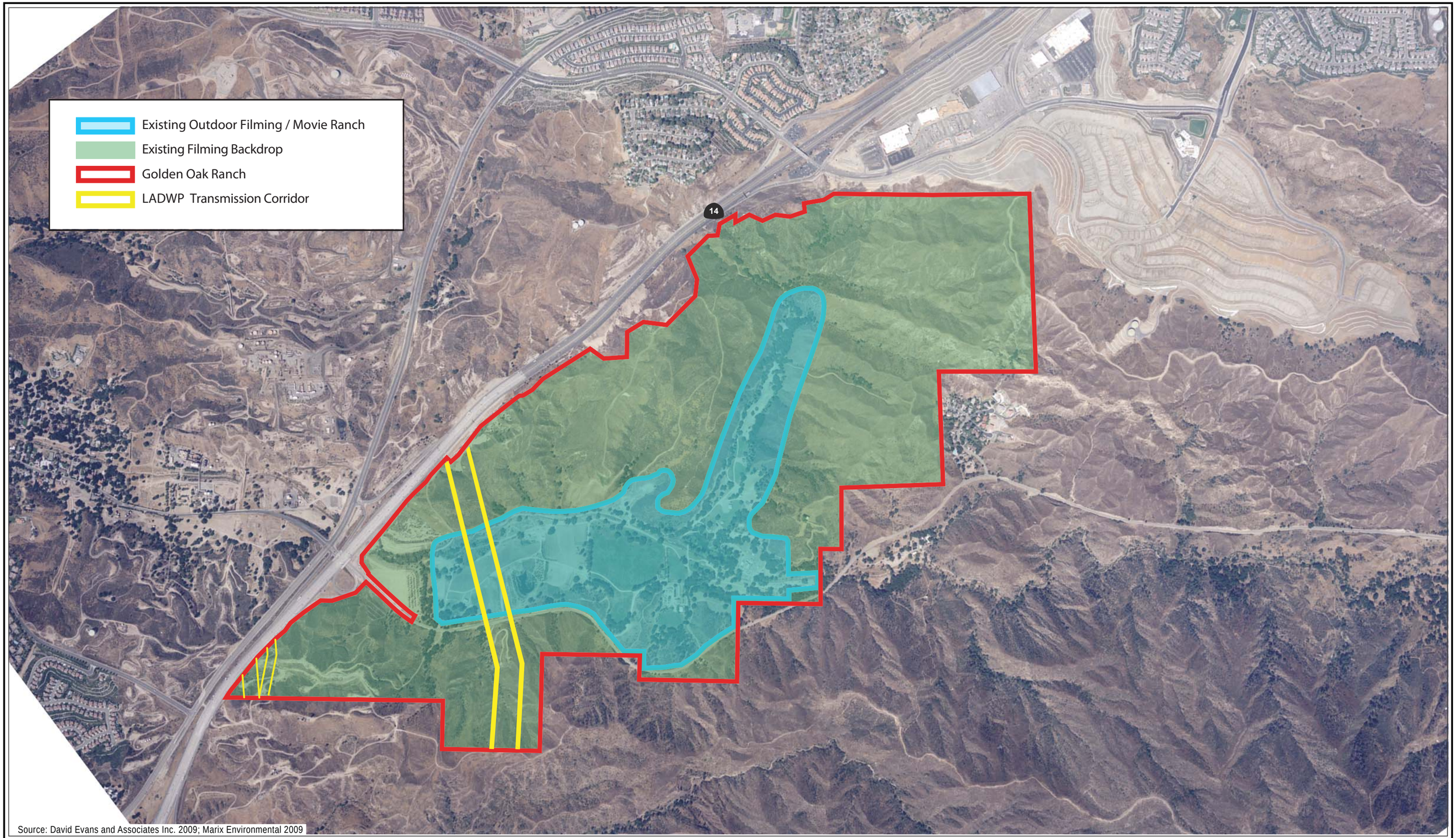
Figure A-2
Aerial Photograph of Golden Oak Ranch

ranch, including existing living space for on-site workers originally authorized under CUP 1494, which was granted in 1979. CUP No. 04-089-(5) allows set construction on approximately 225 acres of the Ranch as shown in Figure A-3 on page A-6.

Existing buildings within the Ranch include the Ranch manager's house, the Ranch foreman's mobile home, a guest house, uninhabited structures, a Ranch office, and various barns, stables and sheds. There are also several temporary filming sets on the Ranch, including farm houses, cottages, mine entrances and a rural bridge over a man-made water feature used as a set. One of the uninhabited structures and the Ranch Foreman's mobile home are currently located within the proposed Development Area. The Ranch also includes another man-made water feature used for filming, agricultural uses, meadows, and mature stands of trees, including heritage oak trees, as shown in Figure A-2. Many of the existing oaks within the Ranch have been planted by the Applicant over time. The Ranch also includes two designated blue line streams: Placerita Creek, which traverses the Development Area and overall Ranch in an east-west direction, and Heil Creek, which connects with Placerita Creek and extends to the north. There are also two small ephemeral drainages just east of the southern fill pad within the Development Area. A small portion of a third ephemeral drainage is located within the northeastern portion of the Development Area north of Placerita Creek and would not be impacted by the Proposed Project As shown in Figure A-3, the steep ridgelines within the northern portion of the Ranch are undeveloped and currently serve as a backdrop for filming.

The topography within the Development Area varies with the lowest elevation being approximately 1,400 feet above mean sea level (msl) located within Placerita Creek near SR-14 and the highest elevation being approximately 1,567 feet above msl located within the northernmost portion of the Development Area. In addition, as shown in the aerial photograph provided in Figure A-2, a portion of the Development Area is located on two large, mostly barren fill pads that were formed when Caltrans deposited dirt and gravel from grading during the construction of SR-14 in the early 1970s. These two fill pads comprise approximately 23.6 acres and are separated by Placerita Creek, which extends in an east-west direction across the Development Area. The northern fill pad is approximately 12 acres, approximately 60 feet deep, and approximately 10 to 25 feet below the elevated SR-14 to the northwest. The southern fill pad is approximately 11.6 acres, 45 to 50 feet deep, and at approximately the same grade as Placerita Canyon Road within its southern portion.

Due to the heavy gravel content of the fill, minimal vegetation exists within the fill pad areas of the Development Area. The remainder of the Development Area is vegetated with non-native grassland communities, non-native and ruderal plant communities, and ornamental plantings on and around the two gravel pads, including bush sunflower (*Encelia californica*), yellow star thistle (*Centuarea melitensis*), brome (*Bromus madritensis*), eucalyptus (*Eucalyptus sp.*), pine (*Pinus sp.*), and areas of mixed sage scrub that include



Source: David Evans and Associates Inc. 2009; Marix Environmental 2009

Disney | ABC Studios at The Ranch

matrix environmental

0 1500 3000
Approximate Scale in Feet

Figure A-3
Existing Uses

white sage (*Salvia apiana*), California buckwheat (*Eriogonum fasciculatum*), deerweed (*Lotus scoparius*), and California sagebrush (*Artemisia californica*). The Development Area also includes pockets of coast live oak (*Quercus agrifolia*) primarily around the southern pad, and a small riparian woodland community associated with Placerita Creek, which is characterized as a mixed mule fat scrub/southern willow scrub community that includes red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepus*), mule fat (*Baccharis salicifolia*), a few western sycamore (*Platanus racemosa*), coast live oak, and poison oak (*Toxicodendron diversilobum*).

The remainder of the Ranch includes both disturbed and non-native plant communities, and a number of native scrub and woodland plant communities. The non-native plant communities are associated with ranching and filming activities and include non-native grassland and ornamental plantings. Native vegetation observed within the uplands of the Ranch is dominated by a mixed sage scrub community with localized pockets of coast live oak woodlands. In addition, riparian coast live oak-sycamore woodland, a mixed mule fat scrub and southern willow scrub communities are dominant within Placerita Creek. The Applicant has and continues to plant and protect coast live oaks within the Ranch.

With regard to animal species, the Development Area, and in particular Placerita Creek, is used most frequently by mule deer (*Odocoileus hemionus*), bobcat (*Felis rufus*), coyote (*Canis latrans*), domestic dog (*Canis familiaris*), raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), striped skunk (*Mephitis mephitis*), desert cottontail (*Sylvilagus auduboni*), and western fence lizard (*Sceloporus occidentialis*).

Primary access to the Ranch is currently provided from Placerita Canyon Road. Unpaved roads within the Ranch property provide internal circulation. The Ranch also holds an easement from the LADWP to access the land under the transmission lines that traverse the western portion of the Ranch in a northwest-southeast direction. The eastern portion of the transmission line corridor forms the eastern boundary of the Development Area.

The Ranch is designated in the current County General Plan as Rural and is zoned A-2-1 and A-2-2 (heavy agriculture), a designation and zoning that provides for motion pictures sets as conditionally permitted uses. As indicated above, the existing CUP No. 04-089-(5) allows for filming and associated production activities within the Ranch. The Ranch is also located within the Santa Clarita Valley Area Plan, which currently designates the Ranch as N-1 (Non Urban 1), HM (Hillside Management Area), W (Floodway/Flood Plain) and O-NF (Open Space/National Forest). In addition, portions of the Ranch, including portions of the Development Area are located within the 100-year flood plain established by the Federal Emergency Management Agency (FEMA).

3. Project Characteristics

The Proposed Project would provide for the development of a state-of-the-art studio and associated film and television production facilities within the westernmost portion of the Ranch. A substantial portion of the Development Area would be located on two large, mostly barren fill pads. The Proposed Project would provide up to twelve soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, and an electrical substation, all on approximately 56 acres located immediately adjacent to SR-14.[3] The Proposed Project also includes an option to develop studio office uses in lieu of four soundstages and two mills within the northern portion of the Development Area. The remaining areas of the Ranch would continue to operate as a working filming ranch, as it has been since at least 1959. Specifically, approximately 30 acres of the existing 225-acre outdoor filming area are located within the proposed Development Area. Thus, as shown in Figure A-4 on page A-9, with implementation of the Proposed Project, approximately 195 acres of the Ranch would continue to be used for outdoor filming/movie ranch uses with some agricultural uses. In addition, approximately 639 acres of the Ranch would be used primarily as a filming backdrop with some agricultural and oil production uses.

The Proposed Project would recognize the synergy of having the existing outdoor filming and proposed indoor film production consolidated on the same site. In addition the Proposed Project would help satisfy the increased demand for film production studio space within the Los Angeles area as well as support the continued successful establishment of the film industry in the Santa Clarita Valley.

As shown in the Conceptual Site Plan provided in Figure A-5 on page A-10, the southern portion of the proposed Development Area south of Placerita Creek and west of the transmission line corridor would contain eight soundstages and four mills in the center of the development, writers/producers bungalows and a commissary/amenity building to the north of the soundstages, and a warehouse and a central utility plant along the southern boundary of the Development Area near Placerita Canyon Road.

As also shown in the Conceptual Site Plan provided in Figure A-5 on page A-10, four additional soundstages, two mills, and an electrical substation would be developed on the northern pad of the Development Area, located to the north of Placerita Creek. As discussed in more detail below, the pads would be connected via a 220-foot long bridge that would span Placerita Creek, as well as an access road at the westernmost portion of the Development Area adjacent to SR-14. As shown in Table A-1 on page A-11, buildout

[3] *The 56-acre Development Area includes approximately 10 acres that are owned by the City of Los Angeles Department of Water and Power and traverse the easternmost portion of the Development Area. This area would be graded and used for surface parking as part of the Project.*

Golden Oak Ranch - **890 acres**
Filming Backdrop Area - **639 acres**
Outdoor Filming / Movie Ranch - **195 acres**
Proposed Site Disney | ABC Studios at The Ranch - **56 acres**
LADWP Transmission Corridor
Parcel Lines

14

Source: David Evans and Associates Inc. 2009; Marix Environmental 2009

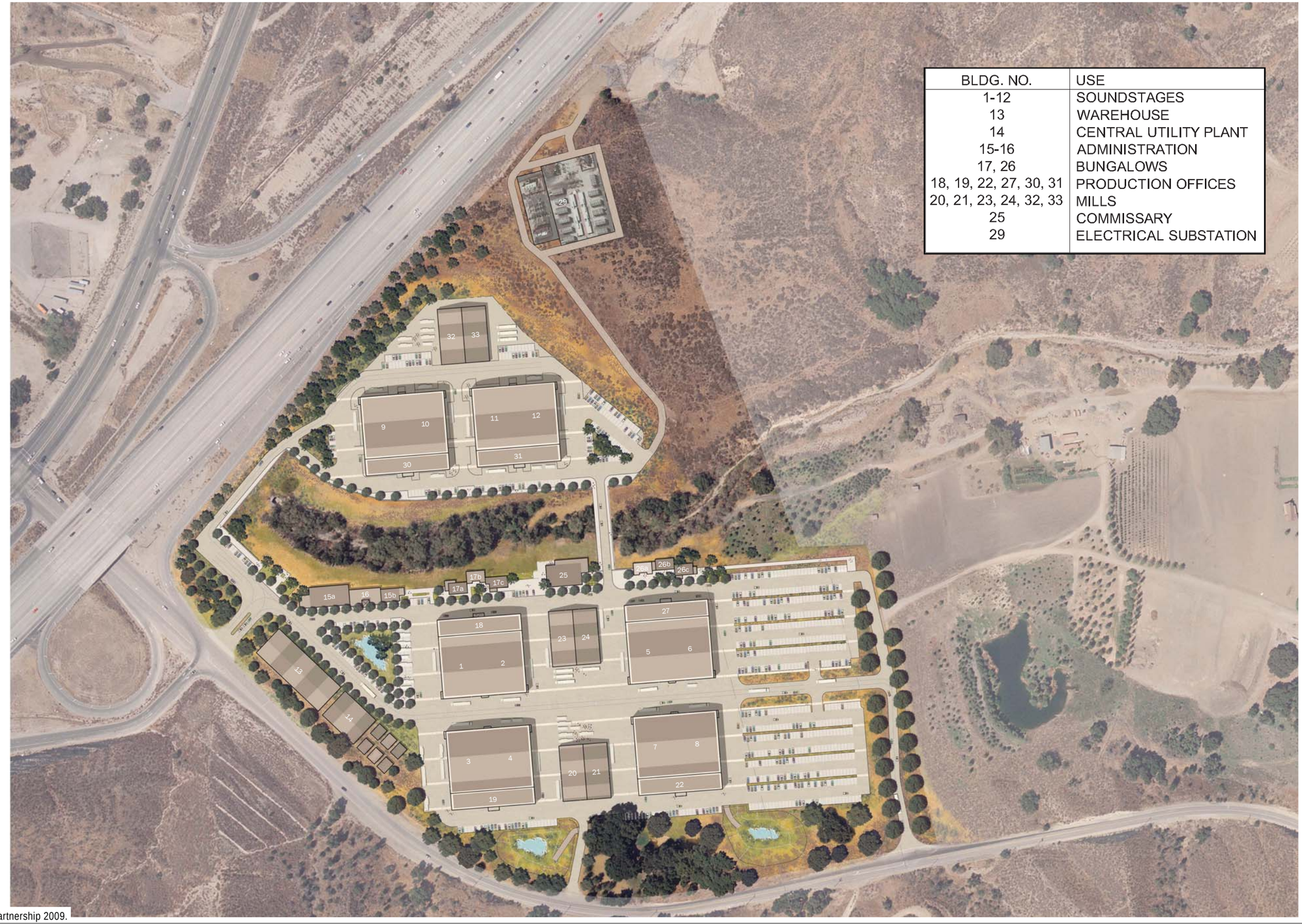
Disney | ABC Studios at The Ranch

matrix environmental

N

0 1500 3000
Approximate Scale in Feet

Figure A-4
Proposed Uses



BLDG. NO.	USE
1-12	SOUNDSTAGES
13	WAREHOUSE
14	CENTRAL UTILITY PLANT
15-16	ADMINISTRATION
17, 26	BUNGALOWS
18, 19, 22, 27, 30, 31	PRODUCTION OFFICES
20, 21, 23, 24, 32, 33	MILLS
25	COMMISSARY
29	ELECTRICAL SUBSTATION

Source: Johnson Fain 2009; Olin Partnership 2009.

matrix environmental

0 50 100 200
Approximate Scale in Feet

Disney | ABC Studios at The Ranch

Figure A-5

Conceptual Site Plan

TABLE A-1
PROJECT BUILDOUT WITH TWELVE SOUNDSTAGES

Use	Building GSF	Quantity	Total GSF
Soundstages	19,800	12	237,600
Production Offices	28,125	6	168,750
Mills	11,500	6	69,000
Warehouse	23,000	1	23,000
Writers/Producers Bungalows	1,725	6	10,350
Commissary/Amenities	17,250	1	17,250
Administration	30,000	1	30,000
Total			**555,950**
Ancillary Facilities			
Central Utility Plant		1	20,000
Electrical Substation		1	46,300

Note: GSF – Gross Square Feet

Source: Johnson Fain, 2009.

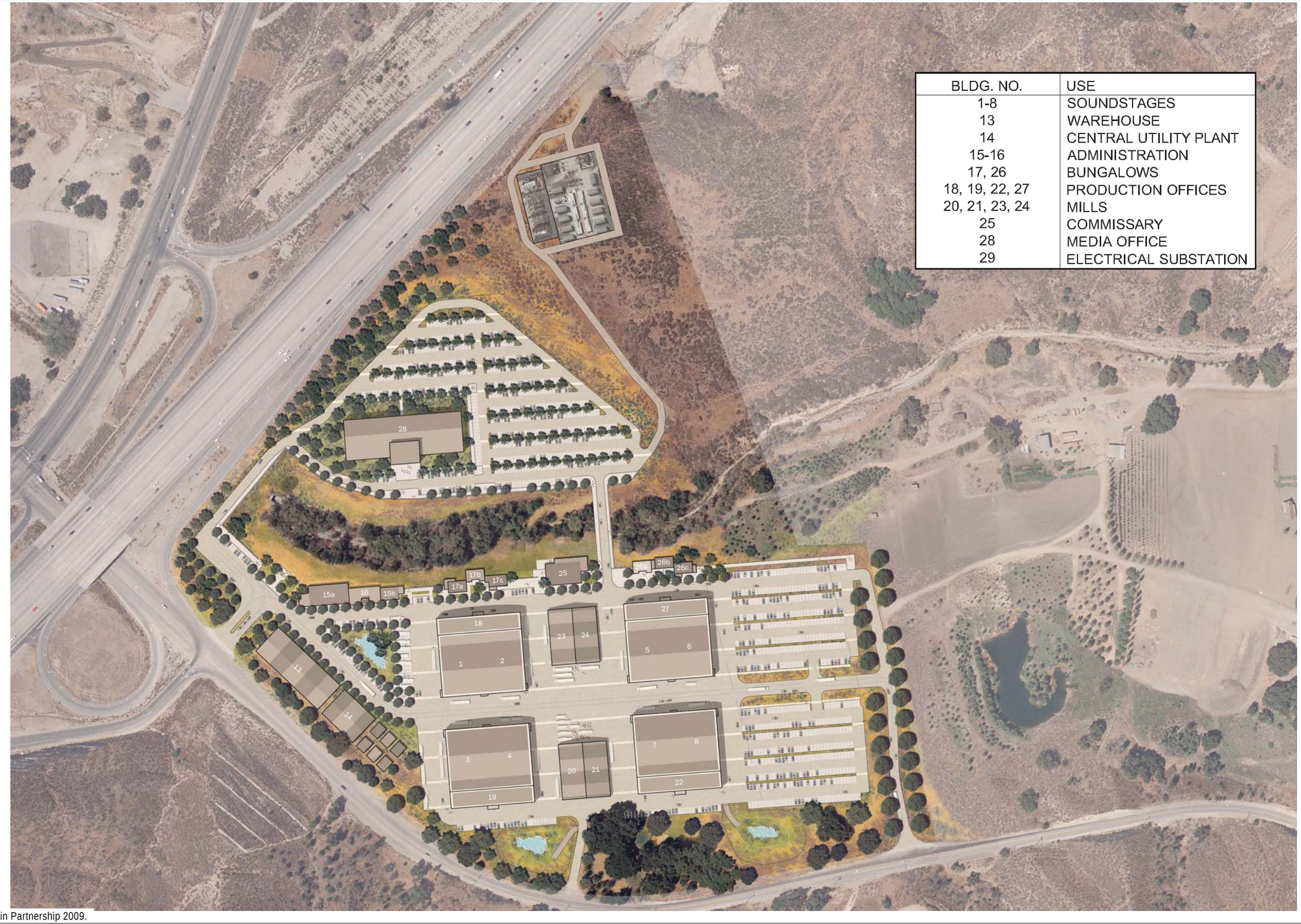
of the Proposed Project with twelve soundstages and associated buildings would result in a total of approximately 555,950 gross square feet of building area, plus approximately 66,300 square feet of ancillary facilities.

As part of the Proposed Project, an option could be implemented to develop studio office uses in lieu of four soundstages and two mills within the northern portion of the Development Area. A Conceptual Site Plan illustrating this option is provided within Figure A-6 on page A-12. As shown in Table A-2 on page A-13, buildout of the Proposed Project with the studio office uses option would result in a total of approximately 510,000 gross square feet of building area, plus approximately 66,300 square feet of ancillary facilities.

As shown in Figure A-5, and discussed further below, while mature trees, including oak trees would need to be removed as part of the Proposed Project, many of the existing mature trees along Placerita Canyon Road would be retained and new landscaping along Placerita Canyon Road and the Ranch boundary next to SR-14 would visually shield new buildings from Placerita Canyon Road and SR-14.

a. Design

The proposed buildings within the Development Area would be designed to reflect the existing agrarian and rustic character of the Ranch. The buildings would be simple in form, function, and architectural design with the intent of complementing the surrounding rural setting. Buildings located within the western portion of the site along SR-14 would be screened from Placerita Canyon Road and SR-14 by earthen berms heavily planted with



BLDG. NO.	USE
1-8	SOUNDSTAGES
13	WAREHOUSE
14	CENTRAL UTILITY PLANT
15-16	ADMINISTRATION
17, 26	BUNGALOWS
18, 19, 22, 27	PRODUCTION OFFICES
20, 21, 23, 24	MILLS
25	COMMISSARY
28	MEDIA OFFICE
29	ELECTRICAL SUBSTATION

Source: Johnson Fain 2009; Olin Partnership 2009.

matrix environmental

0 50 100 200
Approximate Scale in Feet

Disney | ABC Studios at The Ranch

Figure A-6

Option Conceptual Site Plan

TABLE A-2
PROJECT OPTION - BUILDOUT WITH EIGHT SOUNDSTAGES AND STUDIO OFFICES

Use	Building GSF	Quantity	Total GSF
Soundstages	19,800	8	158,400
Production Offices	28,125	4	112,500
Mills	11,500	4	46,000
Warehouse	23,000	1	23,000
Writers/Producers Bungalows	1,725	6	10,350
Studio Office	112,500	1	112,500
Commissary/Amenities	17,250	1	17,250
Administration	30,000	1	30,000
Total			**510,000**
Ancillary Facilities			
Central Utility Plant		1	20,000
Electrical Substation		1	46,300

Note: GSF – Gross Square Feet

Source: Johnson Fain, 2009.

native trees and shrubs. Along Placerita Canyon Road, much of the existing landscaped area that includes mature native trees, including mature oak trees, would provide additional screening of the Proposed Project buildings. In addition, new buildings within the Development Area would be integrated into the topography of the site with rounded roofs on the soundstage buildings to help blend the new development with the surrounding mountains. Building heights would range from approximately 20 to 60 feet in height, with the soundstages being the tallest buildings within the Development Area. Finally, materials, such as wood, brick, stucco, metal panels, concrete and glass are anticipated to be used in the construction of the buildings.

b. Sustainability

Central to the development concept for the Proposed Project are sustainability features that would minimize the following: the consumption of natural gas and other carbon-based fuels and their associated greenhouse gas emissions; purchases of utility-generated electricity with associated greenhouse gas emissions; emissions from diesel and other internal combustion engines; criteria air pollutant and air toxins emissions; vehicle trips and vehicle miles traveled; impacts to ecosystems such as Placerita Creek; and impacts to view corridors of the Placerita Canyon area. Design features to accomplish these goals may include green walls along the soundstages, photovoltaic technology on selected roofs, use of color and shade structures to reduce the heat island effect, the use of highly efficient electric and HVAC equipment (housed in a central utility plant), and the use of native, drought-tolerant landscaping. Water conservation and design features would

include low flow/ultra low-flow fixtures, energy star appliances, drought-tolerant landscaping and use of drip irrigation systems. In addition, the Proposed Project would include planted areas for bio-remediation of storm water, expansive drainage swales within parking areas, and use of pervious pavement in part of the Development Area. The Proposed Project would also incorporate a recycling program as part of its operations and additional sustainability features set forth in the County's recently adopted Green Building Ordinance, Low Impact Development Ordinance, and Drought-tolerant Landscaping Ordinance. As part of compliance with the current Green Building Ordinance, the majority of the proposed buildings, including the soundstages, would achieve Leadership in Energy and Environmental Design (LEED®) Silver Certification or LEED® Certification.

c. Access and Parking

To improve access to the Ranch and the Development Area, the Applicant proposes to reconfigure the SR-14 northbound off-ramp at Placerita Canyon Road. The reconfiguration would allow for northbound vehicles exiting SR-14 to cross Placerita Canyon Road and directly enter the proposed Development Area via the Ranch's new main entry driveway. Although the current primary driveway would continue to be used, primary ingress to the Ranch would be provided via the new entry across from the SR-14 north-bound off-ramp.

Pedestrian and bicycle pathways would be provided throughout the Development Area to enhance non-motorized circulation. An access road crossing over Placerita Creek would be provided at the western edge of the proposed Development Area to create access to the northern pad area (where the four soundstages or studio office uses would be located). A bridge crossing over Placerita Creek also would be provided further to the east within the Development Area.

Parking for the Proposed Project would be provided within surface lots adjacent to the soundstages and office buildings on both the northern and southern pads. Parking for production-related vehicles also would be provided adjacent to the soundstages and mills. Additional parking would be provided in two surface lots located beneath the utility lines of the LADWP transmission corridor as well as in an unpaved surface lot located just east of the manmade water feature immediately adjacent to the existing entrance road. The Proposed Project would comply with County Code parking requirements with at least 1,178 parking spaces under the 12 soundstages project option and at least 1,115 parking spaces under the 8 soundstages plus studio office uses option. These parking spaces would include compact parking spaces in compliance with County Code.

d. Landscaped Areas

As part of the Proposed Project, a comprehensive landscaping plan would be implemented to enhance the existing natural features in the vicinity of the Development Area. Placerita Creek would continue to serve as an integral natural amenity and focal point for the Ranch. All plant species selected for use in the Proposed Project would be drought tolerant in accordance with the County's recently adopted Drought-Tolerant Landscaping Ordinance. In addition, consistent with existing practices on the Ranch, mature native trees including oak trees would be planted and enhanced with complementary native vegetation. The steep slopes along the south side of the creek would be terraced and planted with native grasses and other native riparian vegetation. Native trees, such as oaks, and other plantings along the existing entrance road would create a landscaped "gateway" to the Ranch. To screen off-site views of the Proposed Project, a raised earthen berm planted with a variety of native trees and shrubs would be created along the western perimeter of the Development Area adjacent to SR-14 and a portion of the southern perimeter along Placerita Canyon Road. As previously described, a series of vegetated bioswales would be installed at several parking areas.

Landscaping also would be integrated into the design of the Project structures. Specifically, tall creeping vines may be planted to shade the south and west walls of the soundstages. Figures A-7 and A-8 on pages A-16 and A-17 illustrate the landscaping concept for the Proposed Project.

There are over 3,000 oak trees on the entire 890-acre Ranch. Implementation of the Proposed Project would require the removal of approximately 174 oak trees, including 18 heritage oak trees, and encroachment on eight other oak trees including one heritage oak tree. The County's Oak Tree Ordinance and the County's current practices would require replanting of oaks at a minimum 2 to 1 ratio for jurisdictional oak trees and at a minimum 10 to 1 ratio for heritage oak trees. Accordingly, the Ordinance and County practices would require planting of 516 new oak trees of 15-gallon size with a tree of one-inch diameter at one foot above the base of the trunk. The required 516 15-gallon oak trees would only provide an estimated 3.4 acres of canopy coverage following 20 years of growth. In order to better replace the community of the oak woodland habitat and the oak tree canopy in the Development Area, the Proposed Project includes a comprehensive mitigation program that would plant over 1,500 oak trees of a variety of sizes, including approximately 700 oak trees of 15-gallon size on approximately 10 acres of the Ranch east of the Development Area. The sizes would range from acorns and seedlings to more than a dozen 60-inch box oak trees. These trees would provide an estimated 8.9 acres of canopy following 20 years of growth, or approximately 5.5 acres of canopy more than would be provided by compliance with County requirements. A high-standard of restoration design, implementation, and maintenance would be imposed for successful establishment of the planted oak trees. At least a seven-year monitoring period would be implemented

- Oak Forest
- Restored Native Vegetation
- Restored Riparian Corridor
- Restored Cut and Fill Slopes
- Grassy Herbaceous Drainage Swales
- Screening Berm with Native Plants
- Bioretention
- Entry Allee
- Country Lane
- Bioretention Grove

Revegetated cut and Fill Slopes

Restored Riparian Corridor

Country Lane

Grassy Herbaceous Drainage Swales

Drought Tolerant Plantings

Screening Berm with Native Plants

Source: Johnson Fain 2009; Olin Partnership 2009.

matrix environmental

0 200 400
Approximate Scale in Feet

Disney | ABC Studios at The Ranch

Figure A-7

Landscaping Concept

- Oak Forest
- Restored Native Vegetation
- Restored Riparian Corridor
- Restored Cut and Fill Slopes
- Grassy Herbaceous Drainage Swales
- Screening Berm with Native Plants
- Bioretention
- Entry Allée
- Country Lane
- Bioretention Grove
- Parking Orchard

Revegetated cut and Fill Slopes

Restored Riparian Corridor

Orchard

Country Lane

Grassy Herbaceous Drainage Swales

Drought Tolerant Plantings

Screening Berm with Native Plants

Source: Johnson Fain 2009; Olin Partnership 2009.

matrix environmental

0 200 400
Approximate Scale in Feet

Disney | ABC Studios at The Ranch

Figure A-8

Option Landscaping Concept

following all required restoration planting until the required performance standards are achieved. In addition, the mitigation program would include protective measures to reduce impacts to oak trees that would not be removed. Finally, the Applicant plans to continue its voluntary program to plant oak trees on the Ranch.

e. Utilities

To support the energy needs of the Proposed Project and the Ranch, an approximately 46,300 square foot electrical substation with an approximately one acre footprint would be constructed on the slope north of the northern fill pad. The substation would consist of a small building for controls/switchgear, two large transformers, and above-grade cabling and structures.

An approximately 20,000 square foot central utility plant would be located along Placerita Canyon Road. The central utility plant would include cooling towers, chillers, pumps and other associated equipment, and would be predominantly enclosed. As discussed above, it would be screened from views from Placerita Canyon Road.

Other utility improvements proposed as part of the Proposed Project would include sewer and water connections. It is anticipated that a new sewer line would connect to existing facilities in the Santa Clarita Valley Sanitation District of Los Angeles County. A possible connection to the west would involve a gravity sewer system extending approximately 9,800 feet from the Project site, with a point of connection at Placeritos Boulevard and Meadview Avenue. Another possible connection would consist of a 7,750-foot long force main system north along Sierra Highway, connecting to a new 2,000-foot long gravity line along Golden Valley Road, which would connect to an existing gravity sanitary sewer system within Golden Valley Road. This alignment would require construction of a pump lift station located on Golden Oak Ranch south of Placerita Canyon Road. Additionally, upgrades at the point of connection to the existing Los Angeles County Sanitation Districts 24-inch trunk line along Soledad Canyon Road would consist of the construction of approximately 4,000 feet of gravity sewer pipe from the intersection of Golden Valley Road and Centre Point Parkway northwesterly to Soledad Canyon Road.

Water service would be provided via new lines and possibly a new water tank that would connect with either Santa Clarita Water Division (SCWD) or Newhall County Water District (NCWD) of the Castaic Lake Water Agency facilities. A possible water connection within the SCWD would include construction of a water main from a point of connection to the existing water main at the intersection of Sierra Highway and Golden Valley Road. The proposed water main then would run south along Sierra Highway to Placerita Canyon Road and then east to the Proposed Project site for a total length of approximately 7,500 feet. An alternative alignment that would also obtain water from the SCWD would connect to an existing water main that terminates near Running Horse Road along Placerita Canyon

Road, east of the Proposed Project site. This water line would be extended to the west along Placerita Canyon Road to Golden Oak Ranch. As part of this improvement, a hydro-pneumatic pump station would be needed to provide the required pressure to the on-site distribution system. The proposed pump station would be located on Golden Oak Ranch near Placerita Canyon Road with an easement dedicated to SCWD. From this pump station, the water main then would run to the west along Placerita Canyon Road to the Development Area for a total length of approximately 7,800 feet.

A possible connection within the NCWD would include the construction of a water main from a point of connection to the existing water main at the intersection of Oakhurst Drive and Dockweiler Road. The proposed water main would run east under Sierra Highway and SR-14 and then northeast to Golden Oak Ranch and would feed a proposed water tank to be constructed on the Ranch south of Placerita Canyon Road. A proposed service water main would follow an unpaved access road from the water tank to Placerita Canyon Road and connect to the on-site water distribution system for the Proposed Project. The total length of the proposed water mains would be approximately 6,600 feet.

In addition, runoff from the Development Area would be drained to a new underground detention system that would detain peak flows and provide infiltration for stormwater runoff.

f. Fire Protection

Since the Development Area is located in a County-designated Very High Fire Hazard Severity Zone, a fuel modification plan would be required to minimize the risks of wildfires. The fuel modification plan for the Proposed Project would set forth buffer zones around the proposed structures and would dictate the types of vegetation permitted within the zones. Additional requirements pertaining to the removal of brush and dead plant materials, removal of non-native plant species, and periodic maintenance of the buffer zones would be included within the fuel modification plan. The fuel modification plan would be submitted to the Los Angeles County Fire Department Forestry Division for approval prior to the issuance of Project construction permits. In addition, there is a helipad within the northern portion of the Ranch that is used by the Los Angeles County Fire Department to protect the surrounding areas. The Ranch currently provides a large water tank for emergency firefighting purposes. This tank would continue to be available for use by the Los Angeles County Fire Department to fight fires in the surrounding areas.

4. Construction Phasing and Grading

To accommodate construction of the Proposed Project, the uninhabited structure in the western portion of the Ranch floor would be removed and the Ranch foreman's mobile home would be relocated to another portion of the Ranch with a new septic system. The

entire Development Area would be cleared and mass graded at one time. It is anticipated that approximately 700,000 cubic yards of cut and 200,000 cubic yards of fill would be required, with approximately 500,000 cubic yards of export.

During the construction phase of the Proposed Project, a temporary crossing of Placerita Creek would be constructed. This crossing would be removed and this portion of the Creek would be restored after the completion of the construction phase. In addition, to provide for stable slopes and to address erosion of the slopes that currently occurs, portions of the slopes within Placerita Creek would be graded, stabilized and replanted with native plant species.

The applicant is requesting a vesting tentative map and intends to file the final maps in phases. Completion of the project is expected to occur as early as 2014 or as late as 2020.

STAFF USE ONLY

PROJECT NUMBER: *TR071216*
CASES: *RCUPT200900126*
RZCT200900012
ROAKT200900041
RPAT200900010
RENVT200900112

*** * * * INITIAL STUDY * * * ***

COUNTY OF LOS ANGELES
DEPARTMENT OF REGIONAL PLANNING

GENERAL INFORMATION

I.A. Map Date:	*October 23, 2009*	Staff Member:	*Christina Tran / Jeffrey A. Juarez*
Thomas Guide:	*4641 (D-H 1 & 2) and 4551 (E-H 6 & 7)*	USGS Quad:	*Mint Canyon, San Fernando*
Location:	*19802 Placerita Canyon Road, Newhall, California, 91321*		

Description of Project: *Disney/ABC Studios at The Ranch (Proposed Project) application includes request for Vesting Tentative Tract Map TR071216 to create 18 lots located on 44.28 acres within the westernmost portion of the 890-acre Golden Oak Ranch (the Ranch) for development of studio uses and associated film and television production facilities; a local plan amendment to change the designation on the 44.28-acre Tract Map site from Hillside Management (HM) and Floodplain/Floodway (W) to Commercial (C); a Zone Change on the 44.28-acre Tract Map site from A-2-1 to Commercial Manufacturing – Development Program (C-M-DP); and an Oak Tree permit to remove 174 and encroach upon 8 oak trees on approximately 56 acres of the Ranch. The application also includes a request for a Conditional Use Permit to authorize 700,000 cubic yards of grading including 500,000 cubic yards of export and 200,000 cubic yards of onsite fill; allow the proposed development within a Development Program zone; and allow the continued operation and maintenance of the existing outdoor filming/movie ranch uses with some agricultural uses on 195 acres with the remaining 639 acres of the property to be used primarily as filming backdrop with some agricultural and oil production uses. Specifically, the proposed project would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a 220-foot long bridge over Placerita Creek, drainage devices, associated onsite parking, and two surplus parking lots on 11.72 acres (of which 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right of way) within the proposed development area of approximately 56 acres. In addition, the proposed project would include an option to develop studio offices in lieu of four soundstages and two mills within the northern portion of the Development Area. The proposed project would also require the relocation of the foreman's mobile home from the Development Area to one of two tentative sites located east of the Development Area within the outdoor filming portion of the Ranch with a new septic system. In addition, offsite traffic and*

utilities improvements as well as vacation of the portion of Delden Road through the Development Area are also proposed as part of the project. (Refer to Attachment A for a detailed description of the proposed project).

Gross Acres: *890 acres of which approximately 56 acres is the Development Area*

Environmental Setting: *Golden Oak Ranch is situated at the base of Placerita Canyon and contains steep hillsides and ridgelines to the north and south measuring approximately 350 feet in height. The base of the canyon is relatively flat with the topography descending gently towards the west. The eastern portion of the Ranch includes private in-holdings within the Angeles National Forest. The Development Area is comprised of approximately 56 acres of the westernmost portion of the Ranch, a substantial portion of which is located on two large, mostly barren fill pads that are roughly at grade with Placerita Canyon Road to the south and are about 10 to 25 feet below the elevated SR-14 to the northwest. The elevations within the Development Area range from approximately 1,400 feet above mean sea level (msl) in Placerita Creek near SR-14 to approximately 1,600 feet above msl on the northernmost part of the Development Area. The Development Area is separated from the remainder of the Ranch by a 330-foot strip of land that traverses the Ranch in a generally northwest to southeast direction and is owned by the City of los Angeles Department of Water and Power (LADWP).*

Minimal vegetation exists within the barren fill pad areas of the Development Area. The remainder of the Development Area is vegetated with non-native grassland communities, non-native and ruderal plant communities, and ornamental plantings around the fill pads. The Area also contains native sage scrub vegetation, such as bush sunflower (Encelia californica) white sage (Saliva Apiana), California buckwheat Eriogonum fasciculatum), deerweed (Lotus scoparius), and California sagebrush (Artemisia californica). The Development Area also includes pockets of coast live oak (Quercus agrifolia), primarily around the southern pad, and a mixed riparian woodland/chaparral community associated with Placerita Creek (which is between the fill pads located to the north and south, including western sycamore (Platanus racemosa), cottonwood (Populus spp.), red willow (Salix laevigata), arroyo willow (Salix lasiolepus), mulefat (Baccharis salicifolia, and poison oak (Toxicodendron diversilobum). The remainder of the Ranch includes disturbed and non-native plant communities (grasses and ornamental plantings), and several pockets of native scrub, riparian, and oak woodland communities. Native vegetation within the uplands of the Ranch is dominated by sage scrub, with pockets of oak woodlands.

The Development Area, and in particular Placerita Creek, and the surrounding area is used most frequently by several forms of wildlife, including mule deer (Odocoileus hemionus), bobcat (Felis rufus), coyote (Canis latrans), domestic dog (Canis familiaris), raccoon, (Procyon lotor), gray fox (Urocyon cinereoargenteus), striped skunk (Mephitis mephitis), desert cottontail (Sylvilagus auduboni), and western fence lizard (Scleroporus occidentalis).

Two USGS blue-line streams, Placerita Creek and Heil Creek, are within the boundaries of the Ranch. Placerita Creek traverses the Ranch and the Development Area in an east-west direction. Heil Creek connects with Placerita Creek and extends to the north. There are also two ephemeral drainages just east of the southern fill pad within the Development Area. A portion of a third ephemeral drainage is located within the northeastern portion of the Development Area north of Placerita Creek.

Golden Oak Ranch is a working filming ranch used in the production of motion pictures, television programming,

commercials and photographic images as well as related ancillary uses and activities. The Ranch's other uses include agriculture and oil production. Existing buildings within the Ranch include the Ranch manager's house, the Ranch foreman's mobile home, a guest house, an uninhabited structure, a Ranch office, various barns, stables and sheds. There are also several temporary filming sets on the Ranch. The uninhabited structure and the Ranch foreman's mobile home are currently located within the proposed Development Area.

Surrounding uses include new development within the recently approved 1,259-acre Golden Valley Ranch planned community within the City of Santa Clarita that is under construction to the north of the Ranch (separated from uses within the Ranch by steep ridgelines; residential subdivisions further to the northwest of the Ranch and west of SR-14; the Angeles National Forest and State Park lands to the south; residential subdivisions further to the southwest in the City of Santa Clarita; undeveloped areas and a small residential subdivision that is also separated from uses within the Ranch by steep ridgelines to the east; and oil production wells and industrial uses to the west across SR-14 with The Master's College and residential subdivisions further to the west in the City of Santa Clarita.

Zoning: *A-2-1, Heavy Agriculture-One Acre Minimum Required; A-2-2, Heavy Agriculture-Two Acre Min.*

General Plan: *R (Rural, Non-urban)*

Community/Area wide Plan: *Santa Clarita Valley Area Plan O-NF (Open Space-National Forest); HM (Hillside Management); N1 (Nonurban 1); W (Floodway/Flood Plain)*

Major projects in area:

PROJECT NUMBER	DESCRIPTION & STATUS
TR52715	*8 SF residences, one open space lot, six oak tree removals (approved in 2000)*
Project 85191	*Canyon Park Specific Plan (approved in 1985)*

NOTE: For EIRs, above projects are not sufficient for cumulative analysis.

REVIEWING AGENCIES

Responsible Agencies

- ☐ None
- ☒ Regional Water Quality Control Board
  - ☒ Los Angeles Region
  - ☐ Lahontan Region
- ☐ Coastal Commission
- ☒ Army Corps of Engineers
- ☒ *U.S. Fish & Wildlife*
- ☒ *Caltrans*
- ☐
- ☐
- ☐

Trustee Agencies

- ☐ None
- ☒ State Fish and Game
- ☒ State Parks

Special Reviewing Agencies

- ☐ None
- ☒ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☒ National Forest
- ☐ Edwards Air Force Base
- ☐ Resource Conservation District of Santa Monica Mtns. Area
- ☒ *City of Santa Clarita*
- ☒ *AQMD; DTSC; DOGG*
- ☒ *NAHC*
- ☒ *SCV Historical Society*
- ☒ *SCOPE; SCAG; CHP*
- ☒ *CSUF*
- ☒ *Department of Conservation*
- ☒ *SCE; LADWP*
- ☒ *Castaic Lake Water Agency; Newhall County Water District; Santa Clarita Water Division*
- ☒ *LAFCO*

Regional Significance

- ☐ None
- ☒ SCAG Criteria
- ☒ Air Quality
- ☒ Water Resources
- ☐ Santa Monica Mtns. Area
- ☐
- ☐

County Reviewing Agencies

- ☒ Subdivision Committee
- ☒ *Sheriff*
- ☒ *Sanitation Districts*
- ☒ *Parks & Recreation*
- ☒ Fire Department (+ Hazardous Materials Division)
- ☒ *Public Health: Environmental Hygiene; Land Use Program*
- ☒ DPW: *GMED; Traffic & Lighting; Environmental Programs; Drainage & Grading; Watershed Management; Flood Maintenance; Transportation Planning; Waterworks & Sewer*
- ☐

IMPACT ANALYSIS MATRIX		ANALYSIS SUMMARY (See individual pages for details)				
			Less than Significant Impact/No Impact			
				Less than Significant Impact with Project Mitigation		
					Potentially Significant Impact	
CATEGORY	**FACTOR**	Pg				Potential Concern
HAZARDS	1. Geotechnical	7	☐	☐	☒	*Liquefaction zone; Hillside management area*
	2. Flood	9	☐	☐	☒	*FEMA flood zone*
	3. Fire	11	☐	☐	☒	*Very High Fire Hazard Severity Zone*
	4. Noise	13	☐	☐	☒	*Adjacent to SR-14; continued occasional noise associated with film production*
RESOURCES	1. Water Quality	14	☐	☐	☒	*NPDES requirement; septic system for relocated Ranch foreman's mobile home*
	2. Air Quality	16	☐	☐	☒	*Construction and operation air emissions; Greenhouse gas emissions*
	3. Biota	18	☐	☐	☒	*Oak trees; Placerita Creek*
	4. Cultural Resources	21	☐	☐	☒	*Oak trees and drainage courses*
	5. Mineral Resources	23	☒	☐	☐	
	6. Agriculture Resources	24	☐	☐	☒	*Although used as an outdoor filming ranch, site is zoned for agriculture uses*
	7. Visual Qualities	25	☐	☐	☒	*Site character adjacent to SR-14 would be altered by new development; site may be visible from nearby public trails*
SERVICES	1. Traffic/Access	27	☐	☐	☒	*Construction and operation traffic; site access*
	2. Sewage Disposal	29	☐	☐	☒	*Wastewater generation*
	3. Education	30	☒	☐	☐	
	4. Fire/Sheriff	31	☐	☐	☒	*Demand for fire and sheriff services*
	5. Utilities	32	☐	☐	☒	*Water and sewer infrastructure; solid waste*
OTHER	1. General	34	☐	☐	☒	*Change in pattern, scale, or character; reduction of agricultural land*
	2. Environmental Safety	35	☐	☐	☒	*Continued use of some hazardous materials within the Ranch*
	3. Land Use	37	☐	☐	☒	*Local plan amendment and zone change proposed*
	4. Pop/Hous./Emp./Rec.	39	☐	☐	☒	*Growth inducing impact*
	5. Mandatory Findings	41	☐	☐	☒	*Geotechnical, flood, fire, noise, water quality, air quality, biota, cultural resources, agriculture, visual, traffic, sewage disposal, fire/sheriff services, utilities, environmental safety, land use; pop/hous/empl/re; cumulative impacts*

Environmental Finding:

FINAL DETERMINATION: On the basis of this Initial Study, the Department of Regional Planning finds that this project qualifies for the following environmental document:

☐ NEGATIVE DECLARATION, inasmuch as the proposed project will not have a significant effect on the environment.

An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was determined that this project will not exceed the established threshold criteria for any environmental/service factor and, as a result, will not have a significant effect on the physical environment.

☐ MITIGATED NEGATIVE DECLARATION, in as much as the changes required for the project will reduce impacts to insignificant levels (see attached discussion and/or conditions).

An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was originally determined that the proposed project may exceed established threshold criteria. The applicant has agreed to modification of the project so that it can now be determined that the project will not have a significant effect on the physical environment. The modification to mitigate this impact(s) is identified on the Project Changes/Conditions Form included as part of this Initial Study.

☒ ENVIRONMENTAL IMPACT REPORT*, inasmuch as there is substantial evidence that the project may have a significant impact due to factors listed above as "significant".

☐ At least one factor has been adequately analyzed in an earlier document pursuant to legal standards, and has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets (see attached Form DRP/IA 101). The Addendum EIR is required to analyze only the factors changed or not previously addressed.

Reviewed by: Christin Cran Date: 1-4-10

Approved by: Carl Ann Carthy Date: 1-4-10

☐ This proposed project is exempt from Fish and Game CEQA filling fees. There is no substantial evidence that the proposed project will have potential for an adverse effect on wildlife or the habitat upon which the wildlife depends. (Fish & Game Code 753.5).

☐ Determination appealed – see attached sheet.

*NOTE: Findings for Environmental Impact Reports will be prepared as a separate document following the public hearing on the project.

HAZARDS - 1. Geotechnical

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the project located in an active or potentially active fault zone, Seismic Hazards Zone, or Alquist-Priolo Earthquake Fault Zone? *The Ranch is located in a region of known active fault zones and seismic activity. The Ranch is also located in an earthquake-induced landslides and liquefaction area (Seismic Hazard Zone Maps – San Fernando and Mint Canyon). The Development Area is also located in a liquefaction zone.*
b.	☒	☐	☐	Is the project site located in an area containing a major landslide(s)? *The Ranch is located within Placerita Canyon with relatively steep hillsides and ridgelines and is within a landslide area. Although the Development Area includes steep slopes as well, it does not appear to be in a landslide area. This issue will be addressed in the EIR.*
c.	☐	☐	☒	Is the project site located in an area having high slope instability? *The Ranch and the Development Area include steep slopes and portions of the Ranch are within a County-designated landslide area. In addition, portions of the Ranch and the Development Area are located within a County-designated Hillside Management Area.*
d.	☒	☐	☐	Is the project site subject to high subsidence, high groundwater level, liquefaction, or hydrocompaction? *The Ranch and the Development Area are located within a liquefaction zone (Seismic Hazard Zone map – Mint Canyon and County Safety Element map)*
e.	☐	☒	☐	Is the proposed project considered a sensitive use (school, hospital, public assembly site) located in close proximity to a significant geotechnical hazard? *The Proposed Project is neither a sensitive use nor would it be located in close proximity to a significant geotechnical hazard.*
f.	☒	☐	☐	Will the project entail substantial grading and/or alteration of topography including slopes of over 25%? *The Proposed Project would require approximately 700,000 cubic yards of cut, 200,000 cubic yards of fill and approximately 500,000 cubic yards of export. The grading and alteration of topography will involve slopes in excess of 25 percent.*
g.	☐	☐	☒	Would the project be located on expansive soil, as defined in Table 18-1-B of Uniform Building Code (1994), creating substantial risks to life or property? *The occurrence of expansive soils underlying the Development Area will be evaluated as part of the geotechnical study to be prepared and incorporated in the EIR.*
h.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ Building Ordinance No. 2225 – Sections 308B, 309, 310, and 311 and Chapters 29 and 70

☐ **MITIGATION MEASURES**

☐ Lot Size ☐ Project Design

☐ **OTHER CONSIDERATIONS**

☐ Approval of Geotechnical Report by DPW

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be impacted by, **geotechnical** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No Impact

HAZARDS - 2. Flood

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the major drainage course, as identified on USGS quad sheets by a dashed line, located on the project site? *Placerita Creek traverses the Ranch, including the Development Area, in an east-west direction. Heil Creek runs north/south through the Ranch and connects with Placerita Creek and extends to the north.*
b.	☒	☐	☐	Is the project site located within or does it contain a floodway, floodplain, or designated flood hazard zone? *Portions of the Ranch, including portions of the Development Area, are located within the 100-year flood plain established by the Federal Emergency Management Agency (FEMA). Additionally, the current Santa Clarita Valley Area Plan designates portions of the Ranch as W (Floodway/Flood Plain).*
c.	☐	☐	☒	Is the project site located in or subject to high mudflow conditions? *The potential for mudflow risks will be evaluated in a geotechnical study and hydrology report to be prepared and incorporated into the EIR.*
d.	☐	☐	☒	Could the project contribute or be subject to high erosion and debris deposition from run-off? *Clearing and/or grading associated with the Proposed Project may contribute to erosion. Impacts associated with erosion and runoff will be addressed in a hydrology technical report to be prepared and incorporated into the EIR.*
e.	☐	☐	☒	Would the project substantially alter the existing drainage pattern of the site or area? *The Proposed Project would change surface flow patterns within the areas proposed for construction.*
f.	☐	☒	☐	Other factors (e.g., dam failure)? *The closest dam in the Project vicinity is the Pacoima Reservoir located approximately 5.5 miles to the southwest of the Proposed Project site. Failure of this dam is not anticipated to significantly impact the Proposed Project site.*

STANDARD CODE REQUIREMENTS

☐ Building Ordinance No. 2225 – Section 308A ☐ Ordinance No. 12,114 (Floodways)

☐ Approval of Drainage Concept by DPW

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be impacted by **flood (hydrological)** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

HAZARDS - 3. Fire

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the project site located in a Very High Fire Hazard Severity Zone (Fire Zone 4)? *The Ranch and the Development Area are located in a Very High Fire Hazard Severity Zone.*
b.	☐	☐	☒	Is the project site in a high fire hazard area and served by inadequate access due to lengths, width, surface materials, turnarounds or grade? *The Ranch and the Development Area are located in a high fire hazard area. Primary access to the Ranch is currently provided from Placerita Canyon Road. Unpaved roads within the Ranch provide internal circulation. Analysis of this issue will be included in the EIR.*
c.	☐	☒	☐	Does the project site have more than 75 dwelling units on a single access in a high fire hazard area? *Neither the Development Area nor the remaining areas of the Ranch include more than 75 dwelling units.*
d.	☐	☐	☒	Is the project site located in an area having inadequate water and pressure to meet fire flow standards? *The Ranch contains private wells used for fire suppression purposes on the Ranch. The Project proposes new water supply from either Santa Clarita Water Division or Newhall County Water District of the Castaic Lake Water Agency to provide adequate water and water pressure to meet fire flows. This issue will be addressed in the EIR.*
e.	☐	☐	☒	Is the project located in close proximity to potential dangerous fire hazard conditions/uses (such as refineries, flammables, explosives manufacturing)? *Two fuel tanks (gas and diesel) and an air compressor are located at the Ranch. Additionally, occasional use of explosive materials has and would continue to occur under the supervision of trained professionals and Fire Department personnel. Explosive materials are not stored on the Ranch long-term. Hazardous substances are and would continue to be used for construction of sets in accordance with manufacturers' specifications and regulatory requirements. This issue will be addressed in the EIR.*
f.	☐	☐	☒	Does the proposed use constitute a potentially dangerous fire hazard? *Explosive materials and hazardous substances are and would continue to be used within the Ranch in accordance with manufacturers' specifications and regulatory requirements. This issue will be addressed in the EIR.*
g.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☒ Water Ordinance No. 7834 ☒ Fire Ordinance No. 2947 ☒ Fire Regulation No. 8
☒ Fuel Modification / Landscape Plan

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Project Design ☐ Compatible Use

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be impacted by **fire hazard** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

HAZARDS - 4. Noise

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the project site located near a high noise source (airports, railroads, freeways, industry)? *SR-14 borders the west side of the Development Area located within the Ranch.*
b.	☐	☐	☒	Is the proposed use considered sensitive (school, hospital, senior citizen facility) or are there other sensitive uses in close proximity? *The Proposed Project consists of studio uses and associated film and television production facilities. Operations such as filming within the Ranch and proposed Development Area can be sensitive to noise. The closest sensitive uses in the project vicinity are residential uses located approximately 0.65 mile to the west and separated from the project site by SR-14 and industrial uses.*
c.	☐	☐	☒	Could the project substantially increase ambient noise levels including those associated with special equipment (such as amplified sound systems) or parking areas associated with the project? *Ambient noise levels in the immediate vicinity of the Proposed Project could increase as a result of outdoor equipment and use of parking areas. A noise study will be prepared and incorporated into the EIR.*
d.	☐	☐	☒	Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels without the project? *Short-term construction noise would be generated on the western portion of the Ranch in connection with development of the Proposed Project. In addition, outdoor equipment, use of parking areas, and additional vehicular traffic could increase noise levels in the immediate vicinity of the Proposed Project.*
e.	☐	☒	☐	Other factors?

STANDARD CODE REQUIREMENTS

☒ Noise Control (Title 12 – Chapter 8) ☐ Uniform Building Code (Title 26 - Chapter 35)

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design ☐ Compatible Use

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be adversely impacted by **noise**?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 1. Water Quality

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Is the project site located in an area having known water quality problems and proposing the use of individual water wells? *Several existing private water wells on the Ranch are used for agricultural purposes, fire suppression, and other potable and non-potable uses on the Ranch. The Development Area would be served with new lines and possibly a water tank connecting the existing public water system in the vicinity of the Proposed Project with water provided by the Newhall County Water District or the Santa Clarita Water Division of the Castaic Lake Water Agency. The remaining areas of the Ranch would continue to use the existing private water wells.*
b.	☒	☐	☐	Will the proposed project require the use of a private sewage disposal system? *The existing Ranch foreman's mobile home that would be relocated from the Development Area to another area within the Ranch would require a new septic tank. The remaining structures within the Ranch would continue to use the existing septic tanks associated with those structures. The new structures within the Development Area would be connected to the Santa Clarita Valley Sanitation District of Los Angeles County Public sewer system,*
	☐	☐	☒	If the answer is yes, is the project site located in an area having known septic tank limitations due to high groundwater or other geotechnical limitations *or* is the project proposing on-site systems located in close proximity to a drainage course? *The proposed locations of the new septic tank for the relocated residence are not expected to have groundwater or geotechnical limitations or be located in close proximity to the drainage courses on-site. This issue will be addressed in the EIR.*
c.	☐	☐	☒	Could the project's associated construction activities significantly impact the quality of groundwater and/or storm water runoff to the storm water conveyance system and/or receiving water bodies? *While compliance with regulatory requirements (e.g., NPDES requirements) during construction would ensure that storm water runoff would be properly accommodated and groundwater and surface water quality would be addressed, impacts associated with groundwater and storm water quality and storm water conveyance will be addressed in the EIR.*
d.	☐	☐	☒	Could the project's post-development activities potentially degrade the quality of storm water runoff and/or could post-development non-storm water discharges contribute potential pollutants to the storm water conveyance system and/or receiving bodies? *While compliance with regulatory requirements (e.g., NPDES requirements) during operation would ensure that storm water runoff would be properly accommodated and surface water quality would be addressed, impacts associated with storm water quality and storm water conveyance will be addressed in the EIR.*
e.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ Industrial Waste Permit
☐ Plumbing Code – Ordinance No.2269
☐ Health Code – Ordinance No.7583, Chapter 5
☒ NPDES Permit Compliance (DPW)

☐ **MITIGATION MEASURES**
☐ Lot Size ☐ Project Design ☐ Compatible Use

☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be adversely impacted by, **water quality** problems?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 2. Air Quality

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Will the proposed project exceed the State's criteria for regional significance (generally (a) 500 dwelling units for residential users or (b) 40 gross acres, 650,000 square feet of floor area or 1,000 employees for non-residential uses)? *The number of employees associated with the Proposed Project would vary based on filming schedules and demand. Up to 1,240 persons associated with the Proposed Project may be present on the Ranch per day. The Ranch's current CUP allows 600 persons per day to be on the Ranch for filming activities in the outdoor filming area east of the Development Area. Accordingly, a total of 1,840 persons may be present on the Ranch per day.*
b.	☐	☒	☐	Is the proposal considered a sensitive use (schools, hospitals, parks) and located near a freeway or heavy industrial use? *The Proposed Project consists of studio uses and associated film and television production facilities, none of which are considered a sensitive use with regard to air quality.*
c.	☐	☐	☒	Will the project increase local emissions to a significant extent due to increased traffic congestion or use of a parking structure or exceed AQMD thresholds of potential significance? *Project-generated traffic as well as construction of the Proposed Project would increase local emissions, which could potentially exceed AQMD thresholds of significance.*
d.	☐	☐	☒	Will the project generate or is the site in close proximity to sources that create obnoxious odors, dust, and/or hazardous emissions? *Operations within the Development Area and the remaining areas of the Ranch associated with the production of motion pictures and television programming may generate sources that create obnoxious odors, fumes, or hazardous emissions. Additionally, construction activities may generate hazardous emissions.*
e.	☐	☐	☒	Would the project conflict with or obstruct implementation of the applicable air quality plan? *Construction and operation of the Proposed Project would contribute additional air pollutants emissions. This issue will be addressed in an air quality assessment to be included in the EIR.*
f.	☐	☐	☒	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? *Construction and operation of the Proposed Project would contribute additional air pollutants emissions. This issue will be addressed in an air quality assessment to be included in the EIR.*
g.	☐	☐	☒	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under applicable federal or state ambient air quality standard (including releasing emission which exceed quantitative thresholds for ozone precursors)? *Construction and operation of the Proposed Project would contribute to cumulative increases in criteria pollutants. This issue will be addressed in an air quality assessment to be included in the EIR.*
h.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ Health and Safety Code – Section 40506

☐ **MITIGATION MEASURES**

☐ Project Design ☐ Air Quality Report

☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, or be adversely impacted by, **air quality**?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 3. Biota

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	Is the project site located within Significant Ecological Area (SEA), SEA Buffer, or coastal Sensitive Environmental Resource (ESHA, etc.), or is the site relatively undisturbed and natural? *The hillsides of the Ranch are chiefly naturally vegetated. The existing portions of the Ranch that have been used for filming have been disturbed over time. The remaining portions of the 890-acre Ranch that are used as filming backdrop include both disturbed and natural areas. A portion of the Ranch is located within a proposed SEA and Placerita Creek natural riparian area, a portion of which is within the Development Area, is also part of the proposed SEA as well. However, a substantial portion of the Development Area is located on two large fill pads formed when Caltrans deposited dirt and gravel to construct SR-14. The southern pad is mostly barren and the northern pad has vegetation covering approximately half the area.*
b.	☐	☐	☒	Will grading, fire clearance, or flood related improvements remove substantial natural habitat areas? *The Proposed Project would require grading, fire clearance for structures, and flood-related improvements, and thus would require removal of some existing on-site vegetation. This issue will be addressed in the EIR.*
c.	☒	☐	☐	Is a drainage course located on the project site that is depicted on USGS quad sheets by a dashed blue line or that may contain a bed, channel, or bank of any perennial, intermittent or ephemeral river, stream, or lake? *Placerita Creek traverses the Ranch, including the Development Area, in an east-west direction. Heil Creek runs north/south through the Ranch and connects with Placerita Creek and extends to the north. In addition, two ephemeral drainages are located just east of the south fill pad within the Development Area, and a portion of a third ephemeral drainage is located within the northeastern area of the Development Area, north of Placerita Creek.*
d.	☒	☐	☐	Does the project site contain a major riparian or other sensitive habitat (e.g. coastal sage scrub, oak woodland, sycamore riparian, woodland, wetland, etc.)? *The Development Area of Golden Oak Ranch contains native sage scrub vegetation, such as bush sunflower (Encelia californica), white sage (Salvia apiana), California buckwheat (Eriogonum fasciculatum), deerweed (Lotus scoparius), and California sagebrush (Artemisia californica). The Area also includes pockets of coast live oak (Quercus agrifolia), primarily around the southern fill pad, and a mixed riparian woodland/chaparral community associated with Placerita Creek (which is between the fill pads located to the north and south, including western sycamore (Platanus racemosa), cottonwood (Populus spp.), red willow (Salix laevigata), arroyo willow (Salix lasiolepus), mulefat (Baccharis salicifolia, and poison oak (Toxicodendron diversilobum).*

The remainder of the Ranch includes both disturbed and non-native plant communities, and a number of native scrub, riparian, and woodland plant communities. The non-native plant communities are associated with ranching activities and include non-native grassland and ornamental plantings. Native vegetation within the uplands of the Ranch is dominated by mixed sage scrub with pockets of oak woodlands. In addition, riparian coast live oak-sycamore woodland, a mixed mule fat scrub and southern willow scrub communities are dominant within Placerita Creek.

e. ☒ ☐ ☐ Does the project site contain oak or other unique native trees (specify kinds of trees)?

The Ranch and the Development Area includes oak trees and other native trees, such as western sycamores, willows, and cottonwoods.

f. ☐ ☐ ☒ Is the project site habitat for any known sensitive species (federal or state listed endangered, etc.)?

Placerita Creek traverses the Development Area and some areas of the Ranch do include natural vegetation. In addition, designated critical habitat for the coastal California gnatcatcher (Polioptila californica) is located within the greater project vicinity.

Possible sensitive vegetative habitats: California Walnut Woodland, Coastal Sage Scrub, Mainland Cherry Forest, Riversidian Alluvial Fan Sage Scrub, Southern Cottonwood Willow Riparian Forest, Southern Mixed Riparian Forest, Southern Riparian Scrub, Southern Willow Scrub, Valley Oak Woodland.

Possible sensitive animals: Monarch Butterfly, Western Spadefoot (toad), Western Pond Turtle, Silvery Legless Lizard, Orangethroat Whiptail, Coastal Whiptail, Coast Horned Lizard, Cooper's Hawk, Southern California Rufous-crowned Sparrow, Grasshopper Sparrow, Bell's Sage Sparrow, Burrowing Owl, Costa's Hummingbird, Yellow Warbler, White-tailed Kite, Southwestern Willow Flycatcher, California Horned Lark, California Condor (flyover), Loggerhead Shrike, Coastal California Gnatcatcher, Pallid Bat, Spotted Bat, Silver-haired Bat, Hoary Bat, Western Yellow Bat, San Diego Black-tailed Jackrabbit, Silver-haired Bat, California Leaf-nosed Bat, San Diego Desert Woodrat, Big Free-tailed Bat, Southern Grasshopper Mouse, American Badger.

Possible sensitive plants: Braunton's Milkvetch, Parish's Brittlescale; Round-leaved Filaree, Mariposa Lilies (3 species), Peirson's Morning-glory, Lewis' Evening-primrose, Southern Tarplant, Island Mountain-mahogany, San Fernando Valley Spineflower, Parry's Spineflower, Santa Susana Tarplant; Slender-horned Spineflower; Many-stemmed Dudleya, Los Angeles Sunflower, Coulter's Goldfields, Fragrant Pitcher Sage, Ross' Pitcher Sage, Ocellated Humboldt Lily, Davidson's Bush-mallow, Short-joint Beavertail, White Rabbit-tobacco, San Gabriel Oak, Chaparral Ragwort, Greata's Aster, Spreading Navarretia and California Orcutt Grass

g. ☐ ☐ ☒ Other factors (e.g., wildlife corridor, adjacent open space linkage)?

The environs of the Development Area and surrounding Golden Oak Ranch, and in particular, Placerita Creek, is used frequently by several forms of wildlife, including mule deer (Odocoileus hemionus), bobcat (Felis rufus), coyote (Canis latrans), domestic dog (Canis familiaris), raccoon, (Procyon lotor), gray fox (Urocyon cinereoargenteus), striped skunk (Mephitis mephitis), desert cottontail (Sylvilagus auduboni), and western fence lizard (Scleroporus occidentalis). This issue will be addressed in a wildlife corridor/linkage assessment to be included as part of the EIR. In addition, the proposed grading/alteration of topography and construction of buildings in the Development Area would alter surface flow patterns and thus possibly result in temporary impacts to Placerita Creek. Finally, the Ranch and Development Area contain various forms of wildlife that may be adversely impacted by any increases in ambient noise levels generated by the proposed development in an area of the Ranch that is currently little used for film production purposes. Filming and production activities would occur 24 hours per day. These issues will be addressed and incorporated into the EIR.

☐ **MITIGATION MEASURES**

☐ Lot Size ☐ Project Design

☐ **OTHER CONSIDERATIONS**

☐ ERB/SEATAC Review ☒ Oak Tree Permit

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on, **biotic** resources?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 4. Archaeological/Historical/Paleontological

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the project site in or near an area containing known archaeological resources or containing features (drainage course, spring, knoll, rock outcroppings, or oak trees) that indicate potential archaeological sensitivity? *The Ranch and the Development Area contain drainage courses and oak trees, including heritage oak trees.*
b.	☐	☐	☒	Does the project site contain rock formations indicating potential paleontological resources? *The Ranch is characterized by rugged topography, including steep hills. However, the proposed Development Area does not appear to contain rock formations indicating potential paleontological resources. This issue will be addressed in the EIR.*
c.	☐	☐	☒	Does the project site contain known historic structures or sites? *The Ranch does not contain any resources that are listed on the National Register of Historic Places, the California Register of Historic Resources, or other local lists of historic resources. However, the Ranch does contain one potentially historic structure, a stone dwelling, which may be eligible for listing on the California Register. This dwelling is located on the eastern portion of the Ranch and outside of the proposed Development Area. Thus, the Proposed Project is unlikely to affect this structure.*
d.	☐	☐	☒	Would the project cause a substantial adverse change in the significance of a historical or archaeological resource as defined in 15064.5? *A substantial portion of the Development Area is located on two large, mostly barren fill pads. In addition, many of the remaining areas of the Ranch have been disturbed over time and thus, the potential for uncovering archaeological resources is low. In addition, there are no historic structures within the Development Area. However, construction activities for the Proposed Project would have the potential to uncover buried archaeological resources. This issue will be addressed in the EIR.*
e.	☐	☐	☒	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? *The two large, mostly barren fill pads that comprise a substantial portion of the Development Area are unlikely to contain paleontological resources. In addition, the Development Area does not contain unique geologic features. Nonetheless, construction activities for the Proposed Project would have the potential to uncover buried paleontological resources and thus, this issue will be addressed in the EIR.*
f.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design ☐ Phase 1 Archaeology Report

CONCLUSION

Considering the above information, could the project leave a significant impact (individually or cumulatively) on **archaeological, historical**, or **paleontological** resources?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 5. Mineral Resources

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? *Mineral resources (and related mining activities) are present in the surrounding area of the Ranch, most notably in the area west of SR-14. However, the proposed Development Area does not appear to contain any known mineral resources. In addition, the Proposed Project would not affect the continued oil production activities that occur within the general site vicinity.*
b.	☐	☒	☐	Would the project result in the loss of availability of a locally important mineral resource discovery site delineated on a local general plan, specific plan or other land use plan? *The Ranch and the proposed Development Area do not appear to contain any known mineral resources.*
c.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design

CONCLUSION

Considering the above information, could the project leave a significant impact (individually or cumulatively) on **mineral** resources?

☐ Potentially significant ☐ Less than significant with project mitigation ☒ Less than significant/No impact

RESOURCES - 6. Agriculture Resources

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use? *The portion of the Ranch mapped as Prime Farmland pursuant to the Farmland Mapping and Monitoring Program is Located east of the Development Area.*
b.	☐	☐	☒	Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? *The Development Area is zoned A-2-1 (Heavy Agriculture), a zoning that provides for "motion pictures sets" as conditionally permitted uses. While much of the Development Area is comprised of two large, mostly barren fill pads, approximately 11 acres of the Development Area can be used for agricultural activities. The reduction of the use of 11 acres of land for agricultural uses would not be a substantial reduction. In addition, approximately 195 acres of the Ranch would continue to be used as a working filming ranch that would provide for agricultural uses. This issue will be addressed in the EIR.*
c.	☐	☐	☒	Would the project involve other changes in the existing environment that due to their location or nature, could result in conversion of Farmland, to non-agricultural use? *While much of the Development Area is comprised of two large, mostly barren fill pads, approximately 11 acres of the Development Area can be used for agricultural activities. The reduction of the use of 11 acres of land for agricultural uses would not be a substantial reduction. In addition, approximately 195 acres of the Ranch would continue to be used as a working filming ranch that would provide for agricultural uses. This issue will be addressed in the EIR.*
d.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design

CONCLUSION

Considering the above information, could the project leave a significant impact (individually or cumulatively) on **agriculture** resources?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

RESOURCES - 7. Visual Qualities

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	Is the project site substantially visible from or will it obstruct views along a scenic highway (as shown on the Scenic Highway Element), or is it located within a scenic corridor or will it otherwise impact the viewshed? *No designated scenic highways or designated scenic corridors are located in the vicinity of the Ranch. However, the Ranch and Development Area are visible from Antelope Valley Freeway and Placerita Canyon road, both of which are 2nd priority scenic routes. Development of new buildings within the Development Area could affect viewsheds in the vicinity of the Proposed Project. This issue will be addressed in the EIR.*
b.	☒	☐	☐	Is the project substantially visible from or will it obstruct views from a regional riding or hiking trail? *The Ranch is visible from a hiking trail located to the south of the Ranch. Also, the proposed Placerita Creek Trail traverses the Ranch and Development Area.*
c.	☐	☐	☒	Is the project site located in an undeveloped or undisturbed area that contains unique aesthetic features? *The Ranch includes both disturbed and natural areas. However, much of the Development Area is located on two large, mostly barren fill pads. Aesthetic features in the vicinity of the Development Area include hillsides and ridgelines to the north and south, as well as Placerita Creek which traverses through the Ranch.*
d.	☐	☐	☒	Is the proposed use out-of-character in comparison to adjacent uses because of height, bulk, or other features? *The Proposed Project would develop new structures on an undeveloped site and thus might alter the visual character of the Development Area adjacent to SR-14. This issue will be addressed in the EIR.*
e.	☐	☐	☒	Is the project likely to create substantial sun shadow, light or glare problems? *The Proposed Project would result in new sources of light which could increase nighttime lighting in the immediate vicinity. Shading impacts would not occur as there are no existing buildings or shade sensitive uses in the vicinity of the site that would be shaded by new buildings within the Development Area. The Proposed Project is not anticipated to include highly reflective surfaces that create glare. Potential impacts associated with light and glare will be addressed as part of the EIR.*
f.	☐	☐	☒	Other factors (e.g., grading or landform alteration)? *The Proposed Project would require grading which would alter the visual character of the Development Area. This issue will be addressed in the EIR.*

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Lot Size ☐ Project Design ☐ Visual Report ☐ Compatible Use

CONCLUSION

Considering the above information, could the project leave a significant impact (individually or cumulatively) on **scenic** qualities?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

SERVICES - 1. Traffic/Access

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Does the project contain 25 dwelling units or more and is it located in an area with known congestion problems (roadway or intersections)? *The Proposed Project does not include any residential units and no known congestion problems exist in the immediate vicinity of the Proposed Project. A traffic study will be prepared to address potential traffic impacts associated with the Proposed Project.*
b.	☐	☐	☒	Will the project result in any hazardous traffic conditions? *Major movie productions could result in high volumes of traffic and the ingress/egress of large movie production trailers.*
c.	☐	☐	☒	Will the project result in parking problems with a subsequent impact on traffic conditions? *The Proposed Project would comply with County Code parking requirements and is expected to meet the demand for parking generated by the proposed uses. Nonetheless, parking will be evaluated as part of the traffic study to be incorporated into the EIR.*
d.	☐	☐	☒	Will inadequate access during an emergency (other than fire hazards) result in problems for emergency vehicles or residents/employees in the area? *The access and circulation plan for the Proposed Project will be evaluated as part of the traffic study to be incorporated into the EIR.*
e.	☐	☐	☒	Will the congestion management program (CMP) Transportation Impact Analysis thresholds of 50 peak hour vehicles added by project traffic to a CMP highway system intersection or 150 peak hour trips added by project traffic to a mainline freeway link be exceeded? *The Proposed Project would generate additional traffic that could potentially exceed the CMP thresholds.*
f.	☐	☒	☐	Would the project conflict with adopted policies, plans, or program supporting alternative transportation (e.g., bus, turnouts, bicycle racks)? *The Proposed Project would not conflict with adopted policies, plans or programs supporting alternative transportation. There are no known bus lines in the area of the project site, and the nearest subway/rail station is over 3.5 miles north of the Development Area.*
g.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES**

☐ Project Design ☐ Traffic Report

☐ **OTHER CONSIDERATIONS**

☐ Consultation with Traffic & Lighting Division

CONCLUSION

Considering the above information, could the project leave a significant impact (individually or cumulatively) on **traffic/access** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

SERVICES - 2. Sewage Disposal

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	If served by a community sewage system, could the project create capacity problems at the treatment plant? *The existing residence that would be relocated from the Development Area to another area within the Ranch would require a new septic tank. The remaining structures within the Ranch would continue to use the existing septic tanks associated with those structures. The new structures within the Development Area would be connected to the Santa Clarita Valley Sanitation District of Los Angeles County public sewer system. The ability of the treatment plant to accommodate the demand for wastewater generated by the new buildings within the Development Area will be evaluated in the EIR.*
b.	☐	☐	☒	Could the project create capacity problems in the sewer lines serving the project site? *New buildings within the Development Area would be connected to the Santa Clarita Valley Sanitation District of Los Angeles County public sewer system. The ability of the sewer lines serving the site to accommodate the wastewater generated by the new buildings within the Development Area will be evaluated in the EIR.*
c.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ Sanitary Sewers and Industrial Waste – Ordinance No. 6130
☐ Plumbing Code – Ordinance No. 2269
☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on the physical environment due to **sewage disposal** facilities?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

SERVICES - 3. Education

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Could the project create capacity problems at the district level? *The Proposed Project does not propose any residential development that could create capacity problems at the district level.*
b.	☐	☒	☐	Could the project create capacity problems at individual schools that will serve the project site? *The Proposed Project does not propose any residential development that could create capacity problems at individual schools.*
c.	☐	☒	☐	Could the project create student transportation problems? *The Proposed Project does not propose any residential development that could create direct demand for student transportation.*
d.	☐	☒	☐	Could the project create substantial library impacts due to increased population and demand? *The Proposed Project does not propose any residential development that could generate direct demand for libraries.*
e.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

☐ Site Dedication ☐ Government Code Section 65995 ☐ Library Facilities Mitigation Fee

---

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) relative to **educational** facilities/services?

☐ Potentially significant ☐ Less than significant with project mitigation ☒ Less than significant/No impact

SERVICES - 4. Fire/Sheriff Services

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	Could the project create staffing or response time problems at the fire station or sheriff's substation serving the project site? *Development of the Proposed Project within the Development Area could result in up to an additional 1,240 persons on-site per day. This could increase the demand for fire and sheriff services. This issue will be evaluated in the EIR.*
b.	☐	☐	☒	Are there any special fire or law enforcement problems associated with the project or the general area? *There are no known special law enforcement problems that would be associated with the Proposed Project or the general area. However, the Development Area is located in a Very High Fire Hazard Severity Zone. Thus, this issue will be evaluated as part of the EIR.*
c.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES**

☐ Fire Mitigation Fee

☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) relative to **fire/sheriff** services?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

SERVICES - 5. Utilities/Other Services

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Is the project site in an area known to have an inadequate public water supply to meet domestic needs or to have an inadequate ground water supply and proposes water wells? *Several private water wells are currently used as a source of water for agricultural purposes, fire suppression and other potable and non-potable uses on the Ranch. The Development Area would be served by new lines and possibly a water tank that would connect to the existing public water system in the vicinity of the Proposed Project with water provided by either the Santa Clarita Water Division or the Newhall County Water District of the Castaic Lake Water Agency. The remainder of the Ranch outside of the Development Area would continue to use the existing wells for potable and non-potable uses.*
b.	☒	☐	☐	Is the project site in an area known to have an inadequate water supply and/or pressure to meet fire fighting needs? *The Ranch is currently served by private wells. In addition, the Ranch currently provides a large water tank for emergency firefighting purposes that would continue to be available for use by the Los Angeles County Fire Department to fight fires in the Project vicinity. While new infrastructure is expected to provide adequate water supply and water pressure to meet fir flows for the new buildings within the Development Area, this issue will be addressed in the EIR.*
c.	☐	☐	☒	Could the project create problems with providing utility services, such as electricity, gas, or propane? *Implementation of the Proposed Project would generate an increased demand for energy and would result in the need for new electricity and natural gas infrastructure.*
d.	☐	☐	☒	Are there any other known service problem areas (e.g., solid waste)? *Implementation of the Proposed Project would result in increased waste generation, and therefore, could have an impact on landfill capacity.*
e.	☐	☐	☒	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services or facilities (e.g., fire protection, police protection, schools, parks, roads)? *As indicated above, the Proposed Project has the potential to result in adverse impacts to fire protection and sheriff services. This issue will be evaluated in the EIR.*
f.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ Plumbing Code – Ordinance No. 2269 ☐ Water Code – Ordinance No. 7834

☐ **MITIGATION MEASURES**
☐ Lot Size ☐ Project Design

☐ **OTHER CONSIDERATIONS**

CONCLUSION
Considering the above information, could the project have a significant impact (individually or cumulatively) relative to **utilities** services?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

OTHER FACTORS - 1. General

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Will the project result in an inefficient use of energy resources? *The Proposed Project would be subject to the County and State building codes that mandate incorporation of energy conservation measures, which would ensure the efficient use of energy. While implementation of the Proposed Project would generate an increased demand for energy, the Project proposes design features to conserve energy resources. The features could include green walls along the soundstages, photovoltaic technology on selected roofs, the use of color and incorporation of shade structures to reduce heat island effect, the use of efficient electric and HVAC equipment, and the use of native, drought-tolerant landscaping. Nonetheless, this issue will be evaluated in the EIR.*
b.	☐	☐	☒	Will the project result in a major change in the patterns, scale, or character of the general area or community? *The proposed Project would develop new structures on an undeveloped site.*
c.	☐	☐	☒	Will the project result in a significant reduction in the amount of agricultural land? *While the Ranch does include agricultural uses, the Ranch has operated as a working filming ranch since at least 1959. In addition, the existing CUP No. 04-089-(5) allows for filming and associated production activities within the Ranch. While much of the Development Area is comprised of two large, mostly barren fill pads, approximately 11 acres of the Development Area can be used for agricultural activities. The reduction of the use of 11 acres of land for agricultural uses would not be a substantial reduction. Agricultural uses on the Ranch, outside of the Development Area, would not be affected by the proposed project.*
d.	☐	☐	☐	Other factors?

STANDARD CODE REQUIREMENTS

☐ State Administrative Code, Title 24, Part 5, T-20 (Energy Conservation)

☐ **MITIGATION MEASURES**
☐ Lot Size ☐ Project Design

☐ **OTHER CONSIDERATIONS**
☐ Compatible Use

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on the physical environment due to any of the above factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

OTHER FACTORS - 2. Environmental Safety

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☒	☐	☐	Are any hazardous materials used, transported, produced, handled, or stored on-site? *In connection with the current Golden Oak Ranch operations, including film production and agricultural activities, two fuel tanks (gas and diesel) and an air compressor are located on the Ranch. Fertilizers and pesticides are maintained on-site. Hazardous substances used for construction of sets and/or during film production include hydraulic fluid, propane, liquid nitrogen, carbon dioxide, oxygen and acetylene gas, paint thinner, acetone, barrels of paint waste (which are hauled away off-site for disposal), fiberglass, foam, fog solution (glycol based) mineral oil, explosives (black powder, gas), batteries (rechargeable and non-rechargeable), and diesel fuel. For set construction and film production, these substances are brought onto the site by the production crews, stored and used during the production, and then removed when the production concludes. No radioactive materials are stored or used on-site, and none are proposed. The use of hazardous materials within the Development Area will be addressed in the EIR.*
b.	☒	☐	☐	Are any pressurized tanks to be used or any hazardous wastes stored on-site? *The Proposed Project would likely use pressurized tanks for air compressors (small portable and large units), propane tanks, and nitrogen, oxygen, and acetylene gas tanks. These are used for construction of sets or during film production. The proposed project would likely use a boiler as part of the mechanical system.*
c.	☐	☒	☐	Are any residential units, schools, or hospitals located within 500 feet and potentially adversely affected? *No residential units, schools, or hospitals are located within 500 feet of proposed project.*
d.	☐	☐	☒	Have there been previous uses that indicate residual soil toxicity of the site or is the site located within two miles downstream of a known groundwater contamination source within the same watershed? *The Ranch has historically been used for agricultural, horse breeding, cattle ranching activities, and film production. Significant holdings in the Ranch were purchased by Disney in 1959 and the Ranch has since been used for a variety of film production uses, agricultural uses and some oil production. Groundwater contamination sources are not known to be located within two miles upstream of the Proposed Project site. This issue will be addressed in the EIR.*
e.	☐	☐	☒	Would the project create a significant hazard to the public or the environment involving the accidental release of hazardous materials into the environment? *All potentially hazardous materials and substances have and will continue to be used, handled, and stored within the Ranch. Additionally, occasional use of explosive materials has and will continue to be used under the supervision of trained professionals and Fire Department personnel. Limited hazardous substances would be used within the Development Area for the construction of sets and production activities (e.g., propane, adhesives, etc.).*
f.	☐	☒	☐	Would the project emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? *There are no existing or proposed schools within one-quarter mile of the Development Area.*

g.	☐	☒	☐	Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or environment? *The Development Area is not listed on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5.*
h.	☐	☒	☐	Would the project result in a safety hazard for people in a project area located within an airport land use plan, within two miles of a public or public use airport, or within the vicinity of a private airstrip? *The Ranch is not located within an airport land use plan, within two miles of an airport, or within the vicinity of a private airstrip.*
i.	☐	☒	☐	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? *The Proposed Project would not affect an adopted emergency response plan or evacuation plan.*
j.	☐	☐	☒	Other factors? *Development Area may be within 200 feet of active, abandoned or idle oil or gas wells*

☐ **MITIGATION MEASURES**
☐ Toxic Clean-up Plan

☐ **OTHER CONSIDERATIONS**

CONCLUSION
Considering the above information, could the project have a significant impact relative to **public safety**?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

OTHER FACTORS - 3. Land Use

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☐	☒	Can the project be found to be inconsistent with the plan designation(s) of the subject property? *Amendment to the Santa Clarita Valley Area Plan is proposed as part of the Project. This issue will be evaluated in the EIR.*
b.	☐	☐	☒	Can the project be found to be inconsistent with the zoning designation of the subject property? *A Zone Change from A-2-1 to C-M-DP is proposed for the Development Area. This issue will be evaluated in the EIR.*
c.				Can the project be found to be inconsistent with the following applicable land use criteria:
	☐	☐	☒	Hillside Management Criteria? *Portions of the Ranch are designated Hillside Management, however, the Proposed Project does not include any residential uses. Consistency with these criteria will be evaluated in the EIR.*
	☐	☐	☒	SEA Conformance Criteria? *Portions of the Ranch are located within a proposed SEA. This issue will be evaluated in the EIR.*
	☐	☒	☐	Other?
d.	☐	☒	☐	Would the project physically divide an established community? *The Project vicinity includes a variety of uses. New development within the recently approved 1,259-acre Golden Valley Ranch planned community is underway to the north of the Ranch. Steep ridgelines separate this planned community from the Proposed Project site. Residential subdivisions are also located to the northwest of the Ranch, west of SR-14; these subdivisions are separated from the Ranch by distance and topography. To the south of the Ranch are Angeles National Forest and State Park lands as well as residential subdivisions further to the southwest. To the east of the Ranch are undeveloped areas and a small residential subdivision that is also separated from uses within the Ranch by steep ridgelines. To the west of the Ranch and Development Area across SR-14 are oil production wells and industrial uses, with The Master's College and residential subdivisions further to the west. Ridgelines, SR-14, and Placerita Canyon Road separate the Development Area from surrounding uses. Based on the variety of uses present within the Project vicinity and the distance of the proposed Development from these uses, the Proposed Project would not physically divide an established community. Nonetheless, this issue will be evaluated in the EIR.*
e.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on the physical environment due to **land use** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

OTHER FACTORS - 4. Population/Housing/Employment/Recreation

SETTING/IMPACTS

	Yes	No	Maybe	
a.	☐	☒	☐	Could the project cumulatively exceed official regional or local population projections? *The Proposed Project does not propose any housing which would increase the regional or local population*
b.	☐	☐	☒	Could the project induce substantial direct or indirect growth in an area (e.g., through projects in an undeveloped area or extension of major infrastructure)? *The Proposed Project will create new jobs in the area. In addition, new utility infrastructure is proposed.*
c.	☐	☒	☐	Could the project displace existing housing, especially affordable housing? *The uninhabited structure in the western portion of the Ranch floor would be removed and the Ranch foreman's mobile home would be relocated to another portion of the Ranch. Therefore, the Proposed Project would not displace existing housing.*
d.	☐	☐	☒	Could the project result in substantial job/housing imbalance or substantial increase in Vehicle Miles Traveled (VMT)? *The Proposed Project would recognize the synergy of having outdoor filming and indoor film production consolidated on the same site, and thus, may decrease VMT. This issue will be analyzed in the EIR within the Air Quality and Traffic/Access analyses.*
e.	☐	☒	☐	Could the project require new or expanded recreational facilities for future residents? *The project does not propose residential uses that would require new or expanded recreational facilities.*
f.	☐	☒	☐	Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? *As part of the Proposed Project, the Ranch foreman's mobile home would be relocated to another portion of the Ranch. Therefore, the Proposed Project would not result in the displacement of people.*
g.	☐	☐	☐	Other factors?

☐ **MITIGATION MEASURES** ☐ **OTHER CONSIDERATIONS**

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on the physical environment due to **population, housing, employment,** or **recreational** factors?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact

MANDATORY FINDINGS OF SIGNIFICANCE

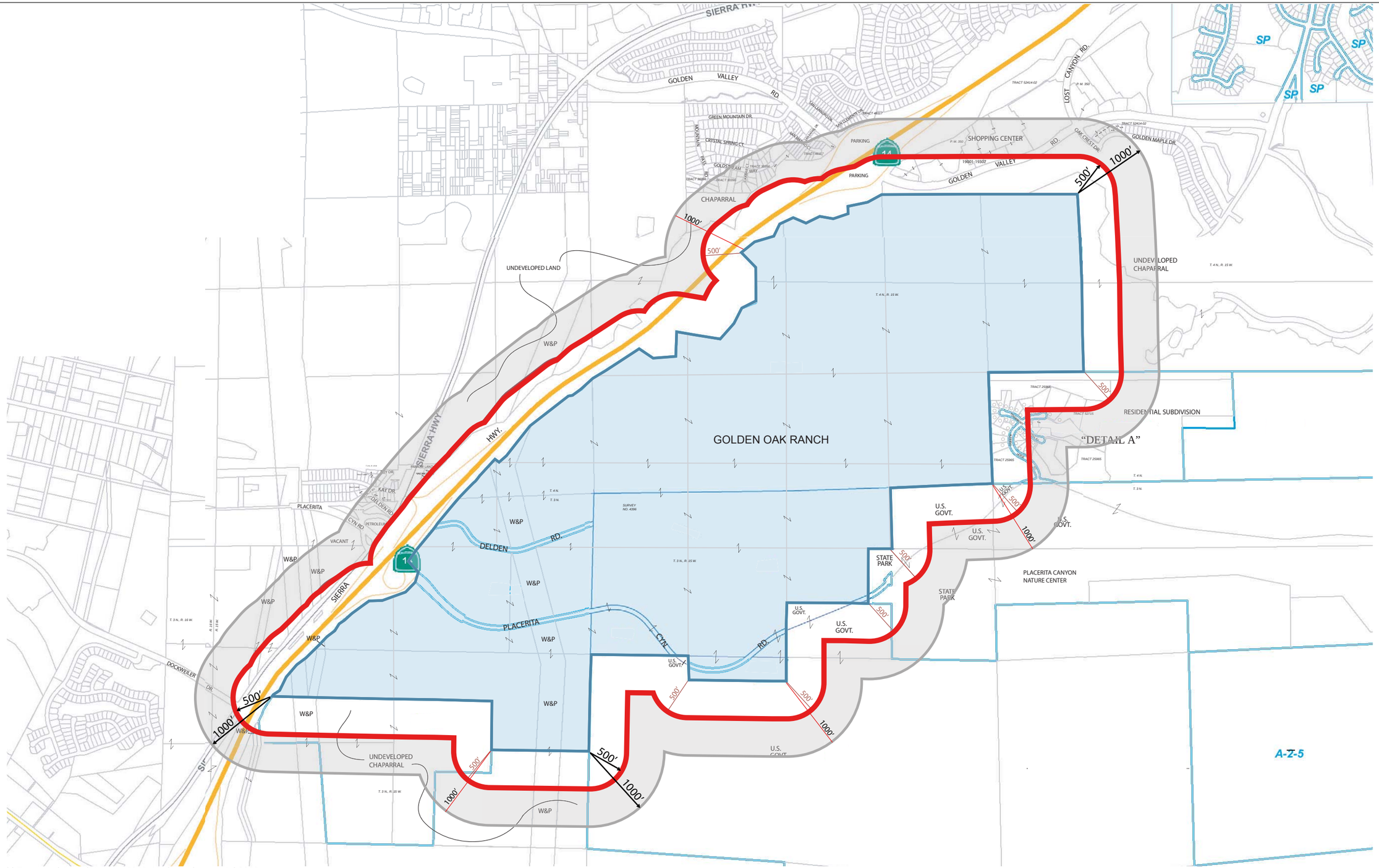
Based on this Initial Study, the following findings are made:

	Yes	No	Maybe	
a.	☒	☐	☐	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? *Biota, cultural resources*
b.	☒	☐	☐	Does the project have possible environmental effects that are individually limited but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. *Water quality, air quality, agriculture resources, visual qualities, sewage disposal, fire/sheriff services, utilities, land use, population/housing/employment/recreation; change in pattern, scale, or character*
c.	☒	☐	☐	Will the environmental effects of the project cause substantial adverse effects on human beings, either directly or indirectly? *Geotechnical, flood, fire, noise, traffic/access, environmental safety*

CONCLUSION

Considering the above information, could the project have a significant impact (individually or cumulatively) on the environment?

☒ Potentially significant ☐ Less than significant with project mitigation ☐ Less than significant/No impact



Source: David Evans and Associates Inc. 2009; Marix Environmental 2009

Disney | ABC Studios at The Ranch

matrix environmental

0 1500 3000
Approximate Scale in Feet

500-foot Radius Land Use Map

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, OFFICE OF REGIONAL PLANNING
AND PUBLIC TRANSPORTATION
IGR/CEQA BRANCH
100 SOUTH MAIN STREET
LOS ANGELES, CA 90012
PHONE (213) 897- 6696
FAX (213) 897-1337

MAR 10 2010

Flex your power!
Be energy efficient!

March 5, 2010

Ms. Christina Tran
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, CA, 90012

Re: Disney/ABC Studios at the Ranch
IGR/CEQA No. 100118/ZJ/NOP
Vic. LA-14-PM 28.08

Dear Ms. Tran:

Thank you for including the California Department of Transportation in the environmental review process for the proposed Disney/ABC Studios at the Ranch project located at Golden Oak Ranch (The Ranch) 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County.

The propose Disney/ABC Studios at the Ranch project would provide for the development of state-of-the-art studio uses and associated film and television production facilities on the westernmost portion of the Ranch. Specifically, the proposed project would provide up to 12 soundstages, production offices, offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, associated onsite parking, and two surplus parking lots on 11.72 acres (of which 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right of way) within the proposed development area of approximately 56 acres of the 890-acre Golden Oak Ranch.

Upon review of information contained in the Initial Study and Notice of Preparation documents, we have the following comments:

The project proposes a direct access to the Ranch across Placerita Canyon Road from the SR-14 north bound off-ramp. Such access may result in high volume of traffic with large movie production trailers and traffic back up onto the off-ramp. Also, according to the Caltrans Highway Design Manual (Paragraph 504.8 see attached), we recommend that the access be relocated at a distance beyond the intersection of the SR-14 off-ramp with Placerita Canyon Road as described in the paragraph.

We request that a traffic impact study be prepared and to include an evaluation of traffic impacts to State Route 14 from Placerita Canyon Road to the I-5 junction. Generally, we request that a traffic impact study include the following information:

- Presentations of assumptions and methods used to develop trip generation, trip distribution, trip assignments, and choice of travel mode. Travel modeling should be consistent with other regional and local modeling forecasts and with travel data.

- Inclusion of all appropriate traffic volumes. Analysis should include a) existing traffic b) cumulative traffic from all specific approved developments in the area, c) cumulative traffic from likely not-yet-approved developments in the area, and d) traffic growth other than from developments.

- Analysis of AM, and PM peak-hour volumes for both existing and future. Future conditions should extend to Specific Plan/General Plan buildout year. Existing and buildout Level of Service should be specified (HCM2000 methodology is requested).

- Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. This discussion should include, but not be limited to, the following:
  - description of transportation infrastructure improvements
  - financial costs, funding sources and financing
  - sequence and scheduling considerations
  - implementation responsibilities, controls and monitoring

For additional information, please refer to State Guide for the Preparation of Traffic Impacts Studies at:

http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

We recommend the City and its traffic consultant coordinate the preparation of the Traffic Study with Caltrans. We would welcome the opportunity to meet and share information that may have been collected in the area.

If you have any questions regarding our comments, please call project coordinator Zeron Jefferson at (213) 897-1333 or me Elmer Alvarez at (213) 897-6696 and please refer to our record number 100118/ZJ.

Sincerely,

Elmer Alvarez

Elmer Alvarez
IGR/CEQA Program Manager
Caltrans, District 7

cc: Scott Morgan, State Clearinghouse

DEPARTMENT OF TRANSPORTATION
100 S. MAIN STREET
LOS ANGELES, CA 90012
PHONE (213) 897-0362
FAX (213) 897-0360

Flex your power!
Be energy efficient!

July 26, 2010

Ms. Christina Tran
Los Angeles County Department of
Regional Planning
Impact Analysis Section
320 W. Temple Street
Los Angeles, CA 90012

RE: Disney/ABC Studios at the Ranch
IGR/CEQA No. 100118/ZJ/NOP
Vic. LA-14-PM 28.08

Dear Ms. Tran:

The purpose of this letter is to clarify our letter of March 5 regarding the above-referenced project. In that letter, we recommended that the proposed project access opposite the northbound off-ramp terminal at Placerita Canyon Road be relocated further to the east.

At the time of our letter, we were unaware that the project applicant and their consultants had been working with other District 7 Caltrans Divisions on the evaluation of the driveway opposite the off-ramp. Both our Freeway Operations and our Geometric Design Divisions have evaluated the proposal and believe that it has merit.

Final approval of the proposal would have to come from Sacramento and further analysis would have to be accomplished in order for this to occur. With that in mind, Caltrans supports the inclusion of the access driveway in the DEIR for the Disney/ABC Studios at the Ranch so that the detailed analysis needed for approval can be completed.

The traffic analysis requirements outlined in our previous letter remain valid. We look forward to reviewing the DEIR and to working with the project applicant and the County on this project.

If you have any questions regarding our comments, please contact Elmer Alvarez at (213) 897-6696 and please refer to our record number 100118/ZJ.

Sincerely,

JAMES J. MCCARTHY
Deputy District Director
Planning, Public Transportation and Local Assistance

RECEIVED
JUL 28 2010

cc. Scott Morgan, State Clearinghouse
Jeff Pletyak, Los Angeles County Department of Public Works, Traffic and Lighting Division
Patrick Gibson, Gibson Transportation Consulting

State of California – The Resources Agency

ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

January 19, 2010

Ms. Christina Tran
County of Los Angeles Department of Regional Planning
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, CA 90012

Notice of Preparation of a
Draft Environmental Impact Report for
Disney/ABC Studios at the Ranch
Los Angeles County

Dear Ms. Tran:

The Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation (NOP), for a Draft Environmental Impact Report (DEIR). The project includes the development of studio and associated film and television production facilities on the westernmost portion of the Disney Golden Oak Ranch. The project also includes the construction of a 220 foot bridge over Placerita Creek, parking lot drainage conveyances, and native vegetation plantings along the banks of Placerita Creek. The project footprint will occupy 56 acres of the 890 acre Disney Golden Oak Ranch. Much of the project will occur on two historic fill pads that were placed on each side of Placerita Creek. The project footprint is composed of sparse non native vegetation, ornamental plantings and native vegetation including sage scrub, oak woodland, and riparian. The project is located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County.

To enable Department staff to adequately review and comment on the proposed project we recommend the following information, where applicable, be included in the Draft Environmental Impact Report:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to

Special Status Native Plant Populations and Natural Communities. (Attachment 1).

b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service.

c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380).

d. The Department's Biogeographic Data Branch in Sacramento should be contacted at (916) 322-2493 to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. Also, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas are of concern to the Department and should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic, outdoor artificial lighting, noise and vibration.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to removal/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives \which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial scrub, coastal sage scrub, etc. should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with offsite mitigation locations clearly identified.

b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are

experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of a drainage.

a. The Department requires a Streambed Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant prior to any direct or indirect impact to a lake or stream bed, bank or channel or associated riparian resources. The Department's issuance of a SAA may be a project that is subject to CEQA. To facilitate our issuance of the Agreement when CEQA applies, the Department as a responsible agency under CEQA may consider the local jurisdiction's (Lead Agency) document for the project. To minimize additional requirements by the Department under CEQA the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Agreement. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

Thank you for this opportunity to provide comment. Please contact Mr. Scott Harris, Environmental Scientist, at (626) 797-3170. if you should have any questions and for further coordination on the proposed project.

Sincerely,

Scott Harris for

Terri Dickerson
Senior Environmental Scientist

Attachments

cc: Ms. Helen Birss, Los Alamitos
Ms. Terri Dickerson, Laguna Niguel
Ms. Kelly Schmoker
Mr. Scott Harris
Mr. Jeff Humble
HabCon-Chron
Department

State Clearinghouse, Sacramento

SPH:sph
spharris/Disney/ABC Studios NOP/2010

#1

Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities

State of California
CALIFORNIA NATURAL RESOURCES AGENCY
Department of Fish and Game
November 24, 2009[1]

RECEIVED
JAN 20 2010

INTRODUCTION AND PURPOSE

The conservation of special status native plants and their habitats, as well as natural communities, is integral to maintaining biological diversity. The purpose of these protocols is to facilitate a consistent and systematic approach to the survey and assessment of special status native plants and natural communities so that reliable information is produced and the potential of locating a special status plant species or natural community is maximized. They may also help those who prepare and review environmental documents determine when a botanical survey is needed, how field surveys may be conducted, what information to include in a survey report, and what qualifications to consider for surveyors. The protocols may help avoid delays caused when inadequate biological information is provided during the environmental review process; assist lead, trustee and responsible reviewing agencies to make an informed decision regarding the direct, indirect, and cumulative effects of a proposed development, activity, or action on special status native plants and natural communities; meet California Environmental Quality Act (CEQA)[2] requirements for adequate disclosure of potential impacts; and conserve public trust resources.

DEPARTMENT OF FISH AND GAME TRUSTEE AND RESPONSIBLE AGENCY MISSION

The mission of the Department of Fish and Game (DFG) is to manage California's diverse wildlife and native plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. DFG has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (Fish and Game Code §1802). DFG, as trustee agency under CEQA §15386, provides expertise in reviewing and commenting on environmental documents and makes protocols regarding potential negative impacts to those resources held in trust for the people of California.

Certain species are in danger of extinction because their habitats have been severely reduced in acreage, are threatened with destruction or adverse modification, or because of a combination of these and other factors. The California Endangered Species Act (CESA) provides additional protections for such species, including take prohibitions (Fish and Game Code §2050 *et seq.*). As a responsible agency, DFG has the authority to issue permits for the take of species listed under CESA if the take is incidental to an otherwise lawful activity; DFG has determined that the impacts of the take have been minimized and fully mitigated; and, the take would not jeopardize the continued existence of the species (Fish and Game Code §2081). Surveys are one of the preliminary steps to detect a listed or special status plant species or natural community that may be impacted significantly by a project.

DEFINITIONS

Botanical surveys provide information used to determine the potential environmental effects of proposed projects on all special status plants and natural communities as required by law (i.e., CEQA, CESA, and Federal Endangered Species Act (ESA)). Some key terms in this document appear in **bold font** for assistance in use of the document.

For the purposes of this document, **special status plants** include all plant species that meet one or more of the following criteria[3]:

---

1 This document replaces the DFG document entitled "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened and Endangered Plants and Natural Communities."

2 http://ceres.ca.gov/ceqa/

3 Adapted from the East Alameda County Conservation Strategy available at http://www.fws.gov/sacramento/EACCS/Documents/080228_Species_Evaluation_EACCS.pdf

- Listed or proposed for listing as threatened or endangered under ESA or candidates for possible future listing as threatened or endangered under the ESA (50 CFR §17.12).

- Listed[4] or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 *et seq.*). A species, subspecies, or variety of plant is **endangered** when the prospects of its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, disease, or other factors (Fish and Game Code §2062). A plant is **threatened** when it is likely to become endangered in the foreseeable future in the absence of special protection and management measures (Fish and Game Code §2067).

- Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 *et seq.*). A plant is **rare** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code §1901).

- Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:

  - Species considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (Lists 1A, 1B and 2);

  - Species that may warrant consideration on the basis of local significance or recent biological information[5];

  - Some species included on the California Natural Diversity Database's (CNDDB) *Special Plants, Bryophytes, and Lichens List* (California Department of Fish and Game 2008)[6].

- Considered a **locally significant species,** that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

Special status natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat. The most current version of the Department's *List of California Terrestrial Natural Communities*[7] indicates which natural communities are of special status given the current state of the California classification.

Most types of wetlands and riparian communities are considered special status natural communities due to their limited distribution in California. These natural communities often contain special status plants such as those described above. These protocols may be used in conjunction with protocols formulated by other agencies, for example, those developed by the U.S. Army Corps of Engineers to delineate jurisdictional wetlands[8] or by the U.S. Fish and Wildlife Service to survey for the presence of special status plants[9].

---

4 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

5 In general, CNPS List 3 plants (plants about which more information is needed) and List 4 plants (plants of limited distribution) may not warrant consideration under CEQA §15380. These plants may be included on special status plant lists such as those developed by counties where they would be addressed under CEQA §15380. List 3 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a List 4 plant are significant even if individual project impacts are not. List 3 and 4 plants are also included in the California Natural Diversity Database's (CNDDB) *Special Plants, Bryophytes, and Lichens List.* [Refer to the current online published list available at http://www.dfg.ca.gov/biogeodata.] Data on Lists 3 and 4 plants should be submitted to CNDDB. Such data aids in determining or revising priority ranking.

6 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

7 http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf. The rare natural communities are asterisked on this list.

8 http://www.wetlands.com/regs/tlpge02e.htm

9 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/sacramento/es/protocol.htm

BOTANICAL SURVEYS

Conduct botanical surveys prior to the commencement of any activities that may modify vegetation, such as clearing, mowing, or ground-breaking activities. It is appropriate to conduct a botanical field survey when:

- Natural (or naturalized) vegetation occurs on the site, and it is unknown if special status plant species or natural communities occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- Special status plants or natural communities have historically been identified on the project site; or
- Special status plants or natural communities occur on sites with similar physical and biological properties as the project site.

SURVEY OBJECTIVES

Conduct field surveys in a manner which maximizes the likelihood of locating special status plant species or special status natural communities that may be present. Surveys should be **floristic in nature**, meaning that every plant taxon that occurs on site is identified to the taxonomic level necessary to determine rarity and listing status. "Focused surveys" that are limited to habitats known to support special status species or are restricted to lists of likely potential species are not considered floristic in nature and are not adequate to identify all plant taxa on site to the level necessary to determine rarity and listing status. Include a list of plants and natural communities detected on the site for each botanical survey conducted. More than one field visit may be necessary to adequately capture the floristic diversity of a site. An indication of the prevalence (estimated total numbers, percent cover, density, etc.) of the species and communities on the site is also useful to assess the significance of a particular population.

SURVEY PREPARATION

Before field surveys are conducted, compile relevant botanical information in the general project area to provide a regional context for the investigators. Consult the CNDDB[10] and BIOS[11] for known occurrences of special status plants and natural communities in the project area prior to field surveys. Generally, identify vegetation and habitat types potentially occurring in the project area based on biological and physical properties of the site and surrounding ecoregion[12], unless a larger assessment area is appropriate. Then, develop a list of special status plants with the potential to occur within these vegetation types. This list can serve as a tool for the investigators and facilitate the use of reference sites; however, special status plants on site might not be limited to those on the list. Field surveys and subsequent reporting should be comprehensive and floristic in nature and not restricted to or focused only on this list. Include in the survey report the list of potential special status species and natural communities, and the list of references used to compile the background botanical information for the site.

SURVEY EXTENT

Surveys should be comprehensive over the entire site, including areas that will be directly or indirectly impacted by the project. Adjoining properties should also be surveyed where direct or indirect project effects, such as those from fuel modification or herbicide application, could potentially extend offsite. Pre-project surveys restricted to known CNDDB rare plant locations may not identify all special status plants and communities present and do not provide a sufficient level of information to determine potential impacts.

FIELD SURVEY METHOD

Conduct surveys using **systematic field techniques** in all habitats of the site to ensure thorough coverage of potential impact areas. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct surveys by walking over the entire site to ensure thorough coverage, noting all plant taxa observed. The level of effort should be sufficient to provide comprehensive reporting. For example, one person-hour per eight

---

10 Available at http://www.dfg.ca.gov/biogeodata/cnddb

11 http://www.bios.dfg.ca.gov/

12 Ecological Subregions of California, available at http://www.fs.fed.us/r5/projects/ecoregions/toc.htm

acres per survey date is needed for a comprehensive field survey in grassland with medium diversity and moderate terrain[13], with additional time allocated for species identification.

TIMING AND NUMBER OF VISITS

Conduct surveys in the field at the time of year when species are both evident and identifiable. Usually this is during flowering or fruiting. Space visits throughout the growing season to accurately determine what plants exist on site. Many times this may involve multiple visits to the same site (e.g. in early, mid, and late-season for flowering plants) to capture the floristic diversity at a level necessary to determine if special status plants are present[14]. The timing and number of visits are determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which the surveys are conducted.

REFERENCE SITES

When special status plants are known to occur in the type(s) of habitat present in the project area, observe reference sites (nearby accessible occurrences of the plants) to determine whether those species are identifiable at the time of the survey and to obtain a visual image of the target species, associated habitat, and associated natural community.

USE OF EXISTING SURVEYS

For some sites, floristic inventories or special status plant surveys may already exist. Additional surveys may be necessary for the following reasons:

- Surveys are not current[15]; or
- Surveys were conducted in natural systems that commonly experience year to year fluctuations such as periods of drought or flooding (e.g. vernal pool habitats or riverine systems); or
- Surveys are not comprehensive in nature; or fire history, land use, physical conditions of the site, or climatic conditions have changed since the last survey was conducted[16]; or
- Surveys were conducted in natural systems where special status plants may not be observed if an annual above ground phase is not visible (e.g. flowers from a bulb); or
- Changes in vegetation or species distribution may have occurred since the last survey was conducted, due to habitat alteration, fluctuations in species abundance and/or seed bank dynamics.

NEGATIVE SURVEYS

Adverse conditions may prevent investigators from determining the presence of, or accurately identifying, some species in potential habitat of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any given year. Discuss such conditions in the report.

The failure to locate a known special status plant occurrence during one field season does not constitute evidence that this plant occurrence no longer exists at this location, particularly if adverse conditions are present. For example, surveys over a number of years may be necessary if the species is an annual plant having a persistent, long-lived seed bank and is known not to germinate every year. Visits to the site in more than one year increase the likelihood of detection of a special status plant especially if conditions change. To further

---

13 Adapted from U.S. Fish and Wildlife Service kit fox survey guidelines available at www.fws.gov/sacramento/es/documents/kitfox_no_protocol.pdf

14 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/sacramento/es/protocol.htm

15 Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment. In forested areas, however, surveys at intervals of five years may adequately represent current conditions. For forested areas, refer to "Guidelines for Conservation of Sensitive Plant Resources Within the Timber Harvest Review Process and During Timber Harvesting Operations", available at https://r1.dfg.ca.gov/portal/Portals/12/THPBotanicalGuidelinesJuly2005.pdf

16 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/botanicalinventories.pdf

substantiate negative findings for a known occurrence, a visit to a nearby reference site may ensure that the timing of the survey was appropriate.

REPORTING AND DATA COLLECTION

Adequate information about special status plants and natural communities present in a project area will enable reviewing agencies and the public to effectively assess potential impacts to special status plants or natural communities[17] and will guide the development of minimization and mitigation measures. The next section describes necessary information to assess impacts. For comprehensive, systematic surveys where no special status species or natural communities were found, reporting and data collection responsibilities for investigators remain as described below, excluding specific occurrence information.

SPECIAL STATUS PLANT OR NATURAL COMMUNITY OBSERVATIONS

Record the following information for locations of each special status plant or natural community detected during a field survey of a project site.

- A detailed map (1:24,000 or larger) showing locations and boundaries of each special status species occurrence or natural community found as related to the proposed project. Mark occurrences and boundaries as accurately as possible. Locations documented by use of global positioning system (GPS) coordinates must include the datum[18] in which they were collected;
- The site-specific characteristics of occurrences, such as associated species, habitat and microhabitat, structure of vegetation, topographic features, soil type, texture, and soil parent material. If the species is associated with a wetland, provide a description of the direction of flow and integrity of surface or subsurface hydrology and adjacent off-site hydrological influences as appropriate;
- The number of individuals in each special status plant population as counted (if population is small) or estimated (if population is large);
- If applicable, information about the percentage of individuals in each life stage such as seedlings vs. reproductive individuals;
- The number of individuals of the species per unit area, identifying areas of relatively high, medium and low density of the species over the project site; and
- Digital images of the target species and representative habitats to support information and descriptions.

FIELD SURVEY FORMS

When a special status plant or natural community is located, complete and submit to the CNDDB a California Native Species (or Community) Field Survey Form[19] or equivalent written report, accompanied by a copy of the relevant portion of a 7.5 minute topographic map with the occurrence mapped. Present locations documented by use of GPS coordinates in map and digital form. Data submitted in digital form must include the datum[20] in which it was collected. If a potentially undescribed special status natural community is found on the site, document it with a Rapid Assessment or Relevé form[21] and submit it with the CNDDB form.

VOUCHER COLLECTION

Voucher specimens provide verifiable documentation of species presence and identification as well as a public record of conditions. This information is vital to all conservation efforts. Collection of voucher specimens should be conducted in a manner that is consistent with conservation ethics, and is in accordance with applicable state

---

17 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata. For Timber Harvest Plans (THPs) please refer to the "Guidelines for Conservation of Sensitive Plant Resources Within the Timber Harvest Review Process and During Timber Harvesting Operations", available at https://r1.dfg.ca.gov/portal/Portals/12/THPBotanicalGuidelinesJuly2005.pdf

18 NAD83, NAD27 or WGS84

19 http://www.dfg.ca.gov/biogeodata

20 NAD83, NAD27 or WGS84

21 http://www.dfg.ca.gov/biogeodata/vegcamp/veg_publications_protocols.asp

and federal permit requirements (e.g. incidental take permit, scientific collection permit). Voucher collections of special status species (or suspected special status species) should be made only when such actions would not jeopardize the continued existence of the population or species.

Deposit voucher specimens with an indexed regional herbarium[22] no later than 60 days after the collections have been made. Digital imagery can be used to supplement plant identification and document habitat. Record all relevant permittee names and permit numbers on specimen labels. A collecting permit is required prior to the collection of State-listed plant species[23].

BOTANICAL SURVEY REPORTS

Include reports of botanical field surveys containing the following information with project environmental documents:

- **Project and site description**
  - A description of the proposed project;
  - A detailed map of the project location and study area that identifies topographic and landscape features and includes a north arrow and bar scale; and,
  - A written description of the biological setting, including vegetation[24] and structure of the vegetation; geological and hydrological characteristics; and land use or management history.
- **Detailed description of survey methodology and results**
  - Dates of field surveys (indicating which areas were surveyed on which dates), name of field investigator(s), and total person-hours spent on field surveys;
  - A discussion of how the timing of the surveys affects the comprehensiveness of the survey;
  - A list of potential special status species or natural communities;
  - A description of the area surveyed relative to the project area;
  - References cited, persons contacted, and herbaria visited;
  - Description of reference site(s), if visited, and phenological development of special status plant(s);
  - A list of all taxa occurring on the project site. Identify plants to the taxonomic level necessary to determine whether or not they are a special status species;
  - Any use of existing surveys and a discussion of applicability to this project;
  - A discussion of the potential for a false negative survey;
  - Provide detailed data and maps for all special plants detected. Information specified above under the headings "Special Status Plant or Natural Community Observations," and "Field Survey Forms," should be provided for locations of each special status plant detected;
  - Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms should be sent to the CNDDB and included in the environmental document as an Appendix. It is not necessary to submit entire environmental documents to the CNDDB; and,
  - The location of voucher specimens, if collected.
- **Assessment of potential impacts**

---

22 For a complete list of indexed herbaria, see: Holmgren, P., N. Holmgren and L. Barnett. 1990. Index Herbariorum, Part 1: Herbaria of the World. New York Botanic Garden, Bronx, New York. 693 pp. Or: http://www.nybg.org/bsci/ih/ih.html

23 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

24 A vegetation map that uses the National Vegetation Classification System (http://biology.usgs.gov/npsveg/nvcs.html), for example *A Manual of California Vegetation*, and highlights any special status natural communities. If another vegetation classification system is used, the report should reference the system, provide the reason for its use, and provide a crosswalk to the National Vegetation Classification System.

- A discussion of the significance of special status plant populations in the project area considering nearby populations and total species distribution;
- A discussion of the significance of special status natural communities in the project area considering nearby occurrences and natural community distribution;
- A discussion of direct, indirect, and cumulative impacts to the plants and natural communities;
- A discussion of threats, including those from invasive species, to the plants and natural communities;
- A discussion of the degree of impact, if any, of the proposed project on unoccupied, potential habitat of the species;
- A discussion of the immediacy of potential impacts; and,
- Recommended measures to avoid, minimize, or mitigate impacts.

QUALIFICATIONS

Botanical consultants should possess the following qualifications:

- Knowledge of plant taxonomy and natural community ecology;
- Familiarity with the plants of the area, including special status species;
- Familiarity with natural communities of the area, including special status natural communities;
- Experience conducting floristic field surveys or experience with floristic surveys conducted under the direction of an experienced surveyor;
- Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- Experience with analyzing impacts of development on native plant species and natural communities.

SUGGESTED REFERENCES

Barbour, M., T. Keeler-Wolf, and A. A. Schoenherr (eds.). 2007. Terrestrial vegetation of California (3rd Edition). University of California Press.

Bonham, C.D. 1988. Measurements for terrestrial vegetation. John Wiley and Sons, Inc., New York, NY.

California Native Plant Society. Most recent version. Inventory of rare and endangered plants (online edition). California Native Plant Society, Sacramento, CA. Online URL http://www.cnps.org/inventory.

California Natural Diversity Database. Most recent version. Special vascular plants, bryophytes and lichens list. Updated quarterly. Available at www.dfg.ca.gov.

Elzinga, C.L., D.W. Salzer, and J. Willoughby. 1998. Measuring and monitoring plant populations. BLM Technical Reference 1730-1. U.S. Dept. of the Interior, Bureau of Land Management, Denver, Colorado.

Leppig, G. and J.W. White. 2006. Conservation of peripheral plant populations in California. Madroño 53:264-274.

Mueller-Dombois, D. and H. Ellenberg. 1974. Aims and methods of vegetation ecology. John Wiley and Sons, Inc., New York, NY.

U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed plants on the Santa Rosa Plain. Sacramento, CA.

U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento, CA.

Van der Maarel, E. 2005. Vegetation Ecology. Blackwell Science Ltd., Malden, MA.

#2

Sensitivity of Top Priority Rare Natural Communities in Southern California

Sensitivity rankings are determined by the Department of Fish and Game, California Natural Diversity Data Base and based on either number of known occurrences (locations) and/or amount of habitat remaining (acreage). The three rankings used for these top priority rare natural communities are as follows:

S1.# Fewer than 6 known locations and/or on fewer than 2,000 acres of habitat remaining.

S2.# Occurs in 6-20 known locations and/or 2,000-10,000 acres of habitat remaining.

S3.# Occurs in 21-100-known locations and/or 10,000-50,000 acres of habitat remaining.

The number to the right of the decimal point after the ranking refers to the degree of threat posed to that natural community regardless of the ranking. For example:

S1.1 = very threatened
S2.2 = threatened
S3.3 = no current threats known

Sensitivity Rankings (February 1992)

Rank	Community Name
S1.1	Mojave Riparian Forest
	Sonoran Cottonwood Willow Riparian
	Mesquite Bosque
	Elephant Tree Woodland
	Crucifixion Thorn Woodland
	Allthorn Woodland
	Arizonan Woodland
	Southern California Walnut Forest
	Mainland Cherry Forest
	Southern Bishop Pine Forest
	Torrey Pine Forest
	Desert Mountain White Fir Forest
	Southern Dune Scrub
	Southern Coastal Bluff Scrub
	Maritime Succulent Scrub
	Riversidean Alluvial Fan Sage Scrub
	Southern Maritime Chaparral
	Valley Needlegrass Grassland
	Great Basin Grassland
	Mojave Desert Grassland
	Pebble Plains
	Southern Sedge Bog
	Cismontane Alkali Marsh

S1.2	Southern Foredunes Mono Pumice Flat Southern Interior Basalt Flow Vernal Pool
S2.1	Venturan Coastal Sage Scrub Diegan Coastal Sage Scrub Riversidean Upland Coastal Sage Scrub Riversidean Desert Sage Scrub Sagebrush Steppe Desert Sink Scrub Mafic Southern Mixed Chaparral San Diego Mesa Hardpan Vernal Pool San Diego Mesa Claypan Vernal Pool Alkali Meadow Southern Coastal Salt Marsh Coastal Brackish Marsh Transmontane Alkali Marsh Coastal and Valley Freshwater Marsh Southern Arroyo Willow Riparian Forest Southern Willow Scrub Modoc-Great Basin Cottonwood Willow Riparian Modoc-Great Basin Riparian Scrub Mojave Desert Wash Scrub Engelmann Oak Woodland Open Engelmann Oak Woodland Closed Engelmann Oak Woodland Island Oak Woodland California Walnut Woodland Island Ironwood Forest Island Cherry Forest Southern Interior Cypress Forest Bigcone Spruce-Canyon Oak Forest
S2.2	Active Coastal Dunes Active Desert Dunes Stabilized and Partially Stabilized Desert Dunes Stabilized and Partially Stabilized Desert Sandfield Mojave Mixed Steppe Transmontane Freshwater Marsh Coulter Pine Forest Southern California Fellfield White Mountains Fellfield
S2.3	Bristlecone Pine Forest Limber Pine Forest

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201
http://www.dfg.ca.gov

ARNOLD SCHWARZENEGGER, Governor

February 8, 2010

FEB 10 2010

Ms. Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012
Fax #: (213) 626-0434

Subject: Notice of Preparation of Draft Environmental Impact Report for the Disney / ABC Studios at the Ranch Project, SCH 2010011010, Los Angeles County

Dear Ms. Tran:

The Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation for a Draft Environmental Impact Report (DEIR) for the Disney / ABC Studios at the Ranch Project, Los Angeles, California. The proposed project would provide for the development of state-of-the-art studio uses and associated film and television production facilities on the westernmost portion of the Ranch. Specifically, the proposed project would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a 220-foot long bridge over Placerita Creek, drainage devices, associated onsite parking, and two surplus parking lots on 11.72 acres (of which 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right-of-way) within the proposed development area of the approximately 56 acres of the 890-acre Golden Oak Ranch. Approximately 30 acres of the existing 225-acre outdoor filming area are located within the proposed Development Area. Thus, with implementation of the Proposed Project, approximately 195 acres of the Ranch would continue to be used for outdoor filming/movie ranch uses with some agricultural uses. In addition, approximately 639 acres of the Ranch would be used primarily as a filming backdrop with some agriculture and oil production uses.

The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (CEQA Section 15386) and pursuant to our authority as a Responsible Agency under the California Environmental Quality Act (CEQA), Section 15381 over those aspects of the proposed project that come under the purview of Fish and Game Code Section 1600 et seq. regarding impacts to streams and lakes.

The California Wildlife Action Plan, a recent Department guidance document, identified the following stressors affecting wildlife and habitats within the project area: 1) growth and development; 2) water management conflicts and degradation of aquatic ecosystems; 3) invasive species; 4) altered fire regimes; and 5) recreational pressures. The Department looks forward to working with the County of Los Angeles to minimize impacts to fish and wildlife resources with a focus on these stressors. Please let Department staff know if you would like a copy of the plan to review.

The Department appreciated the opportunity to go on-site early in the project scoping phase to discuss the proposed project and look at potentially sensitive environmental issues relating to implementation. The Department appreciates Disney and Los Angeles County staff concerns and desires to reduce biological impacts to the riparian, oak woodland, and mixed sage scrub habitats within the proposed project area. The Department looks forward to working with staff during the development of the Streambed Alteration Agreement to minimize riparian impacts and to develop a mitigation strategy. As outlined in the Initial Study, 23.6 acres of the proposed project development area comprise two old fill pads that were formed when Caltrans deposited dirt and gravel from grading during the construction of SR-14 in the early 1970's. Proposed project design features will facilitate riparian habitat function while minimizing impacts to upland oak woodlands and mixed sage scrub in order to meet Disney staff goals of green design and function.

The Department acknowledges the thorough listing and recognition of sensitive biological resources in the Initial Study, including designated critical habitat for the coastal California gnatcatcher located within the greater project vicinity. Department staff review of this project includes the use of the Department's California Natural Diversity Database (CNDDB). This database allows spatial review of sensitive biological resources that have been reported in the past to the CNDDB staff. The attached map (Figure 1) illustrates past observation locations of sensitive species in the general area of the proposed project and as such is a useful tool to evaluate potential sensitive biological resources on the project site. These observations do not represent the current status of sensitive biological resources in the area as CNDDB data is provided only by site specific projects and hence the entire map area has not been surveyed. Site specific surveys should be conducted in the manner described below as needed.

To enable Department staff to adequately review and comment on the proposed project we recommend the following information, where applicable, be included in the draft environmental Impact report:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats (Attachment 1, Plant Survey Protocol).

   a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

   b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use within the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service.

   c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380).

   d. The Department's Biogeographic Data Branch in Sacramento should be contacted at (916) 322-2493 (www.dfg.ca.gov/biogeodata) to obtain current information on any

previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. Also, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas are of concern to the Department and should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic, outdoor artificial lighting, noise and vibration.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to remove/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial

scrub, coastal sage scrub, should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with off-site mitigation locations clearly identified.

b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. A California Endangered Species Act (CESA) Incidental Take Permit is required, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of drainage.

a. The Department also has regulatory authority with regard to activities occurring in streams and/or lakes that could adversely affect any fish or wildlife resource. For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) or a river or stream or use material from a streambed, the project applicant (or "entity") must provide written notification to the Department pursuant to Section 1600 et seq. of the Fish and Game Code. Based on this notification and other information, the department then determines whether a Lake

and Streambed Alteration (LSA) Agreement is required. The Department's issuance of a LSA may be a project that is subject to CEQA. To facilitate our issuance of the Agreement when CEQA applies, the Department as a responsible agency under CEQA may consider the local jurisdiction's (Lead Agency) document for the project. To minimize additional requirements by the Department under CEQA the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Agreement. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

Thank you for this opportunity to provide comments. Please contact Mr. Dan Blankenship, Staff Environmental Scientist, at (661) 259-3750 if you should have any questions and for further coordination on the proposed project.

Sincerely,

Edmund Pert
Regional Manager
South Coast Region

Attachments

cc: Helen Birss, Los Alamitos
Terri Dickerson, Laguna Niguel
Betty Courtney, Newhall
Jeff Humble, Ventura
State Clearinghouse, Sacramento

Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities

State of California
CALIFORNIA NATURAL RESOURCES AGENCY
Department of Fish and Game
November 24, 2009[1]

INTRODUCTION AND PURPOSE

The conservation of special status native plants and their habitats, as well as natural communities, is integral to maintaining biological diversity. The purpose of these protocols is to facilitate a consistent and systematic approach to the survey and assessment of special status native plants and natural communities so that reliable information is produced and the potential of locating a special status plant species or natural community is maximized. They may also help those who prepare and review environmental documents determine when a botanical survey is needed, how field surveys may be conducted, what information to include in a survey report, and what qualifications to consider for surveyors. The protocols may help avoid delays caused when inadequate biological information is provided during the environmental review process; assist lead, trustee and responsible reviewing agencies to make an informed decision regarding the direct, indirect, and cumulative effects of a proposed development, activity, or action on special status native plants and natural communities; meet California Environmental Quality Act (CEQA)[2] requirements for adequate disclosure of potential impacts; and conserve public trust resources.

DEPARTMENT OF FISH AND GAME TRUSTEE AND RESPONSIBLE AGENCY MISSION

The mission of the Department of Fish and Game (DFG) is to manage California's diverse wildlife and native plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. DFG has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (Fish and Game Code §1802). DFG, as trustee agency under CEQA §15386, provides expertise in reviewing and commenting on environmental documents and makes protocols regarding potential negative impacts to those resources held in trust for the people of California.

Certain species are in danger of extinction because their habitats have been severely reduced in acreage, are threatened with destruction or adverse modification, or because of a combination of these and other factors. The California Endangered Species Act (CESA) provides additional protections for such species, including take prohibitions (Fish and Game Code §2050 *et seq.*). As a responsible agency, DFG has the authority to issue permits for the take of species listed under CESA if the take is incidental to an otherwise lawful activity; DFG has determined that the impacts of the take have been minimized and fully mitigated; and, the take would not jeopardize the continued existence of the species (Fish and Game Code §2081). Surveys are one of the preliminary steps to detect a listed or special status plant species or natural community that may be impacted significantly by a project.

DEFINITIONS

Botanical surveys provide information used to determine the potential environmental effects of proposed projects on all special status plants and natural communities as required by law (i.e., CEQA, CESA, and Federal Endangered Species Act (ESA)). Some key terms in this document appear in **bold font** for assistance in use of the document.

For the purposes of this document, **special status plants** include all plant species that meet one or more of the following criteria[3]:

---

1 This document replaces the DFG document entitled "Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened and Endangered Plants and Natural Communities."

2 http://ceres.ca.gov/ceqa/

3 Adapted from the East Alameda County Conservation Strategy available at http://www.fws.gov/sacramento/EACCS/Documents/080228_Species_Evaluation_EACCS.pdf

- Listed or proposed for listing as threatened or endangered under ESA or candidates for possible future listing as threatened or endangered under the ESA (50 CFR §17.12).

- Listed[4] or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 *et seq.*). A species, subspecies, or variety of plant is **endangered** when the prospects of its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, disease, or other factors (Fish and Game Code §2062). A plant is **threatened** when it is likely to become endangered in the foreseeable future in the absence of special protection and management measures (Fish and Game Code §2067).

- Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 *et seq.*). A plant is **rare** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code §1901).

- Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:

  - Species considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (Lists 1A, 1B and 2);

  - Species that may warrant consideration on the basis of local significance or recent biological information[5];

  - Some species included on the California Natural Diversity Database's (CNDDB) *Special Plants, Bryophytes, and Lichens List* (California Department of Fish and Game 2008)[6].

- Considered a **locally significant species,** that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

Special status natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status species or their habitat. The most current version of the Department's *List of California Terrestrial Natural Communities*[7] indicates which natural communities are of special status given the current state of the California classification.

Most types of wetlands and riparian communities are considered special status natural communities due to their limited distribution in California. These natural communities often contain special status plants such as those described above. These protocols may be used in conjunction with protocols formulated by other agencies, for example, those developed by the U.S. Army Corps of Engineers to delineate jurisdictional wetlands[8] or by the U.S. Fish and Wildlife Service to survey for the presence of special status plants[9].

---

4 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

5 In general, CNPS List 3 plants (plants about which more information is needed) and List 4 plants (plants of limited distribution) may not warrant consideration under CEQA §15380. These plants may be included on special status plant lists such as those developed by counties where they would be addressed under CEQA §15380. List 3 plants may be analyzed under CEQA §15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a List 4 plant are significant even if individual project impacts are not. List 3 and 4 plants are also included in the California Natural Diversity Database's (CNDDB) *Special Plants, Bryophytes, and Lichens List.* [Refer to the current online published list available at: http://www.dfg.ca.gov/biogeodata.] Data on Lists 3 and 4 plants should be submitted to CNDDB. Such data aids in determining or revising priority ranking.

6 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

7 http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf. The rare natural communities are asterisked on this list.

8 http://www.wetlands.com/regs/tlpge02e.htm

9 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/sacramento/es/protocol.htm

BOTANICAL SURVEYS

Conduct botanical surveys prior to the commencement of any activities that may modify vegetation, such as clearing, mowing, or ground-breaking activities. It is appropriate to conduct a botanical field survey when:

- Natural (or naturalized) vegetation occurs on the site, and it is unknown if special status plant species or natural communities occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- Special status plants or natural communities have historically been identified on the project site; or
- Special status plants or natural communities occur on sites with similar physical and biological properties as the project site.

SURVEY OBJECTIVES

Conduct field surveys in a manner which maximizes the likelihood of locating special status plant species or special status natural communities that may be present. Surveys should be **floristic in nature**, meaning that every plant taxon that occurs on site is identified to the taxonomic level necessary to determine rarity and listing status. "Focused surveys" that are limited to habitats known to support special status species or are restricted to lists of likely potential species are not considered floristic in nature and are not adequate to identify all plant taxa on site to the level necessary to determine rarity and listing status. Include a list of plants and natural communities detected on the site for each botanical survey conducted. More than one field visit may be necessary to adequately capture the floristic diversity of a site. An indication of the prevalence (estimated total numbers, percent cover, density, etc.) of the species and communities on the site is also useful to assess the significance of a particular population.

SURVEY PREPARATION

Before field surveys are conducted, compile relevant botanical information in the general project area to provide a regional context for the investigators. Consult the CNDDB[10] and BIOS[11] for known occurrences of special status plants and natural communities in the project area prior to field surveys. Generally, identify vegetation and habitat types potentially occurring in the project area based on biological and physical properties of the site and surrounding ecoregion[12], unless a larger assessment area is appropriate. Then, develop a list of special status plants with the potential to occur within these vegetation types. This list can serve as a tool for the investigators and facilitate the use of reference sites; however, special status plants on site might not be limited to those on the list. Field surveys and subsequent reporting should be comprehensive and floristic in nature and not restricted to or focused only on this list. Include in the survey report the list of potential special status species and natural communities, and the list of references used to compile the background botanical information for the site.

SURVEY EXTENT

Surveys should be comprehensive over the entire site, including areas that will be directly or indirectly impacted by the project. Adjoining properties should also be surveyed where direct or indirect project effects, such as those from fuel modification or herbicide application, could potentially extend offsite. Pre-project surveys restricted to known CNDDB rare plant locations may not identify all special status plants and communities present and do not provide a sufficient level of information to determine potential impacts.

FIELD SURVEY METHOD

Conduct surveys using **systematic field techniques** in all habitats of the site to ensure thorough coverage of potential impact areas. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct surveys by walking over the entire site to ensure thorough coverage, noting all plant taxa

---

10 Available at http://www.dfg.ca.gov/biogeodata/cnddb

11 http://www.bios.dfg.ca.gov/

12 Ecological Subregions of California, available at http://www.fs.fed.us/r5/projects/ecoregions/toc.htm

observed. The level of effort should be sufficient to provide comprehensive reporting. For example, one person-hour per eight acres per survey date is needed for a comprehensive field survey in grassland with medium diversity and moderate terrain[13], with additional time allocated for species identification.

TIMING AND NUMBER OF VISITS

Conduct surveys in the field at the time of year when species are both evident and identifiable. Usually this is during flowering or fruiting. Space visits throughout the growing season to accurately determine what plants exist on site. Many times this may involve multiple visits to the same site (e.g. in early, mid, and late-season for flowering plants) to capture the floristic diversity at a level necessary to determine if special status plants are present[14]. The timing and number of visits are determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which the surveys are conducted.

REFERENCE SITES

When special status plants are known to occur in the type(s) of habitat present in the project area, observe reference sites (nearby accessible occurrences of the plants) to determine whether those species are identifiable at the time of the survey and to obtain a visual image of the target species, associated habitat, and associated natural community.

USE OF EXISTING SURVEYS

For some sites, floristic inventories or special status plant surveys may already exist. Additional surveys may be necessary for the following reasons:

- Surveys are not current[15]; or
- Surveys were conducted in natural systems that commonly experience year to year fluctuations such as periods of drought or flooding (e.g. vernal pool habitats or riverine systems); or
- Surveys are not comprehensive in nature; or fire history, land use, physical conditions of the site, or climatic conditions have changed since the last survey was conducted[16]; or
- Surveys were conducted in natural systems where special status plants may not be observed if an annual above ground phase is not visible (e.g. flowers from a bulb); or
- Changes in vegetation or species distribution may have occurred since the last survey was conducted, due to habitat alteration, fluctuations in species abundance and/or seed bank dynamics.

NEGATIVE SURVEYS

Adverse conditions may prevent investigators from determining the presence of, or accurately identifying, some species in potential habitat of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any given year. Discuss such conditions in the report.

The failure to locate a known special status plant occurrence during one field season does not constitute evidence that this plant occurrence no longer exists at this location, particularly if adverse conditions are present. For example, surveys over a number of years may be necessary if the species is an annual plant having a persistent, long-lived seed bank and is known not to germinate every year. Visits to the site in more

---

13 Adapted from U.S. Fish and Wildlife Service kit fox survey guidelines available at www.fws.gov/sacramento/es/documents/kitfox_no_protocol.pdf

14 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/sacramento/es/protocol.htm

15 Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment. In forested areas, however, surveys at intervals of five years may adequately represent current conditions. For forested areas, refer to "Guidelines for Conservation of Sensitive Plant Resources Within the Timber Harvest Review Process and During Timber Harvesting Operations", available at https://r1.dfg.ca.gov/portal/Portals/12/THPBotanicalGuidelinesJuly2005.pdf

16 U.S. Fish and Wildlife Service Survey Guidelines available at http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/botanicalinventories.pdf

than one year increase the likelihood of detection of a special status plant especially if conditions change. To further substantiate negative findings for a known occurrence, a visit to a nearby reference site may ensure that the timing of the survey was appropriate.

REPORTING AND DATA COLLECTION

Adequate information about special status plants and natural communities present in a project area will enable reviewing agencies and the public to effectively assess potential impacts to special status plants or natural communities[17] and will guide the development of minimization and mitigation measures. The next section describes necessary information to assess impacts. For comprehensive, systematic surveys where no special status species or natural communities were found, reporting and data collection responsibilities for investigators remain as described below, excluding specific occurrence information.

SPECIAL STATUS PLANT OR NATURAL COMMUNITY OBSERVATIONS

Record the following information for locations of each special status plant or natural community detected during a field survey of a project site.

- A detailed map (1:24,000 or larger) showing locations and boundaries of each special status species occurrence or natural community found as related to the proposed project. Mark occurrences and boundaries as accurately as possible. Locations documented by use of global positioning system (GPS) coordinates must include the datum[18] in which they were collected;
- The site-specific characteristics of occurrences, such as associated species, habitat and microhabitat, structure of vegetation, topographic features, soil type, texture, and soil parent material. If the species is associated with a wetland, provide a description of the direction of flow and integrity of surface or subsurface hydrology and adjacent off-site hydrological influences as appropriate;
- The number of individuals in each special status plant population as counted (if population is small) or estimated (if population is large);
- If applicable, information about the percentage of individuals in each life stage such as seedlings vs. reproductive individuals;
- The number of individuals of the species per unit area, identifying areas of relatively high, medium and low density of the species over the project site; and
- Digital images of the target species and representative habitats to support information and descriptions.

FIELD SURVEY FORMS

When a special status plant or natural community is located, complete and submit to the CNDDB a California Native Species (or Community) Field Survey Form[19] or equivalent written report, accompanied by a copy of the relevant portion of a 7.5 minute topographic map with the occurrence mapped. Present locations documented by use of GPS coordinates in map and digital form. Data submitted in digital form must include the datum[20] in which it was collected. If a potentially undescribed special status natural community is found on the site, document it with a Rapid Assessment or Relevé form[21] and submit it with the CNDDB form.

VOUCHER COLLECTION

Voucher specimens provide verifiable documentation of species presence and identification as well as a public record of conditions. This information is vital to all conservation efforts. Collection of voucher specimens should

---

17 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata. For Timber Harvest Plans (THPs) please refer to the "Guidelines for Conservation of Sensitive Plant Resources Within the Timber Harvest Review Process and During Timber Harvesting Operations", available at https://r1.dfg.ca.gov/portal/Portals/12/THPBotanicalGuidelinesJuly2005.pdf

18 NAD83, NAD27 or WGS84

19 http://www.dfg.ca.gov/biogeodata

20 NAD83, NAD27 or WGS84

21 http://www.dfg.ca.gov/biogeodata/vegcamp/veg_publications_protocols.asp

be conducted in a manner that is consistent with conservation ethics, and is in accordance with applicable state and federal permit requirements (e.g. incidental take permit, scientific collection permit). Voucher collections of special status species (or suspected special status species) should be made only when such actions would not jeopardize the continued existence of the population or species.

Deposit voucher specimens with an indexed regional herbarium[22] no later than 60 days after the collections have been made. Digital imagery can be used to supplement plant identification and document habitat. Record all relevant permittee names and permit numbers on specimen labels. A collecting permit is required prior to the collection of State-listed plant species[23].

BOTANICAL SURVEY REPORTS

Include reports of botanical field surveys containing the following information with project environmental documents:

- **Project and site description**
  - A description of the proposed project;
  - A detailed map of the project location and study area that identifies topographic and landscape features and includes a north arrow and bar scale; and,
  - A written description of the biological setting, including vegetation[24] and structure of the vegetation; geological and hydrological characteristics; and land use or management history.
- **Detailed description of survey methodology and results**
  - Dates of field surveys (indicating which areas were surveyed on which dates), name of field investigator(s), and total person-hours spent on field surveys;
  - A discussion of how the timing of the surveys affects the comprehensiveness of the survey;
  - A list of potential special status species or natural communities;
  - A description of the area surveyed relative to the project area;
  - References cited, persons contacted, and herbaria visited;
  - Description of reference site(s), if visited, and phenological development of special status plant(s);
  - A list of all taxa occurring on the project site. Identify plants to the taxonomic level necessary to determine whether or not they are a special status species;
  - Any use of existing surveys and a discussion of applicability to this project;
  - A discussion of the potential for a false negative survey;
  - Provide detailed data and maps for all special plants detected. Information specified above under the headings "Special Status Plant or Natural Community Observations," and "Field Survey Forms," should be provided for locations of each special status plant detected;
  - Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms should be sent to the CNDDB and included in the environmental document as an Appendix. It is not necessary to submit entire environmental documents to the CNDDB; and,
  - The location of voucher specimens, if collected.

---

22 For a complete list of indexed herbaria, see: Holmgren, P., N. Holmgren and L. Barnett. 1990. Index Herbariorum, Part 1: Herbaria of the World. New York Botanic Garden, Bronx, New York. 693 pp. Or: http://www.nybg.org/bsci/ih/ih.html

23 Refer to current online published lists available at: http://www.dfg.ca.gov/biogeodata.

24 A vegetation map that uses the National Vegetation Classification System (http://biology.usgs.gov/npsveg/nvcs.html), for example *A Manual of California Vegetation*, and highlights any special status natural communities. If another vegetation classification system is used, the report should reference the system, provide the reason for its use, and provide a crosswalk to the National Vegetation Classification System.

- **Assessment of potential impacts**
  - A discussion of the significance of special status plant populations in the project area considering nearby populations and total species distribution;
  - A discussion of the significance of special status natural communities in the project area considering nearby occurrences and natural community distribution;
  - A discussion of direct, indirect, and cumulative impacts to the plants and natural communities;
  - A discussion of threats, including those from invasive species, to the plants and natural communities;
  - A discussion of the degree of impact, if any, of the proposed project on unoccupied, potential habitat of the species;
  - A discussion of the immediacy of potential impacts; and,
  - Recommended measures to avoid, minimize, or mitigate impacts.

QUALIFICATIONS

Botanical consultants should possess the following qualifications:

- Knowledge of plant taxonomy and natural community ecology;
- Familiarity with the plants of the area, including special status species;
- Familiarity with natural communities of the area, including special status natural communities;
- Experience conducting floristic field surveys or experience with floristic surveys conducted under the direction of an experienced surveyor;
- Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- Experience with analyzing impacts of development on native plant species and natural communities.

SUGGESTED REFERENCES

Barbour, M., T. Keeler-Wolf, and A. A. Schoenherr (eds.). 2007. Terrestrial vegetation of California (3rd Edition). University of California Press.

Bonham, C.D. 1988. Measurements for terrestrial vegetation. John Wiley and Sons, Inc., New York, NY.

California Native Plant Society. Most recent version. Inventory of rare and endangered plants (online edition). California Native Plant Society, Sacramento, CA. Online URL http://www.cnps.org/inventory.

California Natural Diversity Database. Most recent version. Special vascular plants, bryophytes and lichens list. Updated quarterly. Available at www.dfg.ca.gov.

Elzinga, C.L., D.W. Salzer, and J. Willoughby. 1998. Measuring and monitoring plant populations. BLM Technical Reference 1730-1. U.S. Dept. of the Interior, Bureau of Land Management, Denver, Colorado.

Leppig, G. and J.W. White. 2006. Conservation of peripheral plant populations in California. Madroño 53:264-274.

Mueller-Dombois, D. and H. Ellenberg. 1974. Aims and methods of vegetation ecology. John Wiley and Sons, Inc., New York, NY.

U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed plants on the Santa Rosa Plain. Sacramento, CA.

U.S. Fish and Wildlife Service. 1996. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Sacramento, CA.

Van der Maarel, E. 2005. Vegetation Ecology. Blackwell Science Ltd., Malden, MA.

Sensitivity of Top Priority Rare Natural Communities in Southern California

Sensitivity rankings are determined by the Department of Fish and Game, California Natural Diversity Data Base and based on either number of known occurrences (locations) and/or amount of habitat remaining (acreage). The three rankings used for these top priority rare natural communities are as follows:

S1.# Fewer than 6 known locations and/or on fewer than 2,000 acres of habitat remaining.

S2.# Occurs in 6-20 known locations and/or 2,000-10,000 acres of habitat remaining.

S3.# Occurs in 21-100-known locations and/or 10,000-50,000 acres of habitat remaining.

The number to the right of the decimal point after the ranking refers to the degree of threat posed to that natural community regardless of the ranking. For example:

S1.1 = very threatened
S2.2 = threatened
S3.3 = no current threats known

Sensitivity Rankings (February 1992)

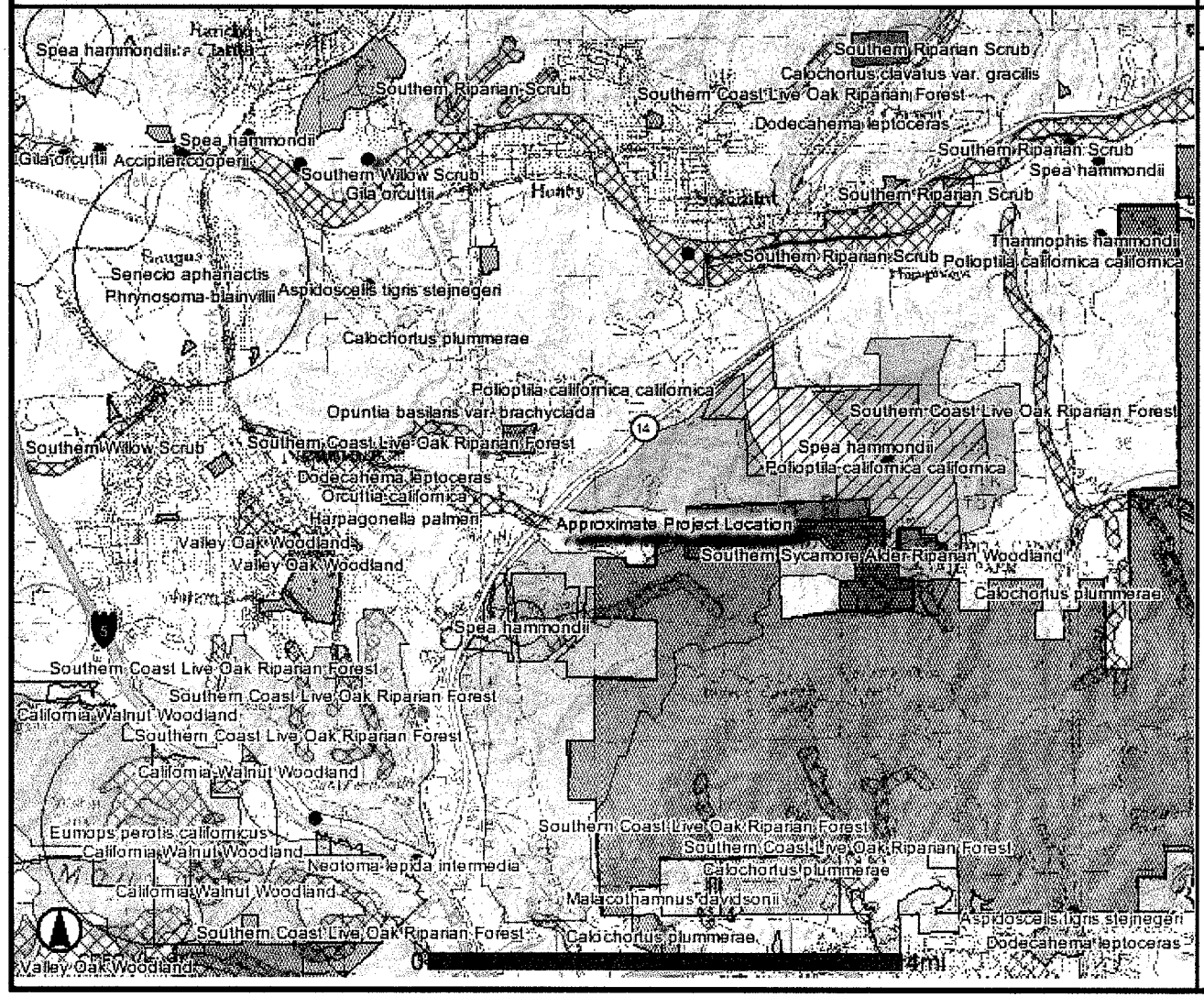
Rank	Community Name
S1.1	Mojave Riparian Forest
	Sonoran Cottonwood Willow Riparian
	Mesquite Bosque
	Elephant Tree Woodland
	Crucifixion Thorn Woodland
	Allthorn Woodland
	Arizonan Woodland
	Southern California Walnut Forest
	Mainland Cherry Forest
	Southern Bishop Pine Forest
	Torrey Pine Forest
	Desert Mountain White Fir Forest
	Southern Dune Scrub
	Southern Coastal Bluff Scrub
	Maritime Succulent Scrub
	Riversidean Alluvial Fan Sage Scrub
	Southern Maritime Chaparral
	Valley Needlegrass Grassland
	Great Basin Grassland
	Mojave Desert Grassland
	Pebble Plains
	Southern Sedge Bog
	Cismontane Alkali Marsh

S1.2	Southern Foredunes Mono Pumice Flat Southern Interior Basalt Flow Vernal Pool
S2.1	Venturan Coastal Sage Scrub Diegan Coastal Sage Scrub Riversidean Upland Coastal Sage Scrub Riversidean Desert Sage Scrub Sagebrush Steppe Desert Sink Scrub Mafic Southern Mixed Chaparral San Diego Mesa Hardpan Vernal Pool San Diego Mesa Claypan Vernal Pool Alkali Meadow Southern Coastal Salt Marsh Coastal Brackish Marsh Transmontane Alkali Marsh Coastal and Valley Freshwater Marsh Southern Arroyo Willow Riparian Forest Southern Willow Scrub Modoc-Great Basin Cottonwood Willow Riparian Modoc-Great Basin Riparian Scrub Mojave Desert Wash Scrub Engelmann Oak Woodland Open Engelmann Oak Woodland Closed Engelmann Oak Woodland Island Oak Woodland California Walnut Woodland Island Ironwood Forest Island Cherry Forest Southern Interior Cypress Forest Bigcone Spruce-Canyon Oak Forest
S2.2	Active Coastal Dunes Active Desert Dunes Stabilized and Partially Stabilized Desert Dunes Stabilized and Partially Stabilized Desert Sandfield Mojave Mixed Steppe Transmontane Freshwater Marsh Coulter Pine Forest Southern California Fellfield White Mountains Fellfield
S2.3	Bristlecone Pine Forest Limber Pine Forest

Disney / ABC Studios Environs CNDDB Observations

Info: Site available at http://imaps.dfg.ca.gov

Author: Dan Blankenship
Date: 2/4/2010 1:29 PM



Map Legend

- Coastal California Gnatcatcher - Final Critical Habitat, USFWS [ds404]
- California Natural Diversity Database (gov ed) [ds45]
  - Plant (80m)
  - Plant (specific)
  - Plant (non-specific)
  - Plant (circular)
  - Animal (80m)
  - Animal (specific)
  - Animal (non-specific)
  - Animal (circular)
  - Terr. Comm. (80m)
  - Terr. Comm. (specific)
  - Terr. Comm. (non-specific)
  - Terr. Comm. (circular)
  - Aqu. Comm. (80m)
  - Aqu. Comm. (specific)
  - Aqu. Comm. (non-specific)
  - Aqu. Comm. (circular)
- Cities
- Highways
  - Interstate
  - US Highway
  - State Highway
- California Protected Areas Database (CPAD) Units
  - Federal

State of California—Business, Transportation and Housing Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
28648 The Old Road
Valencia, CA 91355
(661) 294-5540
(800) 735-2929 (TT/TDD)
(800) 735-2922 (Voice)

January 19, 2010

File No.: 540.11701.11332

Ms. Christina Tran
Impact Analysis Section
County of Los Angeles Regional Planning Department
320 West Temple Street
Los Angeles, CA 90012

Dear Ms. Tran:

This is in response to the Notice of Preparation for the Disney / ABC Studios At The Ranch Project Environmental Review No. RENVT200900112 dated January 5, 2010.

The proposed project is located within the unincorporated Santa Clarita area of Los Angeles County; within the jurisdiction of the California Highway Patrol. The proposed 56 acre project will consist of twelve (12) soundstages, several production offices, a warehouse, a 220 foot long bridge, a utility plant, an electrical substation and numerous other edifices. This project will be located entirely within the unincorporated area of Los Angeles County, near the SR-14 freeway, and will undoubtedly have an impact on traffic.

Based upon the documents provided by your agency, it appears the project will significantly increase traffic volume on SR-14, Sierra Highway and Placerita Canyon Road. This project will require additional resources and officers to provide traffic enforcement, emergency incident management, public service, assistance, and accident investigation. This area has remained undeveloped and not previously subjected to the level of patrol responsibilities, traffic volume and traffic collision problems anticipated. Accordingly, this area will need an increase in resources from the Newhall CHP Area.

Sergeant Jorge Martinez will be our Area's contact person for the project. If you have any questions or concerns, he may be reached at the above address or telephone number. Thank you for allowing us the opportunity to comment on this project.

Sincerely,

M. ODLE, Captain
Commander
Newhall Area

JAN 25 2010

Safety, Service and Security

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION
"Creating Community Through People, Parks and Programs"
Russ Guiney, Director

February 11, 2010

Sent via e-mail: ctran@planning.lacounty.gov

TO: Ms. Christina Tran
Regional Planning
Impact Analysis Section

FROM: Joan Rupert
Parks and Recreation
Environmental Section

SUBJECT: **NOTICE OF PREPARATION (NOP)/ INITIAL STUDY**
DISNEY/ ABC STUDIOS AT THE RANCH
TRACT MAP NO. TR071216
CUP NO. RCUPT200900126
ZONE CHANGE NO. RZVT200900012
PLAN AMENDMENT NO. RPAT200900010
OAK TREE PERMIT NO. ROAKT200900041
ENVIRONMENTAL NO. RENVT200900112

The NOP and Initial Study for the subject project have been reviewed for potential impact on the facilities of this Department. The project may impact facilities under the jurisdiction of this Department (Placerita Creek Connector Trail), for which we have the following comments:

- As described in page 25 of the Initial Study, under the Visual Qualities Section, a proposed County trail alignment (#178- Placerita Creek Connector Trail) traverses the proposed project. In the attached Trail Report previously provided for the Notice of Tract Map Trail Conditions/ Vesting Tentative Tract Map (VTTM) #71216 dated December 17, 2009, it states that a dedication of a variable width twelve (12) to twenty (20) foot wide easement for the Placerita Creek Connector Trail and construction of a variable width (6-8)' trail tread is required to the satisfaction of the Department of Parks and Recreation Trail Building Guidelines pending further review. Please include the above information in the Environmental Impact Report (EIR).

- Please identify and depict the "hiking trail located to the south of the Ranch" mentioned in page 25 of the Initial Study.

- In the Noise Analysis of the EIR, please note the following: Along Placerita Canyon Road, equestrians, cyclists and pedestrians are permitted to use the unpaved dirt right-of-way. Although not an official County trail, it functions as an access route and the six mills described in the proposed project may potentially create noise impacts for those using the right-of-way for transportation purposes.

Thank you for including this Department in the review of this notice. If you have any trail related questions, please contact Robert Ettleman at (213) 351-5134 or rettleman@parks.lacounty.gov or Julie Yom at (213) 351-5127 or jyom@parks.lacounty.gov for any other inquiries.

Enclosure: Trail Report for VTTM #71216 dated December 17, 2009

c: Parks and Recreation (N. E. Garcia, L. Hensley, F. Moreno, R. Ettleman, J. Yom)

COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Creating Community Through People, Parks and Programs"

Russ Guiney, Director

December 17, 2009

TO: Ms. Kim Szalay, Planner
Land Divisions Section
Regional Planning

FROM: Mr. Robert Ettleman, Park Planner
Parks and Recreation

SUBJECT: **NOTICE OF TRACT MAP TRAIL CONDITIONS**
VESTING TENTATIVE TRACT MAP (VTTM) #71216
MAP STAMPED BY REGIONAL PLANNING ON OCTOBER 28, 2009

The Department of Parks and Recreation, Trails and Planning Section has completed the initial review of VTTM #71216. The Placerita Creek Connector Trail alignment adopted by the County Supervisors traverses the proposed project.

Dedication of a variable width twelve (12) to twenty (20) foot wide easement for the Placerita Creek Connector Trail, and construction of a variable width (6-8)' trail tread may be required to the satisfaction of the Department of Parks and Recreation Trail Building Guidelines pending further review.

Because of the necessity to show the trail alignment as it pertains to topographical lines, all information pertaining to trail requirements, must be shown on the tentative and prior to final map recordation.

__X__ Map on hold for trail alignment review.

The exact following language must be shown for trail dedications on the final map.

Title Page: We hereby dedicate to the County of Los Angeles, Department of Parks and Recreation a variable width twelve (12) to twenty (20) foot wide easement, approximate length of _____ linear feet, for multi-use (equestrian, mountain bicycling, and hiking purposes) for the Placerita Creek Connector Trail.

__X__ TRAIL DEDICATIONS MUST BE SHOWN ON FINAL MAP.

__X__ IF A WAIVER IS FILED, A PLAT MAP DEPICTING THE TRAIL MUST ACCOMPANY THE WAIVER.

For any questions concerning trail alignment or other trail concerns, please contact me at (213) 351-5134.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE REFER TO FILE: LD-1

January 21, 2010

TO: Mark Child, AICP
Zoning Permits I Section
Department of Regional Planning

Attention Kim Szalay

FROM: for Steve Burger
Land Development Division
Department of Public Works

CONDITIONAL USE PERMIT (CUP) NO. RCUP 200900126
PROJECT NO. TR 071216(5)
DISNEY/ABC STUDIOS AT THE RANCH
UNINCORPORATED COUNTY AREA OF SANTA CLARITA

☐ Public Works recommends approval of this CUP.

☒ Public Works does **NOT** recommend approval of this CUP.

We reviewed the site plan for the CUP No. RCUP200900126 in the unincorporated County area of Santa Clarita located near the Antelope Valley Freeway and Placerita Canyon Road. The project is to authorize 700,000 cubic yards of grading including 500,000 cubic yards of export and 200,000 cubic yards of on-site fill; a Development Program for indoor filming studio development on 44.28 acres associated with Vesting Tentative Tract Map (VTTM) No. 071216 and demolition of one vacant structure and relocation of the ranch foreman's mobile home within the tract map area in the proposed Commercial Manufacturing Development Program (CM-DP) zone; adjacent parking located on 11.72 acres, mostly within the Los Angeles Department of Water and Power transmission line right of way and property, in the existing Heavy Agricultural-One Acre Minimum Required Area (A-2-1) zone; continued operation and maintenance of the existing outdoor sets filming ranch on 195 acres, and the balance of 639 acres would continue to be used primarily as filming backdrop with some agricultural and oil production uses, in the A-2-1 and Heavy Agricultural-Two Acres Minimum Required (A-2-2) zones.

Prior to Regional Planning's approval of the site plan, the following items need to be addressed, submitted, or shown on the revised site plan:

A. Right of Way and Road Improvement

1 Comply with all previously issued subdivision road related comments for VTTM No. 71216, which includes submission of a traffic study and a conceptual striping plan. All revisions requested on VTTM No. 71216 shall also be applied to the CUP's exhibit map. The exhibit map shall reflect the same information as the maps submitted under VTTM No. 71216 (for the portion that the CUP and tract overlap).

2 In addition, the exhibit map shall be revised to show the following for which the site plan may need to be shown in a smaller scale:

a. Show (and label) all existing improvements including edge of pavement, driveways, utility poles, etc., using accepted topographic conventions (see Standard Plans for Public Works Construction), on both sides of Placerita Canyon Road, 100 feet beyond the property frontage.

b. Show (and label) all proposed improvements (per VTTM No. 71216 road comments) using accepted topographic conventions (see Standard Plans for Public Works Construction).

c. Label and dimension the existing and proposed road right-of-way width, curb-to-curb width, and parkway width on both sides of Placerita Canyon Road.

d. Provide cross sections for Placerita Canyon Road showing the existing and proposed right of way.

For questions regarding the items above, please contact Matthew Dubiel at (626) 458-4921 or by e-mail at mdubiel@dpw.lacounty.gov.

B. Traffic Studies

1. We believe the proposed project has the potential to significantly impact the County roadways in the area. We would like the opportunity to review the project's Environmental Impact Report including any traffic impact studies upon its completion. The County's methodology shall be used when

evaluating the County roadways. A copy of our Traffic Impact Analysis Report Guidelines may be obtained on the Department's website at http://dpw.lacounty.gov/traffic.

For questions regarding the items above, please contact Jeff Pletyak at (626) 300-4721 or by e-mail at jpletyak@dpw.lacounty.gov.

C. Grading

1. Comply with all previously issued subdivision grading related comments for VTTM No. 71216. All revisions requested on VTTM No. 71216 shall also be applied to the CUP's exhibit map. The exhibit map shall reflect the same information as the maps submitted under VTTM No. 71216 (for the portion that the CUP and tract overlap).

2. The environmental documents for this project shall indicate the intended disposal site of the exported on-site fill and the hauling route to said site. The impacts to the structural integrity of the roadways identified as the hauling route shall be analyzed. Additional road related comments/ conditions (to mitigate the impacts) may be necessary should any adverse impacts to public roadways be identified.

For questions regarding the items above, please contact Matthew Dubiel at (626) 458-4921 or by e-mail at mdubiel@dpw.lacounty.gov.

D. Sewer

1 Comply with all previously issued subdivision sewer related comments for VTTM No. 71216, which includes submission of a sewer area study and a Will Serve letter from Los Angeles County Sanitation District. All revisions requested on VTTM No. 71216 shall apply to the CUP's exhibit map. The exhibit map shall reflect the same information as the maps submitted under VTTM No. 71216 (for the portion that the CUP and tract overlap).

For questions regarding the items above, please contact Tony Khalkhali at (626) 458-4921 or by e-mail at tkhalkh@dpw.lacounty.gov.

E. Water

1. Comply with all previously issued subdivision water related comments for VTTM No. 71216, which includes submission of a Will Serve letter from the

water purveyor. All revisions requested on VTTM No. 71216 shall apply to the CUP's exhibit map. The exhibit map shall reflect the same information as the maps submitted under VTTM No. 71216 (for the portion that the CUP and tract overlap).

For questions regarding the items above, please contact Tony Khalkhali at (626) 458-4921 or by e-mail at tkhalkh@dpw.lacounty.gov.

F. Drainage

1. Mitigate portions of the property with proposed improvements that are lying in and adjacent to the natural drainage courses and are subject to flood hazard.

   - Please note that a Conditional Letter of Map Revision from FEMA, to the satisfaction of the Department of Public Works, for proposed encroachment into Zone A, per the Federal Flood Insurance Rate Map, shall be required prior to improvement plan approval

2. A Standard Urban Stormwater Mitigation Plan (as part of the drainage concept) is required when any of the following conditions exist:

   - One acre or more of impervious surface in industrial/commercial development;

   - Parking lot with 5,000 square feet or more of surface area or with 25 or more parking spaces;

   - Redevelopment projects (creation, addition, or replacement of 5,000-square-feet of impervious surface area;

3. A Low-Impact Development Plans (LID) (as part of the drainage concept) are required.

   - Per County Code Section 12.84.460, comply with LID requirements and provide calculations in accordance with the Low-Impact Development Standards Manual, which can be found at http://dpw.lacounty.gov/wmd/LA_County_LID_Manual.pdf

4. Submit a drainage concept showing the extent of drainage impacts and provide mitigation acceptable to the County. The analysis should address increases in runoff, any change in drainage patterns, debris producing areas, and the capacity of existing storm drain facilities. Provide line identification of all proposed drainage facilities. Preliminary soils and geology reports related to debris, retention, and detention basins may be required based on geographic and adverse geotechnical conditions. Provide engineering calculations to support sizing of debris, retention, and detention basins. Provide approximate flood hazard and bank erosion setbacks and lot identifications (as needed). Show slopes for existing and proposed streets. Provide a drainage/grading covenant for any off-site work.

   - Public Works approval for location, span, and clearance for proposed bridges spanning a watercourse is required prior to drainage concept approval.

5. Comply with Interim Peak-Flow Policy, adopted by the Regional Water Quality Control Board February 1, 2005. The Peak-Flow Standard shall require that all post-development runoff from a 2-year, 24-hour storm shall not exceed the predevelopment peak-flow rate, burned, from a 2-year, 24-hour storm. The Peak-Flow Standard shall also require that post-development runoff from the 50-year capital storm shall not exceed the predevelopment peak-flow rate, burned and bulked, from the 50-year capital storm.

6. Submit a revised site plan:

   a. Showing limits of proposed grading, proposed contours and corresponding elevations, proposed on-site elevations at the property line, off-site drainage patterns, and existing and proposed drainage patterns.

   b. Showing all publicly maintained debris basins as a fee title lot. Clearly delineate the fee title lot boundary.

For questions regarding the items above, please contact Lizbeth Cordova at (626) 458-4921 or by e-mail at lcordova@dpw.lacounty.gov.

Upon approval of the site plan, we recommend the following conditions:

1. Solis and Geology

   1.1 The site is located within a potentially liquefiable area per the State of California Seismic Hazard Zones Map–Mint Canyon Quadrangle. Provide a geotechnical report that addresses, but is not limited to, the potential for liquefaction and recommends mitigation at the grading/building plan stage as necessary.

   For questions regarding the items above, please contact Jeremy Wan at (626) 458-4925 or by e-mail at jwan@dpw.lacounty.gov.

2. Grading

   Should CUP No. RCUP No. 200900126 be approved, the following grading related conditions shall apply (please note all Grading comments above must be addressed prior to setting final conditions):

   2.1 Comply with all previously issued subdivision grading related conditions.

   For questions regarding the items above, please contact Mathew Dubiel at (626) 458-4921 or by e-mail at mdubiel@dpw.lacounty.gov.

3. Road

   Should CUP No. RCUP No. 200900126 be approved, the following road related conditions shall apply (all Road comments in Section A must be addressed prior to setting final conditions):

   3.1 Comply with all previously approved subdivision road related conditions issued under VTTM No. 71216.

   3.2 Comply with all previously issued conditions issued under CUP No. 04-089 (see attached September 6, 2006, letter) with the exception of condition 1, which shall be superseded by the following:

      a. Dedicate right of way 43 feet from centerline on Placerita Canyon Road along the property frontage.

3.4 Execute an Agreement to Improve for the street improvements prior to issuance of a building permit.

For questions regarding the items above, please contact Mathew Dubiel at (626) 458-4921 or by e-mail at mdubiel@dpw.lacounty.gov.

4. Street Lighting Requirements

4.1 Provide street lights on concrete poles with underground wiring along the property frontage on Placerita Canyon Road and on all streets and highways within and around VTTM No. 71216 to the satisfaction of Public Works. Submit street lighting plans along with existing and/or proposed underground utilities plans as soon as possible to Public Works' Traffic and Lighting Division, Street Lighting Section, to allow the maximum time for processing and approval.

4.2 Upon approval of the CUP, the applicant shall enter into a secured agreement with the County of Los Angeles for the installation of the street light. This amount is subject to change upon submittal of final street lighting plans. The applicant shall comply with the conditions listed above in order for the Lighting Districts to pay for the future operation and maintenance of the street lights.

4.3 All streetlights in the project, or approved project phase, must be constructed according to Public Works-approved plans. The contractor shall submit one complete set of As-built plans. Provided the above conditions are met, the Lighting District can assume responsibility for the operation and maintenance of the street lights by July 1st of any given year, provided all street lights in the project, or approved project phase, have been energized and the developer has requested a transfer of billing at least by January 1st of the previous year. The transfer of billing could be delayed one or more years if the above conditions are not met. The Lighting District cannot pay for the operation and maintenance of street lights located within gated communities.

For questions regarding the items above, please contact David Stringer at (626) 300-4754 or by e-mail at dstringer@dpw.lacounty.gov.

If you have any other questions or require additional information, please contact Ruben Cruz or Toan Duong at (626) 458-4910 or by e-mail at rcruz@dpw.lacounty.gov or tduong@dpw.lacounty.gov.

RC:ca
P:/LDPUB/SUBMGT/CUP/ Project TR071516(5)_CUP 200900126_Disney-ABC Studios at the ranch.DOCX

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

MAR 23 2010

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

March 10, 2010

Ms. Christina Tran
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, CA 90012

Dear Ms. Tran:

SUBJECT: NOTICE OF PREPARATION AND NOTICE OF SCOPING MEETING, DISNEY/ABC STUDIOS AT THE RANCH, NEWHALL (FFER #201000010)

The Notice of Preparation has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICE AVAILABILITY

1. The subject development will receive fire protection and paramedic service from the County of Los Angeles Fire Department. Currently, Fire Station 104, located at 26201 Golden Valley Road, Santa Clarita, CA 91350, is the jurisdictional station for this property. It is approximately 3.5 miles north of the project site. It has a 4-person quint, which is a combination engine/ladder truck apparatus. The Fire Department's Developer Fee Detailed Fire Station Plan includes the development of a new Fire Station (Station 150) in 2011 which would replace Fire Station 104 as the jurisdictional Fire Station (1st due) for this project. Fire Station 150 will be located approximately 1.3 miles from the project site.

PROJECT IMPACT ON SERVICES

2. Fire protection serving the area appears to be adequate for the existing development/land use. However, each additional development creates greater demands on existing resources. The

Initial Study erred in not checking the box for "Fire Protection Facilities Fee" under "Services - 4. Fire/Sheriff Services, page 31". Imposition of the mitigation measures would mitigate the impact this development would have on Fire Department services.

LAND DEVELOPMENT UNIT:

1. The Statutory Responsibilities of the County of Los Angeles Fire Department, Land Development Unit, are the review of, and comment on, all projects within the unincorporated areas of the County of Los Angeles. Our emphasis is on the availability of sufficient water supplies for Fire Fighting operations and local/regional access issues. However, we review all projects for issues that may have a significant impact on the County of Los Angeles Fire Department.

2. This property is located within the area described by the Forester and Fire Warden as a Very High Fire Hazard Severity Zone (VHFHSZ). All applicable fire code and ordinance requirements for construction, access, water mains, fire hydrants, fire flows, brush clearance and fuel modification plans, must be met.

3. The Fire Department's Land Development Unit has reviewed and provided comments to the submitted Tentative Tract Map TR71216 and Conditional Use Permit RCUP T2009000126. We have enclosed a copy of those reports which reflect specific comments and/or conditions of approval associated with those permits.

4. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.

5. The County of Los Angeles Fire Department, Land Development Unit appreciates the opportunity to comment on this project. Other comments maybe provide when additional details and/or documents are provided for review.

6. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department, Land Development Unit, Inspector Juan Padilla at (323) 890-4243.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Draft Environmental Impact Report.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The review of the "Notice of Preparation" indicates that the Ranch has been used over the past decades for agriculture, oil production, motion picture and television film production, set construction in addition to storage of fuels, pesticides and other hazardous materials on-site. Based on the above information, the site uses may have contributed to soil contamination. Therefore, it is requested that the subject development seeks oversight from the State Department of Toxic Substances Control or Los Angeles County Fire Department, Health Hazardous Materials Division for assessment and mitigation of potential contamination prior to issuance of any grading permit.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

JOHN R. TODD, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

JRT:lj

Enclosure

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

CONDITIONS OF APPROVAL FOR SUBDIVISION - UNINCORPORATED

Subdivision No: TR 71216 Map Date: October 28, 2009

C.U.P. _____ Vicinity _____

☒ **FIRE DEPARTMENT HOLD** on the tentative map shall remain until verification from the Los Angeles County Fire Dept. Planning Section is received, stating adequacy of service. Contact (323) 881–2404.

☒ Access shall comply with Title 21 (County of Los Angeles Subdivision Code) and Section 503 of the Fire Code, which requires all weather access. All weather access may require paving.

☒ Fire Department access shall be extended to within 150 feet distance of any exterior portion of all structures.

☒ Where driveways extend further than 150 feet and are of single access design, turnarounds suitable for fire protection equipment use shall be provided and shown on the final map. Turnarounds shall be designed, constructed and maintained to insure their integrity for Fire Department use. Where topography dictates, turnarounds shall be provided for driveways that extend over 150 feet in length.

☒ The private driveways shall be indicated on the final map as "Private Driveway and Firelane" with the widths clearly depicted. Driveways shall be maintained in accordance with the Fire Code.

☒ Vehicular access must be provided and maintained serviceable throughout construction to all required fire hydrants. All required fire hydrants shall be installed, tested and accepted prior to construction.

☒ This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). A "Fuel Modification Plan" shall be submitted and approved prior to Tentative Map clearance. (Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details).

☒ Provide Fire Department or City approved street signs and building access numbers prior to occupancy.

☐ Additional fire protection systems shall be installed in lieu of suitable access and/or fire protection water.

☐ The final concept map, which has been submitted to this department for review, has fulfilled the conditions of approval recommended by this department for access only.

☐ These conditions must be secured by a C.U.P. and/or Covenant and Agreement approved by the County of Los Angeles Fire Department prior to final map clearance.

☐ The Fire Department has no additional requirements for this division of land.

Comments: **See additional sheet for all holds and conditions of approvals for this project:**

By Inspector: *Juan C. Padilla* Date December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

WATER SYSTEM REQUIREMENTS - UNICORPORATED

Subdivision No: TR 71216 Map Date: October 28, 2009

Revised Report _____

☐ The County Forester and Fire Warden is prohibited from setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted. However, water requirements may be necessary at the time of building permit issuance.

☒ The required fire flow for public fire hydrants at this location is **5000** gallons per minute at 20 psi for a duration of 5 hours, over and above maximum daily domestic demand. 3 Hydrant(s) flowing simultaneously may be used to achieve the required fire flow.

☐ The required fire flow for private on-site hydrants is ____ gallons per minute at 20 psi. Each private on-site hydrant must be capable of flowing ____ gallons per minute at 20 psi with two hydrants flowing simultaneously, one of which must be the furthest from the public water source.

☐ Fire hydrant requirements are as follows:

Install ____ public fire hydrant(s). Upgrade / Verify existing ____ public fire hydrant(s).

Install ____ private on-site fire hydrant(s).

☒ All hydrants shall measure 6"x 4"x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal. All on-site hydrants shall be installed a minimum of 25' feet from a structure or protected by a two (2) hour rated firewall.
☐ Location: As per map on file with the office.
☐ Other location: ____

☒ All required fire hydrants shall be installed, tested and accepted or bonded for prior to Final Map approval. Vehicular access shall be provided and maintained serviceable throughout construction.

☐ The County of Los Angeles Fire Department is not setting requirements for water mains, fire hydrants and fire flows as a condition of approval for this division of land as presently zoned and/or submitted.

☒ Additional water system requirements will be required when this land is further subdivided and/or during the building permit process.

☐ Hydrants and fire flows are adequate to meet current Fire Department requirements.

☒ Fire hydrant upgrade is not necessary, if existing hydrant(s) meet(s) fire flow requirements. Submit original water availability form to our office.

Comments: **All water system requirements along with fire hydrant locations shall be determined upon access acceptance by the Fire Department prior to Tentative Map clearance.**
See additional sheet for all water system conditions of approval.

All hydrants shall be installed in conformance with Title 20, County of Los Angeles Government Code and County of Los Angeles Fire Code, or appropriate city regulations. This shall include minimum six-inch diameter mains. Arrangements to meet these requirements must be made with the water purveyor serving the area.

By Inspector *Juan C. Padilla* Date December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040

LAND DEVELOPMENT UNIT REQUIREMENTS
ADDITIONAL PAGE

Subdivision No: TR 71216 **Map Date:** October 28, 2009

TENTATIVE MAP - HOLDS

1 Provide a clearance letter from the Los Angeles County Fire Department Planning Section prior to Tentative Map clearance.

2 Provide an approved Preliminary Fuel Modification Plan prior to Tentative Map clearance.

3 Label all on-site roadways to be used a Fire Department access as "Private Driveway and Fire Lane". Indicate compliance on the Tentative Map.

4 The proposed Private Driveway and Fire Lane shall provide a minimum turning radius of 32ft on centerline. Indicate compliance on the Tentative Map.

5 Fire Department vehicular access shall be extended to within 150ft to all portions of exterior walls for all proposed structures, including the Mill buildings.
Indicate compliance on the Tentative Map.

6 Clarify the "Ribbon Gutter" being proposed on Section D-D within the Private Driveway and Fire Lanes.

EXHIBIT MAP CONDITIONS OF APPROVAL

7 Record a reciprocal access agreement for all Private Driveways and Fire Lanes to the satisfaction of the Department of Regional Planning, especially for the fire lanes under the LADWP Transmission Corridor.

8 Fire Department vehicular access crossing any portion of the Flood Plain shall be designed to the Department of Public Works standards and Section 503.2.6 of the Los Angeles County Fire Code (Title 32).

9 Due to the proximity of the LADWP overhead powerlines, all proposed buildings and parking area shall ensure compliance with Los Angeles County Fire Department Regulation 27.

10 Any proposed gates shall be shown on the Exhibit Map along with a design cross section. Gates shall also comply with Los Angeles County Fire Department Regulation 5.

11 Final access approval for the Filming Studios shall be further reviewed for compliance at which time the final design plans are submitted for building permit clearances or C.U.P. review.

12 The required fire flow for each public fire hydrant maybe reduced during once final building design has been submitted for review.

13 Multiple water source points of connections maybe required for fire suppression purposes.

By Inspector: *Juan C. Padilla* Date: December 15, 2009

Land Development Unit – Fire Prevention Division – (323) 890-4243, Fax (323) 890-9783

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

5823 Rickenbacker Road
Commerce, California 90040-3027

DATE: March 8, 2010

TO: Department of Regional Planning
Permits and Variances

PROJECT #: TR 71216 (T200900126)

LOCATION: 19802 Placerita Canyon Road, Newhall

☐ The Fire Department Land Development Unit has no additional requirements for this permit.

☐ The required fire flow for this development is ____ gallons per minute for _ hours. The water mains in the street, fronting this property must be capable of delivering this flow at 20 pounds per square inch residual pressure.

☐ Install __ Public and/or __ On-site and/or __ Verify / Upgrade 6" X 4" X 2 1/2" fire hydrants, conforming to AWWA C503-75 or approved equal. All installations must meet Fire Department specifications. Fire hydrant systems must be installed in accordance with the Utility Manual of Ordinance 7834 and all installations must be inspected and flow tested prior to final approval.

☒ **Comments:** The Fire Department has cleared the CUP for Public Hearing with the following conditions of approval.

☒ **Water:** Public Fire Hydrants and fire flow requirements will be determined during the Tentative Map review for the proposed 18 lot subdivision (Sound Stages). Additional water system requirements will be required for any proposed structures within the subdivision boundary or any future structures in the remaining ranch property in compliance to the Los Angeles County Fire Code and Los Angeles County Fire Department Regulations. Architectural plans shall be submitted to the Fire Department for review and approval.

☒ **Access:** Fire Department access to the subdivision is being addressed during the Tentative Map review. For the remaining ranch property, access shall provide an all weather access surface with minimum width of 20ft and subject to any applicable Los Angeles County Fire Code and Los Angeles County Fire Department Regulations for any future structure. Architectural plans shall be submitted to the Fire Department for review and approval.

☒ **Special Requirements:** This property is located within the area described by the Fire Department as "Very High Fire Hazard Severity Zone" (formerly Fire Zone 4). An "Approved Fuel Modification Plan" is required for any proposed structure prior to building permit issuance. Contact: Fuel Modification Unit, Fire Station #32, 605 North Angeleno Avenue, Azusa, CA 91702-2904, Phone (626) 969-5205 for details.

All proposed new construction within the subdivision and any future construction in the remaining ranch property is subject to compliance with any applicable Los Angeles County Fire Code, Los Angeles County Building Code, and any Los Angeles County Fire Department Regulations.

All new permanent facades that fall within the scope of the current edition of Los Angeles County Fire Department Regulation #29 shall be constructed and maintained in accordance with that Regulation. An adequate water supply for each new permanent façade is required prior to construction. The required water supply shall be approved by the Fire Marshal prior to building permit issuance based on the façade's size, construction type, and proximity to adjacent structures

Fire Protection facilities; including access must be provided prior to and during construction. Should any questions arise regarding this matter, please feel free to call our office at (323) 890-4243.

Inspector: *Juan C. Padilla*

Land Development Unit – Fire Prevention Division – Office (323) 890-4243 Fax (323) 890-9783

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

February 2, 2010

File No: SCV-00.04-00

RECEIVED
FEB - 4 2010

Ms. Christina Tran
Impact Analysis Section
Los Angeles County
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Dear Ms. Tran:

Disney/ABC Studios at the Ranch,
Tract Map No. 071216, Conditional Use Permit No. RCUPT200900126,
Zone Change No. RZCT200900012, Plan Amendment No. RPAT200900010,
Oak Tree Permit No. ROAKT200900041, Environmental No. RENVT200900112

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on January 11, 2010. We offer the following comments regarding sewerage service:

1. The project area is outside the jurisdictional boundaries of the Districts and will require annexation into the Santa Clarita Valley Sanitation District before sewerage service can be provided to the proposed development. For a copy of the Districts' Annexation Information and Processing Fees sheets, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the annexation procedure and fees, please contact Ms. Donna Kitt at extension 2708.

2. Because of the project's location, the flow originating from the proposed project would have to be transported to the Districts' trunk sewer by local sewer(s) that are not maintained by the Districts. If no local sewer lines currently exist, it is the responsibility of the developer to convey any wastewater generated by the project to the nearest local sewer and/or Districts' trunk sewer. Based on the information contained in the document received, the following is a list of Districts' trunk sewers that could serve the project area.

Name	Location	Size (dia.)	Design Capacity (mgd)	Peak Flow (mgd)	Last Measured
San Fernando Road Trunk Sewer	In a right of way southeast of the intersection of San Fernando Road and Via Princessa	18"	4.3	0.4	2008
Soledad Canyon Relief Trunk Sewer	In Soledad Canyon Road between Hope Way and Goldenrod Drive	24"	14.1	6.7	2008
Soledad Canyon Trunk Sewer, Sections 1, 2, 3, & 4	In Soledad Canyon Road between Hope Way and Goldenrod Drive	18"	3.7	2.0	2008

Recycled Paper

3. The District operates two water reclamation plants (WRPs), the Saugus WRP and the Valencia WRP, which provide wastewater treatment in the Santa Clarita Valley. These facilities are interconnected to form a regional treatment system known as the Santa Clarita Valley Joint Sewerage System (SCVJSS). The SCVJSS has a design capacity of 28.1 mgd and currently processes an average flow of 20.5 mgd.

4. The expected average wastewater flow from the project site is 66,800 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2.

5. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Will Serve Program, Obtain Will Serve Letter, and click on the appropriate link on page 2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

c: T. Molina
D. Kitt
M. Tremblay

Doc #: 1468995.1

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169
(661) 255-1121

Leroy D. Baca, Sheriff

FEB 24 2010

March 1, 2010

Ms. Christina Tran
Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Dear Ms. Tran:

NOTICE OF PREPARATION
DISNEY / ABC STUDIOS AT THE RANCH
TENTATIVE TRACT NO. TR071216

The proposed Disney / ABC Studios project located at 19802 Placerita Canyon Road, consisting of film and production facilities on 56 acres, is located in the unincorporated area of Los Angeles County. The area is serviced by the Los Angeles County Sheriff's Department, Santa Clarita Valley Station, 23740 Magic Mountain Parkway, Valencia 91355. The proposed project site is located at the northeast corner of the Antelope Valley Freeway and Placerita Canyon Road, approximately 5-6 miles from the Santa Clarita Valley Station.

It is anticipated that the non-emergent response time to a request for service would be approximately 45-60 minutes. The priority response time would be approximately 10-15 minutes and the response time under emergent circumstances would be approximately 4-8 minutes. All response times are approximations, and would be dependent on both the deployment of area radio cars, and traffic conditions.

At present, all law enforcement services with the exception of traffic services (traffic enforcement and traffic accident investigation are handled by the California Highway Patrol) are handled by the Los Angeles County Sheriff's Department.

This station serves an area of 656 square miles, which is made up of the City of Santa Clarita and unincorporated county between the Los Angeles City Limits to the south, the Kern County Line to the north and involving all area between the Ventura County Line to the west and the township of Agua Dulce to the east. The population served by our station is approximately 250,000 residents.

Since this project is a non-residential project, it is difficult for us to anticipate the numbers of personnel on the project site at any given time and therefore we would not anticipate an increase in our station compliment.

It is suggested, for crime prevention purposes and for the security and safety of the working personnel on site, the following measures should be implemented during site and building layout design:

- Proper lighting in open areas and parking lots;
- Provide sufficient street lighting for the project streets;
- Provide Knox Box entry key system for fire department along with law enforcement, if gated entries are planned in the project area;
- Ensure that the required building address numbers be lighted and readily apparent from the street for emergency response agencies.

Should you have further questions, please feel free to call me at (661) 255-1121 estension 5101, or Deputy Patrick Rissler at extension 5159.

Sincerely,

LEROY D. BACA, SHERIFF

Jacques A. La Berge, Captain
Santa Clarita Valley Station

JAL:par

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

January 26, 2010

JAN 28 2010

Ms. Christina Tran
LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING
320 W. Temple Street
Los Angeles, CA 90012

Re: SCH#2010011010 CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **Disney/ABC Sudios (TR071216/RCUPT200900126/RZCT200900012/RPAT200900010/ROAKT200900041/RENVT200900112)**; located in the San Gabriel Mountains between the Santa Clarita Valley and the Angeles National Forest; Los Angeles County, California

Dear Ms Tran:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 for the protection and preservation of California's Native American Cultural Resources.. (Also see *Environmental Protection Information Center v. Johnson (1985) 170 Cal App. 3rd 604)* The California Environmental Quality Act (CEQA - CA Public Resources Code §21000-21177, amended in 2009) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following.

The Native American Heritage Commission did perform a Sacred Lands File (SLF) search in the NAHC SLF Inventory, established by the Legislature pursuant to Public Resources Code §5097.94(a) and Native American Cultural resources **were not identified** within one-half mile of the APE – City Boundaries. However, there are Native American cultural resources in close proximity to the Hesperia City Limits.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. A Native American Tribe or Tribal Elder may be the only source of information about a cultural resource.. Also, the NAHC recommends that a Native American Monitor or Native American culturally knowledgeable person be employed whenever a professional archaeologist is employed during the 'Initial Study' and in other phases of the environmental planning processes.. Furthermore we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation (OHP) Coordinator's office (at (916) 653-7278, for referral to the nearest OHP Information Center of which there are 11..

Consultation with tribes and interested Native American tribes and individuals, as consulting parties, on the NAHC list ,should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f]*et se),*

36 CFR Part 800.3, the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) and NAGPRA (25 U.S.C. 3001-3013), as appropriate. .

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

The authority for the SLF record search of the NAHC Sacred Lands Inventory, established by the California Legislature, is California Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10). The results of the SLF search are confidential. However, Native Americans on the attached contact list are not prohibited from and may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

Again, Lead agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

Native American Contacts
Los Angeles County
January 26, 2010

Charles Cooke
32835 Santiago Road
Acton , CA 93510

(661) 733-1812 - cell
suscol@intox.net

Chumash
Fernandeno
Tataviam
Kitanemuk

Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez
981 N. Virginia
Covina , CA 91722
(626) 339-6785

Yowlumne
Kitanemuk

Beverly Salazar Folkes
1931 Shadybrook Drive
Thousand Oaks, CA 91362

805 492-7255
(805) 558-1154 - cell
folkes9@msn.com

Chumash
Tataviam
Ferrnandeño

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838
Newhall , CA 91322
tsen2u@live.com
(661) 753-9833 Office
(760) 885-0955 Cell
(760) 949-1604 Fax

Fernandeño
Tataviam
Serrano
Vanyume
Kitanemuk

Fernandeno Tataviam Band of Mission Indians
William Gonzales, Cultural/Environ Depart
601 South Brand Boulevard, Suite 102
San Fernando CA 91340
rortega@tataviam-nsn.us
(818) 837-0794 Office
(818) 581-9293 Cell
(818) 837-0796 Fax

Fernandeno
Tataviam

Randy Guzman - Folkes
655 Los Angeles Avenue, Unit E
Moorpark , CA 93021
ndnRandy@gmail.com
(805) 905-1675 - cell

Chumash
Fernandeño
Tataviam
Shoshone Paiute
Yaqui

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm.
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive
Highland , CA 92346
abrierty@sanmanuel-nsn.
(909) 864-8933 EXT-3250
(909) 649-1585 - cell
(909) 862-5152 Fax

Serrano

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code. Also, federal National Environmental Policy Act (NEPA), National Historic Preservation Act, Section 106, and federal NAGPRA.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2010011010; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the Disney/ABC Studios (TR071216; RENVT200900112; located in the San Gbriel Mountains, between the Angeles National Forest and the Santa Clarita Valley; Los Angeles County, California.

NCWD

NEWHALL COUNTY WATER DISTRICT
23780 North Pine Street • P.O. Box 220970 • Santa Clarita, CA 91322-0970
(661) 259-3610 Phone • (661) 259-9673 Fax • email: mail@ncwd.org

Directors: B. J. ATKINS, *President* MARIA GUTZEIT, *Vice President* KATHY COLLEY DANIEL MORTENSEN LYNNE A. PLAMBECK

January 19, 2010

JAN 21 2010

Christina Tran
Los Angeles County
Department of Regional Planning
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, CA 90012

RE: Notice of Preparation for the *"Disney ABC Studios at the Ranch"*
Tract Map No. TR071216

Dear Ms. Tran:

Thank you for the opportunity to prepare comments for consideration in the preparation of the Environmental Impact Report (EIR) for the *"Disney ABC Studios at the Ranch"* Project. Newhall County Water District (NCWD) has reviewed the Notice of Preparation (NOP) and is submitting the following comments for consideration.

NCWD is looking forward to working with the project applicant to bring the project to fruition. The project site lies within the NCWD service jurisdiction. The EIR should include a discussion of the infrastructure requirements necessary for NCWD to serve the project. Improvements may include but are not limited to pipeline extensions, pump station construction, and reservoir construction.

NCWD is very supportive of the project's intent to incorporate green design features. Specifically, plans to enhance Placerita Creek, use of planted areas plus bio-swales to minimize stormwater runoff, and use of native and drought-tolerant landscaping to minimize water usage. Incorporating these types of design features will help ensure Disney, NCWD and the State achieve the water efficiency goal of reducing demand 20% by the year 2020.

The District appreciates your consideration of these comments. If further clarification or discussion is needed please contact Steve Cole, NCWD's General Manager, at (661) 259-3610.

Very truly yours,

NEWHALL COUNTY WATER DISTRICT

For

B.J. Atkins
Board President

Cc: Daniel McBrearty

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

FEB - 1 2010

January 12, 2010

Ms. Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis
320 West Temple Street, Room 1348
Los Angeles, CA 90012

Dear Ms. Tran:

Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) for the Disney/ABC Studios (TR071216 / RCUPT200900126 / RZCT200900012 / RPAT200900010 / ROAKT200900041 / RENVT200900112)

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft environmental impact report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files. Electronic files include spreadsheets, database files, input files, output files, etc., and does not mean Adobe PDF files. Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2007 Model. This model is available on the SCAQMD Website at: www.urbemis.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on siting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Daniel Garcia, Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Susan Nakamura

Susan Nakamura
Planning Manager
Planning, Rule Development and Area Sources

SN:DG:AK
LAC100107-01AK
Control Number

SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL Company

February 4, 2010

Ms. Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis Section
320 West Temple Street, Rm 1348
Los Angeles, CA 90012

RE: Notice of Preparation (NOP) for Disney- ABC Studios at the Ranch

Dear Ms. Tran:

Southern California Edison (SCE) appreciates the opportunity to review and provide comment on the NOP for the Disney-ABC Studios at the Ranch project. The project is described as a proposal to develop state-of-the art studio uses and associated film and television production facilities on the westernmost portion of the Ranch. The project would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building and a 220 foot long bridge over Placerita Creek. The project also includes a central utility plant and an electrical substation. The project is located at 19802 Placerita Canyon Road in the unincorporated community of Santa Clarita Valley, in Los Angeles County.

SCE's comment letter addresses new electric facilities necessary to serve the proposed project and the California Public Utilities Commission (CPUC) California Environmental Quality Act (CEQA) requirements for new or relocated electrical facilities over 50kV.

SCE Facilities Necessary to Support the Proposed Project

The SCE Method of Service (MOS) Study for the proposed project indicated the projected demand load is 21 MW on the 66 kV system, with a projected total connected load of 30 MW. The project will require either a one line 66 kV tap service or a two line 66 kV looped service. Both line arrangements will include a new 66/16 kV customer-dedicated- substation that will be owned and maintained by SCE. The new 66 kV substation is tentatively referred to as the Golden Oak Substation and is projected to be located adjacent to Highway 14 approximately 1/3 mile northeast of the intersection of Highway 14 and Placerita Canyon Road, in the City of Newhall.

CPUC CEQA Requirements

When development plans result in the need to build new or relocate existing SCE electrical facilities that operate at or above 50 kV, the SCE construction may have environmental consequences subject to CEQA review as required by the CPUC. If those environmental consequences are identified and addressed by the local agency in the CEQA process for the larger project, SCE may not be required to pursue a later, separate, mandatory CEQA review through the CPUC's General Order 131-D (GO 131-D) Permit to Construction (PTC) application process. If the SCE facilities are not adequately addressed in the CEQA review for the larger project, and the new facilities could result in significant environmental impacts, the required additional CEQA review at the CPUC could delay approval of the SCE power line portion of the project for two years or longer.

The subtransmission facilities necessary to support the Disney-ABC Studios at the Ranch project requires electric facilities over 50 kV and, therefore, would be subject to CPUC CEQA requirements. We recommend project descriptions for these facilities be included in the Draft Environmental Impact Report (DEIR) for this project, and the details and impacts associated with these facilities be included within the scope of the environmental review for the larger project pursuant to CEQA. By doing so, and if there are no significant unavoidable impacts associated with the SCE project elements, SCE may be eligible to construct the necessary facilities exempt from CPUC PTC requirements, avoiding substantial delays to the overall project.

SCE will work closely with the project applicant to provide detailed project work descriptions for the required SCE electric facilities for inclusion in the DEIR Project Description. Please ensure SCE is on the list of interested parties to be notified throughout the CEQA process for this project.

Once again, SCE appreciates the opportunity to review and respond to the NOP for this project. If you have any questions regarding this letter, please do not hesitate to contact me at (626) 302-1942.

Sincerely,

Ben Wong
Local Public Affairs Region Director
Southern California Edison Company

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

January 6, 2010

To: Reviewing Agencies

Re: Disney/ABC Studios (TR071216 / RCUPT200900126 / RZCT200900012 / RPAT200900010 / ROAKT200900041 / RENVT200900112)
SCH# 2010011010

Attached for your review and comment is the Notice of Preparation (NOP) for the Disney/ABC Studios (TR071216 / RCUPT200900126 / RZCT200900012 / RPAT200900010 / ROAKT200900041 / RENVT200900112) draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Christina Tran
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

for Scott Morgan
Assistant Deputy Director & Senior Planner, State Clearinghouse

RECEIVED
JAN 11 2010

Attachments
cc: Lead Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2010011010
Project Title Disney/ABC Studios (TR071216 / RCUPT200900126 / RZCT200900012 / RPAT200900010 / ROAKT200900041 / RENVT200900112)
Lead Agency Los Angeles County

Type NOP Notice of Preparation

Description Disney / ABC Studios at The Ranch would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a 220-foot long bridge over Placerita Creek, drainage devices, associated onsite parking, and two surplus parking lots on 11.72 acres (of which 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right of way) within the proposed development area of approximately 56 acres of the 890-acre Golden Oak Ranch.

Lead Agency Contact

Name Christina Tran
Agency Los Angeles County Department of Regional Planning
Phone (213) 974-6461 **Fax**
email
Address 320 West Temple Street
City Los Angeles **State** CA **Zip** 90012

Project Location

County Los Angeles
City Santa Clarita
Region
Cross Streets State Route 14 & Placerita Canyon Road
Lat / Long
Parcel No. numerous
Township **Range** **Section** **Base**

Proximity to:

Highways SR-14
Airports
Railways
Waterways Placerita Creek, Heil Creek
Schools
Land Use Outdoor filming ranch with some agricultural and oil production uses / A-2-1 and A-2-2 / Rural, Non-urban

---

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

---

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; Caltrans, District 7; Public Utilities Commission; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

NOP Distribution List

County: Los Angeles

SCH#

Resources Agency

- ■ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  Mike Sotelo
- ☐ **California Coastal Commission**
  Elizabeth A. Fuchs
- ☐ **Colorado River Board**
  Gerald R. Zimmerman
- ☒ **Dept. of Conservation**
  Rebecca Salazar
- ☐ **California Energy Commission**
  Eric Knight
- ☐ **Cal Fire**
  Allen Robertson
- ☒ **Office of Historic Preservation**
  Wayne Donaldson
- ■ **Dept of Parks & Recreation**
  Environmental Stewardship Section
- ☐ **Central Valley Flood Protection Board**
  James Herota
- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- ☒ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- ☐ _____
  Conservancy

ish and Game

- ☐ **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Game Region 1**
  Donald Koch
- ☐ **Fish & Game Region 1E**
  Laurie Harnsberger
- ☐ **Fish & Game Region 2**
  Jeff Drongesen
- ☐ **Fish & Game Region 3**
  Charles Armor
- ☐ **Fish & Game Region 4**
  Julie Vance
- ☒ **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- ☐ **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- ☐ **Fish & Game Region 6 I/M**
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- ☐ **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- ☐ **Depart. of General Services**
  Public School Construction
- ☐ **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- ☐ **Dept. of Public Health**
  Bridgette Binning
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Linda Flack
- ☐ **Office of Emergency Services**
  Dennis Castrillo
- ☐ **Governor's Office of Planning & Research**
  State Clearinghouse
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☒ **Public Utilities Commission**
  Leo Wong
- ☐ **Santa Monica Bay Restoration**
  Guangyu Wang
- ☐ **State Lands Commission**
  Marina Brand
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- ☐ **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- ☐ **Caltrans - Planning**
  Terri Pencovic
- ☐ **California Highway Patrol**
  Scott Loetscher
  Office of Special Projects
- ☐ **Housing & Community Development**
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Bruce de Terra
- ☐ **Caltrans, District 4**
  Lisa Carboni
- ☐ **Caltrans, District 5**
  David Murray
- ☐ **Caltrans, District 6**
  Michael Navarro
- ☒ **Caltrans, District 7**
  Elmer Alvarez
- ☐ **Caltrans, District 8**
  Dan Kopulsky
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Jacob Armstrong
- ☐ **Caltrans, District 12**
  Chris Herre

Cal EPA

Air Resources Board

- ☐ Airport Projects
  Jim Lerner
  - ☐ Transportation Projects
    Douglas Ito
  - ☐ Industrial Projects
    Mike Tollstrup
- ☐ **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- ☐ **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- ☒ **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ☐ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☒ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ☐ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
  - ☐ **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

☐ **Other** _____

Last Updated on 01/04/2010

SEIU
Stronger Together
Local 1877
SOULA 2006
Local 24/7
Local 2007

Southern California Headquarters
828 W. Washington Blvd.
Los Angeles, CA 90015
PHONE (213) 284-7705
FAX (213) 284-7725

Orange County Office
1516 N. Sycamore St.
Santa Ana, CA 92701
(714) 245 9700
Fax (714) 245 9710

San Diego Office
4265 Fairmount Ave.
Suite 260
San Diego, CA 92105
(619) 641-3050
Fax (619) 641-3055

Northern California Headquarters
3411 East 12th Street
Oakland, CA 94601-3425
PHONE (800) 772-3326
FAX (510) 261-2039

San Jose Office
1010 Ruff Drive
San Jose, CA 95110
(408)280-7770
Fax (408) 280-7804

Sacramento Office
1401 21st Street, Suite 310
Sacramento, CA 95814
(916) 498-9505
Fax (916) 497-0806

San Francisco Office
45 Polk Street, 2nd Floor
San Francisco, CA 94102
(415) 552-1301
Fax(415) 552-1307

Christina Tran
County of Los Angeles Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, CA 90012-3225
Fax: (213) 626-0434
ctran@planning.lacounty.gov

re: Disney/ABC Studios at the Ranch

January 21, 2010

Dear Ms. Tran,

I am here on behalf of SEIU United Service Workers West. We're currently organizing security officers at Disney who work for Andrews International, a security contractor with a long track record of legal violations, including wage theft complaints and allegations of sexual harassment and racial discrimination.

SEIU engages in a broad range of policy issues affecting the communities where our members live and work. Upon review of the application for Disney/ABC Studios at the Ranch, SEIU has identified concerns that may greatly affect hard-working families in LA County and especially those who will work on this property. As such, SEIU will be closely monitoring this project to ensure regulatory and legal compliance.

We urge you to do a full environmental review, addressing the following specific concerns in the Environmental Impact Report for the Disney/ABC Studios at the Ranch development.

Land Grading:
As mentioned in the development application, the development application proposes the grading of 700,000 cubic yards. According to the environmental protection agency, some limitations of land grading may disrupt natural storm water patterns. This can result in poor drainage, high-runoff velocities, and increased peak flows during storm events. Also, grading a site without vegetated buffers contributes to offsite transport of sediments and other pollutants. It is imperative that the grading plan include erosion and sediment control and storm water management goals.

Liquefaction:
Also stated in the development application, the Ranch on which the proposed development is located is within a landslide and liquefaction

area, as laid out on the LA County General Plan. Our primary concern is that typical effects of liquefaction may include loss of bearing strength, causing ground to lose the ability to support structures, or lateral spreading, causing ground to slide down even gentle slopes.

The above concerns have the potential to affect the well-being of the more than 6,000 individuals estimated by the applicant to work at this site, both during construction and as permanent full and part-time employees. A possible natural disaster has the potential to devastate the community of Santa Clarita if these concerns are not properly addressed, affecting the lives of working families across LA County. SEIU urges these concerns be taken into consideration in the EIR in order to ensure the safest possible structures on a potentially hazardous site. Because of the severe human and public costs of natural disasters, a thorough review would be the best course of action for Los Angeles County.

Thank you for your consideration.

Sincerely,

Brenda Yancor

Brenda Yancor
Researcher
SEIU United Service Workers West

SANTA MONICA MOUNTAINS CONSERVANCY
RAMIREZ CANYON PARK
5750 RAMIREZ CANYON ROAD
MALIBU, CALIFORNIA 90265
PHONE (310) 589-3200
FAX (310) 589-3207

January 25, 2010

Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012

Disney/ABC Studios at the Ranch NOP Comments
19802 Placerita Canyon Road, Newhall
Tract Map No. TR071216

Dear Ms. Tran:

The proposed project to construct a large studio and production facility at the Golden Oak Ranch in Placerita Canyon would be by far the most intensive land use in the vicinity. With the exception of the subject property, Placerita Canyon is mostly protected public parkland. Portions of the subject property east of the proposed development area are private in-holdings within the Angeles National Forest. The Santa Clarita Valley Area Plan designates all of the property as open space, hillside management, non-urban, or floodway/flood plain. The proposed urban use of the 56-acre development area would change the character of the canyon and permanently impact how the public accesses its parkland.

The use of the Ranch for filming has occurred for at least 50 years. The applicant has found an economically viable use of the land that leaves much of the natural areas on the property undisturbed. In addition, the applicant has shown good stewardship by planting a large number of coast live oaks throughout the property. Unfortunately, many of these oaks, including 18 heritage oak trees would be removed by the proposed project. However, the applicant has proposed to mitigate this impact at ratios far superior to the County's minimum replacement standard.

The Conservancy remains concerned about the proposed project's impact on Placerita Creek. Despite the fact that the initial impact of fill placement in the flood plain was done by Caltrans, by building on top of the pads, the applicant proposes to make the impacts permanent. The applicant proposes to alter the slope and stabilize the grading in its present location with native plants. While the proposed restoration is certainly an

improvement over the status quo, the Environmental Impact Report (EIR) should include an alternative restoring a wider flood plain between the two building pads. This environmentally superior alternative would set buildings and parking areas back from the creek according to the minimum buffer recommended by the California Department of Fish and Game. This would improve wildlife access to the creek and provide more space for the future construction of the proposed Placerita Creek Trail.

As identified in the Notice of Preparation (NOP), the proposed project would be visible from hiking trails on adjacent public parkland. The EIR should assess these visual impacts and evaluate whether the proposed vegetative screening is adequate.

The proposed structures would require perimeter brush clearance per County fire regulations. The EIR should assess the impact of clearance on presently undisturbed native plants and propose appropriate mitigation.

The proposed project includes many green features such as drainage swales, bio-remediation of storm water, drought-tolerant and native landscaping, and potentially solar panels. These features should become standard for development in the region. However, the project also proposes to extend municipal utilities over a mile in all directions. In the fast-growing Santa Clarita Valley, the growth-inducing impact of these utility extensions may nullify any benefit from the environmentally-friendly aspects of the proposed project. The only way to mitigate for such impacts is to place a conservation easement over the remainder of the property protecting Placerita Canyon in perpetuity. Such an easement would allow all activities currently permitted under Conditional Use Permit No. 04–089-(5) including, but not limited to, light agriculture, oil production, and construction of temporary structures for filming. All project alternatives considered by the EIR should include such an easement. The applicant and the Conservancy share an interest in protecting the canyon's visual resources.

The proposed Zone Change and Local Plan Amendment are discretionary actions by the County. The applicant proposes an intensive, urban land use in a currently undeveloped portion of the Santa Clarita Valley. Although the applicant has proposed a project with many environmental benefits, future responsible decisions by future owners cannot be guaranteed. Therefore the long-term public interest in preserving Placerita Canyon must be protected by a conservation easement on all areas not presently proposed for development.

Please address any future documents to the attention of Paul Edelman at the letterhead address and questions to him at (310) 589-3200 ext. 128.

Sincerely,

RONALD P. SCHAFER
Chairperson

U. S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

(805) 644-1766 Telephone **(805) 644-3958 Facsimile**

Date: February 8, 2010

To: Los Angeles Co. Dept. of Regional Planning

Attn: Christina Tran, Impact Analysis Section

From: ***Kim Craig – Office Assistant***
805) 644-1766, ext. 310

Fax Number: ***(213) 626-0434***

Pages: 6 ***(including cover sheet)***

Please find attached requested material. If you have any further questions regarding this matter, please feel free to contact me at the above listed extension.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2010-CPA-0050

February 8, 2010

Christina Tran
Impact Analysis Section
County of Los Angeles Regional Planning Department
320 West Temple Street, Room 1348
Los Angeles, California 90012

Subject: Notice of Preparation of an Environmental Impact Report for the Disney ABC Studios at the Ranch, Los Angeles County, California

Dear Ms. Tran:

We are responding to your request, dated January 5, 2010, and received in our office on January 19, 2010, for comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Disney ABC Studios at the Ranch (project). The delay in our receipt of your request is because it was originally sent to the Carlsbad Fish and Wildlife Office. However, the site is within the area of responsibility of the Ventura Fish and Wildlife Office. For future reference, please check our website at http://ventura.fws.gov for a map showing the limits of this office's responsibility. The project is located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County, California.

The proposed development area is comprised of approximately 56 acres of the westernmost portion of the Golden Oak Ranch (Ranch) property. The proposed project would provide for the development of studio uses and associated film and television production facilities on the westernmost portion of the ranch with up to 12 soundstages, production offices, six mills, a warehouse, writer/producers bungalows, a commissary, administration building, utility plant, electrical substation, bridge over Placerita Creek, drainage devices, and parking lots on approximately 56 acres of the 890-acre Ranch. The development area is located on two large, mostly barren fill pads, non-native grassland communities, non-native and ruderal plant communities, ornamental plantings, pockets of coast live oaks (*Quercus agrifolia*), and a small riparian woodland community along Placerita Creek.

The U.S. Fish and Wildlife Service's (Service) responsibilities include administering the Endangered Species Act of 1973, as amended (Act), including sections 7, 9, and 10. Section 9 of the Act and its implementing regulations prohibits the taking of any federally listed endangered or threatened species. Section 3(18) of the Act defines take to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

TAKE PRIDE IN AMERICA

Service regulations (50 CFR 17.3) define harm to include significant habitat modification or degradation which actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harassment is defined by the Service as an intentional or negligent action that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. The Act provides for civil and criminal penalties for the unlawful taking of listed species.

Exemptions to the prohibitions against take may be obtained through coordination with the Service in two ways. If the subject project is to be funded, authorized, or carried out by a Federal agency and may affect a listed species, the Federal agency must consult with the Service, pursuant to section 7(a)(2) of the Act. If a proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act. Once you have determined if the proposed project will have a lead Federal agency, we can provide you with more detailed information regarding the section 7 or 10(a)(1)(B) permitting process.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Based on the information presented in the NOP, we are unable to determine if the proposed project would substantially affect federally listed or candidate species that could occur on the project site. We recommend evaluating in the EIR whether the proposed project would impact the federally endangered least Bell's vireo (*Vireo bellii pusillus*), the threatened coastal California gnatcatcher (*Polioptila californica californica*) and its designated critical habitat, the slender-horned spineflower (*Dodecahema leptoceras*), the federal candidate San Fernando Valley spineflower (*Chorizanthe parryi* spp. *fernandina*), and migratory birds. To assist us in adequately evaluating the proposed project from the standpoint of fish and wildlife protection, we offer the following additional comments and recommendations:

Federally listed species:

1. We recommend that a botanical survey of the proposed project site be conducted in spring when both annual and perennial plant species are detectable. This survey should include focused searches for the slender-horned spineflower and the San Fernando Valley spineflower. We are enclosing a copy of the Service's guidelines for conducting and reporting botanical inventories for federally listed, proposed, and candidate plants.

2. Our records indicate that coastal California gnatcatchers have been observed in the vicinity of the project, and we understand that suitable habitat, coastal sage scrub, occurs on the

project site as described on page 17 of the Initial Study included with the NOP. To evaluate the likelihood that this species may be impacted, the EIR should specify if coastal sage scrub vegetation would be affected directly or indirectly by the proposed project. In addition, surveys according to Service protocol should be conducted for the coastal California gnatcatcher within suitable habitat.

3. Based on the information presented in the NOP, we are unable to determine if the proposed project would occur within unit 13 of designated critical habitat for the coastal California gnatcatcher (72 Federal Register 72010). To evaluate the likelihood that critical habitat may be affected, the EIR should identify if the project site occurs within this unit, and if so, specify if the critical habitat would be affected directly or indirectly by the proposed project.

4. According to the NOP, Placerita Creek crosses through the project site, and a bridge would be constructed over the creek. The least Bell's vireo is an obligate riparian breeding bird known to inhabit oak woodland, cottonwood-willow forest, and mulefat scrub plant communities. To evaluate the likelihood that this species may be impacted, the EIR should identify if riparian vegetation suitable for the least Bell's vireo occurs onsite and specify if it would be affected directly or indirectly by the proposed project. In addition, we recommend conducting surveys according to Service protocol for the least Bell's vireo if suitable habitat does occur onsite.

Potential impacts:

1. Constructing a bridge over Placerita Creek or other activities associated with the project may fall within the U.S. Army Corp's of Engineer's (Corps) jurisdiction. We recommend that you work with the Corps to determine if consultation pursuant to section 7 of the Act for potential adverse effects to listed species is warranted. As noted above, if the proposed project does not involve a Federal agency but may result in the take of a listed animal species, the project proponent should apply for an incidental take permit, pursuant to section 10(a)(1)(B) of the Act.

2. Some plant communities surrounding the proposed project may have a high fire potential, and the Los Angeles County Fire Department (LACFD) may require vegetation removal in proximity to the development. Per the LACFD's rules, this fuel management zone could extend at least 100 feet into natural vegetation beyond the development footprint. For every 435.6 feet of interface between the development and natural vegetation, a 100-foot wide fuel clearance would remove 1 acre of habitat. Depending upon the length of the interface between the proposed project and the habitat and the width of the fuel clearance required by the LACFD, additional acres of coastal sage scrub could be removed, potentially decreasing the available habitat for the coastal California gnatcatcher and federally listed plants.

3. We have concerns that the proposed project may impact riparian and coastal sage scrub habitat for the least Bell's vireo and coastal California gnatcatcher by construction related noise, dust, lighting, and activity, in addition to increased use of the area as a result of the

development of the studios. For example, lighting of facilities, roads, or parking lots, and their subsequent use may adversely impact the quality of the surrounding habitat for the least Bell's vireo and coastal California gnatcatcher. We recommend the applicant implement measures to reduce the indirect effects of the project, including shielding outdoor light fixtures from coastal sage scrub and riparian vegetation, and implementing dust control and noise best management practices (BMP) during construction.

4. Development of the project area could result in the introduction of non-native predators, specifically cats (*Felis domesticus*). Cats are known to have a great impact on native animals, especially birds. The presence of cats extends the negative effects of the development well into adjacent habitat and could eliminate any nesting attempts by least Bell's vireos and coastal California gnatcatchers in the future, even if the habitat adjacent to the proposed project remains undeveloped. Domestic cats and other pets could be introduced to the project area by workers during construction, or by future residents of the bungalows or other residential facilities. We recommend that the applicant prohibit construction workers, residents, and visitors to the Ranch from bringing domestic pets onsite.

5. Trash left during or after project activities could attract predators to work sites, which could, in turn, prey on least Bell's vireos and coastal California gnatcatchers. For example, raccoons (*Procyon lotor*) are attracted to trash and also prey opportunistically on listed species. We recommend that the applicant implement BMPs to remove trash from construction sites and to install predator resistant trash receptacles for future use of the studios.

6. Development of the bungalows or other residential facilities may result in the control of native predators, such as coyotes (*Canis latrans*). Coyotes are known to suppress the population of smaller predators, such as cats, grey foxes (*Urocyon cinereoargenteus*), and opossums (*Didelphis virginianus*) that prey upon nesting birds. In the absence of coyotes, populations of these smaller predators may increase, and native birds that nest in coastal sage scrub or the riparian corridor, including the least Bell's vireo and coastal California gnatcatcher, may decline or be eliminated.

7. Development of the site may introduce a suite of other indirect effects. These include introduction of non-native plants and potential contamination by pesticides. Suitable habitat in adjacent areas could be accessed by off-road vehicles via the project site during and after project development. Off-road vehicle and other recreational activities could physically destroy otherwise suitable habitat by creating new trails through vegetation. The combined impact of these effects will be to reduce the suitability of the habitat for coastal California gnatcatchers, least Bell's vireos, and federally listed plants should they be in the surrounding area. We recommend the applicant implement measures to discourage new trails through existing vegetation, using native plants for landscaping and habitat restoration, and refraining from using pesticides which could affect suitable habitat for federally listed species.

Based on our conservation responsibilities and management authority for migratory birds under the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 *et seq.*), we are concerned about potential impacts the proposed project may have on migratory birds in the area. Under the MBTA, nests (nests with eggs or young) of migratory birds may not be harmed, nor may migratory birds be killed. Such destruction may be in violation of the MBTA. Therefore, we recommend a qualified biologist survey the area for nests prior to land clearing. If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active.

Lastly, we recommend that you review information in the California Department of Fish and Game's Natural Diversity Data Base. You can contact the California Department of Fish and Game at (916) 324-3812 for information on other sensitive species that may occur in this area.

We appreciate the opportunity to provide comments on the proposed project and look forward to working with you and the applicants in the future to ensure compliance with the Act. If you have any questions, please contact Colleen Mehlberg of our staff at (805) 644-1766, extension 221.

Sincerely,

Chris Dellith
Senior Biologist

To: Christina Tran
County of Los Angeles Department of Regional Planning

From: Yvonne Berlijn

Re: Project at Disney Golden Oak Ranch

As a neighbor to the Golden Oak Ranch of Disney, I would like the project to consider a bike path on Placerita Canyon Road. I would like to propose that a bike path be considered from Sierra Highway all the way to the Placerita Nature Center. More traffic will be present at the Disney/ABC Studios entrance and at the gate for parking at the Studios, therefore a well designed bike path would help the bikers. The bikers could enjoy such improvement from Sierra Highway to the Nature Center. This proposal would surely help the much needed safety for the bikers on Placerita Canyon Road. Lets keep it safe on Placerita Canyon Road as Golden Oak Ranch embarks in adding the project of Disney/ABC Studios to the Ranch.

Please contact me if you have any questions.
661-291-2472

JAN 11 2010

Los Angeles County
Department of Regional Planning

Planning for the Challenges Ahead

Jon Sanabria, AICP
Acting Director of Planning

Notice of Preparation and Scoping Meeting Notification

Project: DISNEY / ABC STUDIOS AT THE RANCH: Tentative Tract Map No. TR071216, Zone Change No. RZCT200900012, Plan Amendment No. RPAT200900010, Conditional Use Permit No. RCUPT200900126, Oak Tree Permit No. ROAKT200900041, Environmental Review No. RENVT200900112

Applicant: Golden Oak Ranch Properties

Notice is hereby given pursuant to California Public Resources Code Section 21083.9. The Los Angeles County Regional Planning Department has conducted an Initial Study for the subject project and has determined that an Environmental Impact Report (EIR) is necessary. Los Angeles County will be the Lead Agency for the project and will be responsible for the EIR preparation. In order for the concerns of responsible and trustee agencies, adjacent jurisdictions, other public agencies, groups and individuals to be incorporated into the Draft EIR, we need to know their views, concerns and recommendations regarding the scope and content of the environmental information relevant to the proposed project. Responsible and trustee agencies must consider the EIR prepared by Los Angeles County when considering a subsequent permit or approval for the project.

The proposed project is an application for: 1) Vesting Tentative Tract Map No. TR071216 to create 18 lots located on 44.28 acres of the Development Area, 2) Local Plan Amendment to change the land use designation in the Santa Clarita Valley Area Plan for the 44.28-acre area covered by the proposed Vesting Tentative Tract Map from HM (Hillside Management) to C (Regional Commercial) for approximately 20 acres and from W (Floodway/Flood Plain) to C (Regional Commercial) for approximately 24.28 acres. The remaining portion of the 56-acre Development Area, most of which is owned by the City of Los Angeles Department of Water and Power, would remain designated as HM (Hillside Management) and W (Floodway/Flood Plain), 3) Zone Change to change the zone from A-2-1 (Heavy Agriculture – one acre minimum area) to C-M-DP (Commercial Manufacturing, Development Program) on the 44.28-acre area covered by the proposed Vesting Tentative Tract Map. The remaining portion of the 56-acre Development Area, most of which is owned by the City of Los Angeles Department of Water and Power, would remain zoned A-2-1, 4) Conditional Use Permit to authorize 700,000 cubic yards of grading including 500,000 cubic yards of export and 200,000 cubic yards of onsite fill; allow the proposed development within a Development Program zone; and allow the continued operation and maintenance of the existing outdoor filming/movie ranch uses with some agricultural uses on 195 acres with the remaining 639 acres of the property to be used primarily as filming backdrop with some agricultural and oil production uses, and 5) Oak Tree Permit remove of 174 and encroach upon 8 oak trees within the Development Area.

The project site is located at 19802 Placerita Canyon Road in the unincorporated Santa Clarita Valley area of Los Angeles County. The Ranch is bordered to the west and north by State Route 14 (SR-14). In addition, Placerita Canyon Road, a secondary highway, runs through the southern portion of the Ranch in an east-west direction.

Golden Oak Ranch is a working filming ranch used in the production of motion pictures, television programming, commercials and photographic images as well as related ancillary uses and activities. The Ranch's other uses include agriculture and oil production. Existing buildings within the Ranch include the Ranch manager's house, the Ranch foreman's mobile home, a guest house, an uninhabited structure, a Ranch office, various barns, stables and sheds. There are also several temporary filming sets on the Ranch. The uninhabited structure and the Ranch foreman's mobile home are currently located within the proposed Development Area.

Surrounding uses include new development within the recently approved 1,259-acre Golden Valley Ranch planned community within the City of Santa Clarita that is under construction to the north of the Ranch (separated from uses within the Ranch by steep ridgelines; residential subdivisions further to the northwest of the Ranch and west of SR-14; the Angeles National Forest and State Park lands to the south; residential subdivisions further to the southwest in the City of Santa Clarita; undeveloped areas and a small residential subdivision that is also separated from uses within the Ranch by steep ridgelines to the east; and oil production wells and industrial uses to the west across SR-14 with The Master's College and residential subdivisions further to the west in the City of Santa Clarita.

Disney | ABC Studios at The Ranch (the Proposed Project) would provide for the development of state-of-the-art studio uses and associated film and television production facilities on the westernmost portion of the Ranch. Specifically, the proposed project would provide up to 12 soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary with associated amenities, an administration building, a central utility plant, an electrical substation, a 220-foot long bridge over Placerita Creek, drainage devices, associated onsite parking, and two surplus parking lots on 11.72 acres (of which approximately 10.04 acres are located within the City of Los Angeles Department of Water and Power transmission line right of way) within the proposed development area of approximately 56 acres of the 890-acre Golden Oak Ranch. These uses would comprise approximately 555,950 gross square feet of building area. The Proposed Project also includes an option to develop studio office uses in lieu of four soundstages and six mills within the northern portion of the Development Area. Buildout of the Proposed Project with the studio office uses option would result in a total of approximately 510,000 gross square feet of building area. The proposed project would also require the relocation of the foreman's mobile home from the Development Area to one of two tentative sites located east of the Development Area within the outdoor filming portion of the Ranch with a new septic system. In addition, offsite traffic and utilities improvements as well as vacation of the portion of Delden Road through the Development Area are also proposed as part of the project. The remaining areas of the Ranch would continue to operate as a working filming ranch as it has been since at least 1959. With implementation of the Proposed Project, approximately 195 acres of the Ranch would continue to be used for outdoor filming/movie ranch uses with some agricultural uses. In addition, approximately 639 acres of the Ranch would be used primarily as a filming backdrop with some agricultural and oil production uses.

Approximately 700,000 cubic yards of grading is proposed including 500,000 cubic yards of export and 200,000 cubic yards of onsite fill.

Operating hours for filming occurs 24 hours per day. Business operating hours for the Ranch office are typically between 6:00 A.M. and 6:00 P.M.

NOTICE OF PREPARATION

A Notice of Preparation (NOP) for the EIR is being distributed requesting written comments regarding the scope and content of environmental analyses to be included in the EIR. Copies of the

NOP are available for public review from **January 7, 2010 to February 8, 2010** on the Department of Regional Planning website http://planning.lacounty.gov/case as well as at the following libraries:

Canyon Country Jo Anne Darcy Library
18601 Soledad Canyon Road
Santa Clarita, CA 91351

Valencia Library
23743 W. Valencia Blvd.
Santa Clarita, CA 91355

Newhall Library
22704 W. 9th St.
Newhall, CA 91321

Castaic Library
27971 Sloan Canyon road
Castaic, CA 91384

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than **February 10, 2010** and can be sent to: Ms. Christina Tran, County of Los Angeles Department of Regional Planning, Impact Analysis Section, 320 West Temple Street, Los Angeles, CA 90012-3225; Telephone: (213) 974-6461; Fax (213) 626-0434; e-mail: ctran@planning.lacounty.gov . Written comments on the NOP will be accepted by the County through **February 10, 2010** at 6:00 p.m.

SCOPING MEETING

A scoping meeting will be held to solicit suggestions from the public as to the content of the EIR that is being prepared. This meeting will be held in **Hart Hall at the William S. Hart Regional Park, located at 24151 Newhall Avenue, Newhall, California 91321, on January 21, 2010 from 7:00 p.m. to 9:00 p.m.** Attendees will be able to provide both written and oral input regarding the scope of environmental analyses and alternatives to be incorporated into the EIR.

From: Cynthia Neal-Harris [harris7330@sbcglobal.net]
Sent: Wednesday, February 10, 2010 4:45 PM
To: Tran, Christina
Subject: Disney ABC Studios at the Ranch

February 9, 2010

Christina Tran
County of Los Angeles Regional Planning Department
Impact Analysis Section
320 West Temple Street, Room 1348
Los Angeles, California 90012
Email:ctran@planning.lacounty.gov

Project Title: Disney/ABC Studios At The Ranch
Track Map No. TR071216
Oak Tree Permit No. ROAKVT200900112

Dear Ms. Tran:

On December 18, 2009, the Santa Clarita Oak Conservancy met with Dan McBrearty, Tom Larson, and Steve Sligh
to discuss the 199 oak trees including 21 heritage oaks within the Development Area of the Proposed Project.
We discussed the "proposed required removal of 174 protected oak trees including 18 Heritage oak trees, and the encroachment of 8 more including one Heritage oak tree."
The Santa Clarita Oak Conservancy subsequently received and reviewed the "Oak Tree Report" dated October 2009 prepared by Tom Larson, Registered Consulting Arborist, for DUDEK.

The Santa Clarita Valley Oak Conservancy agrees with the Los Angeles Impact Analysis Matrix that the oak trees will be <u>Significantly Impacted</u>" as a Biota Resource by the referenced Project.

We appreciate the applicant bringing their NOP to us and discussing their mitigation plans for oak trees, however the Santa Clarita Oak Conservancy also has concerns with the Project as proposed. The Project has no alternative plans or drawings that consider allowing the studios and the oak trees, within the Project, to coexist by shifting buildings, parking lots, or sound stages. There has been no compromise to move or alter the box-shaped buildings that could "save" any of the 182 protected oak trees including the 19

Heritage oak trees.

Certainly with the creative minds at ABC and Disney Studios, the Santa Clarita Oak Conservancy would expect better than a cut-and-paste square-line-destroy-oak-trees plan. The (12) 60-foot tall buildings could as least be hidden in among the whole property with greater consideration and sensitivity to the existing oak tree locations.

The Santa Clarita Oak Conservancy requests the following:

1. Redesign with consideration of the Native California Oak Trees and the community viewscape.
2. Apply the full ISA value of each oak tree removed in this Project including the Heritage oak trees and place
those funds in the Los Angeles County Oak Tree Fund "in-leu fees" designated for this project oak tree mitigation.
3. Since as we understand current planning rules the parking lots must be shaded, we request oak tree plantings be incorporated into the parking lot design and that landscaping on the Project have native oaks as the "strong-tree component", especially in the view shed of the Highway SR-14 and Placerita Canyon Road. We would expect the parking lot to be shaded reaching 50% coverage in less than 10 years.
4. No oak tree moved in this project will be counted as a "mitigation tree".
5. Encroachment oak trees will be protected with tree wells and/or retaining walls to prevent damage.
6. Long term mitigation trees will be immune from future development (They are to be protected in perpetuity).
7. Any grading that will encroach upon oak trees must be accomplished by digging with hand tools as necessary.
8. Only Southern California native oak trees are to be used in mitigation for tree replacement.
9. The soil from under any removed oak trees will be used for planting the mitigation oaks.
10. Part of the mitigation of the loss of any oak trees shall be to work with Cal Trans to plant native Southern California oak trees in the SR-14 on/off ramps to Placerita Canyon Road with 20-gallon or larger trees.
11. Any oak trees slated for removal will be removed only as that phase of the Project progresses.
12. An Oak Tree Permit with a copy of "The Oak Tree Report" containing the map of the location and number of any removal tree clearly marked is to be on location AT ALL TIMES during this Project. The registered arborist must be present during removal.
13. The oak trees being impacted constitute a wildlife corridor following East to West to the Placerita Creek, and the protection of this corridor, vital to the safe passage of wildlife, is not considered or mitigated in the Project Plan.

14. The mitigation plan offered in the Project Proposal does not properly consider the long term loss of biota resource. The Santa Clarita Oak Conservancy requests that monitoring and maintenance of mitigation oaks continue for 20-years.

Thank you for your consideration of the SCV Oak Conservancy concerns for the proposed Disney Studio Project Plan.

Sincerely,

Ken Buchan, President

Santa Clarita Oak Conservancy
P.O.Box 800520
Santa Clarita, 92380-0520

Contact: Cynthia Neal-Harris, Vice President 661-254-0145

From: Tony Lewis [TonyGLewis@yahoo.com]
Sent: Friday, January 28, 2011 6:09 PM
To: Tran, Christina
Subject: Disney/ABC Studios at the Ranch - Tony Lewis * RE/MAX of Valencia

LA County Department of Regional Planning,

The expansion and relocation of Disney to their Placerita Canyon location will be a welcome addition to the area and all of the Santa Clarita Valley communities. This land is an asset to our community and the location to the Historic Placerita Park will help enhance the valuable history that has made our area what it is today. Filming and the discovery of gold are the roots of our areas development and keeping this significance alive is crucial to the California Dream.

My wife Dani and I have lived in the Santa Clarita Valley since 1980 and have witnessed first hand the Disney Family coming to bat for our community. It will be a great day once this project is completed. The economic impact will be immense and the social benefits as well.

Welcome Disney & ABC,

Tony & Dani Lewis
www.TonyLewis.com
Cell - 661-510-7975

Tony Lewis * RE/MAX of Valencia 661-510-7975 Cell
Visit www.TonyLewis.com to "Search the MLS Yourself"
My 4 Favorite Words "Honesty, Integrity, Ethics & Faith!"
List, Sell or Find a Home with a 30 Year SCV Resident!
Department of Real Estate License Number - 01215778

Appendix B.1

Preliminary Geotechnical Report

County of Los Angeles Department of Public Works
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION
GEOLOGIC REVIEW SHEET
900 So. Fremont Ave., Alhambra, CA 91803
TEL. (626) 458-4925

DISTRIBUTION
1 Geologist
__ Soils Engineer
1 GMED File
1 Subdivision

TENTATIVE TRACT MAP 71216
SUBDIVIDER Golden Oak Ranch Properties
ENGINEER David Evans and Associates, Inc.
GEOLOGIST & SOILS ENGINEER URS

TENTATIVE MAP DATED 3/15/10 (Rev.)
LOCATION Newhall
GRADING BY SUBDIVIDER [Y] (Y or N)
REPORT DATE 8/17/11, 5/31/11, 2/28/11, 3/22/10

TENTATIVE MAP FEASIBILITY IS RECOMMENDED FOR APPROVAL FROM A GEOLOGIC STANDPOINT

THE FOLLOWING CONDITIONS MUST BE FULFILLED:

1. The final map must be approved by the Geotechnical and Materials Engineering Division (GMED) to assure that all geotechnical requirements have been properly depicted. For Final Map clearance guidelines refer to GS051.0 in the Manual for Preparation of Geotechnical Reports (http://dpw.lacounty.gov/gmed/Manual.pdf).

2. A grading plan must be geotechnically approved by the GMED prior to Final Map approval. The grading depicted on the plan must agree with the grading depicted on the tentative tract or parcel map and the conditions approved by the Planning Commission. If the subdivision is to be recorded prior to the completion and acceptance of grading, corrective geologic bonds may be required.

3. Prior to grading plan approval a detailed engineering geology and soils engineering report must be submitted that addresses the proposed grading. All recommendations of the geotechnical consultants must be incorporated into the plan (Refer to the Manual for Preparation of Geotechnical Reports at http://dpw.lacounty.gov/gmed/Manual.pdf).

4. All geologic hazards associated with this proposed development must be eliminated. Alternatively, the geologic hazards may be designated as restricted use areas (RUA), and their boundaries delineated on the Final Map. These RUAs must be approved by the GMED, and the subdivider must dedicate to the County the right to prohibit the erection of buildings or other structures within the restricted use areas (refer to GS063.0 in the manual for preparation of Geotechnical Reports).

5. Mitigation by supporting structures on deep foundations is proposed. Therefore, the following note must be placed on the Final Map: "Geotechnical Note, Potential Building Site: For grading and corrective work requirements for access and building areas refer to reports by URS, dated 8/17/11, 5/31/11, 2/28/11 and 3/22/10."

6. The Soils Engineering review dated 10/6/11 is attached.

Note: Much of the site is underlain by alluvium and undocumented fill. Only partial removal of these materials is currently proposed and settlement of these materials beyond County maximum allowable limits is expected. Mitigation by supporting structures on deep foundations is proposed, and although not specifically stated, infrastructure for utilities would also require deep foundation support. We recommend that Land Development Division and the Department of Regional Planning determine if deep foundations are an acceptable mitigation for excessive settlement.

Prepared by _____ Reviewed by _____ Date 8/31/11
Geir Mathisen

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SOILS ENGINEERING REVIEW SHEET

Address: 900 S. Fremont Ave., Alhambra, CA 91803
Telephone: (626) 458-4925
Fax: (626) 458-4913

District Office 8.2
Job Number GMPH
Sheet 1 of 1

Review No. 4

DISTRIBUTION:
____ Drainage
____ Grading
____ Geo/Soils Central File
____ District Engineer
____ Geologist
____ Soils Engineer
____ Engineer/Architect

Tentative Tract Map	71216
Location	Newhall
Developer/Owner	Golden Oak Ranch Properties
Engineer/Architect	David Evans and Associates, Inc.
Soils Engineer	URS (Project No. 09405568)
Geologist	Same as above

Review of:
Revised Tentative Tract Map Dated by the Processing Center 3/15/10
Soils Engineering and Geology Report Dated **8/17/11**, 5/31/11, 2/28/11, 3/22/10
Previous Review Sheet Dated 8/3/11

ACTION:

Tentative Map feasibility is recommended for approval, subject to conditions below.

REMARKS:

1. At the grading plan review stage, provide information, analyses, and/or recommendations for the following:
   a. *Pile Foundations.* All pile foundations must be founded in competent materials and must mitigate the effects of potential settlement (i.e. liquefaction, down drag, etc.). Provide the details for proposed pile foundations. Axial and lateral load calculations for proposed pile foundations at different locations throughout the subject site will be required.
   b. *Slope stability analyses.* Slope stability analyses for slopes based on a 40 scale to substantiate those performed at a 100 scale. Also, provide global stability analyses of the temporary backcut required for the construction soil cement buttress. Indicate the various shear strength parameters used in the analyses, in the appropriate segments of each failure plane. Recommend mitigation if factors of safety are below County minimum standards.
   c. *Utilities.* Calculations for settlement and potential effects to proposed utilities.
   d. *Bridge.* All recommendations, analyses, and data for proposed bridge foundations will be required.

2. At the grading plan review stage, submit two sets of grading plans to the Soils Section for verification of compliance with County codes and policies.

NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY ENGINEER:
A. PER THE SOILS ENGINEER, SEISMICALLY INDUCED SETTLEMENT WILL BE MITIGATED WITH THE INSTALLATION OF PILE FOUNDATIONS. AT THE BUILDING OR GRADING PLAN STAGE ADDITIONAL EXPLORATION WILL BE REQUIRED TO VARIFY TOTAL DEPTH OF PROPOSED PILE FOUNDATIONS. PROPOSED PILE FOUNDATIONS MUST BE FOUNDED IN COMPETENT MATERIAL BELOW THE DEPTH OF SOILS SUSCEPTIBLE TO LIQUEFACTION.

Reviewed by Yoshiyuki Morisaku Date 10/6/11

REGISTERED PROFESSIONAL ENGINEER YOSHIYA MORISAKU No. 67897 CIVIL STATE OF CALIFORNIA

NOTICE: **Public safety, relative to geotechnical subsurface exploration, shall be conducted in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.**
P:\Yosh\71216, TentT-A_4

URS

April 25, 2012

VIA U.S. MAIL

Ms. Ashley Rogers
Principal Planner
Matrix Environmental
6701 Center Drive West, Suite 900
Los Angeles, California 90045

Re: Disney | ABC Studios at The Ranch
TR 071216

Dear Ms. Rogers,

After the completion of the Preliminary Geotechnical Reports and approval of the reports by the County of Los Angeles Department of Public Works on October 6, 2011, minor modifications to the Project were made that do not affect these technical reports. In particular, the Development Area was increased from 56 acres to approximately 58 acres and an associated change to the Development Area boundary was made. In addition, the elevation of the southern portion of the Development Area (i.e., south of Placerita Creek) was increased by approximately five feet to improve circulation through the Development Area. This vertical change was made uniformly across the southern portion of the Development Area. Other minor changes were also made to the design of certain drainage improvements (i.e., the footprints of the debris basins, creek bank protection, and creek access roads) and vehicular access between the Development Area and the eastern portion of the Ranch that are not relevant to these studies. Overall, these changes do not affect the prior engineering recommendations, and in any event, relevant changes will be reflected in the Final Geotechnical Report to be prepared for the Project. Further, all suggested mitigation measures and engineering recommendations would continue to be implemented, in addition to compliance with all applicable regulatory requirements.

While the Preliminary Geotechnical Reports may reflect slightly different Project conditions than addressed in the Draft EIR, the modifications do not affect the conclusions in our reports, and, with the Project design features and mitigation measures set forth in the Draft EIR, the Project's impacts on the environment would remain less than significant.

Sincerely,

URS CORPORATION

REGISTERED PROFESSIONAL ENGINEER
ARNEL M. BICOL
GE No. 2646
EXP. 12/31/12
GEOTECHNICAL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
CASEY LEE JENSEN
No. 2320
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Arnel M. Bicol. P.E., G.E.
Principal Engineer

Casey Lee Jensen, P.G., C.E.G.
Project Manager/Engineering Geologist

cc: Ms. Christina Tran - County of Los Angeles Department of Regional Planning

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: 213.996.2200
Fax: 213.996.2290

PRELIMINARY GEOTECHNICAL INVESTIGATION

DISNEY | ABC STUDIOS AT THE RANCH

GOLDEN OAK RANCH
19802 PLACERITA CANYON ROAD
LOS ANGELES COUNTY, CALIFORNIA

PREPARED FOR:
DISNEY WORLDWIDE SERVICES, INC.

URS PROJECT NO. 29405568
MARCH 22, 2010

TABLE OF CONTENTS

SECTION **PAGE**

1.0 INTRODUCTION 1

1.1 PROJECT DESCRIPTION 1
1.2 PROPOSED GRADING 1

2.0 FIELD INVESTIGATION AND LABORATORY TESTING 3

2.1 FIELD EXPLORATION PROGRAM 3
2.2 LABORATORY TESTING PROGRAM 5

3.0 SURFACE AND SUBSURFACE CONDITIONS 5

3.1 SURFACE 5
3.2 SUBSURFACE 6
3.3 GROUNDWATER 8

4.0 GEOLOGY AND SEISMICITY 8

4.1 REGIONAL GEOLOGIC AND SEISMIC SETTING 8
4.2 LOCAL GEOLOGIC SETTING 9
4.3 SITE GEOLOGY 11

5.0 GEOLOGIC AND SEISMIC HAZARDS EVALUATIONS 11

5.1 REGULATORY FRAMEWORK 11
5.2 SEISMIC HAZARDS 13
5.3 SUBSIDENCE 15
5.4 LANDSLIDES 16
5.5 EXPANSIVE SOILS 16

6.0 CONCLUSIONS AND RECOMMENDATIONS 17

6.1 CONCLUSIONS 17
6.2 RECOMMENDATIONS 18

7.0 ADDITIONAL INVESTIGATIONS 22

8.0 LIMITATIONS 23

9.0 SIGNATURES OF RESPONSIBLE PROFESSIONALS 23

10.0 REFERENCES 24

List of Figures

Figure 1 Vicinity Map
Figure 2 Site Geologic Map
Figure 3 Regional Geologic Map
Figure 4 Regional Fault and Epicenter Map
Figure 5 Slope Grading Details

Appendices

Appendix A Boring Logs
Appendix B Laboratory Test Results

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

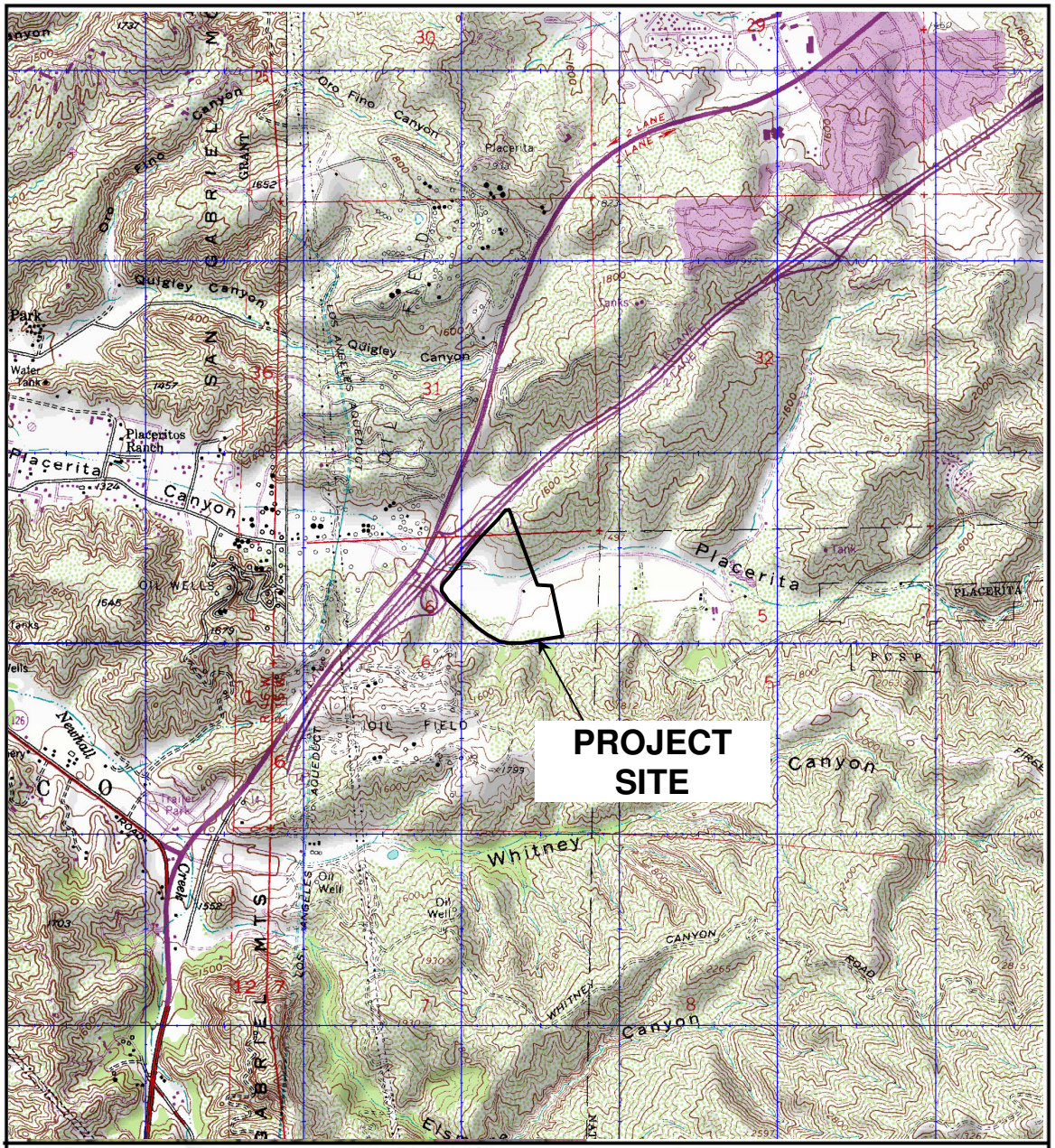
Disney | ABC Studios at The Ranch (Project) involves the construction of a new motion picture and television studio on approximately 56-acres (Development Area) in the westernmost portion of Golden Oak Ranch in the unincorporated Santa Clarita Valley area of Los Angeles County, California. The Development Area is located just east and south of the Antelope Valley Freeway (SR-14), north of Placerita Canyon Road, and east of the eastern border of a 330-foot strip of land owned by the Los Angeles Department of Water and Power (LADWP) and used as a transmission corridor. The coordinates for the Development Area used for analysis within this study are 34.3775^{o} N and 118.4900^{o}W.

The Development Area includes two graded fill pads that will be referred to in this report as the northern and southern fill pads. These fill pads were placed by Caltrans during the construction of SR-14 in the early 1970s, however, documentation of the fill placed on these two pads was not available from Caltrans. The Development Area relative to general topography, streets, landmarks and SR-14 is shown on Figure 1, Vicinity Map.

The Project would include up to twelve soundstages, production offices, six mills, a warehouse, writers/producers bungalows, a commissary, an administration building, a central utility plant and an electrical substation. As an option, the Project would develop studio offices instead of four soundstages, two production offices and two mills within the northern portion of the Development Area. The main buildings would consist of two 19,800-square foot soundstages with an attached 28,125-square foot production office. Each soundstage would consist of a one-story, truss-framed building with a height of about 60 feet. The attached production offices would be wood framed structures of up to 60 feet. Each pair of soundstages would have an 11,500-square foot mill of up to 40 feet.

1.2 PROPOSED GRADING

Site preparation will generally involve grading in order to establish building pad grades within the Development Area. It is anticipated that portions of the northern and southern fill pads will be excavated and then brought up to the design pad elevations. At the same time, the area to the east of the fill pads would be raised with engineered fill to achieve the desired building pad elevations. It is anticipated that the majority of the proposed structures would be supported on pile foundations in order to achieve adequate bearing support for the relatively heavy column loads as well as provide adequate mitigation for potential seismic-settlement hazards due to liquefaction.



SCALE 1:24 000

1 MILE

1 KILOMETER

URS

VICINITY MAP	
Project: Disney | ABC Studios at The Ranch Project No. 29405568	Date: Mar 2010 Figure No. 1

2.0 FIELD INVESTIGATION AND LABORATORY TESTING

A geotechnical field investigation, including limited subsurface exploration, was performed by URS in order to obtain preliminary subsurface data within the proposed Development Area. Laboratory testing was conducted on selected soil samples to evaluate the pertinent physical and chemical properties. A summary of the field investigation and laboratory testing is provided below.

2.1 FIELD EXPLORATION PROGRAM

2.1.1 General

The field exploration program consisted of drilling thirteen (13) exploratory hollow-stem auger borings (HSA-1 through HSA-13) and two (2) bucket auger borings (BA-1 and BA-2). The field exploration was performed between September 5 and October 8, 2008 for the purposes of investigating the subsurface conditions and collecting samples for laboratory testing. The locations of the borings are shown in Figure 2, Site Geologic Map.

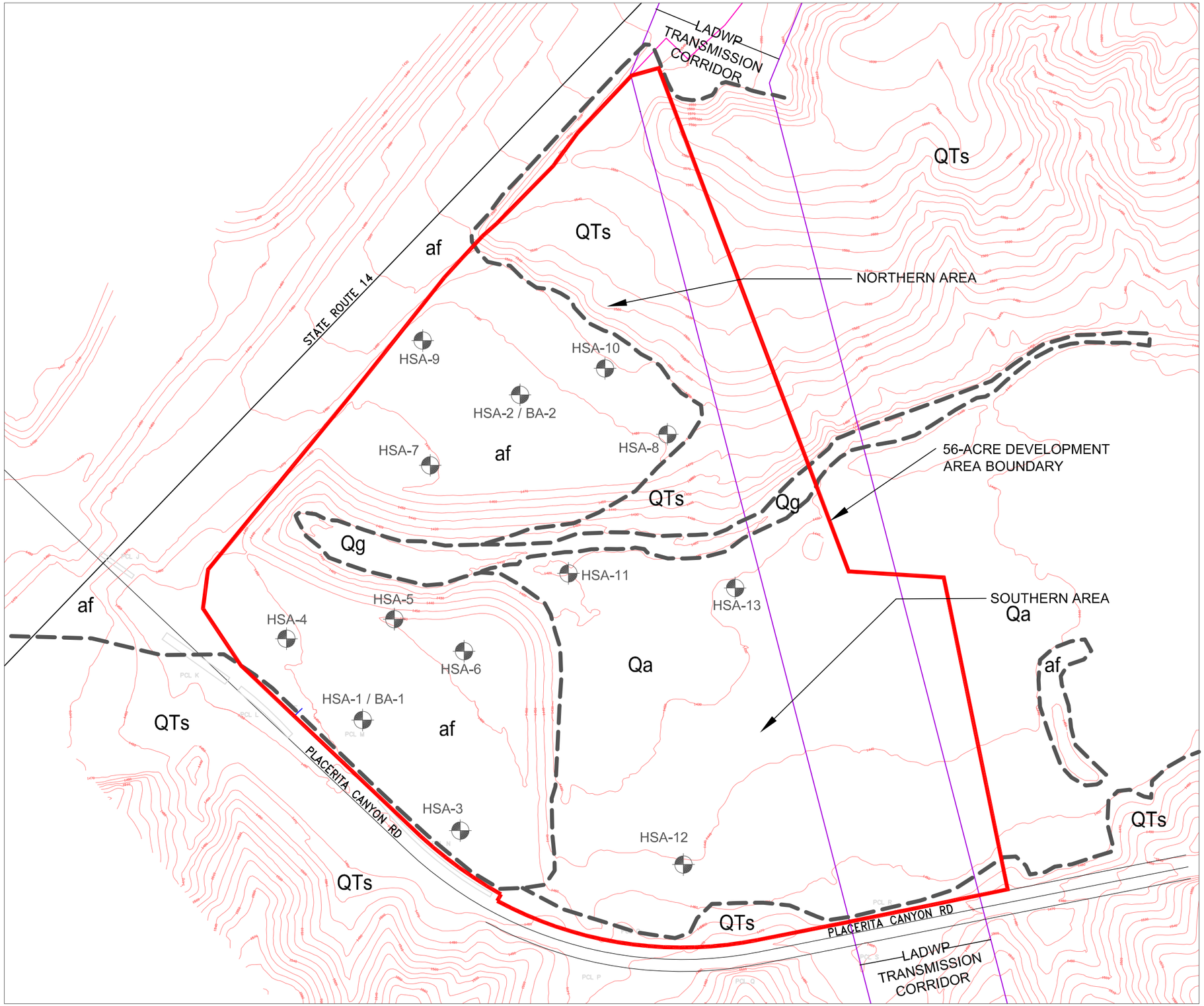
Hollow-stem auger borings were drilled with a CME 75 drill rig using 7.25-inch outside diameter augers, by R&C Drilling, Inc. of Van Nuys, California. Bucket auger borings were drilled with an EZ Bore drill rig using a 24-inch diameter bucket auger by C&L Pacific Drilling Company of La Habra, California.

2.1.2 Logging

URS Professional Geologists licensed by the State of California logged the borings under the supervision of a Certified Engineering Geologist. The materials observed from the borings were visually classified in accordance with the Unified Soil Classification System (USCS). The boring logs, key to logs, and other pertinent information are presented in Appendix A. The lines designating the interface between materials on the boring logs generally represent approximate boundaries. The actual transition between subsurface materials is usually gradual.

2.1.3 Sampling

When subsurface conditions permitted, soil samples were collected at 5-foot intervals using either a Standard Penetration Test (SPT) split-spoon sampler or a Modified California Sampler with an outside diameter of 3.25 inches and an inside diameter of 2.5 inches. To collect relatively undisturbed samples, the Modified California Sampler was lined with one-inch-high thin-walled brass rings. In the hollow-stem auger borings, samplers were driven 18-inches into the subsurface materials using a 140-pound hammer dropped 30 inches per blow. In the bucket auger borings, samplers were driven 12 inches into the subsurface materials by the weight of a Kelly bar dropped approximately 30 inches per blow.



N

0 250 500

SCALE, feet

LEGEND:

af	Engineered artificial fill
Qg	Holocene alluvial gravel and sand of major stream channels
Qa	Holocene alluvial gravel, sand and clay
QTs	Saugus Formation, Pliocene and Pleistocene conglomerate
— — — —	Approximate location of geologic contact
HSA-13 ⊕	Approximate location of boring

URS

SITE GEOLOGIC MAP

Proj. No.: 29405568

Project: DISNEY | ABC STUDIOS AT THE RANCH

Date: MAR 2010

Figure: 2

L:_Project Central Files\29405568 – Disney ABC Studios at The Ranch\400_Technical\406_Exhibits\Figure 2 – Site Geologic Map.dwg Layout2 03/22/2010 20:02, __Casey_Jensen

In the bucket auger borings, Kelly bar weights of 1,590 pounds between 0 and 29 feet, 765 pounds between 29 and 48 feet and 1,125 pounds deeper than 48 feet were used to drive the sampler into the subsurface materials. An extension attachment was used to drill and sample at depths greater than 48 feet.

The number of blows required to drive the samplers into the subsurface soils was recorded in 6-inch or 12-inch intervals. Bulk samples were also collected at selected locations. The borings were backfilled with soil cuttings.

2.2 LABORATORY TESTING PROGRAM

Geotechnical soil samples obtained from the borings and test pits were carefully sealed and packaged in the field to reduce moisture loss and disturbance during transport. The samples were delivered to a URS laboratory located in Los Angeles, where they were further examined and classified. Laboratory testing was performed on selected samples to confirm (and to modify if necessary) the visual classification of the soils based on the field identification, and to evaluate their physical and chemical properties. Tests performed included:

- In-Place Density and Field Moisture tests per ASTM D2216 and ASTM D2937
- Maximum Density Test per ASTM D 1557
- Expansion Index Test per ASTM D4829
- Atterberg Limits per ASTM D4318
- Sieve Analysis, 3-inch to No. 200 Sieve per ASTM D422
- Sieve Analysis, percent passing #200 sieve per ASTM D1140
- Three-Point Direct Shear Test per ASTM D3080
- Consolidation tests with existing and proposed loads per square feet per ASTM D2435
- Chemical Tests for corrosion potential (pH, Sulfates, Resistivity and Chloride) per CA DOT Method

Laboratory test results for density, field moisture, percent passing #200 sieve, expansion index and Atterberg limits are presented on the boring logs in Appendix A. The remaining test results are presented in tabular and/or graphical form in Appendix B of this report.

3.0 SURFACE AND SUBSURFACE CONDITIONS

3.1 SURFACE

The eastern portion of the Development Area is located at the bottom of Placerita Canyon. The canyon is surrounded by local mountain ridges to the north, east and south. The bottom of the canyon is relatively flat with site topography descending gently toward the west.

From the canyon bottom, the Development Area ascends westerly and northerly at a gradient of approximately 2:1 (horizontal to vertical) for 40 to 50 feet to the northern fill pad and the southern pad, respectively. These fill pads were placed by Caltrans during the construction of SR-14 in the early 1970s, however, documentation of the fill placed on these two pads was not available from Caltrans. The two relatively level fill pads are roughly at grade with Placerita Canyon Road to the south and are about 10 to 20 feet below the elevated SR-14 to the northwest.

The northern and southern fill pads are separated by Placerita Creek, which traverses Golden Oak Ranch from east to west across the Development Area before entering an approximately 20-foot culvert which extends under SR-14. The creek is approximately 25 feet in width where it extends across the Development Area. Most of the slopes from the fill pads are exposed with sparse vegetation and some trees.

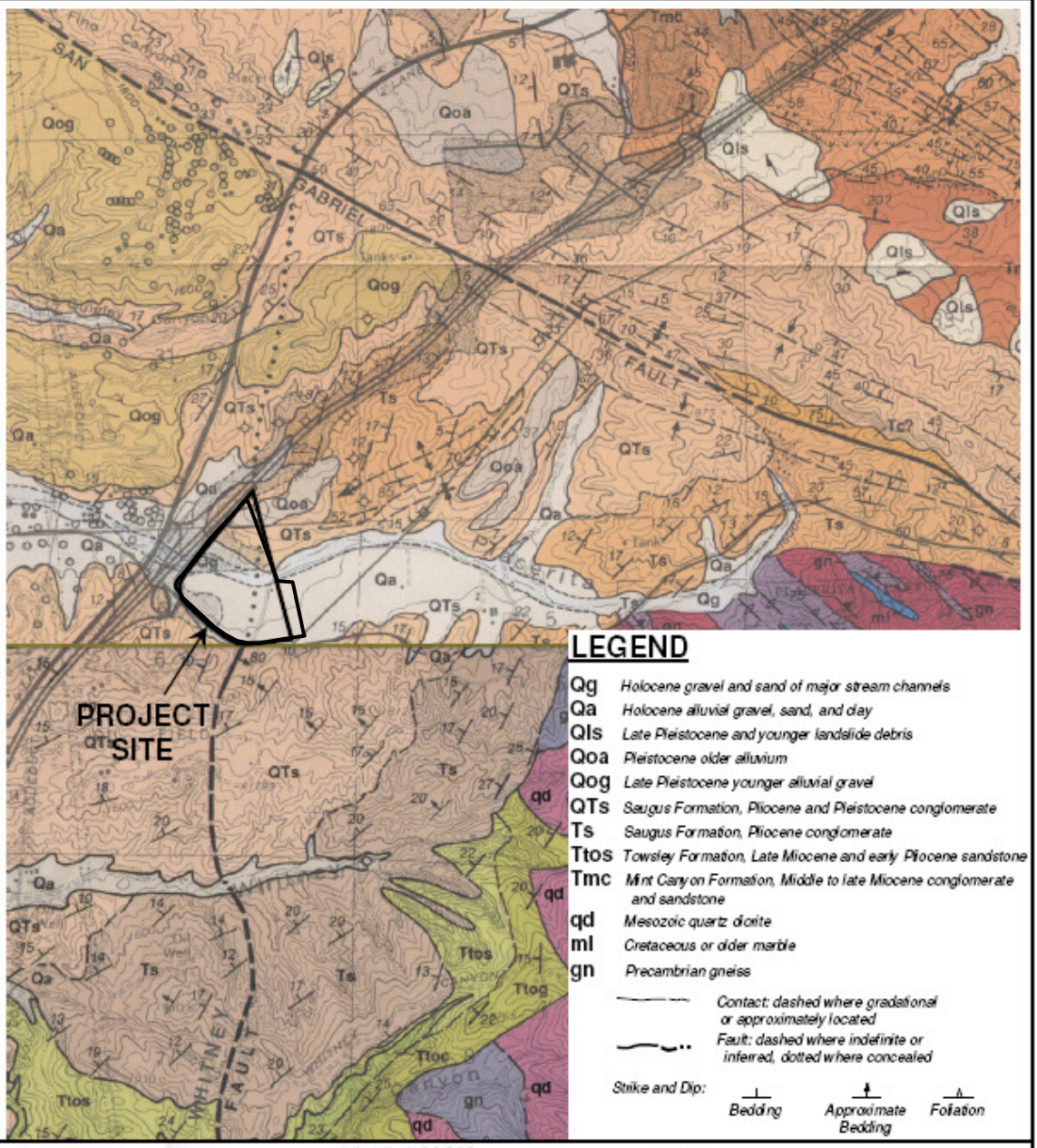
The eastern portion of the Development Area is located within an LADWP Transmission Corridor. The corridor is approximately 330-feet wide and contains high voltage tower mounted electrical transmission lines.

3.2 SUBSURFACE

Based on the preliminary borings drilled by URS, the Development Area consists of recently placed artificial fill overlying native alluvium and Saugus Formation sandstone in the northern and southern fill pads, alluvium overlying Saugus Formation in the southeast portion, and Saugus Formation exposed at the surface in the northern tip and along the southern boundary. The site geology is shown on Figures 2 and 3.

As encountered in the borings, the thickness of artificial fill comprising the fill pads varies between 34 and greater than 61.5 feet (elevations 1455 and 1409.5 feet mean sea level [msl]) in the northern fill pad and 21 to greater than 53 feet (elevations 1432 and 1399 feet msl) in the southern fill pad. Except in borings BA-1, HSA-1 and HSA-2 that did not penetrate below the artificial fill, native alluvium was encountered underlying the artificial fill soils or was exposed at the surface. Saugus Formation bedrock was encountered below alluvium in Borings HSA-3, HSA-10 and HSA-12 at depths of 25, 41 and 7 feet (elevations 1428, 1448 and 1432 feet msl), respectively. These borings are located relatively close to the Saugus formation outcrops mapped at the site.

As depicted on Figure 2, Site Geologic Map, bedrock was exposed along the base of the northern fill pad adjacent to Placerita Creek. Bedrock was not observed at the base of the southern fill pad adjacent to Placerita Creek.



LEGEND

Qg	*Holocene gravel and sand of major stream channels*
Qa	*Holocene alluvial gravel, sand, and clay*
Qls	*Late Pleistocene and younger landslide debris*
Qoa	*Pleistocene older alluvium*
Qog	*Late Pleistocene younger alluvial gravel*
QTs	*Saugus Formation, Pliocene and Pleistocene conglomerate*
Ts	*Saugus Formation, Pliocene conglomerate*
Ttos	*Towsley Formation, Late Miocene and early Pliocene sandstone*
Tmc	*Mint Canyon Formation, Middle to late Miocene conglomerate and sandstone*
qd	*Mesozoic quartz diorite*
ml	*Cretaceous or older marble*
gn	*Precambrian gneiss*

Contact: dashed where gradational or approximately located

Fault: dashed where indefinite or inferred, dotted where concealed

Strike and Dip: *Bedding* *Approximate Bedding* *Foliation*

SCALE 1:24 000

1 MILE

1 KILOMETER

URS

REFERENCES: Dibblee, T.W., Jr., 1991, Geologic Map of the San Fernando and Van Nuys (North ½) Quadrangles, Los Angeles County, California, MAP #DF-33
Dibblee, T.W., Jr., 1996, Geologic Map of the Mint Canyon Quadrangle, Los Angeles County, California, MAP #DF-57

REGIONAL GEOLOGIC MAP

Project: Disney | ABC Studios at The Ranch	Date: Mar 2010
Project No. 29405568	Figure No. 3

3.3 GROUNDWATER

Groundwater was encountered within the alluvial soils, likely perched above the relatively impervious Saugus Formation, in some of the borings drilled during our limited field explorations within the Development Area. In Borings HAS-4, HAS-5, HAS-6, HAS-7, HAS-11and HAS-13, groundwater was encountered at depths of 61 to 79 feet (elevations 1402 to 1382 feet msl) below the southern fill pad, at a depth of 71.5 feet (elevation 1399.5 feet msl) below the northern fill pad, and at depths of 11.5 to 16 feet (elevations 1409.5 and 1413 feet msl) below the surface in the low lying areas of the Development Area. Based on this data, the average groundwater depth below the fill pads is approximately 68.5 feet below the fill pad surface. Overall, the alluvial groundwater encountered in the URS borings had an east to west gradient at elevations between 1413 and 1382 feet msl.

According to the California Geological Survey (CGS), previously known as the California Division of Mines and Geology (CDMG), the historic-high groundwater in the alluvial valley of the Development Area has been reported to be approximately 10 feet below the ground surface (CCS, 1998). It should be noted that State and County reviewers will rely on the CGS published historic high water level for evaluation of liquefaction potential. Therefore, for design purposes, a perched alluvial groundwater level of the creek bottom elevation or 10 feet below the adjacent creek banks should be used for the Development Area, representing the historic high groundwater level within the alluvial soils.

Deeper groundwater aquifers may exist below the Development Area that are located beyond the limits of our borings and the scope of our study.

4.0 GEOLOGY AND SEISMICITY

4.1 REGIONAL GEOLOGIC AND SEISMIC SETTING

The Development Area lies within the Transverse Ranges physiographic province of Southern California. This province is characterized by a complex series of mountain ranges and valleys with dominant east-west trends. The east west structural grain of the Transverse Ranges are the consequence of active faulting and folding that is driven by movement along the boundary between the North American and the Pacific crustal plates. These two plates are passing by each other horizontally, in a right lateral sense (i.e. the North American plate is moving southeastward relative to the Pacific plate) at a rate of about 40 to 50 mm/yr. Most of this stress is accommodated by movement on the San Andreas Fault, which extends from north of San Francisco to the Gulf of California. Through the Transverse Ranges, the San Andreas Fault deviates from its typical N40˚W trend to an approximately N65˚W trend. This left bend in the fault, known as the “Big Bend” results in a zone of compression where the northward movement of the slice of California west of the fault pushes against the terrain east of the fault, compressing the rocks on both sides and forming the uplifted Transverse Ranges.

The Development Area, like most of California, is within a seismically active region that will be subjected to future seismic shaking during earthquakes generated by any of several surrounding active faults. The locations of known active and potentially active faults and epicenters of earthquakes with magnitudes of 4 or greater within 50 kilometers of the Development Area are shown on the Regional Fault and Epicenter Map, presented as Figure 4. Significant historical earthquakes that have occurred near the project area include:

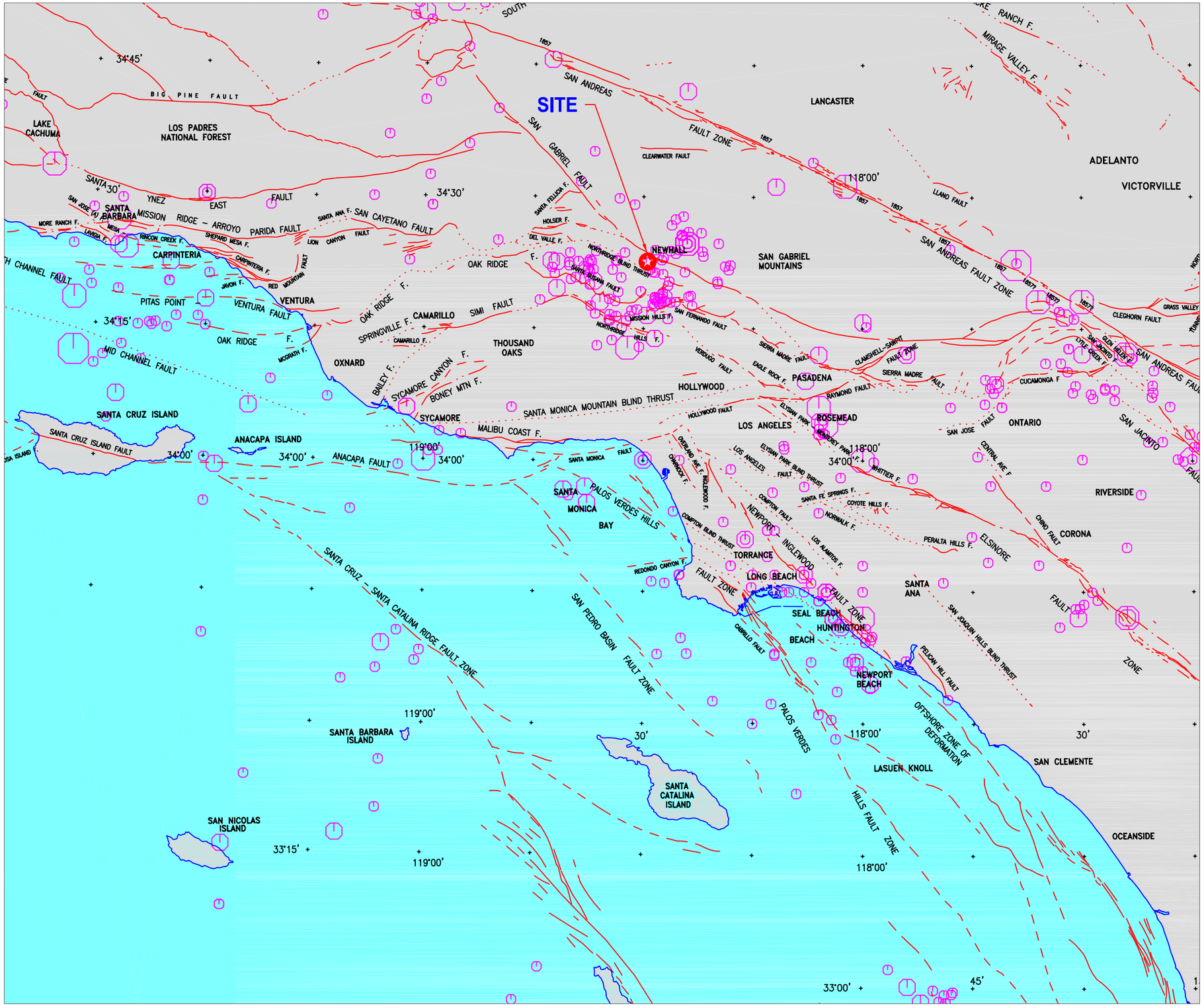
- The 1812 Wrightwood Earthquake (M7.5) on the San Andreas fault;
- The 1857 Fort Tejon Earthquake (M7.9) on the San Andreas fault;
- The 1971 Sylmar Earthquake (M7.1) on the San Fernando fault; and
- The 1994 Northridge earthquake (M6.7) on the Northridge thrust.

The San Gabriel Fault, located approximately ¾ mile north (See Figure 3, Regional Geologic Map), is the most significant active fault in the vicinity of the Development Area. The mapped trace of the San Gabriel fault is approximately 80 miles (~130 km) long from the Frazier Mountain area southeast to the east end of the San Gabriel Mountains where it terminates at the San Jacinto fault. The San Gabriel fault is considered capable of generating a maximum earthquake of about Magnitude 7 (CDMG, 1996, 2003). The north-south trending, steeply east dipping Whitney fault is mapped as crossing the Development Area, as shown on Figure 3. This fault has been mapped at the surface cutting the Plio-Pleistocene age Saugus Formation along the south side of Placerita Canyon, and was mapped as a concealed (buried) fault beneath the Holocene alluvium of Placerita Canyon. The Whitney fault is not located within an Alquist-Priolo Earthquake Fault Zone and is not an active fault as defined by the CGS.

4.2 LOCAL GEOLOGIC SETTING

The Development Area is located in Placerita Canyon immediately east of SR-14 and is the easternmost extent of the Ventura Basin, which contains an immense thickness of marine sedimentary rocks deposited during the late Cenozoic time. The marine sediments are in turn covered by non-marine sediments deposited during late Pliocene to Recent time.

As shown on the Regional Geologic Map by Dibblee (1991, 1996), presented as Figure 3, the Canyon sides are underlain by the Pliocene-Pleistocene age Saugus Formation. The Saugus Formation is composed of weakly indurated, non-marine, fluviatile pebble-cobble conglomerates, sandstones, and siltstones. Unconformably overlying the Saugus Formation (Qts) in Placerita Canyon is Holocene age alluvium (Qa and Qg). The alluvium is composed of unconsolidated gravel, sand and clay. Artificial fill overlies these native deposits at and in the vicinity of the SR-14 crossing of Placerita Canyon.



0 20 40

SCALE,kilometers

LEGEND

REPORTED EARTHQUAKE MAGNITUDES.

- 4.0 TO 4.9
- 5.0 TO 5.9
- 6.0 TO 6.9
- 7.0 AND GREATER

SOUTH OF LATITUDE 35°N, EPICENTER AND MAGNITUDE DATA ARE FROM THE CALIFORNIA GEOLOGICAL SURVEY (2001) EARTHQUAKE CATALOG FOR THE PERIOD FROM 1769 TO 2000. ONLY EARTHQUAKES OF MAGNITUDE 4.0 AND LARGER ARE SHOWN. AFTERSHOCKS ARE NOT INCLUDED.

? ? ?

APPROXIMATE LOCATION OF HOLOCENE AND PLEISTOCENE FAULTS, DOTTED WHERE CONCEALED, QUERIED WHERE CONJECTURAL. FAULT LOCATIONS BASED ON: ZIONY AND JONES, 1989; CDMG GEOLOGIC MAP SERIES OF CALIFORNIA, 1977–1986 (1:250,000 SCALE); CDMG GEOLOGIC MAP SERIES, CALIFORNIA CONTINENTAL MARGIN, 1987 (1:250,000 SCALE); HAUKSSON, 1990; SHAW AND SHEARER, 1999; WRIGHT, 1991; GRANT ET AL. 1999.

URS

REGIONAL FAULT AND EPICENTER MAP

Proj. No.: 29405568	Date: MAR 2010
Project: DISNEY | ABC STUDIOS AT THE RANCH	Figure: 4

L:_Project Central Files\29405568 – Disney ABC Studios at The Ranch\400_Technical\406_Exhibits\Figure 4 – Regional Fault and Epicenter Map.dwg Layout2 03/22/2010 20:07, ___Casey_Jensen

4.3 SITE GEOLOGY

Surficial deposits within the Development Area consist of artificial fill, unconsolidated Holocene age alluvium, and weakly lithified, Plio-Pleistocene age bedrock of the Saugus Formation. As shown on Figure 2, Site Geologic Map, the artificial fill occupies two constructed fill pads (approximately 23.6 acres of the Development Area) that are adjacent to SR-14, identified as the northern and southern fill pads. This artificial was placed during the construction of the adjacent SR-14 freeway and is derived from local cut areas. The Holocene age alluvium is exposed at the surface in the eastern portion of the Development Area and exists below the northern and southern fill pads. Saugus Formation bedrock is exposed in the northern corner of the Development Area and south of Placerita Canyon Road outside of the Development Area.

5.0 GEOLOGIC AND SEISMIC HAZARDS EVALUATIONS

Geologic and seismic hazards are those hazards that could impact a site due to the surrounding geologic and seismic conditions. Seismic hazards include phenomena that occur during an earthquake, such as surface fault rupture, strong ground motion, liquefaction, lateral spreading, differential seismic settlement, seismic induced flooding and seiche. Geological hazards include landslides, subsidence, and expansive soils.

5.1 REGULATORY FRAMEWORK

The potential for impacts from geologic and seismic hazards at the Project have been evaluated in accordance with the California Geological Survey (CGS) Guidelines, the Alquist-Priolo Earthquake Fault Zone Act of 1972, the Seismic Hazards Mapping Act of 1990, the California Building Code and County of Los Angeles Guidelines.

5.1.1 California Geological Survey (CGS)

The CGS identifies several earth resource issues that should be taken into consideration when evaluating whether the proposed project is likely to be subject to geologic hazards, particularly hazards related to earthquake damage. These considerations include both the potential for existing geologic and soil conditions to pose a risk to the proposed project and the potential for the proposed project to result in an impact to the existing geologic and soil conditions by creating or exacerbating a geologic hazard.

The CGS conducts studies related to geologic hazards (e.g., faulting, liquefaction, seismically induced landslides, and ground shaking) as they affect people and structures. These studies relate to the Alquist-Priolo Earthquake Fault Zone (APEFZ) Act and Seismic Hazards Mapping Act. The CGS also issues guidelines for the evaluation of geologic and seismic factors that may impact a project or

that a project may affect such as CDMG Special Publication No. 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

Each set of guidelines provides checklists and outlines to help ensure a comprehensive report of geologic/seismic conditions. Although not mandatory, these guidelines characterize the standards for technical and procedural adequacy in the characterization of geology, soils, and related environmental hazards.

5.1.2 Alquist-Priolo Earthquake Fault Zone Act of 1972

The CGS has delineated earthquake fault zones along known active or potentially active faults in California pursuant to the APEFZ Act of 1972. Construction of habitable structures is not permitted over potential rupture zones.

5.1.3 Seismic Hazards Mapping Act of 1990

The CGS also has identified seismic hazard zones that are delineated in accordance with the seismic hazards mapping program (SHMP) of the Seismic Hazards Mapping Act of 1990. The Seismic Hazards Mapping Act provides for the following:

> *"...a statewide seismic hazard mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting the public health and safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other seismic hazards caused by earthquakes."*

5.1.4 California Building Code

Most of the State of California, including the proposed project site, lies within Seismic Zone 4, the highest level hazard zone designated by the current Uniform Building Code (UBC). The California Building Standards Code, or California Building Code (CBC), augments and supersedes the UBC with stricter requirements to reduce the risks associated with building in Seismic Zone 4 to the maximum extent practicable. The CBC sets standards for the investigation and mitigation of the site conditions related to fault movement, liquefaction, landslides, differential compaction/seismic settlement, ground rupture, ground shaking, tsunami, seiche, and seismically induced flooding.

5.1.5 County of Los Angeles

The County of Los Angeles has published general guidelines for preparation of soils engineering and engineering geology reports which reference the state guidelines identified above in addition to Guidelines prepared by the Association of Environmental and Engineering Geologists (AEG).

5.2 SEISMIC HAZARDS

5.2.1 Surface Fault Rupture

Surface fault rupture is ground deformation that occurs along the surface trace of the causative fault during an earthquake. To mitigate the hazard of surface fault rupture, the "Alquist-Priolo Earthquake Fault Zoning Act" is a state law that regulates development projects near active faults. The act requires that development permits for projects within "Earthquake Fault Zones" be withheld until geologic investigations demonstrate that the sites are not threatened by surface displacement from future fault rupture. To be zoned under the Alquist-Priolo Fault Zoning Act, a fault must be considered active or both sufficiently active and well-defined (CDMG, 1997b). The CGS defines an active fault as one that has had surface displacement within Holocene time (about the last 11,000 years), and a sufficiently active fault as one that has evidence of Holocene surface displacement along one or more of its segments or branches (CDMG, 1997b). The CGS considers a fault to be well defined if its trace is clearly detectable as a physical feature at or just below the ground surface.

No known active or sufficiently active and well defined faults have been recognized as crossing the Development Area, and the CGS does not delineate any part of the Development Area as being within an Earthquake Fault Zone. The closest Earthquake Fault Zone to the Development Area is a portion of the San Gabriel Fault Zone, which is located approximately 2 miles to the northwest. The portion of the San Gabriel fault shown on Figure 3, which lies within ¾ mile northeast of the Development Area has not been zoned by the CGS as an Earthquake Fault Zone. The Whitney fault, which crosses through the Development Area, is shown as a Quaternary fault on the Fault Activity Map of California (Jennings, 1994). Thus, in accordance with the CDMG Alquist-Priolo (1997), it would be regarded as a "potentially active" fault. Based on analysis of historic aerial photographs of the Development Area, there were no lineaments suggestive of surficial faulting that were identified as passing through the Development Area. Although the possible presence of the "potentially active" Whitney fault beneath the Development Area represents some potential for surface fault rupture, there is a remote possibility that this fault would exhibit surface displacement during the lifetime of the Project. **Therefore, surface fault rupture does not represent a significant hazard for the Project.**

5.2.2 Strong Ground Motion

The Development Area is located within a seismically active region that is well known for its many active faults and historic seismicity. Because the Development Area is in a seismically active region, it follows that it will be subjected to future seismic shaking and strong ground motion resulting from seismic activity along local, regional, and more distant active faults. The degree of shaking that is felt at a given site depends on the distance from the earthquake epicenter and the type of subsurface material on which the site is situated. The highest levels of ground shaking in the Development Area are likely to result from an earthquake on the nearby San Gabriel fault, which is located approximately ¾ mile north of the Development Area.

Either deterministic or probabilistic methods are typically performed to estimate the level of shaking that can be expected at a project site. The United States Geological Survey (USGS) has developed Probabilistic Seismic Hazard Maps for the United States and its territories (USGS 2007b). A probabilistic estimate of ground motion for a firm rock site can be obtained from a USGS web site by inputting the Latitude and Longitude of the project site (USGS 2007c). Based on the USGS probabilistic data set, the peak ground acceleration corresponding to a 10% probability of exceedance in 50 years for the Development Area is estimated to be 0.8 g (units of gravity). Note that this ground motion value is calculated for a firm rock site. Much of the Development Area, however, is a soil site, which may amplify or de-amplify this value. **Nevertheless, with appropriate design measures and compliance with regulatory requirements, seismic ground shaking and strong ground motion would not be a significant hazard for the Project. The project will be designed per the California Building Code to address strong seismic ground motion.**

5.2.3 Liquefaction

Liquefaction is a phenomenon whereby saturated granular soils lose their inherent shear strength due to increased pore water pressures, which may be induced by cyclic loading such as that caused by an earthquake. A low relative density of the granular soils, shallow water, long duration and high acceleration of seismic shaking are some of the factors favorable to cause liquefaction. Potential for seismically induced liquefaction exists whenever relatively loose, sandy soils exist with high groundwater levels and potential for long duration, high seismic shaking. When liquefaction occurs, a site can experience damage induced by permanent ground movements resulting in differential settlement and flotation of structures.

The CGS has designated certain areas as having the potential for liquefaction to occur during a seismic event (CDMG, 1999). These are areas considered at a risk of liquefaction-related ground failure during a seismic event, and are based upon mapped surficial deposits and the presence of a relatively shallow water table. The Seismic Hazard Zones Map for the Mint Canyon Quadrangle (CDMG, 1999) shows most of the Development Area as being within a potential liquefaction hazard zone. This would include the areas underlain by alluvium, including the artificial fill pads shown on Figure 2. Portions of the site underlain by Saugus Formation would not be susceptible to liquefaction. In accordance with the Seismic Hazards Mapping Act, the portions of the Development Area that are in a liquefaction hazard zone would require a liquefaction investigation and analysis prior to issuance of a building permit by the permitting authority.

Once a design level geotechnical investigation has been performed in accordance with regulatory requirements to determine the liquefaction potential of the site soils, proposed mitigation measures, if needed, would be ground improvement or placement of foundations on piles bearing on non-liquefiable soils. **With appropriate design measures and compliance with regulatory requirements including mitigation of liquefiable conditions, liquefaction would not be a significant hazard for the Project.**

5.2.4 Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. Although no potential free-face conditions have been indentified, the Development Area has significant slopes and slopes which may be underlain by liquefiable soils; therefore, an evaluation for lateral spreading should be performed as part of a design level geotechnical investigation in accordance with regulatory requirements. **With compliance with regulatory requirements and use of appropriate design measures that may include pile foundations, lateral spreading would not be a significant hazard for the Project.**

5.2.5 Differential Seismic Settlement

Differential seismic settlement occurs when seismic shaking causes one type of soil or rock to settle more than another type. It may also occur within a soil deposit with relatively homogeneous properties if the seismic shaking is uneven, which could occur due to variable geometry, for example, and variable depth of the soil deposit. Differential seismic settlement is most likely to occur in areas that transition between rock formations and more recently deposited alluvial soils or human-placed artificial fill. Because the Development Area is underlain by a variety of deposits including sedimentary bedrock, alluvium and artificial fill, this potential hazard should be evaluated as part of a design level geotechnical investigation. **With compliance with regulatory requirements set forth by the CGS and CBC and use of appropriate design measures that may include ground improvement or pile foundations, differential seismic settlement would not be a significant hazard for the Project.**

5.2.6 Seismic Induced Flooding, Seiche and Tsunami

Earthquake induced flooding occurs when upstream water retaining structures, such as dams or levees, are breached or damaged during an earthquake. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank, resulting from earthquakes or other large environmental disturbances. A tsunami is a great sea wave (commonly called a tidal wave) produced by a significant undersea disturbance, such as tectonic displacement of the sea floor associated with large, shallow earthquakes. **The Project is not located near the ocean and there are no dams or levees or large bodies of water located upstream of the Development Area. Therefore seismically induced flooding, seiche and tsunami are not considered significant hazards at the site.**

5.3 SUBSIDENCE

The extraction of water or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The compaction of subsurface sediments by fluid withdrawal will cause subsidence of the ground surface overlying a pumped reservoir. If the volume of water or petroleum removed is sufficiently great, the amount of resulting subsidence may

be sufficient to damage nearby engineered structures. **Significant quantities of water or petroleum are not being and have not been extracted beneath the Development Area and current regulatory compliance prevents extraction that causes detrimental effects to overlying areas. Therefore, with compliance to regulatory requirements, subsidence is not anticipated to pose a significant hazard to the Project.**

5.4 LANDSLIDES

The potential for landslides is not anticipated to pose a significant geologic hazard to the Development Area. Most of the Development Area occupies relatively flat ground that would not be subject to landsliding. Based on geologic reconnaissance and aerial photograph analysis of the moderate slopes that are along the northern portion of the Development Area and the SR-14 fill slope on the west side of the Development Area, there is no evidence of pre-existing slope instability. In addition, the State Seismic Hazard Map for the Mint Canyon Quadrangle (CDMG, 1999) indicates that the Development Area does not lie within areas designated to be prone for either future earthquake induced landslides or in an area of previous landslide occurrence.

Future grading to construct slopes adjacent to SR-14 and Placerita Canyon Road during lowering of the northern and southern fill pad areas would be completed in accordance with regulatory requirements including the California Building Code. As part of these regulatory requirements, a design level geotechnical investigation would be prepared to determine appropriate slope gradients or retaining wall design parameters that may include design measures such as ground improvement, retaining walls or surficial stabilization. **With compliance with regulatory requirements and use of appropriate design measures, landslides would not be a significant hazard for the Project.**

5.5 EXPANSIVE SOILS

Expansive soils are fine-grained soils (clay) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures constructed on the soil. The surficial soils observed on the fill pads, the colluvial soils developed on the Saugus Formation, and the alluvial soils immediately adjacent to Placerita Creek appear to primarily consist of coarse-grained soils that would not be susceptible to expansion. Some clayey soils exist on the flood plain that is south of Placerita Creek. **With compliance with regulatory requirements including the California Building Code and the use of select grading or structures designed for expansive soils that will be evaluated during the design level geotechnical investigation, impacts associated with this hazard would be less than significant.**

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

Provided that the Project is designed in accordance with the recommendations of a future URS design level geotechnical investigation and the California Building Code, and constructed in accordance with the California Building Code and under the observation of URS geotechnical consultants, the Project is feasible from a geological and geotechnical engineering standpoint.

The primary geotechnical considerations for the Project are the undocumented fills comprising the northern and southern fill pads, liquefaction potential and the associated seismically induced settlement. As indicated above, compliance with regulatory requirements would ensure that impacts associated with these issue areas would be less than significant. Identified key issues are discussed as follows:

With respect to seismic hazards, although the potentially active Whitney fault is known to exist within the Development Area, our review of historic aerial photographs of the Development Area found no lineaments suggestive of surficial faulting, suggesting that the possibility of surface rupture due to faulting is remote.

The Development Area could be subjected to significant ground-shaking with major earthquakes during the lifetime of the Project. However, strong ground-shaking is common to southern California and potential damage caused by seismic shaking is customarily reduced through proper structural design and construction that would occur as part of compliance with regulatory requirements.

The current static groundwater level within the Development Area is an average of 68.5 feet below the level of the fill pads, within 11 to 16 feet below the low lying eastern area, and the reported historic-high groundwater level is about 10 feet below the existing grades near the creek in the bottom of the canyon. As a result, a liquefaction potential exists for susceptible granular soils. If susceptible soils are saturated and liquefy during a design earthquake, the seismic induced settlement could be of a magnitude that would require mitigation measures. As liquefaction and seismic induced settlement significantly affect the choice of foundation type and mitigation measure, in accordance with regulatory requirements, an extensive site-specific field exploration program suitable for liquefaction investigation would be incorporated into the Project design phase. As discussed above, project features that would be implemented as a result of this investigation may include soil improvement through overexcavation and recompaction of susceptible soils and the use of pile foundations for support of settlement sensitive structures.

The majority of the northern and southern pads consist of fills generated by excavations into the surrounding hills during construction of SR-14 and the disposal of construction-derived waste (excess materials) onto the Development Area. Caltrans has no records regarding the fill placement. Because of the timing of the placement of the fill, there is a strong likelihood that the fill is neither properly engineered nor the placement fully documented. The current County and State grading ordinance does not allow structures to be supported directly on sub-standard or undocumented man-made fills. As a

result, the layout of the proposed structures on the northern and southern fill pads should be carefully planned. The north side of northern pad and the south side of southern pad have fill on the order of 50 to 60 feet deep. In order to place structures on the fill pads, the fill pads should be lowered or deep foundations should be used. The excavated materials can be re-used as fill materials for the construction of raised pads at the southeastern corner of the Development Area. Recommendations for deep foundations can be provided in the final phase of design if necessary.

The future design level geotechnical investigation, proposed Project mitigation measures and design of the proposed site improvements will be performed in accordance to State and County guidelines.

Preliminary recommendations for earthwork and foundation design considerations are presented below.

6.2 RECOMMENDATIONS

6.2.1 Earthwork

6.2.1.1 Site Preparation

Prior to the placement of fill, all vegetation within the construction areas should be cleared and grubbed. Any debris, deleterious materials, loose native soil disturbed by the removal of vegetation and existing fills should be removed. Unsuitable materials should be removed and disposed of appropriately under observation of the Geotechnical Engineer of Record. It is the responsibility of the contractor to notify and coordinate with Underground Service Alert (USA) for utility location before any proposed earthwork. All active or inactive utilities within the construction limits should be identified for relocation, abandonment, or protection prior to grading. Any pipelines greater than 2 inches in diameter to be abandoned in-place should be filled with sand/cement slurry after review of their location and approval by the Geotechnical Engineer of Record.

6.2.2 Excavations

6.2.2.1 Overexcavation

In general, up to five feet of the site native and artificial fill soils should be removed and replaced as engineered fill under the direction of the Geotechnical Engineer-of-Record. To limit differential settlement across any transition between cut and fill, native materials should be overexcavated to a depth at least three feet below the bottom of the proposed footings and recompacted as engineered fill. The area of removal should extend at least 5 feet beyond the edge of foundations, or equal to the depth of removal, whichever is greater. In addition, where mitigation measures are required by the Geotechnical Engineer-of-Record to support roadways and other lightly-loaded, non-settlement sensitive structures, overexcavation may be utilized to provide the proper bearing conditions. The depths of removal will vary depending on the proposed building or structure location. Because of the lack of subsurface information, the exact depths of removal cannot be accurately estimated at the preparation of this report.

Following excavation, the exposed subgrade should be proof-rolled to locate any loose or soft zones. Proof-rolling will involve making several passes with heavy rubber-tired equipment over the area under consideration, and observing the reaction of the subgrade under the wheel loads. Upon completion of proof-rolling, a field representative of the Geotechnical Engineer-of-Record should perform probing and/or field density testing to evaluate the extent of loose or soft zones, if any. All observed loose or soft zones less than 12 inches in depth should be compacted in-place. Upon completion of proof-rolling, the excavation subgrade should be scarified a minimum of eight inches deep and compacted in-place, achieving a minimum subgrade relative compaction of 95 percent of the maximum dry density per ASTM D-1557.

If loose zones greater than 12 inches in depth are encountered, additional overexcavation will be required. Such additional subsurface improvement requirements should be determined in the field by the Geotechnical Engineer-of-Record during foundation subgrade preparation activities. Upon completion of any required overexcavation, backfill should be placed in accordance with recommendations for compacted fill soils.

6.2.2.2 Temporary Excavation Slopes

Excavations during slope repair should be carried out in such a manner to prevent failure and excessive ground movement. All excavations should comply with the current California and Federal OSHA requirements, as applicable. For preliminary design purposes, a Cal/OSHA Soil Type C should be assumed for the existing fill and alluvium. It should be noted that this assessment of Cal/OSHA soil type for temporary excavations is based on engineering classifications of material encountered in widely spaced explorations. The contractor should have a geotechnical or geological professional evaluate the soil conditions encountered during excavation to determine permissible temporary slope inclinations.

Surcharge loads from vehicles, and stockpiled material should be kept away from the top of temporary excavations at a distance equal to at least one half of the excavation depth. During wet weather, runoff water should be prevented from entering the excavation, and collected and disposed of outside the construction limits. To prevent runoff from adjacent areas from entering the excavation, a perimeter berm should be constructed at the top of the slope.

6.2.3 Fills and Backfills

The fill materials to be excavated as part of the Project would be clayey sand to sandy clay. If the fill materials excavated were to be re-used in compacted fill, thorough mixing with coarse grained fill materials would be necessary. The resulted mix should have no more than 35% of fine content finer than the openings of a standard No. 200 sieve and an Expansive Index not exceeding 40. Shrinkage factors of 12 to 17 percent may be used to estimate earthwork volume in meeting different site preparation requirements for shallow foundation.

If import soil is considered for this Project, the new fill should be predominantly granular in nature, with an Expansion Index of less than 40. For gradation, the new fill should contain no rocks in excess of 3

inches in maximum dimension, and no more than 35% of fines passing a standard No. 200 sieve. In addition, aggregate base and trench bedding materials should conform to Caltrans' Standard Specifications and the Green Book, respectively or similar standards. All new fills shall be free of hazardous, organic and inorganic debris.

Compacted fills used to support structural loads should be compacted to at least 95 percent of the maximum dry density as per ASTM D1557. All other fills and backfills should be compacted to 90 percent of their maximum dry density.

The standard slope grading details requirements are presented in Figure 5. In all cases where the existing ground surface is steeper than 5:1 (horizontal to vertical), backfill should be brought up in layers by benching five feet into competent fill. The back-cut into the slope face should be no steeper than 1:1. A keyway at least 15 feet in width should be excavated a minimum of 2 feet into competent material at the toe of the slope. Subdrains should be installed at the heel of the keyway and at 15 feet interval on the benches. Slopes should be over-built and trimmed back to the design slope gradient of no steeper than 2:1 (horizontal to vertical) to ensure proper compaction of the slope faces.

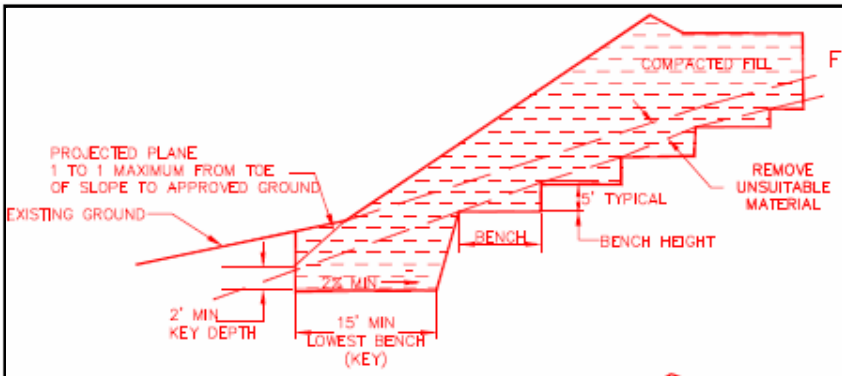
6.2.4 Permanent Slopes

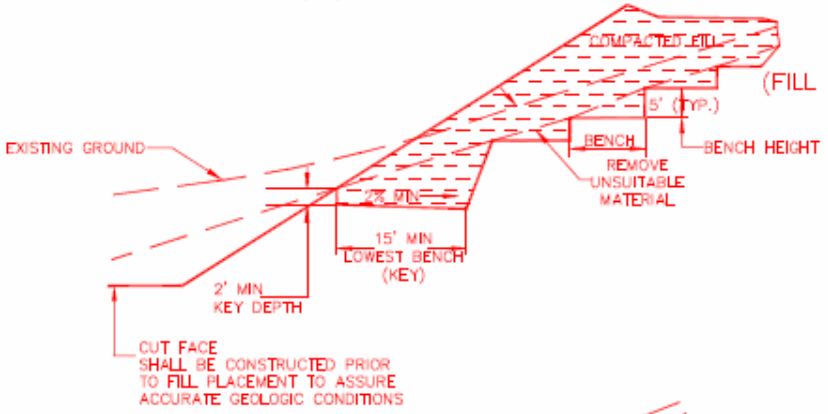
Permanent cut and fill slopes should be planned at a gradient no steeper than 2:1 (horizontal to vertical). Slopes with this gradient are generally stable, if properly maintained. Creating slopes from the undocumented fill would require evaluation of the existing surface conditions by borings and laboratory testing to determine fill depths, geometry and slope stability characteristics.

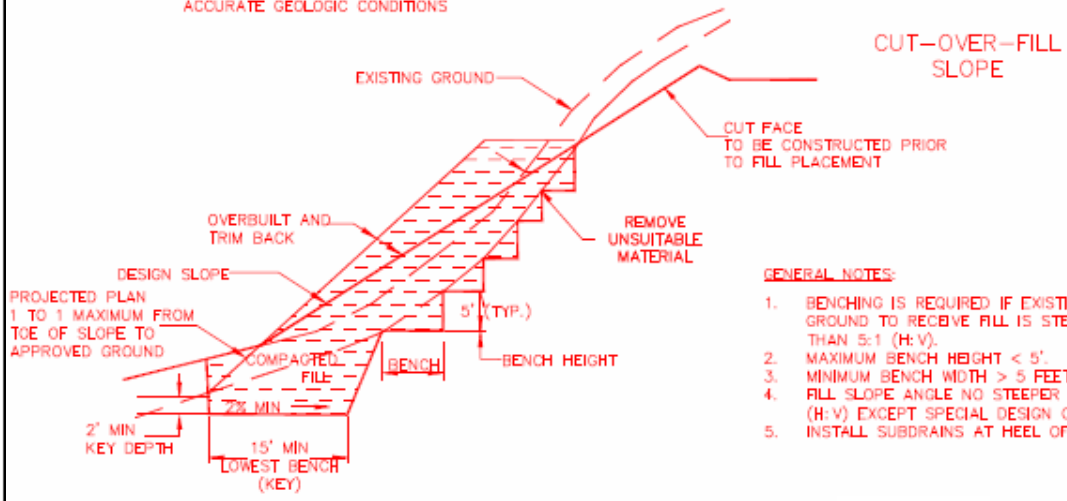
In particular, creating slopes from the undocumented fill adjacent to Highway 14 and Placerita Canyon Road could require special slope stability enhancements such as grid reinforced slopes or retaining walls.

6.2.5 Foundations

Settlement sensitive structures, buildings and floor slabs located at the northern and southern area undocumented fill pads should be supported on deep foundations founded into competent native material soils or bedrock. In the low-lying eastern portion of the Project site where building pads would have to be raised above existing conditions to bring the pads above the flood zone, shallow foundations established in engineered fill may be used for structural support.







GENERAL NOTES:

1. BENCHING IS REQUIRED IF EXISTING GROUND TO RECEIVE FILL IS STEEPER THAN 5:1 (H:V).
2. MAXIMUM BENCH HEIGHT < 5'.
3. MINIMUM BENCH WIDTH > 5 FEET.
4. FILL SLOPE ANGLE NO STEEPER THAN 2:1 (H:V) EXCEPT SPECIAL DESIGN CONDITION.
5. INSTALL SUBDRAINS AT HEEL OF KEYWAY.

URS

SLOPE GRADING DETAILS	
Project: Disney | ABC Studios at The Ranch Project No. 29405568	Date: Mar 2010 Figure No. 5

6.2.5.1 Deep Foundations

Deep foundations may be used to support the proposed buildings located on the northern and southern fill pad areas. The deep foundations may consist of a minimum 24-inch diameter cast-in-drilled-hole (CIDH) concrete piles or 14-inch square, driven precast concrete piles. For preliminary estimating purposes, an allowable compressive capacity of 75 kips and 150 kips may be assumed for CIDH and driven, 14-inch square pre-stressed concrete piles, respectively, with a minimum pile length of 50 feet below the pile cap. Uplift capacity may be assumed to be one-half of the assumed compressive capacity. It is recommended that the piles be established at least 10 feet into the underlying bedrock. Settlement of single piles, or groups of up to 4 piles, may be assumed to be less than ½ inch.

6.2.5.2 Shallow Foundations

Where feasible, shallow spread or continuous footings founded into engineered fill or bedrock may be used for support of lightly-loaded, non-settlement sensitive structures. All footings should be at least 24 inches wide, placed at a depth of 24 inches below the lowest adjacent grade. An allowable bearing value of 2,000 pounds per square foot (psf) and 3,000 psf may be assumed for footings established in engineered fill and bedrock, respectively, in preliminary design. These allowable bearing values are for dead plus live loads to be used in a working stress design, and they have included a safety factor of at least 3. The given value may be increased by one-third for momentary wind or seismic loads. Settlement of footings is estimated to be less than 1 inch under the fully applied allowable bearing pressure. Differential settlement between footings is expected to be on the order of ½ inch.

Footings should be setback from the face of a descending slope with a minimum horizontal distance measured from the outside edge of the bottom of the footings equal to one-third of the height of the slope, or 40 feet, whichever is smaller. Where footings are desired within this setback zone, the footings may be deepened to meet the minimum horizontal distance requirements or deep foundations may be used.

7.0 ADDITIONAL INVESTIGATIONS

The geotechnical recommendations included in this report are provided for project estimating and planning purposes and should be considered preliminary and subject to change based on additional site exploration.

In accordance with regulatory requirements, a design level geotechnical exploration would be performed of the Development Area prior to construction of the Project. The geotechnical exploration should include additional borings and laboratory testing of subsurface materials to allow for the preparation of site grading, foundation, and drainage recommendations. The final grading and foundation plans should be reviewed by the Geotechnical Engineer for conformance to the recommendations of the final geotechnical exploration report.

8.0 LIMITATIONS

URS warrants that our services are performed within the limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended in this report.

The preliminary conclusions and recommendations contained in this report are based on the findings of our field investigation, our interpretation of the geologic and geotechnical conditions encountered, and our past project experience in the vicinity of the Project site. This report is preliminary in nature and is not to be used as the sole basis for final design, construction or remedial action. Further design level geotechnical studies should be performed prior to such decisions.

This report is prepared for Disney Worldwide Services, Inc. and their project consultants to be used in environmental impact report (EIR) preparation, conceptual design, and cost estimating of the Project as described herein. It is intended for this specific purpose only and will not contain sufficient information for building permitting or for the uses of other parties.

9.0 SIGNATURES OF RESPONSIBLE PROFESSIONALS

It has been a pleasure to assist you with this Project. We look forward to being of further assistance during the final design and construction process. Should you have any questions regarding this report, please contact us at 213-996-2200.

On behalf of the project team, this report is respectfully submitted by,

URS CORPORATION

PROFESSIONAL GEOLOGIST
CASEY LEE JENSEN
No. 2320
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
ARNEL M. BICOL
GE No. 2646
EXP. 12-31-10
GEOTECHNICAL
STATE OF CALIFORNIA

Casey Lee Jensen, PG, CEG
Senior Engineering Geologist

Arnel Bicol, PE, GE
Principal Engineer

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: (213) 996-2200
Fax: (213) 996-2290

10.0 REFERENCES

1. California Building Code, Volume 2 (2007-CBC).

2. California Building Standards Commission, November 1, 2002a. California Code of Regulations, Title 24: "California Building Standards Code." Sacramento, CA: California Building Standards Commission. Available at: http://www.bsc.ca.gov

3. California Department of Conservation, Division of Mines and Geology, 1995, State of California Earthquake Fault Zones, Newhall Quadrangle, Revised Official Map June 1, 1995.

4. California Department of Conservation, Division of Mines and Geology. 1997. Guidelines for Evaluating and Mitigating Seismic Hazards in California. Special Publication No. 117. Contact: California Department of Conservation, Division of Mines and Geology, 801 K Street, MS 14-33, Sacramento, CA 95814-3531.

5. California Department of Conservation, Division of Mines and Geology. Revised 1997 (Supplements 1 and 2 added 1999). Fault-Rupture Hazard Zones in California. Special Publication No. 42. Contact: California Department of Conservation, Division of Mines and Geology, 801 K Street, MS 14-33, Sacramento, CA 95814-3531.

6. California Department of Conservation, Division of Mines and Geology, 1998, Seismic Hazard Evaluation of the Mint Canyon 7.5-Minute Quadrangle, Open File Report 98-09.

7. California Department of Conservation, Division of Mines and Geology, 1999, State of California Seismic Hazards Zones Map of the Mint Canyon 7.5-Minute Quadrangle, Official Map Released, March 25, 1999, Scale 1:24,000.

8. Dibblee, T.W. Jr., 1991, Geologic Map of the San Fernando and Van Nuys North Half Quadrangle, Los Angeles, California, Dibblee Geological Foundation Map #DF-33, Scale 1:24,000.

9. Dibblee T.W., Jr., 1996, Geologic Map of the Mint canyon Quadrangle, Los Angeles, California, Dibblee Geological Foundation Map #DF-57, Scale 1:24,000.

10. Federal Emergency Management Agency, 2008, Flood Insurance Rate Map, Los Angeles County, California and incorporated Areas, Panel 840 of 2350, Map Number 06037C0840F, Effective date September 26, 2008.

11. Los Angeles County Department of Public Works (LACDPW), Geotechnical and Materials Engineering Division, Manual for Preparation of Geotechnical Reports, December 2006.

12. State of California. 1972. Alquist-Priolo Earthquake Fault Zoning Act. California Public Resources Code, Section 2621 et seq. Available at: http://www.leginfo.ca.gov/calaw.html.

13. State of California, 1979, Special Studies Zones, San Fernando Quadrangle.

14. State of California. 1990. Seismic Hazards Mapping Act. California Public Resources Code. Section 2690 et seq. Available at: http://www.leginfo.ca.gov/calaw.html.

15. State of California, 1999, Seismic Hazard Zones, San Fernando Quadrangle.

APPENDIX A

BORING LOGS

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	*GRAVEL AND GRAVELLY SOILS* MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	*CLEAN GRAVELS* (LITTLE OR NO FINES)	**GW**	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	**GM**	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	*CLEAN SANDS* (LITTLE OR NO FINES)	**SW**	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	**SM**	SILTY SANDS, SAND - SILT MIXTURES
			SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	*SILTS AND CLAYS*	LIQUID LIMIT LESS THAN 50	**ML**	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	**MH**	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			**PT**	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Dual symbols are used to indicate gravels or sand with 5-12% fines and soils with fines classifying as CL-ML. Symbols separated by a slash indicate borderline soil classifications.

Sampler and Symbol Descriptions

- California sample
- Standard Penetration Test
- No Recovery
- Bk ☒ Bulk sample
- Approximate depth of perched water or groundwater

Laboratory and Field Test Abbreviations

COMP	Compaction test
CORR	Corrosivity test
CON	Consolidation Test
DSCD	Consolidated drained direct shear test
EI	Expansion Index(result in parentheses)
LL=29	Liquid limit (Atterberg limits test)
PI=11	Plasticity Index (Atterberg limits test)
SA	Sieve Analysis (-200 result in parentheses)
-200	Percent passing #200 sieve (test result in parentheses)

BORING LOG KEY

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-1

Date(s) Drilled	09/05/2008	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	24-inch Bucket Auger
Drill Rig Type	EZ BORE (C&L Drilling)	Hammer Data	Variable Kelley bar
Sampling Method(s)	California Modified Sampler, Bulk Samples		
Approximate Groundwater Depth and Date Measured	Groundwater not encountered.		
Comments	Hammer, 12-inch drop; 1590 lbs 0-29 ft, 765 lbs 24-48 ft, 1125 lbs 48-82 ft		

Boring BA-1

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	53.0
Approximate Ground Surface Elevation(ft)	1452.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND light brown, medium dense, dry to moist, fine to medium, with gravel up to 0.75-inch in diameter, cobbles up to 8-inches in diameter			
1450										
	5		1	6						CORR SA (27%<#200, 13%>#4)
							Grades grey, fine			
	10		2	6			Grades with no gravel	9	128	
1440										
	15		3	5				18		
	20		4	3			Grades light brown	15	114	
1430										
	25		5	4				17	112	
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-2

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\BA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring BA-1

Sheet 2 of 2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		7	2				14	106	
1420						SC	Clayey SAND dark brown to black, medium dense, moist, medium, with gravel up to 1-inch in diameter, organic odor, roots			
	35		8	2						SA (24%<#200, 4%>#4)
							Grades fine to medium, with rounded gravel up to 2-inches in diameter			
						SM	Silty SAND greenish-grey, medium dense, moist, fine to medium, trace gravel up to 0.75-inch in diameter Grades moist to wet, with gravel, cobbles up to 7-inches in diameter			
	40		9	3				8	103	
1410										
	45		10	3						
	50		11	2						
1400										
							Boring completed to 53 ft, Hole was backfilled with soil cuttings			
	55									
	60									
1390										
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\BA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-3

Date(s) Drilled	09/05/2008	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	24-inch Bucket Auger
Drill Rig Type	EZ BORE (C&L Drilling)	Hammer Data	Variable Kelley bar
Sampling Method(s)	California Modified Sampler, Bulk Samples		
Approximate Groundwater Depth and Date Measured	Groundwater not encountered.		
Comments	Hammer, 12-inch drop; 1590 lbs 0-29 ft, 765 lbs 24-48 ft, 1125 lbs 48-82 ft		

Boring BA-2

Sheet 1 of 3

Job Number	29405568
Total Depth Drilled (ft)	69.5
Approximate Ground Surface Elevation(ft)	1477.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND light tan with orange mottles, dense, moist, with gravel up to 3-inches in diameter			
	5		1	6						
1470										
	10		2	7			Grades light greenish-grey, with gravel, cobbles up to 5-inches in diameter	9	127	
	15		3	4			Grades medium dense, with cobbles up to 5-inches in diameter			
1460										
	20		4	3			Grades with gravel up to 2-inches in diameter	19	108	
	25		5	3			Grades dark greenish-grey, with sub rounded gravel up to 2-inches diameter, cobbles up to 4-inches in diameter			
1450										
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-4

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\BA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring BA-2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	9			Grades dense, with cobbles up to 4-inches in diameter			
	35		7	3			Grades light brown, medium dense	9	111	
1440										
	40		8	6						
	45		9	7			Grades brown, dense, fine, with angular gravel up to 1-inch in diameter	15	106	
1430										
	50		10	5			Grades with gravel up to 2-inches in diameter			
	55		11	5			Grades brown to light brown, dense, with gravel up to 2-inches in diameter			
1420										
	60		12	8						
						SM	**NATIVE** Silty SAND dark brown to black, very dense, moist, fine, with cobbles Grades with some clay, roots and organics			
			13	17						
	65		14	9			Grades dense, with sub angular gravel up to 1.5-inches in diameter Grades with sandy CLAY layer			
1410										

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\BA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-5

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring BA-2

Sheet 3 of 3

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
			15	35						
							Grades with gravel up to 2-inches in diameter and cobbles up to 4-inches in diameter			
	70									
							Boring completed to 69.5 ft, Hole was backfilled with soil cuttings			
	75									
1400										
	80									
	85									
1390										
	90									
	95									
1380										
	100									
	105									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\BA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-6

Date(s) Drilled	09/11/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (R&C Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-1

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	40.0
Approximate Ground Surface Elevation(ft)	1452.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0					SM	**ARTIFICIAL FILL** Silty SAND light brown, dense, moist, fine			
1450										
	5		1	33						
			2	33			Grades greenish-grey			
	10		3	60			Grades with angular to sub rounded gravel up to 2-inches in diameter			
			4	75/11			Grades very dense			
1440			5	29			Grades gley-green, medium dense			
			6	18						
	15		7	22			Grades with brown mottles			
			8	39			Grades dense			
							Grades with more gravel			
			9	33						
	20		10	23			Grades medium dense, gravel up to 0.5-inch in diameter			
			11	25			Grades light brown, gravel up to 1-inch in diameter			
1430			12	62			Grades dark gley-green, very dense, no gravel, trace clay			
			13	44/11			Grades with light brown mottles			
	25		14	63			Grades greenish-grey			
			15	80			Grades with bluish-green mottles			
			16	95			Grades light brown, no clay, with gravel up to 0.5-inch in diameter			
	30		17	53			Grades dark greenish-grey, no gravel, trace clay			

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-7

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-1

Sheet 2 of 2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30									
			18	50						
1420			19	50-6			Grades dark bluish-green			
			20	88		SC	Clayey SAND dark brown to black, very dense, moist, fine, with rounded gravel up to 1-inch in diameter			
	35		21	32						
			22	24			Grades medium dense			
						SM	Silty SAND greenish-grey, medium dense, moist, fine to medium, trace gravel			
	40									
1410							Boring completed to 40 ft, Hole was backfilled with soil cuttings			
	45									
	50									
1400										
	55									
	60									
1390										
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-8

Date(s) Drilled	9/11/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (R&C Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-2

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	46.0
Approximate Ground Surface Elevation(ft)	1477.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0					SM	**ARTIFICIAL FILL** Silty SAND light brown, dense, moist, fine			
	5		1	45						
1470										
	10		2	45			Grades light brown to greenish-grey			
	15		3	36						
1460			4	47						
			5	43						
	20		6	41			Grades with gravel up to 0.5-inch in diameter Grades very dense			
			7	43						
			8	43/10						
			9	48/11						
	25									
1450										
	30		10	41						

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-9

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30									
	35		11	39						
1440										
	40		12	36						
	45		13 14	100/6 125/6			Grades with rounded to subangular gravel up to 3-inches in diameter			
1430							Boring completed to 46 ft, Hole was backfilled with soil cuttings			
	50									
	55									
1420										
	60									
	65									
1410										

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-10

Date(s) Drilled	10/6/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-3

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	31.5
Approximate Ground Surface Elevation(ft)	1453.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND yellowish-brown, medium dense, moist, fine, with gravel up to 1-inch in diameter			EI (26)
1450										
	5		1	31		SM/ML	Silty SAND to Sandy SILT greenish-grey, medium dense, moist, fine	14	109	
						SM	Silty SAND bluish-green, medium dense, moist			
	10		2	13						
						SC	Clayey SAND bluish-green, medium dense, moist			
1440										
	15		3	30				28	100	
	20		4	25		CL-ML	**NATIVE (ALLUVIUM)** Silty CLAY to Clayey SILT dark brown, stiff, moist, with gravel up to 1-inch in diameter, roots			
1430										
	25		5	61		SM	**SAUGUS FORMATION (Qts)** SANDSTONE orange to light-brown, moist, fine to medium, with sub rounded gravel up to 0.25-inch in diameter, cobbles up to 4-inches in diameter Grades fine, slightly weathered	10	121	
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-11

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-3

Sheet 2 of 2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	85						
1420							Boring completed to 31.5 ft, Hole was backfilled with soil cuttings			
	35									
	40									
1410										
	45									
	50									
1400										
	55									
	60									
1390										
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-12

Date(s) Drilled	10/6/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 62.5 ft bgs		
Comments			

Boring HSA-4

Sheet 1 of 3

Job Number	29405568
Total Depth Drilled (ft)	72.0
Approximate Ground Surface Elevation(ft)	1449.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND brown to yellowish-brown, medium dense, moist, fine, with sub angular gravel up to 0.25-inch in diameter			COMP CORR DSCD
	5		1	49				12	116	
1440						SC	Clayey SAND dark greenish-grey, medium dense, dry to moist, fine			
	10		2	24						
	15		3	76				20	112	-200(57)
1430										
	20		4	34			Grades with sub angular gravel up to 0.5-inch in diameter			
						SC-CL	Clayey SAND to Sandy CLAY greenish-grey, dense, dry to moist, fine			
	25		5	36			Grades very dense, with sub rounded gravel up to 0.25-inch in diameter	11	116	
1420						SM	Silty SAND bluish-green, medium dense, slightly moist, fine			
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-13

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-4

Sheet 2 of 3

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	28						
	35		7	48			Grades greenish-grey	12	122	
1410										
	40		8	38			Grades with rounded gravel up to 0.5-inch in diameter			
						SM	**NATIVE (ALLUVIUM)** Silty SAND dark brown, medium dense, moist, fine, with gravel up to 0.75-inch in diameter, roots			
	45		9	24				9	121	-200(24)
						SC	Clayey SAND dark brown to black, medium dense, moist, fine, with sub rounded gravel up to 1-inch in diameter			
1400	50		10	44						
	55		11	15				16	112	
1390										
	60		12	13			Grades yellowish-brown, wet, fine to medium, with fine gravel			
	65		13	50			Grades yellowish-brown to brown, with mica	21	106	

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-14

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-4

Sheet 3 of 3

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1380	70		14	64			Grades very dense			
							Boring completed to 72 ft, Hole was backfilled with soil cuttings			
	75									
1370	80									
	85									
1360	90									
	95									
1350	100									
	105									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-15

Date(s) Drilled	10/6/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 79 ft bgs		
Comments			

Boring HSA-5

Sheet 1 of 3

Job Number	29405568
Total Depth Drilled (ft)	90.0
Approximate Ground Surface Elevation(ft)	1461.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			ML	**ARTIFICIAL FILL** Silty SAND light brown to brown, medium dense, slightly moist, fine, with sub rounded gravel up to 0.5-inch in diameter			
1460										
	5		1	21				12		
						SC	Clayey SAND dark green to bluish-green, dense, moist, fine, with sub angular gravel up to 0.5-inch in diameter			
	10		2	32				7	128	
1450										
	15		3	31			Grades medium dense			
	20		4	27				12	118	
1440										
	25		5	46						
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-16

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1430	30		6	43/10			Grades very dense	7	122	
	35		7	19			Grades medium dense	11		
						CL	Sandy CLAY dark greenish-grey, hard, moist, with sub angular gravel up to 0.25-inch in diameter			
1420	40		8	35				16	116	
	45		9	31						
1410	50		10	42/10				15	116	
						SC	**NATIVE (ALLUVIUM)** Clayey SAND greenish-grey, medium dense, moist, with sub angular gravel up to 0.75-inch in diameter			
	55		11	9			Grades dark brown to black	15		-200(33)
							Grades very dense, fine			
1400	60		12	46				18	109	
	65		13	11			Grades with some clay			

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-5

Sheet 3 of 3

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	70		14	33			Grades dense, fine to medium, moist to wet, with mica	14	113	
1390										
	75		15	19		SM	Silty SAND brown to yellowish-brown, medium dense, moist to wet, fine to medium			
							Grades wet			
	80		16	23				23	105	
1380										
	85		17	38			Grades dense, with gravel up to 2-inches in diameter			
	90									
1370							Boring completed to 90 ft, Hole was backfilled with soil cuttings			
	95									
	100									
1360										
	105									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-18

Date(s) Drilled	10/7/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 61 ft bgs		
Comments			

Boring HSA-6

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	61.5
Approximate Ground Surface Elevation(ft)	1463.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND brown, medium dense, moist, with sub rounded gravel up to 1-inch in diameter			
1460										
	5		1	26				15	115	
	10		2	24			Grades with clay			
1450										
	15		3	20				13	114	
	20		4	39			Grades dense			
1440										
	25		5	19			Grades medium dense	9	110	
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-19

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-6

Sheet 2 of 2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	23						
1430										
	35		7	25		SC/CL	Clayey SAND to CLAY dark green to gley with light brown to orange mottles, dense to very stiff, moist, fine, with sub rounded gravel up to 0.75-inch in diameter	26	101	-200(60)
	40		8	20		SM	Silty SAND dark green to gley with light brown to orange mottles, medium dense, moist, fine to medium, with sub rounded gravel up to 0.25-inch in diameter			
1420										
	45		9	24			Grades light yellowish-brown	13	118	
	50		10	22		SM	**NATIVE (ALLUVIUM)** Silty SAND dark brown to black, medium dense, moist, fine, with gravel up to 1.5-inches in diameter			
1410										
	55		11	16		SC	Clayey SAND dark brown to black, medium dense to very stiff, fine to medium	18	109	DSCD
	60		12	22		SM	Silty SAND light brown to yellowish-brown, medium dense, wet, with rounded gravel up to 2-inches in diameter ▼			
1400							Boring completed to 61.5 ft, Hole was backfilled with soil cuttings			
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-20

Date(s) Drilled	10/7/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 71.5 ft bgs		
Comments			

Boring HSA-7

Sheet 1 of 3

Job Number	29405568
Total Depth Drilled (ft)	75.5
Approximate Ground Surface Elevation(ft)	1471.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND light brown to greyish-brown, medium dense to dense, moist, with sub rounded gravel up to 0.75-inch in diameter			CORR COMP
1470										
	5		1	31				13	119	
							Grades dark greenish-grey, medium dense, fine			
	10		2	18						
1460							Grades with sub rounded gravel up to 1-inch in diameter			
	15		3	22				13		
	20		4	16			Grades with some silt			
1450										
						CL	Sandy CLAY olive with yellow and grey mottles, very stiff, moist, fine to medium, with sub angular gravel up to 0.25-inch in diameter			
	25		5	27				14	118	CON
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-21

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1440	30		6	19			Grades gley-green, with gravel up to 1-inch in diameter			
	35		7	30			Grades olive-grey, fine, sub rounded gravel up to 3-inches in diameter, with cobbles up to 8-inches in diameter, sand lenses	14		
						SM	Silty SAND dark green to gley-green, medium dense, moist, fine, with sub rounded gravel up to 0.25-inch in diameter			
1430	40		8	20						
	45		9	23			Grades dark bluish-grey, fine to medium, trace gravel up to 0.5-inch in diameter	12	121	
1420	50		10	19			Grades brown to yellowish-brown			
						SC	Clayey SAND olive with brown and grey mottles, medium dense, moist, fine to medium, trace gravel up to 0.25-inch in diameter			
	55		11	18				24	101	
						SM	Silty SAND brown to yellowish-brown,dense, moist, fine, trace sub rounded gravel up to 0.5-inch in diameter			
1410	60		12	31		SC	**NATIVE (ALLUVIUM)** Clayey SAND dark brown to black, dense, moist, fine, roots			
	65		13	36/11			Grades to clay, brownish-yellow, hard, fine to medium	14	116	
						SP	Poorly graded SAND grey, dense, moist, fine to medium, with sub			

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-7

Sheet 3 of 3

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
							rounded gravel up to 0.5-inch in diameter			
						SP-SM	SAND with silt brown to greyish-brown, medium dense, moist to wet, fine, with sub rounded gravel up to 0.5-inch in diameter			
	70		14	28						
1400										
	75		15	22						
							Grades coarse			
							Boring completed to 75.5 ft, Hole was backfilled with soil cuttings			
	80									
1390										
	85									
	90									
1380										
	95									
	100									
1370										
	105									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-23

Date(s) Drilled	10/7/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-8

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	52.5
Approximate Ground Surface Elevation(ft)	1480.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1480	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND yellowish-brown with orange mottles, medium dense, slightly moist, with sub angular gravel up to 0.5-inch in diameter			
	5		1	26						
1470	10		2	28			Grades moist			
	15		3	22			Grades grey with light brown mottles, fine to medium	9	124	
1460	20		4	30			Grades dense			
	25		5	22			Grades dark green to grey-green with orange mottles, medium dense			
1450	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-24

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-8

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1450	30		6	26			Grades bluish-green, more sand, trace cobbles up to 4-inches in diameter			
						SC-SM	Silty Clayey SAND grey with brown to yellow mottles, dense, moist, fine to medium, with sub rounded gravel up to 0.75-inch in diameter and cobbles up to 3-inches in diameter			
	35		7	32/11			Grades very dense, with no clay, trace mica	15	114	
						SP-SM	**NATIVE (ALLUVIUM)** SAND with silt yellowish-brown to brown, dense, moist, fine to medium, some sub rounded gravel up to 0.5-inch in diameter			
1440	40		8	49						
	45		9	45/10			Grades olive, gravel up to 0.75-inch in diameter	7	120	DSCD
1430	50		10	50/6			Grades very dense, with gravel up to 1-inch in diameter			
			11	50/6				7		
							Boring completed to 52.5 ft, Hole was backfilled with soil cuttings			
	55									
1420	60									
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

Date(s) Drilled	10/8/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-9

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	61.0
Approximate Ground Surface Elevation(ft)	1477.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND yellowish-brown, medium dense, slightly moist, fine, with sub angular gravel up to 0.25-inch in diameter			
	5		1	17				17		
1470										
	10		2	11			Grades dark green to grey-green, with cobbles up to 4-inches diameter, trace mica			
	15		3	28			Grades dark green to greyish-green, trace clay, fine to medium, trace cobbles up to 4-inches in diameter	12		-200(29)
1460										
						ML	Sandy SILT dark green to greyish-green, medium dense, moist, fine to medium, with angular gravel up to 1-inch diameter, trace clay			
	20		4	22						
	25		5	13			Grades dark bluish-grey	15		LL=32, PI=11
1450										
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-26

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

Boring HSA-9

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	17			Grades yellowish-brown, with mica Grades brown, fine to coarse, with clay			
	35		7	23		SM	Silty SAND yellowish-brown, medium dense, moist, fine to medium, with sub rounded gravel up to 0.5-inch in diameter	14		-200(28)
1440										
	40		8	33		SM	**NATIVE (ALLUVIUM)** Silty SAND olive with yellow mottles, dense, moist, fine to medium, with sub rounded gravel up to 1-inch in diameter			
	45		9	31			Grades coarse, with cobbles up to 4-inches diameter	13		
1430										
	50		10	30						
	55		11	27			Grades brownish-yellow, medium dense, with rounded gravel up to 0.75-inch in diameter and cobbles up to 3-inches in diameter	9		
1420										
	60		12	20			Grades olive with no cobbles			
							Boring completed to 61 ft, Hole was backfilled with soil cuttings			
	65									
1410										

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

Date(s) Drilled	10/8/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-10

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	42.5
Approximate Ground Surface Elevation(ft)	1489.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND yellowish-brown, medium dense, slightly moist, fine, with some gravel up to 1-inch diameter			
	5		1	23			Grades yellow with brown mottles, little medium sand	13		
1480	10		2	33			Grades dark green to gley-green, dense, trace clay, trace mica, no gravel			
	15		3	39			Grades dark bluish-grey, with gravel up to 0.75-inch in diameter and cobbles up to 4-inches diameter	12		
1470	20		4	18			Grades medium dense, with no gravel, no cobbles			
	25		5	12			Grades olive to brownish-yellow, medium dense, moist, fine to medium, with sub angular gravel up to 0.75-inch in diameter	13		
1460	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-28

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-10

Sheet 2 of 2

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	30		6	18						
	35		7	49		SM	**NATIVE (ALLUVIUM)** Silty SAND pale yellow, dense, moist, fine, with sub angular gravel up to 1-inch in diameter, trace clay Grades light grey, dense, with gravel up to 1-inch in diameter	8		
1450										
	40		8	69			Grades olive with yellow mottles, very dense	11	118	
			9	33/10		SM	**SAUGUS FORMATION (Qts)** Silty SAND yellowish-brown to grey, very dense, fine, trace coarse, moderately weathered, friable, some silt lenses			
	45						Boring completed to 42.5 ft, Hole was backfilled with soil cuttings			
1440										
	50									
	55									
1430										
	60									
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

FIGURE A-29

Date(s) Drilled	10/8/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 11.5 ft bgs		
Comments			

Boring HSA-11

Sheet 1 of 2

Job Number	29405568
Total Depth Drilled (ft)	57.0
Approximate Ground Surface Elevation(ft)	1421.0 MSL

Elevation (ft)	Depth (ft)	Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1420	0		BK1			SM	**ARTIFICIAL FILL** Silty SAND brown, loose to medium dense, moist, trace fine gravel			
	5		1	17		SM	**NATIVE (ALLUVIUM)** Silty SAND brown with olive-grey mottles, medium dense, moist, fine, with sub subrounded gravel up to 0.75-inch in diameter, rootlets	4	101	
1410	10		2	52			Grades brownish-yellow, very dense, coarse, with angular gravel up to 0.75-inch in diameter and cobbles up to 4-inches in diameter Grades wet	4		SA (7%<#200, 43%>#4)
						SW	SAND brown to yellowish-brown, medium dense, wet, medium to coarse, with gravel up to 1-inch in diameter, cohesionless			
	15		3	25						
1400	20		4	17			Grades dark greenish-grey, with gravel and cobbles up to 4-inches in diameter			
						SM	Silty SAND dark brown to dark grey, loose, wet, fine to medium, trace sub rounded gravel up to 1-inch in diameter Grades loose, trace gravel			
	25		5	7				16	114	
	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-30

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

19802 Placerita Canyon Road, Los Angeles County, CA

FOR: Disney Worldwide Services, Inc.

Boring HSA-11

Elevation (ft)	Depth (ft)	SAMPLES Type	SAMPLES Number	SAMPLES Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
1390	30		6	6			Grades no gravel			
	35		7	10			Grades medium dense	21	103	
						CL-ML	Sandy SILT to Sandy CLAY dark greyish-brown, medium stiff, moist, fine			
1380	40		8	5						
	45		9	6			Grades black, trace gravel up to 0.25-inch in diameter			CON LL=39, PI=23
						CL	Sandy CLAY dark grey, stiff, moist, fine to medium, low plasticity Grades stiff			
1370	50		10	10				21		-200(54)
						CL-ML	Sandy SILT to Sandy CLAY brown to dark bluish-grey, hard, moist, fine to medium, sandy lenses			
	55		11	50/6				28	105	
			12	50/1						Grades hard to drill
							Boring completed to 57 ft, Hole was backfilled with soil cuttings			
1360	60									
	65									

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

URS

Date(s) Drilled	10/8/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	No ground water encountered		
Comments			

Boring HSA-12

Sheet 1 of 1

Job Number	29405568
Total Depth Drilled (ft)	26.5
Approximate Ground Surface Elevation(ft)	1439.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SM	**NATIVE (ALLUVIUM)** Silty SAND brown, loose, moist, fine, trace sub angular gravel up to 0.5-inch in diameter			
	5		1	5				7		
1430						SM	**SAUGUS FORMATION (Qts)** SANDSTONE yellowish-brown to brown, medium dense, slightly moist, fine, trace coarse, with sub angular gravel to up 1-inch in diameter, moderately weathered, friable			
	10		2	17				6	113	
	15		3	55			Grades very dense, low to moderate hardness, less silt, with sub rounded to sub angular gravel up to 1-inch diameter, slightly weathered, friable			
1420	20		4	35			Grades to poorly graded sandstone with silt, yellow to white, coarse gravel and cobbles	4	142	
	25		5	30			Grades to silty sandstone, pale yellow, medium dense, moist to wet, fine to coarse, sub rounded gravel up to 1-inch in diameter	14		
1410	30						Boring completed to 26.5 ft, Hole was backfilled with soil cuttings			

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

URS

FIGURE A-32

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

Date(s) Drilled	10/8/08	Logged By	M.Snyder
Drilling Method	Bucket Auger	Drill Bit Size/Type	7.25-inch OD
Drill Rig Type	CME-75 (Martini Drilling)	Hammer Data	140 lbs, 30-inch drop height, Auto trip
Sampling Method(s)	California, SPT, Bulk		
Approximate Groundwater Depth and Date Measured	Ground water encountered at 16 ft bgs		
Comments			

Boring HSA-13

Sheet 1 of 1

Job Number	29405568
Total Depth Drilled (ft)	17.0
Approximate Ground Surface Elevation(ft)	1429.0 MSL

Elevation (ft)	Depth (ft)	SAMPLES Type	Number	Blows per foot	Graphic Log	USCS	MATERIAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	OTHER TESTS and REMARKS
	0		BK1			SP	**NATIVE (ALLUVIUM)** Poorly graded SAND light brown, loose to medium dense, dry to moist, fine to medium, some rounded cobbles up to 4-inches in diameter, cohesionless			
	5		1	15			Grades medium dense	3	108	
1420						SM	Silty SAND yellowish-brown, medium dense, moist, fine to medium, trace rounded gravel up to 1-inch in diameter, cohesionless			
	10		2	14				6		
	15		3	44/11				9	128	
			4	50/1			Grades coarse, very dense, wet, with gravel up to 0.75-inch in diameter, cobbles up to 4-inches in diameter			
1410							Boring completed to 17 ft, Hole was backfilled with soil cuttings			
	20									
	25									
1400	30									

This log is part of the report prepared by URS for this project and should be read together with the report. This summary applies only at the location of the exploration and at the time of drilling or excavation. Subsurface conditions may differ at other locations and may change at this location with time. Data presented are a simplification of actual conditions encountered.

LOG OF BORING

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
FOR: Disney Worldwide Services, Inc.

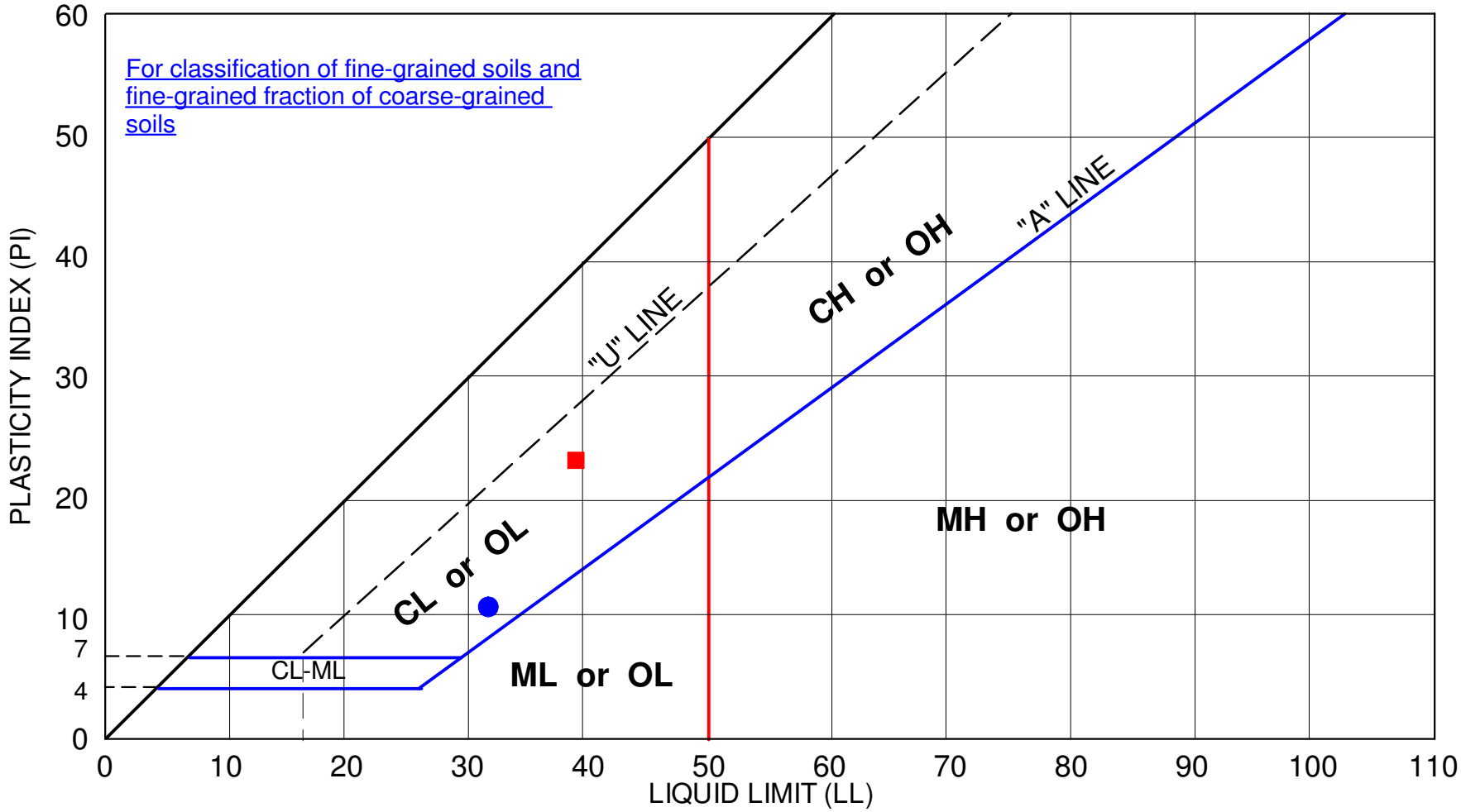
URS

FIGURE A-33

Report: URS-1FOOT; Project File: L:_PROJECT CENTRAL FILES\29405568 - DISNEY ABC STUDIOS AT THE RANCH\400_TECHNICAL\406_EXHIBITS\BORING LOGS\HSA GOLDEN OAKS.GPJ; Data Template:DMLA.GDT Printed: 2/10/10

APPENDIX B

LABORATORY TEST RESULTS



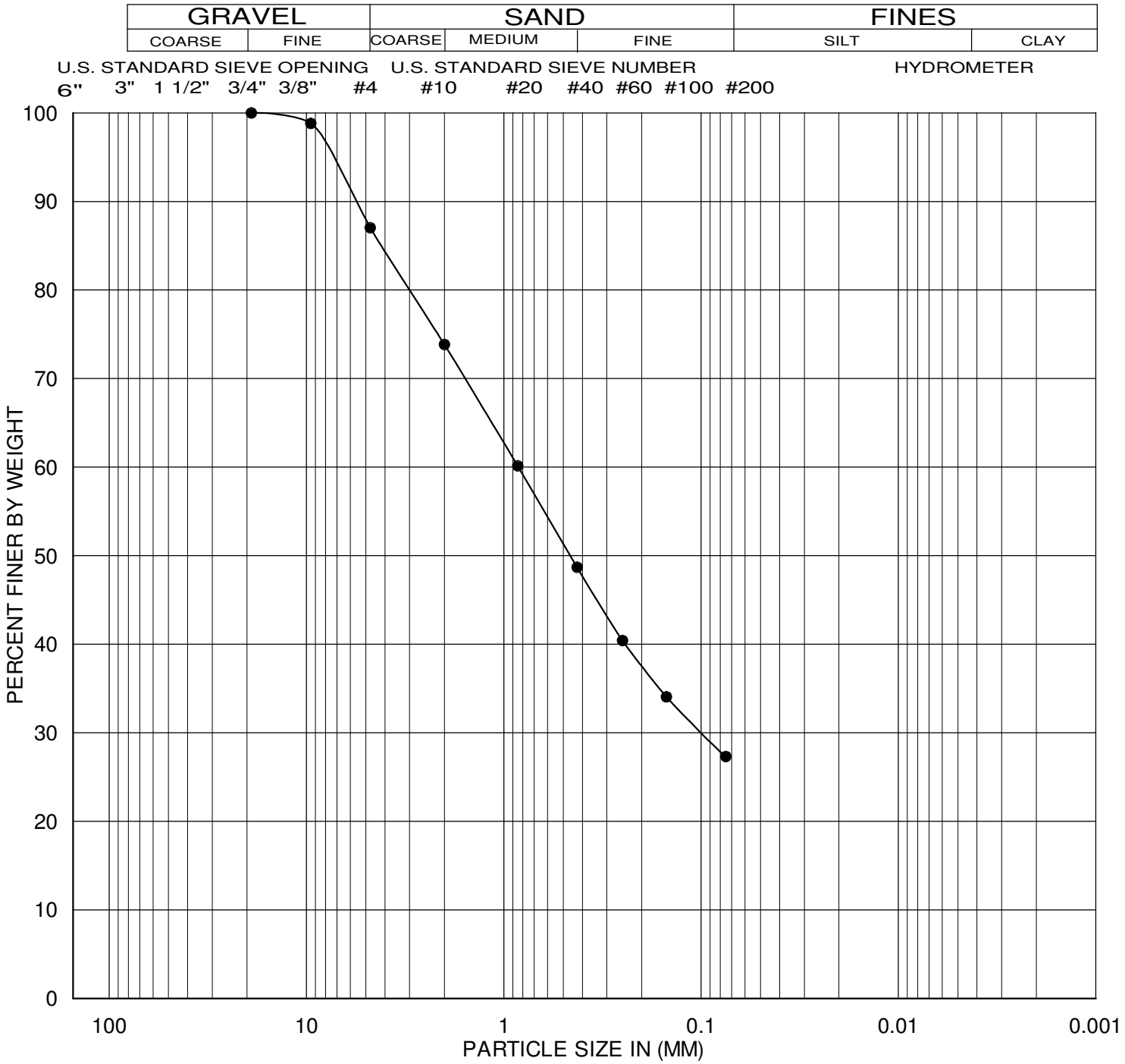
SYMBOL	SAMPLE	DEPTH (ft.)	USCS
●	HSA-9	25	CL
■	HSA-11	45	CL

ATTERBERG LIMITS
(ASTM D4318)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-1



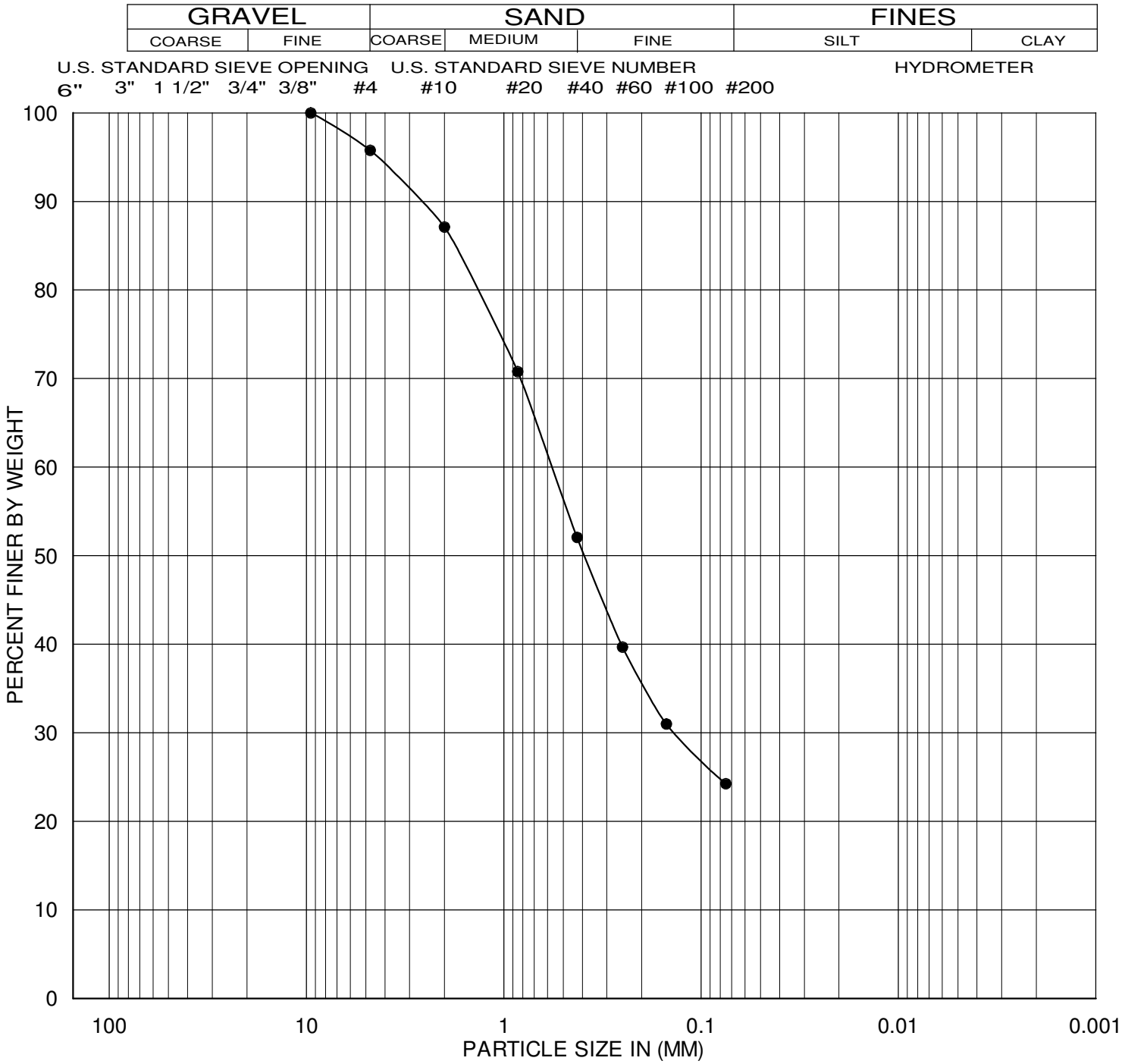
Symbol	Boring No.	Sample No.	Depth (in.)	GR:SA:SI-CL (%)	Sample Description (USCS Symbol)
●	BA-1	1	5	13:60:27	Silty SAND (SM), yellowish brown some fine gravel

PARTICLE-SIZE DISTRIBUTION CURVE
(ASTM D-422)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-2



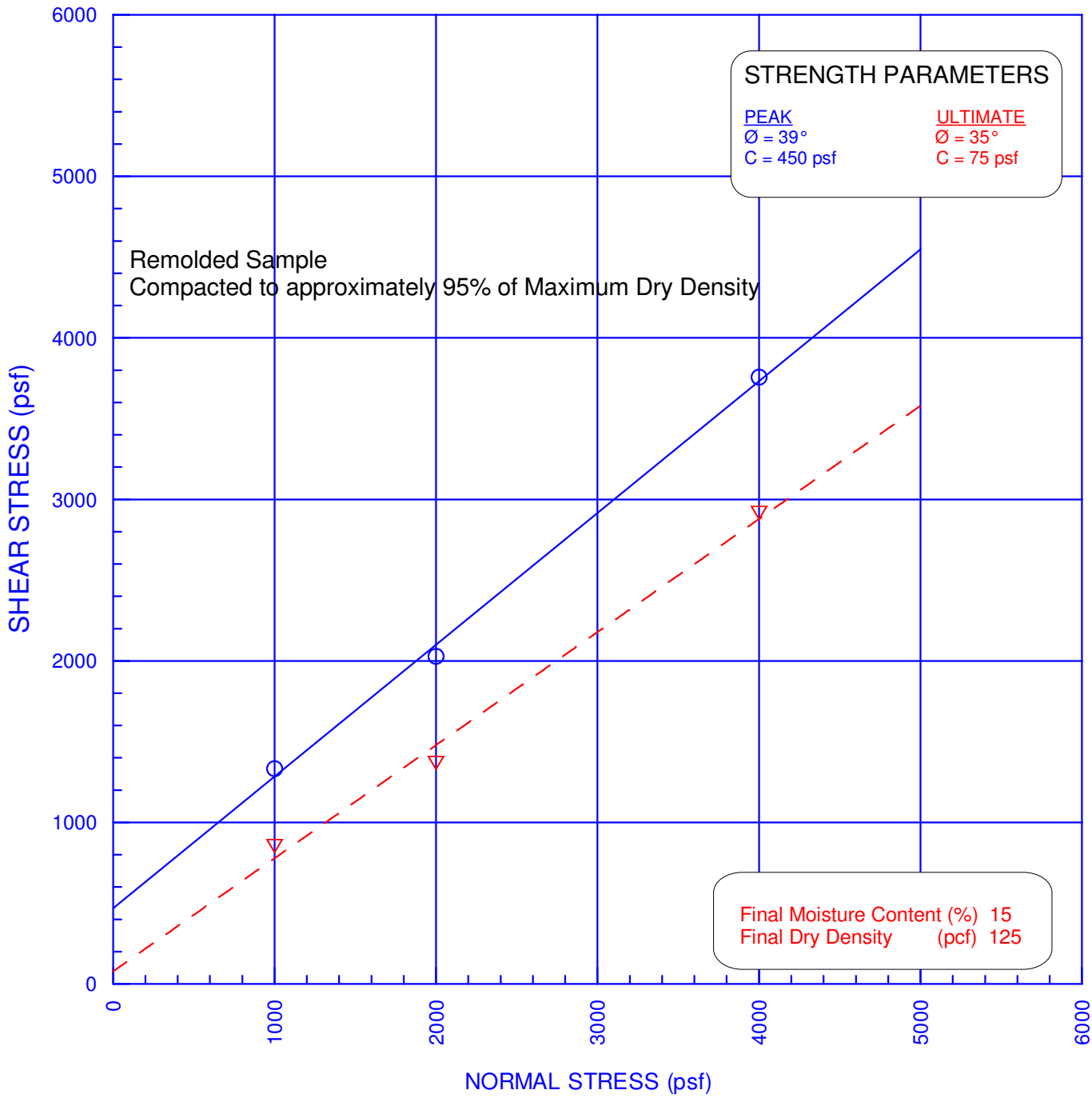
Symbol	Boring No.	Sample No.	Depth (in.)	GR:SA:SI-CL (%)	Sample Description (USCS Symbol)
●	BA-1	7	35	4:72:24	Silty SAND (SM), dark brown, trace fine gravel

PARTICLE-SIZE DISTRIBUTION CURVE
(ASTM D-422)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-3



BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-4	BK-4	0-5	0.005	1000	○ 1332	▽ 852
				2000	○ 2028	▽ 1368
				4000	○ 3756	▽ 2916

Sample Description: Silty SAND (SM)

DIRECT SHEAR TEST RESULTS

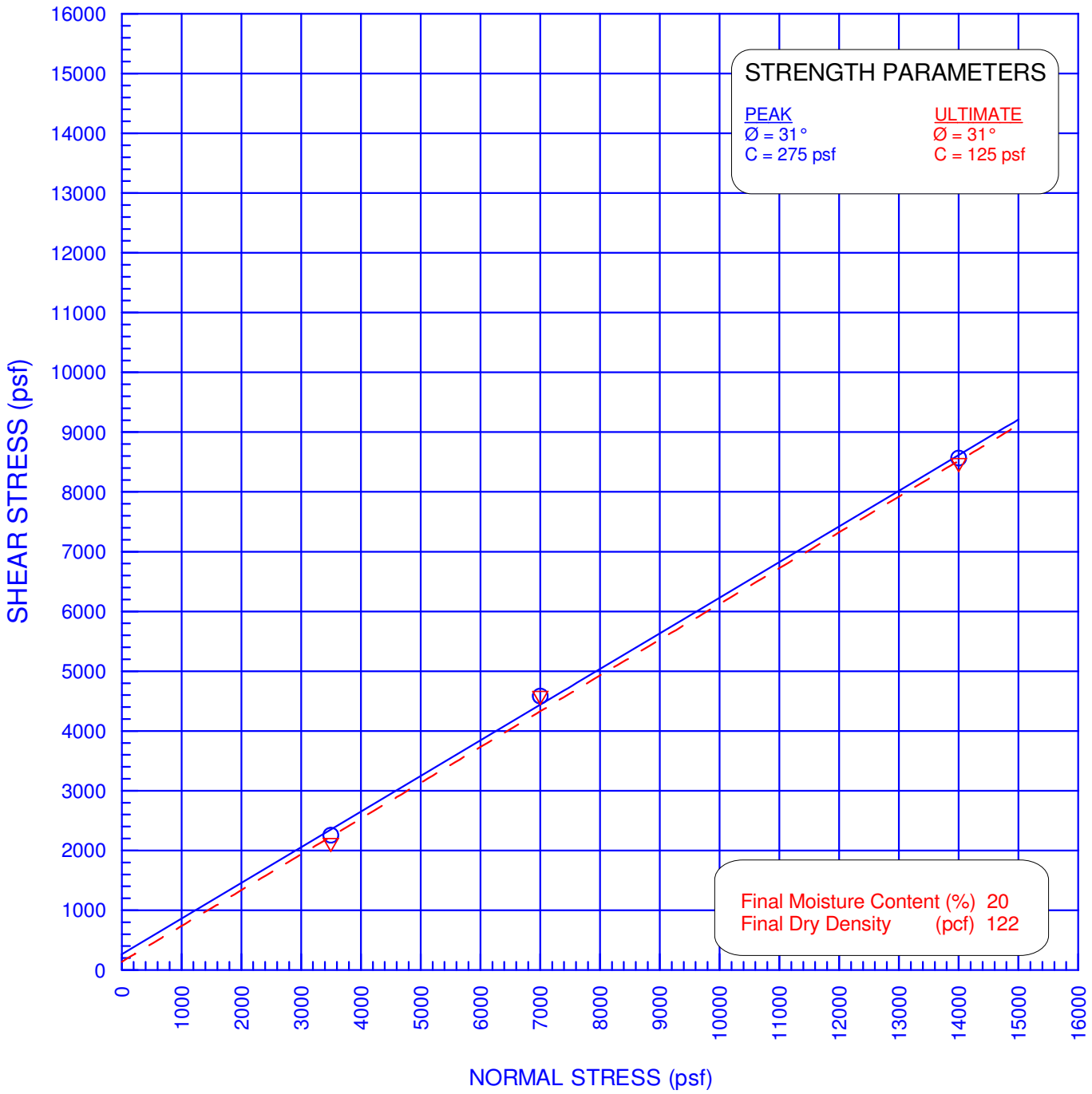
CONSOLIDATED DRAINED

ASTM D 3080

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-4



BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-6	11	55	0.001	3500	○ 2256	▽ 2208
				7000	○ 4584	▽ 4548
				14000	○ 8567	▽ 8447

Sample Description: Sandy Lean CLAY (CL)

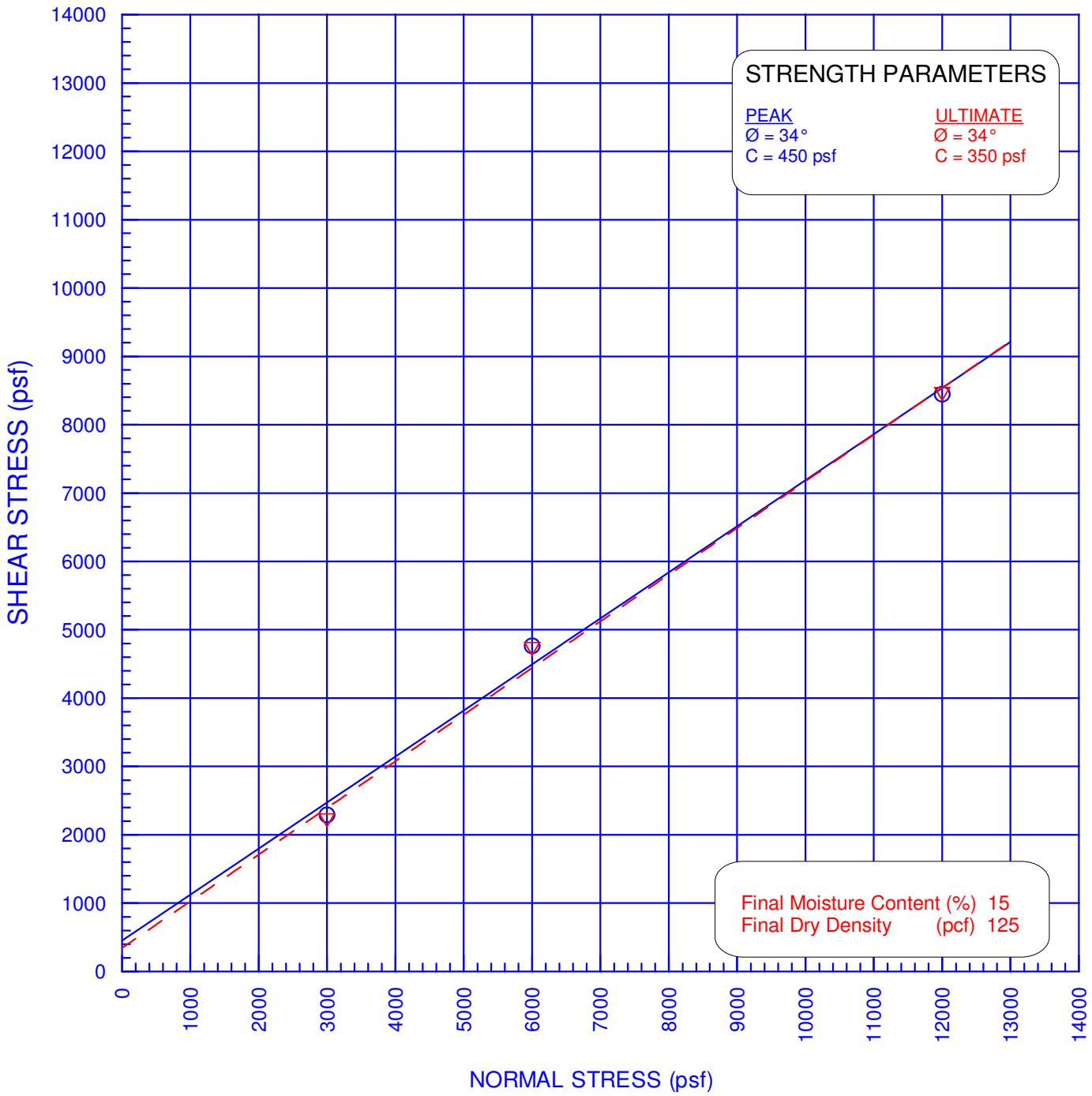
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED
ASTM D 3080

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-5



BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-8	9	45	0.010	3000	○ 2292	▽ 2210
				6000	○ 4764	▽ 4716
				12000	○ 8447	▽ 8447

Sample Description: Poorly Graded SAND with Silt (SP-SM)

DIRECT SHEAR TEST RESULTS

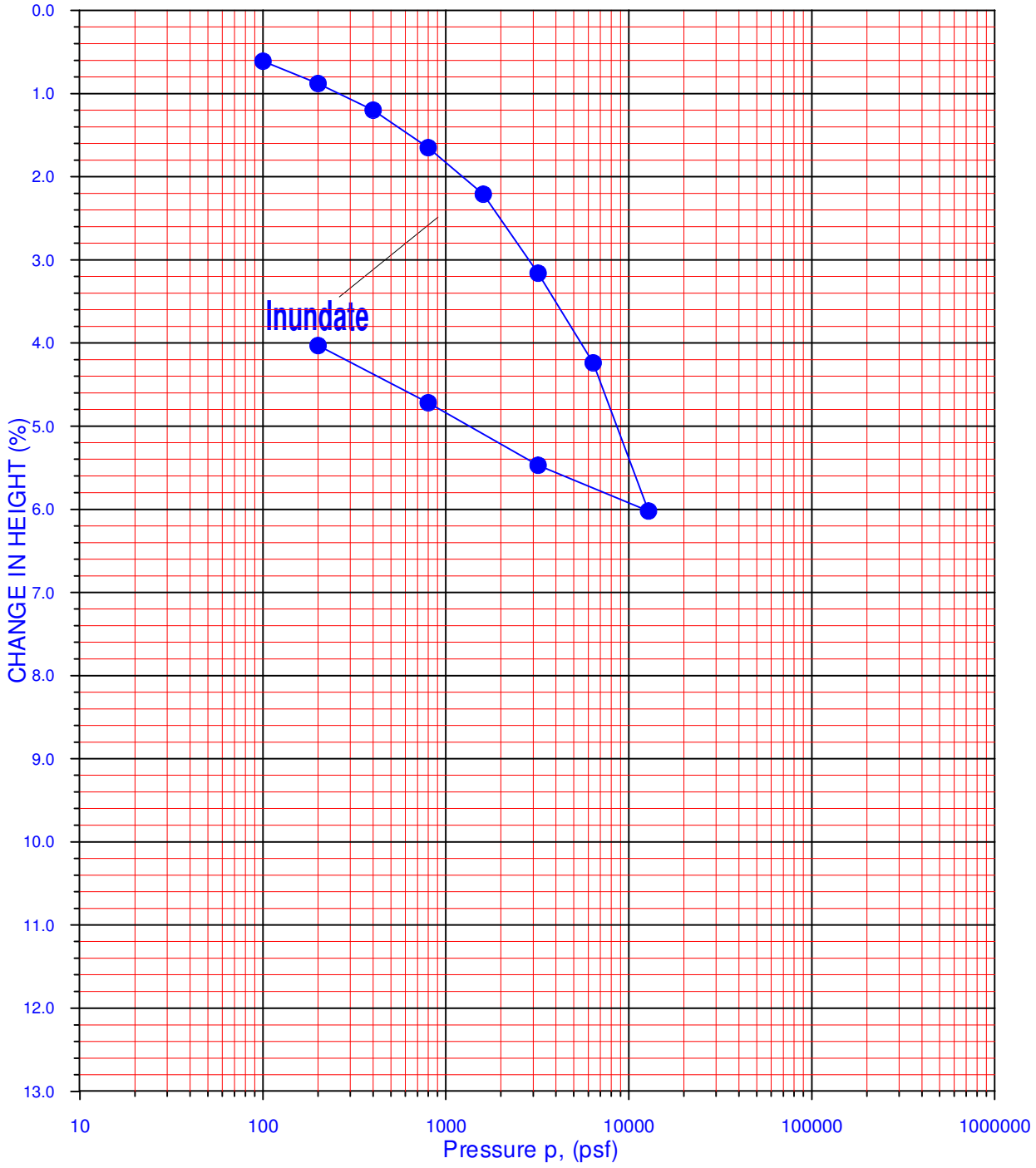
CONSOLIDATED DRAINED

ASTM D 3080

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-6



BORING NO.	SAMPLE NO.	DEPTH (ft.)	MOISTURE CONTENT (%) Initial / Final	DRY DENSITY (pcf) Initial / Final	DEGREE OF SATURATION (%) Initial / Final
HSA-7	5	25	14 / 16	118 / 124	87 / 100

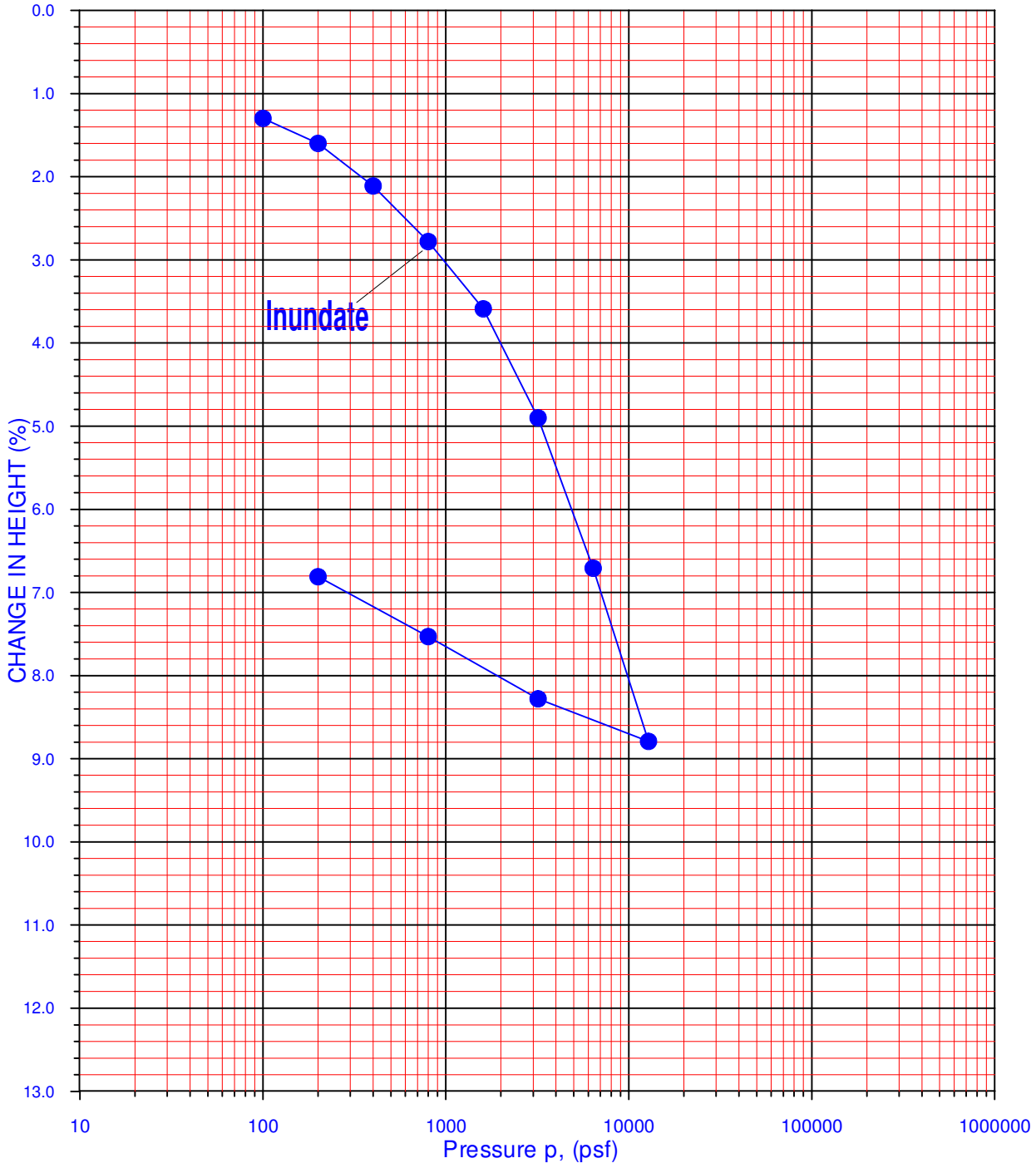
Sample Description: Sandy Lean CLAY (CL)

ONE-DIMENSIONAL CONSOLIDATION
(ASTM D2435)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-7



BORING NO.	SAMPLE NO.	DEPTH (ft.)	MOISTURE CONTENT (%) Initial / Final	DRY DENSITY (pcf) Initial / Final	DEGREE OF SATURATION (%) Initial / Final
HSA-11	9	45	22 / 17	107 / 118	87 / 100

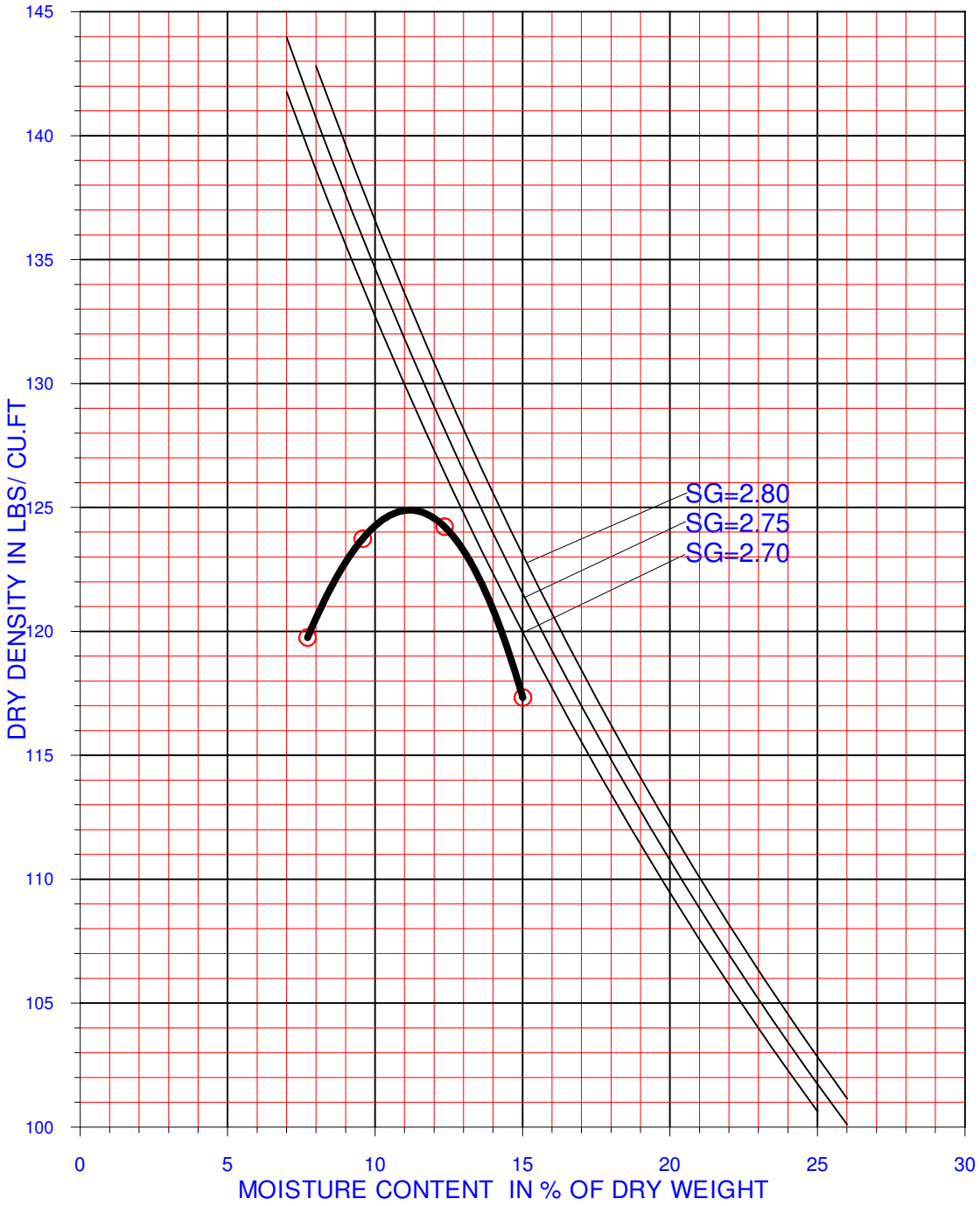
Sample Description: Sandy Lean CLAY (CL)

ONE-DIMENSIONAL CONSOLIDATION
(ASTM D2435)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-8



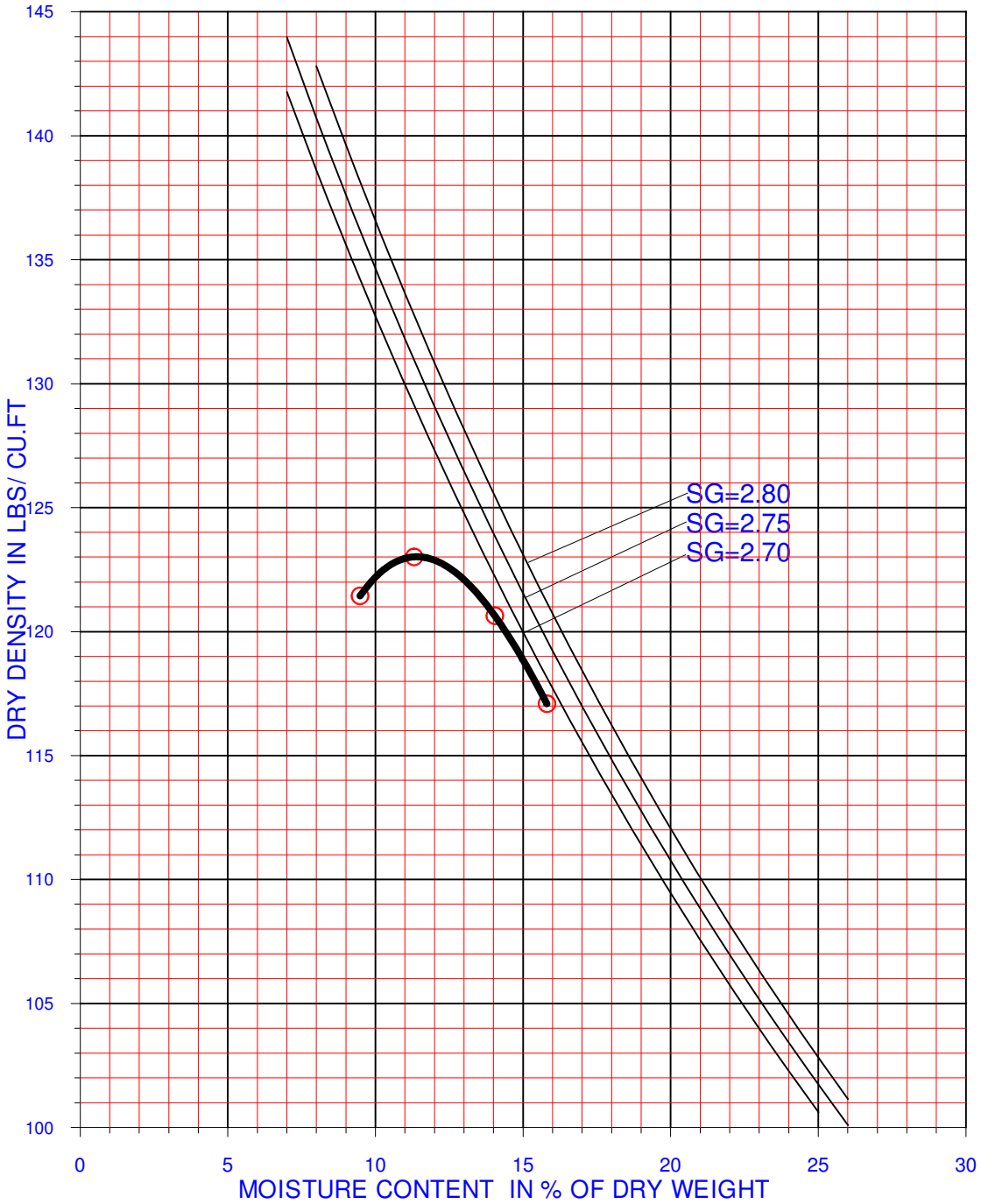
SYMBOL	BORING NUMBER	SAMPLE NUMBER	Depth (ft)	SOIL DESCRIPTION	TEST METHOD	OPT. MOISTURE CONTENT (%)	MAX. DRY DENSITY (pcf)
○	HSA-4	BK-4	0-5	Silty SAND (SM)	ASTM D1557-A	11.0	125

COMPACTION TEST RESULTS
(ASTM D1557-A)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-9



SYMBOL	BORING NUMBER	SAMPLE NUMBER	Depth (ft)	SOIL DESCRIPTION	TEST METHOD	OPT. MOISTURE CONTENT (%)	MAX. DRY DENSITY (pcf)
○	HSA-7	BK-7	0-5	Silty SAND (SM)	ASTM D1557-A	11.5	123

COMPACTION TEST RESULTS
(ASTM D1557-A)

Proposed Disney | ABC Studios at The Ranch
19802 Placerita Canyon Road, Los Angeles County, CA
For: Disney Worldwide Services, Inc.

URS

FIGURE B-10

Appendix B.2

Preliminary Geotechnical Report

URS

PRELIMINARY GEOTECHNICAL INVESTIGATION

VESTING TENTATIVE TRACT MAP
NO. 71216

GOLDEN OAK RANCH
19802 PLACERITA CANYON ROAD
NEWHALL, CALIFORNIA 91321

PREPARED FOR:
DISNEY WORLDWIDE SERVICES, INC.

URS PROJECT NO. 29405568
FEBRUARY 28, 2011

February 28, 2011

Disney Worldwide Services, Inc.
Disney CORE Services
500 South Buena Vista Street, Shorts Bldg. 203
Burbank, California 91521-2670

Attention: Mr. Dan McBrearty

Subject: Transmittal
Preliminary Geotechnical Investigation
Vesting Tentative Tract Map No. 71216
Golden Oak Ranch
19802 Placerita Canyon Road
Newhall, California 91321
URS Project No. 29405568

URS Corporation (URS) is pleased to present the results of our preliminary geotechnical investigation to support the subdivision of Vesting Tentative Tract Map No. 71216 (Project) located on the westernmost 44.28 acres of Golden Oak Ranch in the unincorporated territory of the County of Los Angeles, State of California.

If you have any questions regarding this report, please contact us.

Sincerely,

URS CORPORATION

Casey Lee Jensen, PG, CEG
Project Manager

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: (213) 996-2200
Fax: (213) 996-2290

TABLE OF CONTENTS

SECTION **PAGE**

1.0 INTRODUCTION 1

1.1 PROJECT DESCRIPTION 1
1.2 PROPOSED GRADING AND LOT AREAS 1

2.0 FIELD INVESTIGATION AND LABORATORY TESTING 3

2.1 FIELD EXPLORATION PROGRAM 3
2.2 LABORATORY TESTING PROGRAM 4

3.0 GEOLOGY AND SEISMICITY 5

3.1 REGIONAL GEOLOGIC AND SEISMIC SETTING 5
3.2 LOCAL GEOLOGIC SETTING 6
3.3 SITE GEOLOGY 6

4.0 SURFACE AND SUBSURFACE CONDITIONS 7

4.1 SURFACE 7
4.2 SUBSURFACE 7
4.3 BEDROCK RIPPABILITY 8
4.4 GROUNDWATER 9

5.0 GEOLOGIC AND SEISMIC HAZARDS EVALUATIONS 10

5.1 REGULATORY FRAMEWORK 10
5.2 SEISMIC HAZARDS 11
5.3 SUBSIDENCE 14
5.4 LANDSLIDES 14
5.5 EXPANSIVE SOILS 15

6.0 GEOTECHNICAL ENGINEERING EVALUATION 16

6.1 ARTIFICIAL FILL EVALUATION 16
6.2 SEISMIC-INDUCED SETTLEMENT POTENTIAL EVALUATION 16
6.3 LATERAL SPREADING EVALUATION 16
6.4 CONSOLIDATION AND DIFFERENTIAL SETTLEMENT EVALUATION 17
6.5 SLOPE STABILITY ANALYSIS 17

7.0 CONCLUSIONS 23

8.0 RECOMMENDATIONS 25

8.1 EARTHWORK 25
8.2 FOUNDATIONS 28
8.3 SEISMIC DESIGN PARAMETERS 33
8.4 SOIL CORROSIVITY TESTING 33
8.5 LOS ANGELES COUNTY BUILDING CODE SECTION 111 STATEMENT 34

9.0 CONSTRUCTION MONITORING 35

10.0 ADDITIONAL INVESTIGATIONS 36

11.0 LIMITATIONS 37

TABLE OF CONTENTS (Continued)

SECTION **PAGE**

12.0 SIGNATURES OF RESPONSIBLE PROFESSIONALS 38

13.0 REFERENCES.....39

List of Attached Tables

Table A Summary of Hollow-Stem Boring Data and Analysis

List of Figures

Figure 1 Vicinity Map
Figure 2 Plot Plan and Geologic Map (1" = 100' scale)
Figure 3 Geologic Map North (1" = 40' scale)
Figure 4 Geologic Map South (1" = 40' scale)
Figure 5 Geologic Cross Sections (1" = 40' scale)
Figure 6 Regional Fault and Epicenter Map
Figure 7 Regional Geologic Map
Figure 8 Slope Grading Details

Appendices

Appendix A Exploration Logs
Appendix B Laboratory Test Results
Appendix C Engineering Analysis

1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

Vesting Tentative Tract Map No. 71216 (Project) would involve the construction of a new motion picture and television studio on approximately 44.28 acres in the westernmost portion of Golden Oak Ranch in the unincorporated Santa Clarita Valley area of Los Angeles County, California. The Project site would be located just east and south of the Antelope Valley Freeway (SR-14), north of Placerita Canyon Road, and west of a 330-foot wide strip of land owned by the Los Angeles Department of Water and Power (LADWP) and used as a transmission corridor. The coordinates for the Project site used for analysis within this study are 34.3775^{o} N and 118.4900^{o}W for the majority of the site and 34.3807^{o} N and 118.4893^{o} W for the electrical substation, Lot 18 of the tentative tract map, with shallow bedrock.

The tentative tract map area includes two graded fill pads that will be referred to in this report as the northern and southern fill pads. These fill pads were placed by Caltrans during the construction of SR-14 in the early 1970s, however, documentation of the fill placed on these two pads was not available from Caltrans. The approximate limits of the Project relative to general topography, streets, landmarks and SR-14 is shown on Figure 1, Vicinity Map.

The Project would include up to twelve soundstages, six production offices, six mills, six writers/producers bungalows, a commissary, an administration building, a central utility plant, a warehouse, and an electrical substation. As an option, the Project would develop studio offices instead of four soundstages, two production offices and two mills within the northern portion of the Project site. The main buildings in the Project would consist of two 19,800-square foot soundstages with an attached 28,125-square foot production office. Each soundstage would consist of a one-story, truss-framed building with a height of about 60 feet. The attached production offices would be wood-framed structures of up to 60 feet. Each pair of soundstages would have an 11,500-square foot mill of up to 40 feet.

1.2 PROPOSED GRADING AND LOT AREAS

Site preparation would generally involve grading in order to establish lot pad grades within the Project site as depicted on Figures 2 through 4, Plot Plans and Geologic Maps, and conceptually shown on Figure 5, Geologic Cross Sections. Portions of the northern and southern fill pads would be over-excavated and then brought up to the design pad elevations. At the same time, the area to the east of the fill pads would be raised with engineered fill to achieve the desired lot pad elevations. In addition, cut slopes would be excavated in the northern portion of the Project site to prepare a building pad for the electrical substation and the slope above the northern fill pad. With the exception of the electrical substation, the majority of the proposed structures and retaining walls would be supported on pile foundations in order to achieve

adequate bearing support for the relatively heavy column loads as well as provide adequate mitigation for potential seismic-settlement hazards due to liquefaction. Table 1 includes a general description of each lot and proposed tentative tract map grading.

Table 1 – SUMMARY OF LOT CONDITIONS

LOT NUMBER	PROPOSED LAND USE	GRADING SUMMARY
1	• Private Driveway and Access Easement • Included interior access to all other lots, major cut slope, multi-use areas, above ground and underground storm water detention/treatment basin, dry utilities and retaining walls.	• Variable grades to connect tract lots. • Major cut slope north of northern fill pad.
2 and 3	• Warehouse and Central Utility Plant	• Remove existing southern pad fill down to pad grade of 1441.5 with minor slope on south side of pads.
4 and 9	• Soundstages / Production Offices	• Transition between southern fill pad and native alluvium. • Remove existing southern pad fill down to proposed pad grade of 1440.5 on west side of lots and build up pad grades on east side of lots.
5, 6, 7 and 8	• Mills and Soundstages / Production Offices	• Place engineered fill to bring up pad grades to 1440.5.
10	• Administration Building	• Remove existing southern pad fill down to pad grade of 1440.0 and 1441.0.
11	• Bungalows	• Remove existing southern pad fill down to pad grade of 1440.0 on west side of lot and build up pad grades on east side of lot.
12 and 13	• Commissary and Bungalows	• Place engineered fill to bring up pad grades to 1440.0.
14	• Placerita Creek	• Grading to stabilize slopes to creek and place slope armor as required.
15 and 16	• Soundstages / Production Offices	• Remove existing northern pad fill down to proposed pad grade of 1447.0.
17	• Mills	• Remove existing northern pad fill down to proposed pad grade of 1447.5. • Includes portion of 2:1 cut slope.
18	• Electrical Substation	• Cut and fill to bring the pad to 1539.5.
19 and 20	• Debris Basin	• Cut and fill to construct proposed debris basins.

2.0 FIELD INVESTIGATION AND LABORATORY TESTING

A geotechnical field investigation, including subsurface exploration, was performed by URS to obtain subsurface data within the Project site. Laboratory testing was conducted on selected soil samples to evaluate pertinent physical and chemical properties. A summary of the field investigation and laboratory testing is provided below.

2.1 FIELD EXPLORATION PROGRAM

2.1.1 General

The field exploration program consisted of drilling at eighteen (18) exploratory hollow-stem auger boring locations (HSA-1 through HSA-14 and HSA-16 through HSA-19), two (2) bucket auger boring locations (BA-1 and BA-2), two (2) hand auger boring locations (HA-1 and HA-2) and ten (10) test pit locations (TP-1 through TP-10). The field exploration was performed between September 5, 2008 and November 30, 2010 to investigate the subsurface conditions and collect samples for laboratory testing. The exploration locations are shown on Figures 2 through 4.

Hollow-stem auger borings were drilled with a CME 75 drill rig using 7.25-inch outside diameter augers, by R&C Drilling, Inc. of Van Nuys, California. Bucket auger borings were drilled with an EZ Bore drill rig using a 24-inch diameter bucket auger by C&L Pacific Drilling Company of La Habra, California. Hand auger borings were drilled with a 3.5-inch diameter auger by URS technicians. Test pits were excavated with a backhoe equipped with a 24-inch wide bucket by Mike's Geotechnical Backhoe Services of Yorba Linda, California.

2.1.2 Logging

URS geologists, engineers and technicians logged the borings and test pits under the supervision of a California Certified Engineering Geologist. The materials observed from the borings and test pits were visually classified in accordance with the Unified Soil Classification System (USCS). The boring and test pit logs, key to logs, and other pertinent information are presented in Appendix A. The lines designating the interface between materials on the boring logs generally represent approximate boundaries. The actual transition between subsurface materials is usually gradual.

2.1.3 Sampling

When subsurface conditions permitted, soil samples were collected at selected intervals using either a Standard Penetration Test (SPT) split-spoon sampler, a 3.5-inch diameter hand sampler, or a Modified California Sampler with an outside diameter of 3.25 inches and an inside diameter of 2.5 inches. To collect relatively undisturbed samples, the Modified California Sampler was lined with one-inch-high thin-walled brass rings. In the hollow-stem auger borings and test pits, samplers were driven 12- to 18-inches into the subsurface materials using a 140-pound hammer dropped 30 inches per blow. In

the bucket auger borings, samplers were driven 12 inches into the subsurface materials by the weight of a Kelly bar dropped approximately 30 inches per blow.

In the bucket auger borings, Kelly bar weights of 1,590 pounds between 0 and 29 feet, 765 pounds between 29 and 48 feet and 1,125 pounds deeper than 48 feet were used to drive the sampler into the subsurface materials. An extension attachment was used to drill and sample at depths greater than 48 feet.

The number of blows required to drive the samplers into the subsurface soils was recorded in 6-inch or 12-inch intervals. Bulk samples were also collected at selected locations. The borings and test pits were backfilled with the excavated materials.

2.2 LABORATORY TESTING PROGRAM

Geotechnical soil samples obtained from the borings and test pits were carefully sealed and packaged in the field to reduce moisture loss and disturbance during transport. The samples were delivered to a URS laboratory located in Los Angeles, where they were further examined and classified. Laboratory testing was performed on selected samples to confirm (and to modify if necessary) the visual classification of the soils based on the field identification, and to evaluate their physical and chemical properties. Tests performed included:

- In-Place Density and Field Moisture tests per ASTM D2216 and ASTM D2937;
- Maximum Density Test per ASTM D 1557;
- Expansion Index Test per ASTM D4829;
- Atterberg Limits per ASTM D4318;
- Sieve Analysis, 3-inch to No. 200 Sieve per ASTM D422;
- Sieve Analysis, percent passing #200 sieve per ASTM D1140;
- Three-Point Direct Shear Test per ASTM D3080;
- Consolidation tests with existing and proposed loads per square feet per ASTM D2435; and
- Chemical Tests for corrosion potential (pH, Sulfates, Resistivity and Chloride) per CA DOT Method.

Laboratory test results for density, field moisture, percent passing #200 sieve, expansion index and Atterberg limits are presented on the logs in Appendix A. The remaining test results are presented in tabular and/or graphical form in Appendix B of this report.

3.0 GEOLOGY AND SEISMICITY

3.1 REGIONAL GEOLOGIC AND SEISMIC SETTING

The Project site lies within the Transverse Ranges physiographic province of Southern California. This province is characterized by a complex series of mountain ranges and valleys with dominant east-west trends. The east west structural grain of the Transverse Ranges are the consequence of active faulting and folding that is driven by movement along the boundary between the North American and the Pacific crustal plates. These two plates are passing by each other horizontally, in a right lateral sense (i.e. the North American plate is moving southeastward relative to the Pacific plate) at a rate of about 40 to 50 mm/yr. Most of this stress is accommodated by movement on the San Andreas Fault, which extends from north of San Francisco to the Gulf of California. Through the Transverse Ranges, the San Andreas Fault deviates from its typical N40˚W trend to an approximately N65˚W trend. This left bend in the fault, known as the "Big Bend" results in a zone of compression where the northward movement of the slice of California west of the fault pushes against the terrain east of the fault, compressing the rocks on both sides and forming the uplifted Transverse Ranges.

The Project site, like most of California, is within a seismically active region that will be subjected to future seismic shaking during earthquakes generated by any of several surrounding active faults. The locations of known active and potentially active faults and epicenters of earthquakes with magnitudes of 4 or greater within 50 kilometers of the Project site are shown on the Regional Fault and Epicenter Map, presented as Figure 6. Significant historical earthquakes that have occurred near the Project site include:

- The 1812 Wrightwood Earthquake (M7.5) on the San Andreas fault;
- The 1857 Fort Tejon Earthquake (M7.9) on the San Andreas fault;
- The 1971 Sylmar Earthquake (M7.1) on the San Fernando fault; and
- The 1994 Northridge earthquake (M6.7) on the Northridge thrust.

The San Gabriel Fault, located approximately ¾ mile north (See Figure 7, Regional Geologic Map), is the most significant active fault in the vicinity of the Project site. The mapped trace of the San Gabriel fault is approximately 80 miles (~130 km) long from the Frazier Mountain area southeast to the east end of the San Gabriel Mountains where it terminates at the San Jacinto fault. The San Gabriel fault is considered capable of generating a maximum earthquake of about Magnitude 7 (CDMG, 1996, 2003). The north-south trending, steeply east dipping Whitney fault is mapped as crossing the Project site, as shown on Figures 2, 3, 4 and 7. This fault has been mapped at the surface cutting the Plio-Pleistocene age Saugus Formation along the south side of Placerita Canyon, and was mapped as a concealed (buried) fault beneath the Holocene alluvium of Placerita Canyon. The Whitney fault is not located within an Alquist-Priolo Earthquake Fault Zone and is not an active fault as defined by the CGS.

3.2 LOCAL GEOLOGIC SETTING

The Project site is located in Placerita Canyon immediately east of SR-14 and is the easternmost extent of the Ventura Basin, which contains an immense thickness of marine sedimentary rocks deposited during the late Cenozoic time. The marine sediments are in turn covered by non-marine sediments deposited during late Pliocene to Recent time.

As shown on the Regional Geologic Map by Dibblee (1991, 1996), presented as Figure 7, the canyon sides are underlain by the Pliocene-Pleistocene age Saugus Formation. The Saugus Formation is composed of weakly indurated, non-marine, fluviatile pebble-cobble conglomerates, sandstones, and siltstones. Unconformably overlying the Saugus Formation (Qts) in Placerita Canyon is Holocene age alluvium (Qa and Qg). The alluvium is composed of unconsolidated gravel, sand and clay. Artificial fill overlies these native deposits at and in the vicinity of the SR-14 crossing of Placerita Canyon.

3.3 SITE GEOLOGY

Surficial deposits within the Project site consist of artificial fill, unconsolidated Holocene age alluvium, colluvium and weakly lithified, Plio-Pleistocene age bedrock of the Saugus Formation. As shown on Figures 2, 3 and 4, the artificial fill occupies two constructed fill pads (approximately 23.6 acres of the Project site) that are adjacent to SR-14, identified as the northern and southern fill pads. This artificial fill was placed during the construction of SR-14 and is derived from local cut areas. The Holocene age alluvium is exposed at the surface in the eastern portion of the Project site and exists below the northern and southern fill pads. Colluvium is exposed in the northern corner of the Project site overlying Saugus Formation bedrock. Saugus Formation bedrock is exposed in the northern corner of the Project site and south of Placerita Canyon Road outside of the Project site.

4.0 SURFACE AND SUBSURFACE CONDITIONS

4.1 SURFACE

The eastern portion of the Project site is located at the bottom of Placerita Canyon. The canyon is surrounded by local mountain ridges to the north, east and south. The bottom of the canyon is relatively flat with site topography descending gently toward the west.

From the canyon bottom, the Project site ascends westerly and northerly at a gradient of approximately 2:1 (horizontal to vertical) for 40 to 50 feet to the northern fill pad and the southern pad, respectively. These fill pads were placed by Caltrans during the construction of SR-14 in the early 1970s, however, documentation of the fill placed on these two pads was not available from Caltrans. The two relatively level fill pads are roughly at grade with Placerita Canyon Road to the south and are about 10 to 20 feet below the elevated SR-14 to the northwest.

The northern and southern fill pads are separated by Placerita Creek, which traverses Golden Oak Ranch from east to west across the Project site before entering an approximately 20-foot culvert which extends under SR-14. The creek is approximately 25 feet in width where it extends across the Project site. Most of the slopes from the fill pads are exposed with sparse vegetation and some trees.

4.2 SUBSURFACE

Based on the borings drilled by URS, the Project site consists of artificial fill overlying native alluvium and Saugus Formation sandstone in the northern and southern fill pads, alluvium overlying Saugus Formation in the southeast portion, and colluvium and Saugus Formation exposed at the surface in the northern tip and along the southern boundary. The site geology is shown on Figures 2, 3 and 4.

As encountered in the borings, the thickness of artificial fill comprising the fill pads varies between 34 and 70 feet (elevations 1455 and 1381.5 feet above mean sea level [msl]) in the northern fill pad and 21 to greater than 75 feet (elevations 1432 and 1374 feet above msl) in the southern fill pad. Saugus Formation bedrock was encountered below alluvium or alluvium in Borings HSA-1A, HSA-3, HSA-10, HSA-11A, HSA-12, HSA-14 and HSA-19 at depths of 60, 25, 41, 66, 7, 11 and 5 feet (elevations 1391, 1428, 1448, 1355, 1434, 1534 and 1525 feet above msl), respectively.

4.2.1 Artificial Fill

The fill materials are described as silty sand (SM), clayey sand (SC), sandy clay (CL), silty sand to sandy silt (SM/ML), clayey sand to sandy clay (SC/CL), clayey sand to clay (SC/CL), sandy clayey silt (CL/ML), silty clayey sand (SC/SM), sandy silt (ML), and sand (SP) with various amounts of

gravel and cobbles. These materials are medium dense to very dense and soft to hard, dry to wet, and non-plastic to medium plasticity. An evaluation of this fill material can be found in Section 6.0.

4.2.2 Alluvium

The alluvial materials encountered in the borings are described as silty sand (SM), silty clay to clayey silt (CL/ML), clayey sand (SC), poorly graded sand (SP), clay (CL), sand with silt (SM and SP/SM), well graded sand (SW), sandy silt to sandy clay (ML/CL), sandy clay (CL), silt (ML), and silty with sand (ML) with various amounts of gravel and cobbles. These materials are loose to very dense and medium stiff to hard, moist to wet, and non-plastic to high plasticity.

4.2.3 Colluvium

The colluvial materials encountered in the borings and test pits are described as silty sand (SM) and clayey sand (SC) with various amounts of gravel and cobbles. These materials are loose to very dense, dry to moist, and non-plastic to medium plasticity.

4.2.4 Saugus Formation

Saugus Formation bedrock underlies the artificial fill, alluvium and colluvial deposits at the Project site. Saugus Formation was observed in hollow stem auger borings HSA-1A, HSA-3, HSA-10, HSA-11A, HSA-12, HSA-14 and HSA-19; and in test pits TP-2, TP-6, TP-7, TP-8, TP-9 and TP-10 from surface exposures to depths of 62.5 feet below the existing ground surface (elevation 1391 feet above msl in boring HSA-1A). In boring HSA-11A near the center of the alluvial valley, Saugus Formation was encountered at an elevation of 1355 feet above msl, approximately 66 feet below the existing ground surface. Saugus Formation at the site consists of sandstone, clayey sand to silty sand(completely weathered sandstone), clayey sand (conglomerate), siltstone, cobble conglomerate, and sandy siltstone. These materials are of low to moderate hardness, friable, weak to moderately strong, deeply to moderately weathered, with massive to laminated bedding.

Saugus Formation bedding attitudes observed in the test pits and outcrops in the northern portion of the Project were at north 20 degrees west at a dip of 15 degrees to the south in TP-2 and north 35 degrees east at a dip of 15 degrees to the north in TP-9. The observed bedding and dip are depicted on the geologic map and geologic cross sections.

4.3 BEDROCK RIPPABILITY

To evaluate rippability characteristics of the on-site bedrock materials, borings (HSA-14 and HSA-19) and test pits (TP-1 through TP-10) were excavated in the northern portion of the Project site. HSA-14 encountered drilling refusal at 29-feet and some of the test pits encountered very difficult layers to excavate with a backhoe.

Bedrock rippability is a function of depositional cementing and natural weathering processes, which can be variable and change vertically and horizontally over short distances depending on jointing, fracturing and/or mineralogic discontinuities within the bedrock. With this in mind and based on observations during the field investigation, it is anticipated that most of the bedrock is rippable to moderately rippable with heavy-duty mass grading equipment. However, areas of non-rippable "cemented zones" or very difficult to rip "bolder/cobble zones" are anticipated to be encountered within the Project cut-slope areas. It is anticipated that these very difficult to non-rippable zones are laterally continuous and could occur almost anywhere in the northern cut portion of the Project. To facilitate excavations within these non-rippable zones, specialized equipment, such as blasting, hydraulic rock hammers, etc., may be required. Oversized rock not suitable for placement as engineered fill will likely be generated from excavations within these areas.

4.4 GROUNDWATER

Groundwater was encountered within the alluvial soils, likely perched above the relatively impervious Saugus Formation, in some of the borings drilled during our field explorations within the Project site. In Borings HSA-1A, HSA-4, HSA-5, HAS-5A, HSA-6, HSA-7, HSA-11, HSA-11A, HSA-13, HSA-16, HSA-17 and HSA-18, groundwater was encountered at depths of 11.5 to 79 feet below the existing ground surface within the Project site. The alluvial groundwater encountered in the URS borings has an east to west gradient at elevations between 1415 (HSA-13) and 1374 (HSA-16) feet above msl.

According to the California Geological Survey (CGS), previously known as the California Division of Mines and Geology (CDMG), the historic-high groundwater in the alluvial valley of the Project site has been reported to be approximately 10 feet below the ground surface at Placerita Creek (CCS, 1998). For design purposes, a perched alluvial groundwater level of the creek bottom elevation or 10 feet below the adjacent creek banks should be used for the Project, representing the historic high groundwater level within the alluvial soils. For the rapid draw-down slope stability analysis, a conservative flood elevation of 1425 feet above msl was used for the slopes adjacent to Placerita Creek. The Sediment Transport Analysis for the Project site used a maximum flood elevation during the 50 year storm of 1418.69 feet above msl.

Deeper groundwater aquifers within bedrock deposits may exist below the Project site. These deeper aquifers are located beyond the limits of our borings and the scope of our study.

5.0 GEOLOGIC AND SEISMIC HAZARDS EVALUATIONS

Geologic and seismic hazards are those hazards that could impact a site due to the surrounding geologic and seismic conditions. Seismic hazards include phenomena that occur during an earthquake, such as surface fault rupture, strong ground motion, liquefaction, lateral spreading, differential seismic settlement, seismic induced flooding and seiche. Geological hazards include landslides, subsidence, and expansive soils.

5.1 REGULATORY FRAMEWORK

The potential for impacts from geologic and seismic hazards at the Project have been evaluated in accordance with the CGS Guidelines, the Alquist-Priolo Earthquake Fault Zone Act of 1972 (Alquist-Priolo Act), the Seismic Hazards Mapping Act of 1990, the California Building Code and County of Los Angeles Guidelines.

5.1.1 California Geological Survey (CGS)

The CGS identifies several earth resource issues that should be taken into consideration when evaluating whether the a project is likely to be subject to geologic hazards, particularly hazards related to earthquake damage. These considerations include both the potential for existing geologic and soil conditions to pose a risk to a project and the potential for a project to result in an impact to the existing geologic and soil conditions by creating or exacerbating a geologic hazard.

The CGS conducts studies related to geologic hazards (e.g., faulting, liquefaction, seismically induced landslides, and ground-shaking) as they affect people and structures. These studies relate to the Alquist-Priolo Act and Seismic Hazards Mapping Act. The CGS also issues guidelines for the evaluation of geologic and seismic factors that may impact a project or that a project may affect such as CDMG Special Publication No. 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

Each set of guidelines provides checklists and outlines to help ensure a comprehensive report of geologic/seismic conditions. Although not mandatory, these guidelines characterize the standards for technical and procedural adequacy in the characterization of geology, soils, and related environmental hazards.

5.1.2 Alquist-Priolo Earthquake Fault Zone Act of 1972

The CGS has delineated earthquake fault zones along known active or potentially active faults in California pursuant to the Alquist-Priolo Act of 1972. Construction of habitable structures is not permitted over potential rupture zones.

5.1.3 Seismic Hazards Mapping Act of 1990

The CGS also has identified seismic hazard zones that are delineated in accordance with the seismic hazards mapping program (SHMP) of the Seismic Hazards Mapping Act of 1990. The Seismic Hazards Mapping Act provides for the following:

> *"...a statewide seismic hazard mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting the public health and safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other seismic hazards caused by earthquakes."*

5.1.4 California Building Code

Most of the State of California, including the Project site, lies within Seismic Zone 4, the highest level hazard zone designated by the current Uniform Building Code (UBC). The California Building Standards Code, or California Building Code (CBC), augments and supersedes the UBC with stricter requirements to reduce the risks associated with building in Seismic Zone 4 to the maximum extent practicable. The CBC sets standards for the investigation and mitigation of the site conditions related to fault movement, liquefaction, landslides, differential compaction/seismic settlement, ground rupture, ground-shaking, tsunami, seiche, and seismically-induced flooding.

5.1.5 County of Los Angeles

The County of Los Angeles has published general guidelines for preparation of soils engineering and engineering geology reports, which reference the state guidelines identified above in addition to Guidelines prepared by the Association of Environmental and Engineering Geologists (AEG).

5.2 SEISMIC HAZARDS

5.2.1 Surface Fault Rupture

Surface fault rupture is ground deformation that occurs along the surface trace of the causative fault during an earthquake. To mitigate the hazard of surface fault rupture, the Alquist-Priolo Act is a state law that regulates development projects near active faults. The act requires that development permits for projects within "Earthquake Fault Zones" be withheld until geologic investigations demonstrate that the sites are not threatened by surface displacement from future fault rupture. To be zoned under the Alquist-Priolo Act, a fault must be considered active or both sufficiently active and well-defined (CDMG, 1997b). The CGS defines an active fault as one that has had surface displacement within Holocene time (about the last 11,000 years), and a sufficiently active fault as one that has evidence of Holocene surface displacement along one or more of its segments or branches (CDMG, 1997b). The CGS considers a fault to be well defined if its trace is clearly detectable as a physical feature at or just below the ground surface.

No known active or sufficiently active and well defined faults have been recognized as crossing the Project, and the CGS does not delineate any part of the Project site as being within an Earthquake Fault Zone. The closest Earthquake Fault Zone to the Project site is a portion of the San Gabriel Fault Zone, which is located approximately 2 miles to the northwest. The portion of the San Gabriel fault shown on Figure 7, which lies within ¾ mile northeast of the Project site has not been zoned by the CGS as an Earthquake Fault Zone. The Whitney fault, which crosses through the Project site, is shown as a Quaternary fault on the Fault Activity Map of California (Jennings, 1994). Thus, in accordance with the CDMG Alquist-Priolo (1997), it would be regarded as a "potentially active" fault. Based on analysis of historic aerial photographs of the Project site, there were no lineaments suggestive of surficial faulting that were identified as passing through the Project site. Although the possible presence of the "potentially active" Whitney fault beneath the Project site represents some potential for surface fault rupture, there is a remote possibility that this fault would exhibit surface displacement during the lifetime of the Project. Therefore, surface fault rupture does not represent a significant hazard for the Project.

5.2.2 Strong Ground Motion

The Project site is located within a seismically active region that is well known for its many active faults and historic seismicity. Because the Project site is in a seismically active region, it follows that it will be subjected to future seismic shaking and strong ground motion resulting from seismic activity along local, regional, and more distant active faults. The degree of shaking that is felt at a given site depends on the distance from the earthquake epicenter and the type of subsurface material on which the site is situated. The highest levels of ground-shaking on the Project site are likely to result from an earthquake on the nearby San Gabriel fault, which is located approximately ¾ mile north of the Project site.

Either deterministic or probabilistic methods are typically performed to estimate the level of shaking that can be expected at a project site. The United States Geological Survey (USGS) has developed Probabilistic Seismic Hazard Maps for the United States and its territories (USGS 2007b). A probabilistic estimate of ground motion for a firm rock site can be obtained from a USGS web site by inputting the Latitude and Longitude of the project site (USGS 2007c). Based on the USGS probabilistic data set, the peak ground acceleration corresponding to a 10% probability of exceedance in 50 years for the Project site is estimated to be 0.8 g (units of gravity). Note that this ground motion value is calculated for a firm rock site. Much of the Project site, however, is a soil site, which may amplify or de-amplify this value. Nevertheless, with appropriate design measures and compliance with regulatory requirements, seismic ground-shaking and strong ground motion would not be a significant hazard for the Project. The Project would be designed per the California Building Code to address strong seismic ground motion.

5.2.3 Liquefaction

Liquefaction is a phenomenon whereby saturated granular soils lose their inherent shear strength due to increased pore water pressures, which may be induced by cyclic loading such as that caused by an earthquake. A low relative density of the granular soils, shallow water, long duration and high acceleration of seismic shaking are some of the factors favorable to cause liquefaction. Potential for seismically induced liquefaction exists whenever relatively loose, sandy soils exist with high groundwater levels and potential for long duration, high seismic shaking. When liquefaction occurs, a site can experience damage induced by permanent ground movements resulting in differential settlement and flotation of structures.

The CGS has designated certain areas as having the potential for liquefaction to occur during a seismic event (CDMG, 1999). These are areas considered at risk of liquefaction-related ground failure during a seismic event, and are based upon mapped surficial deposits and the presence of a relatively shallow water table. The Seismic Hazard Zones Map for the Mint Canyon Quadrangle (CDMG, 1999) shows most of the Project site as being within a potential liquefaction hazard zone. This would include the areas underlain by alluvium, including the artificial fill pads shown on Figures 2, 3 and 4. Portions of the site underlain by Saugus Formation would not be susceptible to liquefaction. In accordance with the Seismic Hazards Mapping Act, the portions of the Project site that are in a liquefaction hazard zone have been analyzed and a detailed liquefaction analysis has been performed as part of the current investigation. Detailed analysis of the site liquefaction hazards are discussed in Section 6.0.

5.2.4 Lateral Spreading

Lateral spreading is a failure within a nearly horizontal soil zone (possibly due to liquefaction) that causes the overlying soil mass to move toward a free face or down a gentle slope. Although no potential free-face conditions have been identified, the Project site has significant slopes and slopes which may be underlain by liquefiable soils; therefore, an evaluation for lateral spreading was performed as part of this current investigation. Detailed analysis of the site lateral spreading hazards is discussed in Section 6.0.

5.2.5 Differential Seismic Settlement

Differential seismic settlement occurs when seismic shaking causes one type of soil or rock to settle more than another type. It may also occur within a soil deposit with relatively homogeneous properties if the seismic shaking is uneven, which could occur due to variable geometry, for example, and variable depth of the soil deposit. Differential seismic settlement is most likely to occur in areas that transition between rock formations and more recently deposited alluvial soils or human-placed artificial fill. Because the Project site is underlain by a variety of deposits including sedimentary bedrock, alluvium and artificial fill, this potential hazard has been evaluated as part of the current investigation. Detailed analysis of the site differential seismic settlement hazards is discussed in Section 6.0.

5.2.6 Seismic Induced Flooding, Seiche and Tsunami

Earthquake-induced flooding occurs when upstream water retaining structures, such as dams or levees, are breached or damaged during an earthquake. A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank, resulting from earthquakes or other large environmental disturbances. A tsunami is a great sea wave (commonly called a tidal wave) produced by a significant undersea disturbance, such as tectonic displacement of the sea floor associated with large, shallow earthquakes. The Project site is not located near the ocean and there are no dams or levees or large bodies of water located upstream of the Project site. Therefore seismically induced flooding, seiche and tsunami are not considered significant hazards at the site.

5.3 SUBSIDENCE

The extraction of water or petroleum from sedimentary source rocks can cause the permanent collapse of the pore space previously occupied by the removed fluid. The compaction of subsurface sediments by fluid withdrawal will cause subsidence of the ground surface overlying a pumped reservoir. If the volume of water or petroleum removed is sufficiently great, the amount of resulting subsidence may be sufficient to damage nearby engineered structures. Significant quantities of water or petroleum are not being and have not been extracted beneath the Project site and current regulatory compliance prevents extraction that causes detrimental effects to overlying areas. Therefore, with compliance with regulatory requirements, subsidence is not anticipated to pose a significant hazard to the Project.

5.4 LANDSLIDES

The potential for landslides is not anticipated to pose a significant geologic hazard to the Project. Most of the Project site occupies relatively flat ground that would not be subject to landsliding. Based on geologic reconnaissance and aerial photograph analysis of the moderate slopes that are along the northern portion of the Project site and the SR-14 fill slope on the west side of the Project site, there is no evidence of pre-existing slope instability. In addition, the State Seismic Hazard Map for the Mint Canyon Quadrangle (CDMG, 1999) indicates the Project site does not lie within areas designated to be prone for either future earthquake induced landslides or in an area of previous landslide occurrence.

Future grading to construct cut slopes in the northern portion of the Project site and rework fill slopes adjacent to SR-14, Placerita Creek and Placerita Canyon Road during lowering of the northern and southern fill pad areas would be completed in accordance with regulatory requirements including the California Building Code. Slope stability analysis with proposed mitigation schemes, where needed, is presented in Section 6.0. With compliance with regulatory requirements and use of appropriate design measures, landslides would not be a significant hazard for the Project.

5.5 EXPANSIVE SOILS

Expansive soils are fine-grained soils (clay) that can undergo a significant increase in volume with an increase in water content and a significant decrease in volume with a decrease in water content. Changes in the water content of an expansive soil can result in severe distress to structures constructed on the soil. The surficial soils observed on the fill pads, the colluvial soils developed on the Saugus Formation, and the alluvial soils immediately adjacent to Placerita Creek appear to primarily consist of coarse-grained soils that would not be susceptible to expansion. Some clayey soils exist on the flood plain that is south of Placerita Creek. With compliance with regulatory requirements including the California Building Code and the use of select grading or structures designed for expansive soils that will be evaluated during the design level geotechnical investigation, impacts associated with this hazard would be less than significant.

6.0 GEOTECHNICAL ENGINEERING EVALUATION

6.1 ARTIFICIAL FILL EVALUATION

Artificial fills were previously placed in the northern and southern fill pads during construction of SR-14. The artificial fill material was likely imported from multiple sources and consists of varying types of materials from sand to clay. Documentation of these fill materials and information regarding the base of the fill was not located during our records review; therefore, the artificial fill materials are considered undocumented.

Undisturbed driven samples were taken during our field exploration program to obtain the corresponding dry unit weights in the laboratory, as well as the referenced maximum unit weights following ASTM D 1557. Of the samples taken from the fill material, the dry density generally ranged from 100 pounds per cubic foot (pcf) to 128 pcf, which would correspond to a relative compaction of 90 percent for maximum dry densities greater than 110 pcf and up to 140 pcf, the expected range for the fill materials encountered at the Project site. There were no significant lower test results for the fill encountered in the borings and no loose zones were observed during drilling.

The exposed artificial fill slopes of the northern and southern pads are heavily eroded and did not appear to have been compacted by track walking or overbuilt and cut back as recommended in typical finish grading activities.

6.2 SEISMIC-INDUCED SETTLEMENT POTENTIAL EVALUATION

A seismic-induced (liquefaction and dynamic settlement of dry sands) settlement evaluation was performed as part of the current investigation using the LiquefyPro program by CivilTech Corporation. Based on a design groundwater depth of 10 feet below creek elevation, two potential modes of seismic-induced settlement were analyzed: (1) liquefaction settlement of the loose granular soils below the design groundwater level; and (2) dynamic dry sand settlement of unsaturated, loose granular soils.

Assuming a design earthquake event with a peak ground acceleration of 0.537 g, and a groundwater level of 10 feet below creek ground surface, the total potential seismic induced settlement at the site could be up to 8 inches under the lot footprints. The majority of this predicted settlement would be liquefaction-induced. Detailed graphical results of the analyses are presented in Appendix C.

6.3 LATERAL SPREADING EVALUATION

No liquefiable zones were identified to intersect the slope surfaces and the near-surface loose fill soils would be rebuilt as engineered fill. The liquefiable soils identified during our seismic-induced settlement potential evaluation were found to be discontinuous in both elevation and area across the

Project site. Based on these findings, with the Project's proposed slope mitigation and grading, lateral spreading is unlikely to occur at the Project site.

6.4 CONSOLIDATION AND DIFFERENTIAL SETTLEMENT EVALUATION

Anywhere from 14 to 19 feet of additional fills will be placed in Lots 1, 4, 5, 6, 7, 8, 9, 11, 12, 13 and 14 to bring these lots to a finished grade elevation of about 1,440 to 1,441 feet above msl. Based on the settlement analysis, about 2 inches of consolidation settlement should be anticipated as a result of the proposed grading activities. Differential settlement below the fill pads could also occur due to the differential stresses induced on the soils along the fill perimeter. The anticipated mode of settlement would be consolidation-related and could take several months to complete. If shallow foundations are built before the consolidation settlement is completed, the foundations within the fill pads should be designed to accommodate this settlement. Likewise, any piles installed through the fill before completion of the consolidation settlement should be sized to account for down drag due to settlement of the surrounding soils.

6.5 SLOPE STABILITY ANALYSIS

Geologic cross-sections were chosen in the most critical area of each slope type and condition for slope stability analysis. In general, the slopes chosen for analysis represent the depicted and adjacent slope areas and conditions as well as similar slopes with lesser heights. The cross-sections and representative adjacent areas are summarized in Table 2.

Table 2 – GEOLOGIC CROSS-SECTION SUMMARY

GEOLOGIC CROSS SECTION	SLOPE TYPE	PROPOSED SLOPE GRADIENT (horizontal: vertical)	MAXIMUM SLOPE HEIGHT (feet)	REPRESENTATIVE AREA
A-A'	Cut	2:1	60	Offsite west and south facing cut slopes in colluvium and Saugus Formation adjacent to and east of Lot 18 within the LADWP transmission corridor
B-B'	Fill/Cut/Fill	2:1	92	Combination fill/cut/undocumented fill slopes, cut/undocumented fill slopes, and cut slopes within Lot 1 north and east of adjacent Lots 16 and 17.
C-C'	Fill	2:1	35	Undocumented fill slopes of the northern fill pad adjacent to Placerita Creek for Lots 1 and 14, and adjacent Lots 15 and 16.
D-D'	Fill	2:1	75	Undocumented fill slopes of the northern and southern fill pads adjacent to SR-14 for Lots 1 and 14 and adjacent to Lots 15, and 17
E-E'	Fill	2:1	37	Undocumented fill slopes of the southern fill pad adjacent to Placerita Creek for Lots 1, 10, 11, 12 and 13; and adjacent Lots 7, 8 and 9.

6.5.1 Shear Strength Parameters

Generally, shear strength parameters are reported as peak and ultimate values in the following discussions. The peak strength is defined as the highest resistance during the initial shearing, while the ultimate strength is defined as the resistance at larger strain (approximately 10 percent) which occurs in the same loading path. The shear strength parameters used in the slope stability analyses were developed based on the recent and previous laboratory test results.

The shear strength parameters used in the current study are summarized in Table 3. Generally, these recommended engineering parameters were selected based on the average values of the previous and the current laboratory shear test results.

Table 3 - SUMMARY OF URS ENGINEERING PARAMETERS

GEOLOGIC UNIT		TOTAL UNIT WEIGHT, γ (pcf)	PEAK STRENGTH		ULTIMATE STRENGTH	
			c' (psf)	φ' (deg)	c' (psf)	φ' (deg)
Rip Rap		150			0	50
Proposed Buttress Fill [Qaf]		120			400	32
Artificial Fill [Qaf]		120			400	32
Alluvium / Colluvium [Qal/Qc]		120			100	36
Saugus Formation [Qts]	favorable bedding	120	500	35		
	adverse bedding	120			300	32

6.5.2 Slope Stability Assessment

6.5.2.1 Gross Slope Stability

Slope stability analyses were completed using SLOPE/W, a two-dimensional computer program that evaluates the potential of overall rotational failures and translational failures along adverse bedding planes based on a limiting-equilibrium approach. The results of the slope stability analyses using Spencer's Method are presented in terms of factors of safety.

Location-specific slope stability analyses were conducted on Geologic Cross-Sections A-A' through E-E'. The cross-section locations are presented on Figures 2, 3 and 4 and the cross-sections are presented on Figure 5. The cross-sections illustrate the generalized subsurface profile by adopting soil and alluvial groundwater conditions interpreted from our field investigation. The slope stability analysis for cut slope cross-sections A-A' and B-B' do not include hydrostatic conditions for alluvial groundwater as the grading would be well above alluvial groundwater levels. Existing fill slope sections C-C' through E'E' assume static alluvial groundwater conditions at 10-feet below creek elevation and elevation 1,425 msl for rapid draw down conditions after the maximum flooding event.

Target minimum factors of safety were 1.5 for static conditions and 1.1 for pseudostatic conditions using a horizontal acceleration of 0.27 g in accordance with the current California Building Code (Code).

The shear strength parameters of Table 3 were used in calculating the theoretical failure surface determined to have the lowest factor of safety. Ultimate and peak shear strengths were used for soils and bedrock with favorable bedding for static and pseudostatic analyses, respectively. The results of the slope stability analyses are presented in Table 4 for the proposed grades. Detailed graphical results of the analyses are presented in Appendix C.

Table 4 - RESULTS OF GROSS AND RAPID DRAW-DOWN SLOPE STABILITY ANALYSES

SLOPE TYPE	GEOLOGIC CROSS-SECTION	PROPOSED SLOPE GRADIENT (horizontal: vertical)	SLOPE HEIGHT (feet)	FACTOR OF SAFETY			NOTE	MITIGATION REQUIRED
				Static	Seismic	Rapid Draw-Down		
Cut	A-A'	2:1	60	2.2	1.2		Adverse Bedding	No
Fill/Cut/Fill	B-B'	2:1	92	2.1	1.2		Favorable Bedding	No
Fill	C-C'	2:1	35	2.3	1.5	1.5[1]	--	Yes[2]
Fill	D-D'	2:1	75	1.8	1.4	1.6[1]	--	Yes[2]
Fill	E-E'	2:1	37	2.3	1.4	2.0[1]	--	Yes[2]

Notes: 1. Minimum 5-foot wide zone of riprap or 8-foot wide zone (4-feet depth) of soil cement surficial treatment within the flood zone.
2. Slope surface (15-feet horizontal) would be rebuilt as engineered fill.

6.5.2.2 Rapid Draw-Down Slope Stability

Rapid draw down slope stability analyses were completed using SLOPE/W and a conservative flood water elevation of 1425 msl. In general, the proposed site slopes within the rapid draw down zone would be at slope gradients of 2H:1V or flatter and protected with slope improvements (eg. Soil cement or rip-rap). The shear strength parameters used in our analysis were based on the existing fill soils and proposed protection of a minimum of 5 foot wide zone of rip rap or 8 foot wide, 4 foot thick zone of soil cement within the flood zone. The estimated factor of safety of 1.5 is considered adequate and meets the Code requirement. Details of the rapid draw down slope stability analyses are presented in Appendix C.

6.5.2.3 Surficial Slope Stability

Surficial slope stability was evaluated using procedures for an infinite-slope analysis assuming depth of soil saturation of 3 feet with seepage parallel to the slope. In general, the proposed site slopes would be at slope gradients of 2H:1V or flatter. The shear strength parameters were based on the existing fill and bedrock soils were used to evaluate the surficial stability of the slopes. Factor of safety values greater than 1.5 were calculated for the proposed cut and fill slopes, are considered adequate and meet the Code requirement. Details of the surficial-slope stability analyses are presented in Appendix C.

6.5.3 Proposed Slope Mitigation

Slopes consisting of undocumented fill would require a minimum 15-foot wide (measured horizontally from face of proposed slope) slope buttress of engineered fill. Within the flood zone, a minimum of 5 feet surface protection would be required on the surface of fill slopes to protect the slope during a

rapid draw down event after flooding. Cut slopes would need to be evaluated by an engineering geologist during grading to determine the cut slopes do not contain additional adverse conditions not known at the time of this investigation. If additional adverse conditions were encountered, the adverse slope conditions could be mitigated by overexcavation and buttressing as fill slopes.

6.5.4 Slope Erosion Control

Based on the analysis performed for the proposed 2H:1V cut and fill slopes, the estimated factor of safety for surficial slope stability meets the Code. Therefore, materials to be used for the proposed mitigation fill should have similar strength properties as the existing fill materials.

Generally, erosion protection of the slope surfaces at slope gradients of 2H:1V or flatter do not require erosion protection. However, the erosion control methods in Table 5 are provided for consideration and special case uses.

Table 5 - EROSION CONTROL ALTERNATIVES

METHOD	ADVANTAGES	DISADVANTAGES
Hydro-seeding	• Widely used • Least expensive • Quickly applied • Not subject to graffiti • Can be used with geotechnical fabrics	• Requires careful irrigation • May require multiple applications • Rills and gullies still possible • Takes significant amount of time to grow • Subject to pests
Landscaping	• Widely used • Inexpensive • Not subject to graffiti • Can be used with geotechnical fabrics • Native plants can be used to minimize irrigation requirements	• May require irrigation • May require periodic replanting and maintenance • Requires full coverage • Rills and gullies still possible • Subject to pests • Takes time for plants to grow
Flattening (4H:1V of terrace slope and 2H:1V of buttress fill)	• Effective immediately • No maintenance required • Not subject to graffiti	• Not feasible due to ROW restriction
Degradable erosion control product with landscaping and/or hydro-seeding	• Widely used • Effective immediately • Not subject to graffiti	• May require irrigation • May require periodic replanting and maintenance • Rills and gullies possible in several years after degradation • Subject to pests
Non-degrading erosion control product with landscaping and/or hydro-seeding	• Widely used • Effective immediately • Not subject to graffiti	• May require irrigation • May require periodic replanting and maintenance • Unsightly • Subject to pests
Geocells with landscaping and/or hydro-seeding	• Effective immediately • Not subject to graffiti • Effective without planting	• May require irrigation • May require periodic replanting and maintenance • Subject to pests
Geogrid reinforcement	• Stabilizes upper 3 feet (if needed) • Not subject to graffiti	• Does not reduce surface erosion • Expensive
Shotcrete/Concrete facing	• Widely used • Irrigation not needed • Not subject to pests	• Planting not possible • Subject to cracking • Reinforcement needed for crack reduction • Can be undermined at crown • Costly • Subject to graffiti
Soil cement mix treatment	• Widely used • Approved by County Public Works • Irrigation not needed • Not subject to pests • Not subject to graffiti	• Planting of exposed soil cement not possible • Not favored by resource agencies if vegetation is not placed over the soil cement

7.0 CONCLUSIONS

Provided the proposed tentative tract map grading would be designed in accordance with the recommendations of this geotechnical investigation and the CBC, and constructed in accordance with the CBC under the observation of URS geotechnical consultants; the Project is feasible from a geological and geotechnical engineering standpoint.

The primary geotechnical considerations for the Project are the undocumented fills comprising the northern and southern fill pads, consolidation of the alluvial soils, and liquefaction potential and the associated seismically-induced settlement. As indicated above, compliance with regulatory requirements would ensure impacts associated with these issue areas would be less than significant. Identified key issues are discussed as follows:

- With respect to seismic hazards, although the potentially active Whitney fault is known to exist within the Project site, review of historic aerial photographs of the Project site found no lineaments suggestive of surficial faulting, suggesting the possibility of surface rupture due to faulting is remote.

- The Project site could be subjected to significant ground-shaking with major earthquakes during the lifetime of the Project. However, strong ground-shaking is common to southern California and potential damage caused by seismic shaking is customarily reduced through proper structural design and construction that would occur as part of compliance with regulatory requirements.

- The current static alluvial groundwater level within the Project site is an average of 68.5 feet below the level of the fill pads and within 11 to 16 feet below the ground surface in the low lying eastern area. The reported historic-high groundwater level is about 10 feet below the existing grades near the creek in the bottom of the canyon. As a result, a liquefaction potential exists for susceptible granular soils. Since the Project site soils may liquefy during a design earthquake, the seismic-induced settlement is of the magnitude that requires mitigation with deep foundations.

- The majority of the northern and southern pads consist of fills generated by excavations into the surrounding hills during construction of SR-14 and the disposal of construction-derived waste (excess materials) onto the Project site. URS was unable to locate Caltrans records regarding the fill placement. Because of the timing of the placement of the fill, there is a strong likelihood that the fill is not properly engineered and the placement is not fully documented. The current County and State grading ordinance does not allow structures to be supported directly on sub-standard or undocumented man-made fills. The south side of the northern pad and the north side of the southern pad have fill of 50 to 60 feet deep. In order to place structures on the fill pads, the fill pads would be lowered and deep foundations should

be used. The excavated materials could be re-used as fill materials for the construction of raised pads at the southeastern corner of the Project site. Preliminary recommendations for deep foundations are provided, in general, and would need to be clarified based on exact building locations in the final phase of design.

- During the design level geotechnical investigation, proposed mitigation measures and design of the proposed site improvements would be performed in accordance to State and County guidelines.

Based on our engineering analysis, a summary of the geotechnical lot conditions that vary between lots is provided in Table 6. All of these conditions could be mitigated by deep foundation systems and grading techniques.

Table 6 – SUMMARY OF VARIABLE GEOTECHNICAL CONDITIONS FOR EACH LOT

CONDITION PRESENT	LOT NUMBER																			
Y=YES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Undocumented Fill	Y	Y	Y	Y	-	-	-	-	Y	Y	Y	-	-	Y	Y	Y	Y	-	Y	-
Seismic-Induced Settlement	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-
Consolidation	Y	-	-	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	Y	-	-	-	-	-	-
Slopes Hazards	Y	Y	Y	-	-	-	-	-	-	Y	Y	Y	Y	Y	-	-	-	-	Y	Y

Table A attached to this report provides a summary of the analysis performed on the hollow-stem auger boring data for the Project. Tentative tract map recommendations for earthwork and foundation design considerations are presented in the following section.

8.0 RECOMMENDATIONS

8.1 EARTHWORK

8.1.1 Site Preparation

Prior to the placement of fill, all existing structures and vegetation within the construction area should be cleared and grubbed. Any debris, deleterious materials, loose native soil disturbed by the removal of vegetation and existing fills should be removed. Unsuitable materials should be removed and disposed of appropriately under observation of the Geotechnical Engineer of Record. It would be the responsibility of the contractor to notify and coordinate with Underground Service Alert (USA) to locate all existing utilities before any proposed earthwork commences. All active or inactive utilities within the construction limits should be identified for relocation, abandonment, or protection prior to grading. Any pipelines greater than 2 inches in diameter to be abandoned in-place should be filled with sand/cement slurry after review of their location and approval by the Geotechnical Engineer of Record.

8.1.2 Excavations

8.1.2.1 Overexcavation

General Project Overexcavation: Minimum of up to 5 feet of overexcavation should occur in non-bedrock areas.

In general, up to 5 feet of the site native (alluvium and colluvium) and artificial fill soils below existing and proposed grades, whichever is deeper, should be removed and replaced as engineered fill under the direction of the Geotechnical Engineer-of-Record. Proposed cuts into competent Saugus Formation bedrock would not require overexcavation.

Northern and Southern Fill Slopes: The existing and proposed fill slopes within the undocumented artificial fill would require removal of the outer 15 feet (horizontal distance) of the slope materials and replacement with an engineered fill slope with keyway. The east side of the southern fill pad would require the removal of the outer 15 feet and a 5-foot overexcavation into the soils exposed by the 15-foot horizontal removal.

Differential Fill Thickness: To limit differential settlement across any transition between cut and fill, native materials should be overexcavated to a depth at least three feet below the bottom of the proposed footings and recompacted as engineered fill. The area of removal should extend at least 5 feet beyond the edge of foundations, or equal to the depth of removal, whichever is greater. In addition, where mitigation measures are required by the Geotechnical Engineer-of-Record to support roadways and other lightly-loaded, non-settlement sensitive structures, overexcavation may be utilized to provide the proper bearing conditions. The depths of removal would vary depending on the

proposed building or structure location. Because of the lack of subsurface information, the exact depths of removal cannot be accurately estimated at this time.

Overexcavation Grade Proofing: Following excavation, the exposed subgrade should be proof-rolled to locate any loose or soft zones. Proof-rolling would involve making several passes with heavy rubber-tired equipment over the area under consideration, and observing the reaction of the subgrade under the wheel loads. Upon completion of proof-rolling, a field representative of the Geotechnical Engineer-of-Record should perform probing and/or field density testing to evaluate the extent of loose or soft zones, if any. All observed loose or soft zones less than 12 inches in depth should be compacted in-place. Upon completion of proof-rolling, the excavation subgrade should be scarified a minimum of eight inches deep and compacted in-place, achieving a minimum subgrade relative compaction of 95 percent of the maximum dry density per ASTM D-1557.

If loose zones greater than 12 inches in depth were encountered, additional overexcavation would be required. Such additional subsurface improvement requirements should be determined in the field by the Geotechnical Engineer-of-Record during subgrade preparation activities. Upon completion of any required overexcavation, backfill should be placed in accordance with recommendations for compacted fill soils.

8.1.2.2 Temporary Excavation Slopes

Excavations during slope repair should be carried out in such a manner to prevent failure and excessive ground movement. All excavations should comply with the current California and Federal OSHA requirements, as applicable. For preliminary design purposes, a Cal/OSHA Soil Type C should be assumed for the existing fill, colluvium and alluvium. This assessment of Cal/OSHA soil type for temporary excavations is based on engineering classifications of material encountered in widely spaced explorations. The contractor should have a geotechnical or geological professional evaluate the soil conditions encountered during excavation to determine permissible temporary slope inclinations.

Surcharge loads from vehicles, and stockpiled material should be kept away from the top of temporary excavations at a distance equal to at least one half of the excavation depth. During wet weather, runoff water should be prevented from entering the excavation, and collected and disposed of outside the construction limits. To prevent runoff from adjacent areas from entering the excavation, a perimeter berm should be constructed at the top of the slope.

8.1.2.3 Keyways

All fill slopes should be constructed with keyways along the toes of slopes. Recommended keyway sizes and locations would be determined by a geotechnical professional during a review of the final grading plans. A keyway at least 15 feet in width should be excavated to a minimum of 5 feet deep at the toe of the slope. Where keyways could not be located at the toe of slope due to Project constraints, the keyways could be constructed starting at an upslope location; however, the depth of the keyway would need to extend to 5 feet below the toe of slope grade. Subdrains should be installed at the heel of the keyway and at 15-foot intervals on level benches where drainable to Placerita Creek or other

structure approved by the project civil engineer. Subsurface benches should be constructed into slopes above the keyways as filling progresses. Unless otherwise recommended by the Geotechnical Engineer, such benches should be excavated horizontally into firm, competent soil or bedrock. The actual size of the keyways and benches should be determined by the geotechnical professional in the field during grading.

After excavation of the keyway to a minimum of 5 feet, the geotechnical professional would observe and evaluate the bottom of the excavation. The keyway bottom should be moist and firm and founded in firm alluvium, fill soil or bedrock. Where moist and firm conditions are not found in the bottom of a keyway, additional removals would be required until firm conditions exist as determined by a geotechnical professional.

8.1.2.4 Fills and Backfills

The fill materials to be excavated as part of the Project would be sand to clay. If the fill materials excavated were to be re-used in compacted fill, thorough mixing with coarse grained fill materials might be necessary. The resulted mix should contain no rocks in excess of 6 inches in maximum dimension, and have no more than 35% of fine content finer than the openings of a standard No. 200 sieve and an Expansive Index not exceeding 20.

If import soil were considered for this Project, the new fill should be predominantly granular in nature, with an Expansion Index of less than 20. For gradation, the new fill should contain no rocks in excess of 3 inches in maximum dimension, and no more than 35% of fines passing a standard No. 200 sieve. In addition, aggregate base and trench bedding materials should conform to Caltrans' Standard Specifications and the Green Book, respectively or similar standards. All new fills must be free of hazardous, organic and inorganic debris.

All fills should be compacted to at least 95 percent of the maximum dry density as per ASTM D1557.

The standard slope grading details requirements are presented in Figure 8. In all cases where the existing ground surface is steeper than 5:1 (horizontal to vertical), backfill should be brought up in layers by benching 5 feet into competent fill. The back-cut into the slope face should be no steeper than 1:1. A keyway of at least 15 feet in width should be excavated a minimum of 2 feet into competent material at the toe of the slope. Subdrains should be installed at the heel of the keyway and at 15-foot intervals on the benches. Slopes should be over-built and trimmed back to the design slope gradient of no steeper than 2:1 (horizontal to vertical) to ensure proper compaction of the slope faces.

8.1.2.5 Permanent Slopes

Permanent cut and fill slopes should be planned at a gradient no steeper than 2:1 (horizontal to vertical). Slopes with this gradient are generally stable, if properly maintained. Creating slopes from the undocumented fill would require removal of the outer 15 feet (horizontally). Where this is not achievable with standard grading techniques due to property line limitations, such as grading adjacent to SR-14 and Placerita Canyon Road, special slope stability enhancements, such as grid reinforced slopes or retaining walls, would be required.

Cut Slopes

It is recommended that cut slopes be observed during grading by an engineering geologist to verify the soil and geologic conditions do not differ significantly from those anticipated and to determine if adverse bedding, sheared zones, fractures or joints exist. Remedial grading procedures may be recommended should adverse geologic conditions be observed.

Fill Slopes

The outer 15 feet of fill slopes, measured horizontal to the slope face, should be composed of properly compacted granular soil fill to reduce the potential for surface sloughing. To verify surficial stability calculations, these soils should be tested in the laboratory to evaluate shear strength.

Fill slopes should be overbuilt at least 3 feet horizontally, and cut back to the design finish grade. As an alternative, fill slopes may be compacted by back-rolling at vertical intervals not to exceed 4 feet and then track-walking with a D-8 dozer, or equivalent, upon completion such that the fill soils are uniformly compacted to at least 95 percent relative compaction to the face of the finished slope.

Fill slopes located within the flood zone will require surficial reinforcement with riprap or soil cement mitigation measures.

Slopes should be landscaped with drought-tolerant vegetation having variable root depths and requiring minimal landscape irrigation. Slopes should also be properly maintained to reduce erosion.

8.2 FOUNDATIONS

Settlement sensitive structures, retaining walls, buildings and floor slabs located at the northern and southern area undocumented fill pads and eastern liquefiable alluvial soils should be supported on deep foundations founded into competent native material soils or bedrock. Shallow foundations established in engineered fill may be used for structural support in Lot 18 in the northern portion of the Project site. Special recommendations, such as additional overexcavation and/or modified fill compaction requirements would be provided for structures which span between the southern undocumented fill pad and new fill placed in the eastern portion of the Project site to address differential conditions these buildings span.

8.2.1 Deep Foundations

Deep foundations may be used to support the Project's proposed buildings. The deep foundations may consist of a minimum 24-inch diameter cast-in-drilled-hole (CIDH) concrete piles or a minimum 14-inch square, driven precast concrete piles. For preliminary estimating purposes, an allowable compressive capacity of 75 kips and 150 kips may be assumed for CIDH and driven, 14-inch square pre-stressed concrete piles, respectively. Minimum pile lengths and suggested pile types for portions of lots at boring locations are provided in Table 7 for preliminary estimating purposes only. Future

geotechnical investigations based on specific building locations and foundation loading constraints would be required to determine recommended pile depths for foundation design. Please note that the pile depth/type would change between boring locations across individual lots.

Table 7 – PILE SUMMARY

LOT NUMBER	MINIMUM PILE LENGTH (FEET BELOW PROPOSED PAD GRADES)	PILE TYPE
1	various	Driven/CIDH
2 and 3	55	Driven
4, 5, 6, 7, 8, 9 and 16	65	Driven
10 and 15	70	Driven
11, 12 and 13	80	Driven
17	50	Driven
18	20	CIDH
19 and 20	20	CIDH

On a preliminary basis, uplift capacity may be assumed to be one-half of the assumed compressive capacity. Settlement of single piles, or groups of up to 4 piles, may be assumed to be less than ½ inch.

A structural slab should be used in combination with deep foundations. In order to minimize post-seismic slab settlement, a minimum 5 feet of engineered fill should be provided under the slab.

Due to potential variability of the soil conditions, a pile indicator program should be used to adequately size the piles and to evaluate pile drivability characterization.

Potential vibrations and noise from pile driving operations and their effects on adjacent neighboring facilities and residences was evaluated in the Noise section of the Draft Environmental Impact Report for Disney│ABC Studios at The Ranch. To minimize construction noise, the Project contractors would equip all construction equipment, fixed or mobile, with properly operating and maintained noise mufflers, consistent with the equipment manufacturers' standards. Specifically, pile-driving operations can be controlled and vibration isolation devices/techniques can be used to keep the vibrations (and noise) below a prescribed level. Specialized deep foundation techniques that preclude noise and vibrations (such as Tubex or Fundex piles) are also suitable deep foundation alternatives.

8.2.2 Shallow Foundations

Where feasible, shallow spread or continuous footings founded into engineered fill or bedrock may be considered for support of structures. All footings should be at least 24-inches wide, placed at a depth of 24-inches below the lowest adjacent grade. An allowable bearing value of 2,000 pounds per square

foot (psf) and 3,000 psf may be assumed for footings established in engineered fill and bedrock, respectively, in preliminary design. These allowable bearing values are for dead plus live loads to be used in a working stress design, and they have included a safety factor of at least 3. The given value may be increased by one-third for momentary wind or seismic loads. Settlement of footings is estimated to be less than 1 inch under the fully applied allowable bearing pressure. Differential settlement between footings is expected to be on the order of ½-inch.

Footings should be setback from the face of a descending slope with a minimum horizontal distance measured from the outside edge of the bottom of the footings equal to one-third of the height of the slope, or 40 feet, whichever is smaller. If footings were desired within this setback zone, the footings could be deepened to meet the minimum horizontal distance requirements or deep foundations could be used.

8.2.3 Lightly Loaded and Non-Settlement Sensitive Structures

Lightly-loaded (under the order of 10 to 20 kips), non-settlement sensitive structures and isolated units may be supported on spread footings established on a minimum 5 feet of compacted engineered fill.

The final thickness of engineered fill would depend upon the actual depths of removal of undocumented fills during site preparation. The limits of engineered fill should extend at least 5 feet beyond the edges of the footings or equal to the depth of improvement under the footing, whichever is greater.

To provide uniform and adequate support, general surfaces to be paved with either Portland cement concrete or asphaltic concrete should be underlain by at least 5 feet of granular fill compacted to 95 percent relative density.

In areas to be provided with settlement-sensitive coverings, such as decorative tile or stone, we recommend providing a minimum 5 feet of engineered fill under the pavement. The actual thickness of the engineered fill will vary depending on the thickness of existing uncertified fills to be removed.

In general, a moisture barrier is recommended under all floor slabs to be overlain by moisture-sensitive floor covering. A moisture barrier such as 'Stego Wrap' or equivalent, meeting current American Concrete Institute installation requirements and recommendations, may be used for this purpose.

At least 4 inches of clean-open graded, ¾-inch maximum crushed rock is recommended beneath concrete slabs-on-grade to act as a capillary break. The crushed rock base course should be compacted in placed using mechanical compaction equipment. For design of slabs and rigid pavements and for estimating their deflections, a modulus of subgrade reaction (k) of 250 pounds per square inch per inch deflection may be used.

8.2.4 Concrete Flatwork

All exterior concrete flatwork not subject to vehicular traffic should be underlain by a minimum of 12-inches of non-expansive, granular soils, be a minimum of 4 inches thick, and should be reinforced with 6 x 6 - W2.9/W2.9 (6 x 6 - 6/6) welded wire mesh to reduce the potential for cracking. In addition, all concrete flatwork should be provided with crack-control joints to reduce and/or control shrinkage cracking. Crack-control spacing should be determined by the project structural engineer based upon the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack-control spacing. Prior to placing concrete, the upper 12-inches of subgrade soils should be scarified, moisture conditioned and recompacted to a minimum relative compaction of 95 percent, at or slightly above optimum moisture content based on ASTM Test Procedure D 1557. The recompacted fill soil should be observed and tested by a representative of the Geotechnical Engineer prior to placing concrete.

The recommendations presented herein are intended to reduce the potential for cracking of slabs and foundations as a result of differential movement. However, even with the incorporation of the recommendations presented herein, foundations and slabs-on-grade may crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, the use of crack-control joints and by proper concrete placement and curing. Crack-control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction and curing practices, and should be incorporated into project construction.

8.2.5 Retaining Walls and Lateral Earth Pressures

Retaining walls located in areas of undocumented fill and liquefiable materials would require deep foundations to bear on dense material.

8.2.5.1 Static Lateral Pressures

Walls should be designed to resist the earth pressure exerted by the retained soils; plus any additional lateral forces that will be applied to the walls due to surface loads placed at, or near the top; and those due to potential alluvial groundwater build-up and seismic loads. Adequate provisions are required to counteract the effects of hydrostatic pressure, as recommended previously. Free-draining backfill should be used behind portions of walls above the design alluvial groundwater level. Provisions should be made to collect and dispose of water that may accumulate behind the walls.

The at-rest earth pressure against walls with a level-backfill that are restrained at the top can be taken as equivalent to the pressure exerted by a fluid weighing 55 pcf. Fifty percent of any uniform areal surcharge placed at the top of a restrained wall will act as a uniform horizontal pressure over the entire height of the wall.

Walls that are not restrained at the top may be designed for an active earth pressure developed by an equivalent fluid weighing 35 pcf. Thirty percent of any uniform surcharge will act as a uniform horizontal pressure over the entire height of the wall.

The above lateral earth pressures do not include any hydrostatic pressure. Therefore, wall backfill should be free draining and provisions should be made to collect and dispose of water that may accumulate behind the walls. Light equipment should be used during backfill compaction to avoid possible overstressing of walls.

8.2.5.2 Seismic Lateral Pressure

Retaining walls higher than 12 feet, as measured from the top of the foundation, should be designed to resist the additional earth pressure caused by seismic ground-shaking.

For vertical retaining walls with a level backfill, the corresponding seismic lateral pressure based on the design earthquake may be taken as an inverted triangular pressure distribution with a maximum pressure at the top equal to 20H (with H being the height of the wall in feet). The seismic lateral force may be assumed to act at 2/3H above the wall base. The seismic pressure should be superimposed on the static design load.

8.2.6 Driveways, Parking and Fire Truck Access Areas

Based on an R-value of 20, the recommended minimum thickness of flexible pavements for Traffic Index (TI) values of 4 to 10 are provided in Table 8.

Table 8 – FLEXIBLE PAVEMENTS

PAVEMENT DESCRIPTION	Traffic Index (TI)	PAVEMENT THICKNESS (inches)	
		ASPHALTIC CONCRETE	CRUSHED AGGREGATE BASE (min. R-value =78)
Automobile Drive/Parking Areas	4 to 5	4	10
Truck and Fire Truck Drive/Parking Areas	8 to 10	6	12

Crushed Aggregate Base (CAB) consisting of natural materials should be used. CAB should satisfy the specifications contained in "Standard Specification for Public Works Construction" for gradation and should have a minimum R-value of 78. All gradation and R-value should be confirmed by the geotechnical engineer during construction. All base materials should be compacted to a minimum of 95 percent of the maximum dry density per ASTM D-1557.

Pavements adjacent to the building should be sloped away from the buildings in all directions and ponding of water should not be allowed. Asphalt should be graded to direct surface water toward the street or, preferably, toward suitable catchments devices, which should be appropriately designed and maintained.

The above recommendations apply to parking lot, driveway and street areas only. Other highly loaded areas, such as loading docks and trash enclosures, should be paved with Portland cement concrete pavement. We recommend the section consist of a minimum of 6 inches of reinforced Portland cement concrete over 4 inches of CAB with a minimum R-value of 78. The base should be compacted to at least 95 percent of the maximum dry density per ASTM D-1557.

8.3 SEISMIC DESIGN PARAMETERS

California Building Code (2007 CBC) Seismic Design Parameters

The upper 100 feet at the Project site varies from medium dense to very dense sands with Standard Penetration Test (SPT) blow counts of 15 to 50, to stiff cohesive soils with undrained shear strength of 1,000 to 2,000 psf. This range of soil properties generally corresponds to a Site Class D in accordance with Table No. 1613A.5.2 of the 2007 CBC for the majority of the Project site. The electrical substation, Lot 18, would be founded over shallow bedrock consisting of sandstones, siltstones and conglomerate materials (soft rock) with SPT blow counts generally exceeding 50, which generally corresponds to a Site Class C in accordance with Table No. 1613A.5.2 of the 2007 CBC. Seismic design parameters according to the 2007 CBC are summarized in Table 9.

Table 9 – SEISMIC DESIGN PARAMETERS

	Lots 1 to 17, 19 & 20	*Lot 18*
Site Class Definition	*D*	*C*
Spectral Acceleration for Short Period, S_S	2.014	1.998
Spectral Acceleration for 1 Second, S_1	0.779	0.800
Site Coefficient, F_a	1.0	1.0
Site Coefficient, F_v	1.5	1.3
Design Spectrum, $S_{DS} = 2/3\ S_{MS}$	1.343	1.332
Design Spectrum, $S_{D1} = 2/3\ S_{M1}$	0.779	0.693
Maximum Considered S_{MS} = Fa x Ss	2.014	1.998
Maximum Considered S_{M1} = Fv x S_1	1.168	1.040
Peak Ground Acceleration, g	0.537	0.533

8.4 SOIL CORROSIVITY TESTING

Selected soil samples were tested in order to assess corrosivity parameters including resistivity, pH, and sulfate and chloride contents. The test results are summarized in Table 10 and Appendix B.

Table 10 –SOIL CORROSIVITY PARAMETERS

SAMPLE LOCATION	MINIMUM RESISTIVITY (Ohm-cm)	PH	SULFATE CONTENT (ppm)	CHLORIDE CONTENT (ppm)
HAS-4 @ 0-5'	803	4.3	28.3	30
HAS-7 @ 0-5'	7,400	7.6	0.07	30

According to ACI 138, the sulfate exposure is negligible to very severe. As such, we anticipate that concrete in contact with site soils may be constructed with Portland Cement Type V plus pozzolan. Results of the resistivity test indicate that the soils are mildly to very corrosive to ferrous metals. A licensed corrosion engineer should be consulted in order to obtain specific recommendations for protection.

8.5 LOS ANGELES COUNTY BUILDING CODE SECTION 111 STATEMENT

Based on the findings of this geotechnical investigation, and provided the recommendations of this report are followed and the designs and construction are properly and adequately executed, it is our opinion that the proposed construction work within the Project site would not be subjected to geotechnical and geologic hazards from existing landslides, slippage, or excessive settlement. Further, it is our opinion that the proposed construction would not adversely affect the existing stability of the site, or adjacent properties, with the same provisions listed above.

9.0 CONSTRUCTION MONITORING

All earthwork and foundation construction should be monitored by a qualified geologist/engineer/technician under the supervision of an engineering geologist and geotechnical engineer, including:

- Site preparation - site stripping, removal of subsurface structures, overexcavation, and recompaction;
- All foundation excavations;
- All pile installations;
- Placement of all compacted fills and backfills; and
- Construction of slab and pavement subgrades.

All earthwork in areas exposing bedrock materials should be observed and monitored during the grading process by an engineering geologist.

The engineering geologist and geotechnical engineer should be present to observe the soil/bedrock conditions encountered during construction, to evaluate the applicability of the recommendations presented in this report to the soil conditions encountered, and to recommend appropriate changes in design or construction if conditions differ from those described herein. The geotechnical engineer should inspect and approve all imported backfill material prior to its placement as backfill, approve the subgrade beneath all fills, fill placement and bottom of all foundation excavations before concrete or steel is placed.

10.0 ADDITIONAL INVESTIGATIONS

The geotechnical recommendations included in this report are provided for tentative map preparation, project estimating and planning purposes and should be considered preliminary and subject to change based on additional site exploration for building and structure foundations.

In accordance with regulatory requirements, a design level geotechnical exploration would be performed for the Project prior to construction of Project's structures. The geotechnical exploration should include additional borings and laboratory testing of subsurface materials to allow for the preparation of additional site grading, foundation, and drainage recommendations. The final grading and foundation plans should be reviewed by the Engineering Geologist and Geotechnical Engineer for conformance to the recommendations of the final geotechnical exploration report.

11.0 LIMITATIONS

URS warrants that our services are performed within the limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended in this report.

The conclusions and recommendations contained in this report are based on the findings of our field investigation, our interpretation of the geologic and geotechnical conditions encountered, and our past project experience in the vicinity of the Project site. This report is preliminary in nature and is not to be used as the sole basis for final design; and in no way should be used for construction or remedial action bidding by contractors. Further design level geotechnical studies should be performed prior to such decisions.

This report is prepared for Disney Worldwide Services, Inc. and their project consultants to be used in vesting tentative tract map preparation, conceptual design, and cost estimating of the Project as described herein. It is intended for this specific purpose only and will not contain sufficient information for building permitting or for the uses of other parties.

12.0 SIGNATURES OF RESPONSIBLE PROFESSIONALS

It has been a pleasure to assist you with this Project. We look forward to being of further assistance during the final design and construction process. Should you have any questions regarding this report, please contact us at 213-996-2200.

On behalf of the project team, this report is respectfully submitted by,

URS CORPORATION

PROFESSIONAL GEOLOGIST
CASEY LEE JENSEN
No. 2320
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Casey Lee Jensen, PG, CEG
Project Manager / Engineering Geologist

REGISTERED PROFESSIONAL ENGINEER
SADDANATHAPILLAI NESARAJAH
No. 2717
Exp. 9-30-11
GEOTECHNICAL
STATE OF CALIFORNIA

S. Nesarajah, Ph.D., P.E., G.E.
Senior Project Engineer

Reviewed By:

Arnel Bicol, PE, GE
Principal Engineer

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: (213) 996-2200
Fax: (213) 996-2290

13.0 REFERENCES

1. American Concrete Institute (ACI), ACI 318, Building Code Requirements for Structural Concrete.

2. California Building Code, Volume 2 (2010-CBC).

3. California Building Standards Commission, November 1, 2002a. California Code of Regulations, Title 24: "California Building Standards Code." Sacramento, CA: California Building Standards Commission. Available at: http://www.bsc.ca.gov

4. California Department of Conservation, Division of Mines and Geology, 1995, State of California Earthquake Fault Zones, Newhall Quadrangle, Revised Official Map June 1, 1995.

5. California Department of Conservation, Division of Mines and Geology. 1997. Guidelines for Evaluating and Mitigating Seismic Hazards in California. Special Publication No. 117. Contact: California Department of Conservation, Division of Mines and Geology, 801 K Street, MS 14-33, Sacramento, CA 95814-3531.

6. California Department of Conservation, Division of Mines and Geology. Revised 1997 (Supplements 1 and 2 added 1999). Fault-Rupture Hazard Zones in California. Special Publication No. 42. Contact: California Department of Conservation, Division of Mines and Geology, 801 K Street, MS 14-33, Sacramento, CA 95814-3531.

7. California Department of Conservation, Division of Mines and Geology, 1998, Seismic Hazard Evaluation of the Mint Canyon 7.5-Minute Quadrangle, Open File Report 98-09.

8. California Department of Conservation, Division of Mines and Geology, 1999, State of California Seismic Hazards Zones Map of the Mint Canyon 7.5-Minute Quadrangle, Official Map Released, March 25, 1999, Scale 1:24,000.

9. County of Los Angeles, Department of Public Works (LACDPW), Manual for Preparation of Geotechnical Reports, July 2010.

10. Dibblee, T.W. Jr., 1991, Geologic Map of the San Fernando and Van Nuys North Half Quadrangle, Los Angeles, California, Dibblee Geological Foundation Map #DF-33, Scale 1:24,000.

11. Dibblee T.W., Jr., 1996, Geologic Map of the Mint canyon Quadrangle, Los Angeles, California, Dibblee Geological Foundation Map #DF-57, Scale 1:24,000.

12. Federal Emergency Management Agency, 2008, Flood Insurance Rate Map, Los Angeles County, California and incorporated Areas, Panel 840 of 2350, Map Number 06037C0840F, Effective date September 26, 2008.

13. Los Angeles County Department of Public Works (LACDPW), Geotechnical and Materials Engineering Division, Manual for Preparation of Geotechnical Reports, December 2006.

14. State of California. 1972. Alquist-Priolo Earthquake Fault Zoning Act. California Public Resources Code, Section 2621 et seq. Available at: http://www.leginfo.ca.gov/calaw.html.

15. State of California, 1979, Special Studies Zones, San Fernando Quadrangle.

16. State of California. 1990. Seismic Hazards Mapping Act. California Public Resources Code. Section 2690 et seq. Available at: http://www.leginfo.ca.gov/calaw.html.

17. State of California, 1999, Seismic Hazard Zones, San Fernando Quadrangle.

URS

May 31, 2011

County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331

Attention: Mr. Yoshiya Morisaku

Subject: Transmittal – Response to Comments
Vesting Tentative Tract Map No. 71216
Golden Oak Ranch
19802 Placerita Canyon Road
Newhall, California 91321
TR 0171216, CUP 200900126, ENV200900112

In response to County of Los Angeles Department of Public Works review letters dated April 14 and 21, 2011, URS Corporation (URS) is submitting the attached response to soils engineering and geologic review sheet comments for vesting tentative tract map no. 71216 (Project) in Los Angeles County, California. Please review the attached response to comments with attachments and provide additional comments as necessary.

If you have any questions regarding this response to comments, please contact us.

Sincerely,

URS CORPORATION

REGISTERED PROFESSIONAL ENGINEER
ARNEL M. BICOL
GE No. 2646
EXP. 12-31-12
GEOTECHNICAL
STATE OF CALIFORNIA

Casey Lee Jensen, PG, CEG
Project Manager / Engineering Geologist

Arnel Bicol, P.E., G.E.
Principal Engineer

Attachment: Responses to Soils Engineering and Geologic Review Sheet Comments (2 copies)

CC: Disney Worldwide Services, Inc. – Mr. Dan McBrearty (via email)
Truman & Elliott, LLP – Ms. Kathleen Truman (via email)

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: 213.996.2200
Fax: 213.996.2290

DISNEY|ABC STUDIOS AT THE RANCH
County of Los Angeles

RESPONSES TO SOILS ENGINEERING AND GEOLOGIC REVIEW SHEET COMMENTS

Vesting Tentative Tract No. TR 071216

May 31, 2011

COUNTY:	**Los Angeles, CA**	**REVIEW AGENCY:**	**County of Los Angeles**
CHECK BY:		**TITLE NO.:**	
RESPONDED BY:	**Casey Jensen**	**DATE:**	**October 28, 2009 (1st Submittal)**
DATE:	**May 31, 2011**	**SUB. COMM. MTG.**	**December 17, 2009**
		DATE:	**March 15, 2010 (2nd Submittal)**
		SUB COMM. MTG.	**April 15, 2010**
		DATE:	**May 3, 2010 (Parking Permit Submittal)**
		APPLICATION DEEMED COMPLETE	**May 4, 2010**

Item	Review Comments	Responses	Action/Status	Responder
	PUBLIC WORKS – GEOTECHNICAL AND MATERIALS ENGNIEERING DIVISION, SOILS ENGINEERING REVIEW SHEET. (MORISAKU) 4/14/11			
1.	Provide revised geotechnical maps such [that] the proposed development can be clearly identified in relation to the existing topography. The line weights in the areas of the existing channel are especially difficult to discern the proposed final grades/slopes versus the existing contours. Revise as necessary.	Figures 3 and 4 (attached) have been revised to remove hatched areas and only the 5-foot contours are shown so that the topography can be discerned. Within the existing channel, the figures do not contain proposed topography and only contain conceptual top of slope and toe of slope spot elevations.		
2.	Provide revised cross sections at 40-scale. All scale must the same for the vertical and horizontal.	Figure 5 (attached) has been modified so that the cross sections major tick marks of the x and y axis match.		
3.	Verify the shear strength parameters utilized in the slope stability analyses are those from direct shear test results reported within the submitted reports. For example, the represented cross bedded material of the Saugus Formation in the slope stability analyses has a cohesion of 500 psf and phi of 35 degrees. However, none of the submitted direct shear test data have shear strength parameters that match these values. The surficial slope stability analyses utilize 95 relative compaction with a cohesion of 400 psf and phi of 32 degrees. However, direct shear tests for 95 relative compaction in the submitted reports indicate 75 psf and a phi of 35 degrees. The shear strength parameters utilized in the slope stability analyses must be directly derived from the direct shear tests of the samples of the materials being represented. Multiple samples should be provided for each earth sample to verify conservative values are utilized in the slope stability analyses. Provide direct shear test with values utilized in the slope stability analyses, provide additional direct shear tests, and/or revise analyses such that they utilize shear parameters from the direct shear tests.	Understood. Based on your comments and our telephone conversation on May 9, 2011, we are providing revised slope stability analysis with conservative values. The revised values are derived from the existing laboratory data, additional laboratory analysis and local data from other projects where multiple samples were not available for testing due to the dense nature of the materials. Instead of using average values as discussed in the previously submitted report, the revised analysis utilizes the lowest conservative direct shear results. For the proposed cut slope with adverse (out of slope) bedding, we additionally simulated a slope stability analysis and mitigation with a clay bed condition, although not currently identified to exist on the site in borings or geologic mapping. The current conservative slope stability strength values may be modified by future design level geotechnical investigation and testing.		
4.	The shear strength parameters must be derived from a minimum of three data points to be utilized in the slope stability analyses. Verify and revise analyses as necessary.	Each laboratory test was performed using three data points; however, due to the gravelly nature of the site soils, some of the data points could not be used because a large size partial skewed the laboratory results.		

5.	Provide all input data and output data for the slope stability analyses. Include copies of the points inputted for each segment. Specify the modeled anisotropic conditions in the slope stability analyses. The degrees in which the along bedding materials are utilized has not been reported.	See the attached input and output data for each stability analysis in Appendix C.		
6.	Additional comments may arise once all requested data above is provided.	Noted		
7.	Provide revised rapid draw down analyses which does not include the phreatic surface within the channel. The rapid draw down analyses should show saturation of the proposed slopes without water in front of the slopes. Revise analyses as necessary.	See the attached revised rapid draw down analyses which do not include the phreatic surface within the channel and show saturation of the proposed slopes without water in front.		
8.	Requirements of the Geology Section are attached.	Noted		
9.	Include a copy of this review sheet with your response.	Noted		
Note A.	NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY ENGINEER: PER THE SOILS ENGINEER, SEISMICALLY INDUCED SETTLEMENT WILL BE MITIGATED WITH THE INSTALLATION OF PILE FOUNDATIONS. AT THE BUILDING OR GRADING PLAN STAGE, ADDITIONAL EXPLORATION WILL BE REQUIRED TO VARIFY [sic] TOTAL DEPTH OF PROPOSED PILE FOUNDATIONS PROPOSED PILE FOUNDATIONS MUST BE FOUNDED IN COMPETENT MATERIAL BELOW THE DEPTH OF SOILS SUSCEPTABLE TO LIQUEFACTION.	Noted		
	PUBLIC WORKS – GEOTECHNICAL AND MATERIALS ENGNIEERING DIVISION, GEOLOGY REVIEW SHEET (NESTLE) 4/21/11			
1.	The Soils Engineering review dated 4/14/11 is attached.	Noted, see above.		
Note.	Much of the site is underlain by alluvium and undocumented fill. Only partial removal of these materials is currently proposed and settlement of these materials beyond County maximum allowable limits is expected. Mitigation by supporting structures on deep foundations is proposed, and although not specifically stated, infrastructure for utilities would also require deep foundation support. We recommend that Land Development Division and the Department of Regional Planning determine if deep foundations area an acceptable mitigation for excessive settlement.	Noted. The future design level geotechnical report will investigate and address settlement of utilities. Based on the future settlement analysis, URS will likely recommend utility pipes with gaskets at joint connections to accommodate settlement of proposed utilities.		

Attachments:

1. County of Los Angeles Department of Public Works, Geotechnical And Materials Engineering Division, Geologic Review Sheet
2. County of Los Angeles Department of Public Works, Geotechnical And Materials Engineering Division, Soils Engineering Review Sheet
3. Revised Section 6.5, Slope Stability Analysis of Preliminary Geotechnical Investigation, Vesting Tentative Tract Map No. 71216, Golden Oak Ranch, 19802 Placerita Canyon Road, Newhall, California 91321.
4. Revised Appendix B – Laboratory Test Results
5. Revised Appendix C – Slope Stability Portion of Engineering Analysis
6. Revised Figure 3 – Geologic Map North
7. Revised Figure 4 – Geologic Map South
8. Revised Figure 5 – Geologic Cross Sections

County of Los Angeles Department of Public Works
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION
GEOLOGIC REVIEW SHEET
900 So. Fremont Ave., Alhambra, CA 91803
TEL. (626) 458-4925

DISTRIBUTION
1 Geologist
__ Soils Engineer
1 GMED File
1 Subdivision

TENTATIVE TRACT MAP 71216
SUBDIVIDER Golden Oak Ranch Properties
ENGINEER David Evans and Associates, Inc.
GEOLOGIST & SOILS ENGINEER URS

TENTATIVE MAP DATED 3/15/10 (Rev.)
LOCATION Newhall
REPORT DATE 2/28/11, 3/22/10

The Regional Planning Commission, developer, and engineer are advised that:

PRIOR TO RECOMMENDING APPROVAL OF THE TENTATIVE TRACT OR PARCEL MAP:

1. The Soils Engineering review dated 4/14/11 is attached.

Note: Much of the site is underlain by alluvium and undocumented fill. Only partial removal of these materials is currently proposed and settlement of these materials beyond County maximum allowable limits is expected. Mitigation by supporting structures on deep foundations is proposed, and although not specifically stated, infrastructure for utilities would also require deep foundation support. We recommend that Land Development Division and the Department of Regional Planning determine if deep foundations are an acceptable mitigation for excessive settlement.

NOTE Provide a copy of this review with your resubmittal

Prepared by _____ Reviewed by _____ Date 4/21/11
Charles Nestle

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SOILS ENGINEERING REVIEW SHEET

Address:	900 S. Fremont Ave., Alhambra, CA 91803	District Office	8.2
Telephone:	(626) 458-4925	Job Number	GMTR
Fax:	(626) 458-4913	Sheet 1 of 1	

Review No. 2

DISTRIBUTION:
___ Drainage
___ Grading
___ Geo/Soils Central File
___ District Engineer
___ Geologist
___ Soils Engineer
___ Engineer/Architect

Tentative Tract Map	71216
Location	Newhall
Developer/Owner	Golden Oak Ranch Properties
Engineer/Architect	David Evans and Associates, Inc.
Soils Engineer	URS (Project No. 09405568)
Geologist	Same as above

Review of:
Revised Tentative Tract Map Dated by the Processing Center 3/15/10
Soils Engineering and Geology Report Dated **2/28/11**, 3/22/10
Previous Review Sheet Dated 6/22/10

ACTION:
Tentative Map feasibility is not recommended for approval.

REMARKS:

1. Provide revised geotechnical maps such the proposed development can be clearly identified in relation to the existing topography. The line weights in the areas of the existing channel are especially difficult to discern the proposed final grades/slopes versus the existing contours. Revise as necessary.

2. Provide revised cross sections at 40-scale. All scale must the same for the vertical and horizontal.

3. Verify the shear strength parameters utilized in the slope stability analyses are those from direct shear test results reported within the submitted reports. For example, the represented cross bedded material of the Saugus Formation in the slope stability analyses has a cohesion of 500 psf and phi of 35 degrees. However, none of the submitted direct shear test data have shear strength parameters that match these values. The surficial slope stability analyses utilize 95% relative compaction with a cohesion of 400 psf and phi of 32 degrees. However, direct shear tests for 95% relative compaction in the submitted reports indicate 75 psf and a phi of 35 degrees. The shear strength parameters utilized in the slope stability analyses must be directly derived from the direct shear tests of the samples of the materials being represented. Multiple samples should be provided for each earth sample to verify conservative values are utilized in the slope stability analyses. Provide direct shear test with values utilized in the slope stability analyses, provide additional direct shear tests, and/or revise analyses such that they utilize shear parameters from the direct shear tests.

4. The shear strength parameters must be derived from a minimum of three data points to be utilized in the slope stability analyses. Verify and revise analyses as necessary.

5. Provide all input data and output data for the slope stability analyses. Include copies of the points inputted for each segment. Specify the modeled anisotropic conditions in the slope stability analyses. The degrees in which the along bedding materials are utilized has not been reported.

6. Additional comments may arise once all requested data above is provided.

7. Provide revised rapid draw down analyses which does not include the phreatic surface within the channel. The rapid draw down analyses should show saturation of the proposed slopes without water in front of the slopes. Revise analyses as necessary.

8. Requirements of the Geology Section are attached.

9. Include a copy of this review sheet with your response.

NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY ENGINEER:
A. PER THE SOILS ENGINEER, SEISMICALLY INDUCED SETTLEMENT WILL BE MITIGATED WITH THE INSTALLATION OF PILE FOUNDATIONS. AT THE BUILDING OR GRADING PLAN STAGE ADDITIONAL EXPLORATION WILL BE REQUIRED TO VARIFY TOTAL DEPTH OF PROPOSED PILE FOUNDATIONS. PROPOSED PILE FOUNDATIONS MUST BE FOUNDED IN COMPETENT MATERIAL BELOW THE DEPTH OF SOILS SUSCEPTIBLE TO LIQUEFACTION.

REGISTERED PROFESSIONAL ENGINEER YOSHIYA MORISAKU No. 67587 Exp. 6/30/11 CIVIL STATE OF CALIFORNIA

Reviewed by Yoshiya Morisaku Date 4/14/11
Yoshiya Morisaku

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.
P:\Yosh\71216, TentT-NA_2

6.5 SLOPE STABILITY ANALYSIS

This stability analysis has been performed using preliminary conservative geotechnical data based on conditions known to exist at the project site and regionally. However, future design level geotechnical investigations will be performed to refine our conservative values utilizing several shear strength tests for each geologic unit. The currently proposed mitigation measures are presented to show that even using conservative shear strength values, the proposed development is feasible from a geotechnical standpoint. Geologic cross-sections were chosen in the most critical area of each slope type and condition for slope stability analysis. In general, the slopes chosen for analysis represent the depicted and adjacent slope areas and conditions as well as similar slopes with lesser heights. The cross-sections and representative adjacent areas are summarized in Table 2.

Table 2 – GEOLOGIC CROSS-SECTION SUMMARY

GEOLOGIC CROSS SECTION	SLOPE TYPE	PROPOSED SLOPE GRADIENT (horizontal: vertical)	MAXIMUM SLOPE HEIGHT (feet)	REPRESENTATIVE AREA
A-A’	Cut	2:1	60	Offsite west and south facing cut slopes in colluvium and Saugus Formation adjacent to and east of Lot 18 within the LADWP transmission corridor
B-B’	Fill/Cut/Fill	2:1	92	Combination fill/cut/undocumented fill slopes, cut/undocumented fill slopes, and cut slopes within Lot 1 north and east of adjacent Lots 16 and 17.
C-C’	Fill	2:1	35	Undocumented fill slopes of the northern fill pad adjacent to Placerita Creek for Lots 1 and 14, and adjacent Lots 15 and 16.
D-D’	Fill	2:1	75	Undocumented fill slopes of the northern and southern fill pads adjacent to SR-14 for Lots 1 and 14 and adjacent to Lots 15, and 17
E-E’	Fill	2:1	37	Undocumented fill slopes of the southern fill pad adjacent to Placerita Creek for Lots 1, 10, 11, 12 and 13; and adjacent Lots 7, 8 and 9.

6.5.1 Shear Strength Parameters

Generally, shear strength parameters are reported as peak and ultimate values in the following discussions. The peak strength is defined as the highest resistance during the initial shearing, while the ultimate strength is defined as the resistance at larger strain (approximately 10 percent) which occurs in the same loading path. The shear strength parameters used in the slope stability analyses are based on the recent and previous laboratory test results by URS, USGS and other consultants for projects within the region. A summary of the laboratory test results is summarized in Table 3.

Table 3 - SUMMARY OF LABORATORY SHEAR STRENGTH VALUES

GEOLOGIC UNIT	SAMPLE NAME	SOURCE	PEAK STRENGTH		ULTIMATE STRENGTH	
			c' (psf)	φ' (deg)	c' (psf)	φ' (deg)
Undocumented Fill	HSA-5A-2 at 20'	URS	250	27	**50**	**30**
	HSA-5A-3 at 40'	URS	0	40	0	33
	HSA-16-3 at 15'	URS	100	35	**50**	**30**
	HSA-16-5 at 25'	URS	0	45	100	35
	HSA-18-5 at 50'	URS	1100	33	1050	33
Artificial Fill	HSA-4-BK-4 at 0-5', 95%	URS	450	39	**75**	**35**
	HSA-17-BK-1 at 0-5', 95%	URS	400	36	150	32
	Lyons Canyon at 90%	Pac Soils[1]			350	31
Alluvium / Colluvium	HSA-5A-5 at 52'	URS	0	34	0	34
	HSA-6-11 at 55'	URS	275	31	125	31
	HSA-8-9 at 45'	URS	450	34	350	34
	HSA-17-3 at 15'	URS	100	52	0	46
	HSA-17-5 at 25'	URS	250	39	0	39
Saugus Formation	HSA-14-4 at 20'	URS	700	36	**350**	**33**
	LAR[2] B-5-S-10 at 50'	URS-EGL[3]	351	28	**335**	**27**
	LAR B-6-S-8 at 40'	URS-EGL	308	31	280	29
	LAR BA-001-1-3 at 25'	URS-EGL	54	36	192	30
	LAR BA-02-S-2 at 15'	URS-EGL	234	31	120	28
	LAR BA-02-S-3 at 25'	URS-EGL	354	33	240	31
	LAR BA-02-S-5 at 45'	URS-EGL	1003	30	583	29
	LAR BA-03-S-3 at 25'	URS-EGL	552	37	0	35
	LAR BA-03-S-5 at 45'	URS-EGL	373	36	319	35
	Oat Mtn. Quad	USGS[4]			34	400
	Oat Mtn. Quad Upper Member	USGS			34	450
	Oat Mtn. Quad Lower Member	USGS			34	450
	Cross-Bedding	RTF&A			600	32
	Sunshine Ranch Member	Pac Soils			35	350
3% Soil Cement at 95% compaction	RH[5] B-1-BK-1, 2, 3, 0-15'	URS-EGL	930	40	**550**	**30**
	RH B-4-BK-1, 2, 3, 0-12.5'	URS-EGL	670	48	730	29
5% Soil Cement at 95% compaction	RH B-1-BK-1, 2, 3, 0-15'	URS-EGL	1110	40	780	27
	RH B-4-BK-1, 2, 3, 0-12.5'	URS-EGL	540	51	95	37

Notes: **Bold** shaded indicates shear strength value used for analysis.

1. Pac Soils = Pacific Soils Engineering, Inc. 2006, Updated Preliminary Geotechnical Report and Response to County of Los Angeles Geotechnical and Materials Engineering Division Review Sheets, Proposed Lyons Canyon Ranch Development, Tentative Tract Map No. 53653.
2. LAR = Los Angeles Reservoir, Hillside Grading Project
3. EGL = Laboratory testing performed by Environmental Geotechnology Laboratory for URS.
4. USGS = United States Geological Survey
5. RH = Soil cement samples by EGL for Los Angeles County Rio Hondo Coastal Basins Spreading Grounds Project for URS.

The shear strength parameters used in the current study are summarized in Table 4. These recommended engineering parameters were selected based on the lowest actual values of laboratory shear test results or in the case of the alluvium/colluvium, the reasonable lower-bound ultimate laboratory shear strength as depicted in Figure C-1.

Table 4 - SUMMARY OF URS ENGINEERING PARAMETERS

GEOLOGIC UNIT		TOTAL UNIT WEIGH T, γ (pcf)	PEAK STRENGTH		ULTIMATE STRENGTH	
			c' (psf)	φ' (deg)	c' (psf)	φ' (deg)
Rip Rap		150			0	50
Undocumented Fill		120			50	30
Artificial Fill [Qaf][1]		120			75	35
Alluvium / Colluvium [Qal/Qc][2]		120			0	31
Soil Cement[3]		135			550	30
Saugus Formation [Qts][4]	across bedding	120	350	33	350	33
	along bedding	120			335	27
	clay bed	120			200	20

Notes:

1. URS performed two remolded direct shear tests on the existing fill soil material. These samples were prepared at 95% relative compaction. Due to the nature of the shallow fill, the more conservative value of the two remolded direct shear tests was used in the analyses. The remolded direct shear tests are included.
2. Based on reasonable lower-bound ultimate laboratory shear strength.
3. Soil cement strength based on recently performed ultimate laboratory shear tests on similar silty sand material at the Rio Hondo project (URS 2011). The sample was remolded to 95% relative compaction at optimum moisture content with 3% cement added. The results of the laboratory direct shear test is included.
4. Cross-bedding strength is based on reasonable ultimate laboratory shear results. Regional parameters given by USGS suggest a shear strength of 34 degrees and 400 psf for Saugus Formation. Pacific Soils (2006) used 35 degrees and 350 psf in a report approved by LA County. R.T. Frankian and Associates utilized 32 degrees and 600 psf for Saugus Formation based on multiple direct shear tests for a paper written for the Honby Landslide Stabilization. Along bedding strength is based on conservative ultimate strength results recently achieved on Saugus Formation at the Los Angeles Reservoir.

6.5.2 Slope Stability Assessment

6.5.2.1 Gross Slope Stability

Slope stability analyses were completed using SLOPE/W, a two-dimensional computer program that evaluates the potential of overall rotational failures and translational failures along adverse bedding planes based on a limiting-equilibrium approach. The results of the slope stability analyses using Spencer's Method are presented in terms of factors of safety.

Location-specific slope stability analyses were conducted on Geologic Cross-Sections A-A' through E-E'. The cross-section locations are presented on Figures 2, 3 and 4 and the cross-sections are presented on Figure 5. The cross-sections illustrate the generalized subsurface profile by adopting soil and alluvial groundwater conditions interpreted from our field investigation. The slope stability

analysis for cut slope cross-sections A-A' and B-B' do not include hydrostatic conditions for alluvial groundwater as the grading would be well above alluvial groundwater levels. In addition, clay beds are known to exist within the Saugus Formation bedrock although not currently identified to exist on the site in borings or geologic mapping. As a conservative approach, URS performed slope stability analysis using a hypothesized clay bed condition for the proposed cut slope with adverse (out of slope) bedding (cross-section A-A') with proposed mitigation. The hypothetical clay bed condition was not modeled for cross-section B-B' because the bedding angles are into the slope.

Fill slope sections C-C' through E'E' assume static alluvial groundwater conditions at 10-feet below creek elevation and elevation 1,425 msl for rapid draw down conditions after the maximum flooding event.

Target minimum factors of safety were 1.5 for static conditions and 1.1 for pseudostatic conditions using a horizontal acceleration of 0.27 g in accordance with the current California Building Code (Code).

The shear strength parameters of Table 4 were used in calculating the theoretical failure surface determined to have the lowest factor of safety. Ultimate and peak shear strengths were used for soils and bedrock with favorable bedding for static and pseudostatic analyses, respectively. The results of the slope stability analyses are presented in Table 5 for the proposed grades. Detailed graphical results of the analyses are presented in Appendix C.

Table 5 - RESULTS OF GROSS AND RAPID DRAW-DOWN SLOPE STABILITY ANALYSES

SLOPE TYPE	GEOLOGIC CROSS-SECTION	PROPOSED SLOPE GRADIENT (horizontal: vertical)	SLOPE HEIGHT (feet)	FACTOR OF SAFETY			NOTE	MITIGATION REQUIRED
				Static	Seismic	Rapid Draw-Down		
Cut	A-A'	2:1	60	1.9	1.1		Adverse Bedding	No
Fill Buttress	A-A'	2:1	60	1.9	1.1		Clay Bed Condition	Yes[1]
Fill/Cut/Fill	B-B'	2:1	92	1.8	1.1		Favorable Bedding	No
Fill	C-C'	2:1	35	2.3	1.3	1.5	--	Yes[2]
Fill	D-D'	2:1	75	2.0	1.2	1.5	--	Yes[2]
Fill	E-E'	2:1	37	2.3	1.3	1.6	--	Yes[2]

Notes: 1. Minimum 10 foot deep keyway, 50 foot wide fill slope buttress.
2. Minimum 2-foot wide zone of riprap and soil cement with 10 to 20 foot deep keyway and 20 to 35 foot width within the flood zone.

6.5.2.2 Rapid Draw-Down Slope Stability

Rapid draw down slope stability analyses were completed using SLOPE/W and a conservative flood water elevation of 1425 msl. In general, the proposed site slopes within the rapid draw down zone would be at slope gradients of 2H:1V or flatter and protected with slope improvements (eg. Soil cement and rip-rap). The shear strength parameters used in our analysis were based on the existing fill soils and proposed protection of a minimum of 2-foot wide zone of rip rap and 20- to 35-foot wide zone of soil cement with a keyway of soil cement 10 to 20 feet deep within the flood zone. The estimated factor of safety of 1.5 is considered adequate and meets the Code requirement. Details of the rapid draw down slope stability analyses are presented in Appendix C.

6.5.2.3 Surficial Slope Stability

Surficial slope stability was evaluated using procedures for an infinite-slope analysis assuming depth of soil saturation of 3 feet with seepage parallel to the slope. In general, the proposed site slopes would be at slope gradients of 2H:1V or flatter. The shear strength parameters, based on the existing fill and bedrock soils, were used to evaluate the surficial stability of the slopes. Factor of safety values greater than 1.5 were calculated for the proposed cut and fill slopes, are considered adequate and meet the Code requirement. Details of the surficial-slope stability analyses are presented in Appendix C.

6.5.3 Proposed Slope Mitigation

Slopes consisting of undocumented fill would require a minimum 15-foot wide (measured horizontally from face of proposed slope) slope buttress of engineered fill. Mitigation for fill slopes within the flood zone includes a minimum 2-foot wide zone of rip rap and 20- to 35-foot wide zone of soil cement with a keyway of soil cement 10 to 20 feet deep to mitigate a rapid draw down event after flooding. Cut slopes would need to be evaluated by an engineering geologist during grading to determine if cut slopes contain additional adverse conditions not known at the time of this and future investigations such as the hypothetical clay bed condition. If additional adverse conditions were encountered, the adverse slope conditions could be mitigated by over-excavation and buttressing as fill slopes. Mitigation for the hypothetical clay bed condition includes rebuilding the slope as a 50-foot wide fill buttress with a 10-foot deep key and soil cementing the outer 20 feet of the slope face.

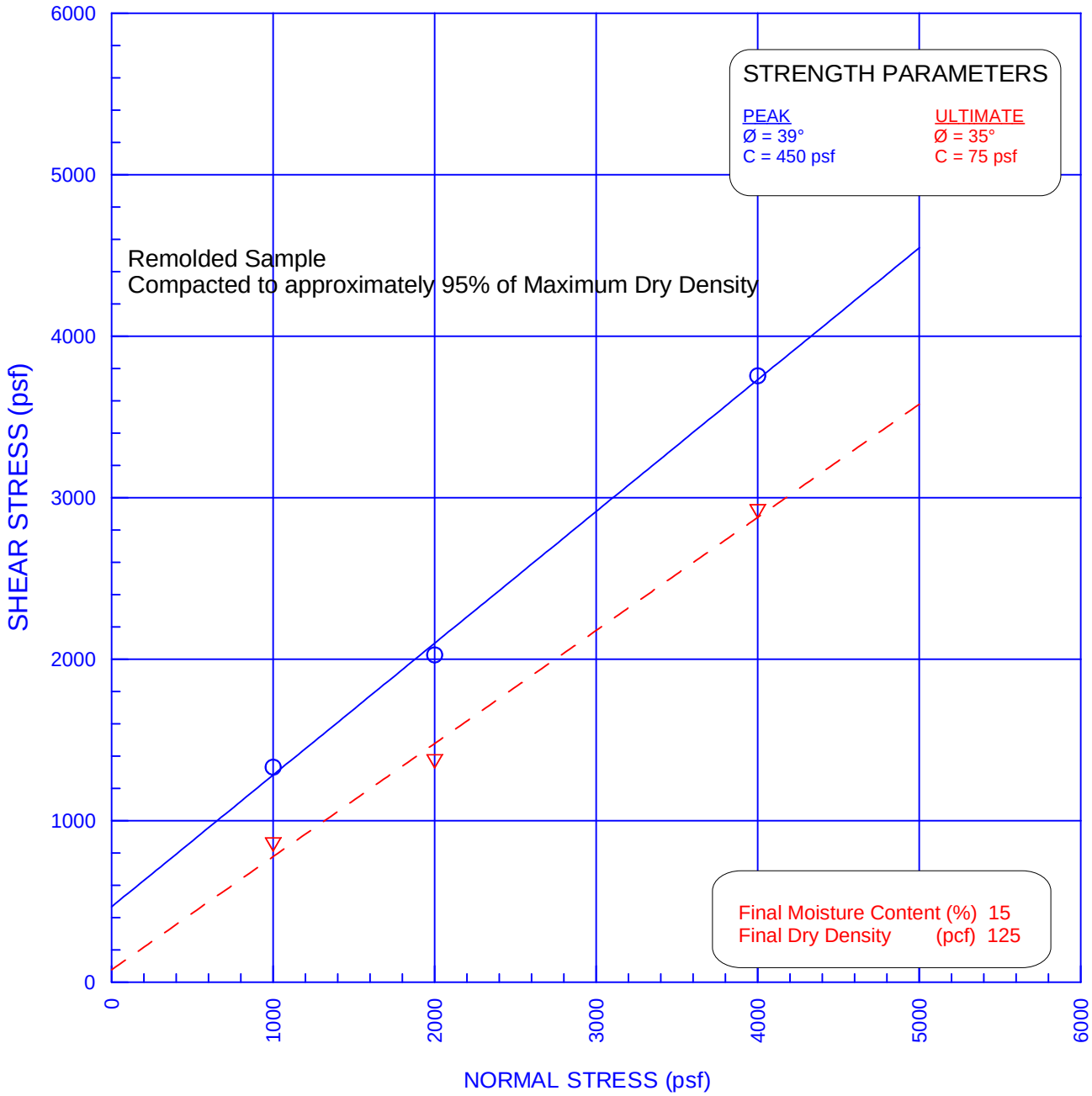
6.5.4 Slope Erosion Control

Based on the analysis performed for the proposed 2H:1V cut and fill slopes, the estimated factor of safety for surficial slope stability meets the Code. Therefore, materials to be used for the proposed mitigation fill should have similar strength properties as the existing fill materials.

Generally, erosion protection of the slope surfaces at slope gradients of 2H:1V or flatter do not require erosion protection. However, the erosion control methods in Table 6 are provided for consideration and special case uses.

APPENDIX B

LABORATORY TEST RESULTS



BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-4	BK-4	0-5	0.005	1000	○ 1332	▽ 852
				2000	○ 2028	▽ 1368
				4000	○ 3756	▽ 2916

Sample Description: Silty SAND (SM) Artificial Fill

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

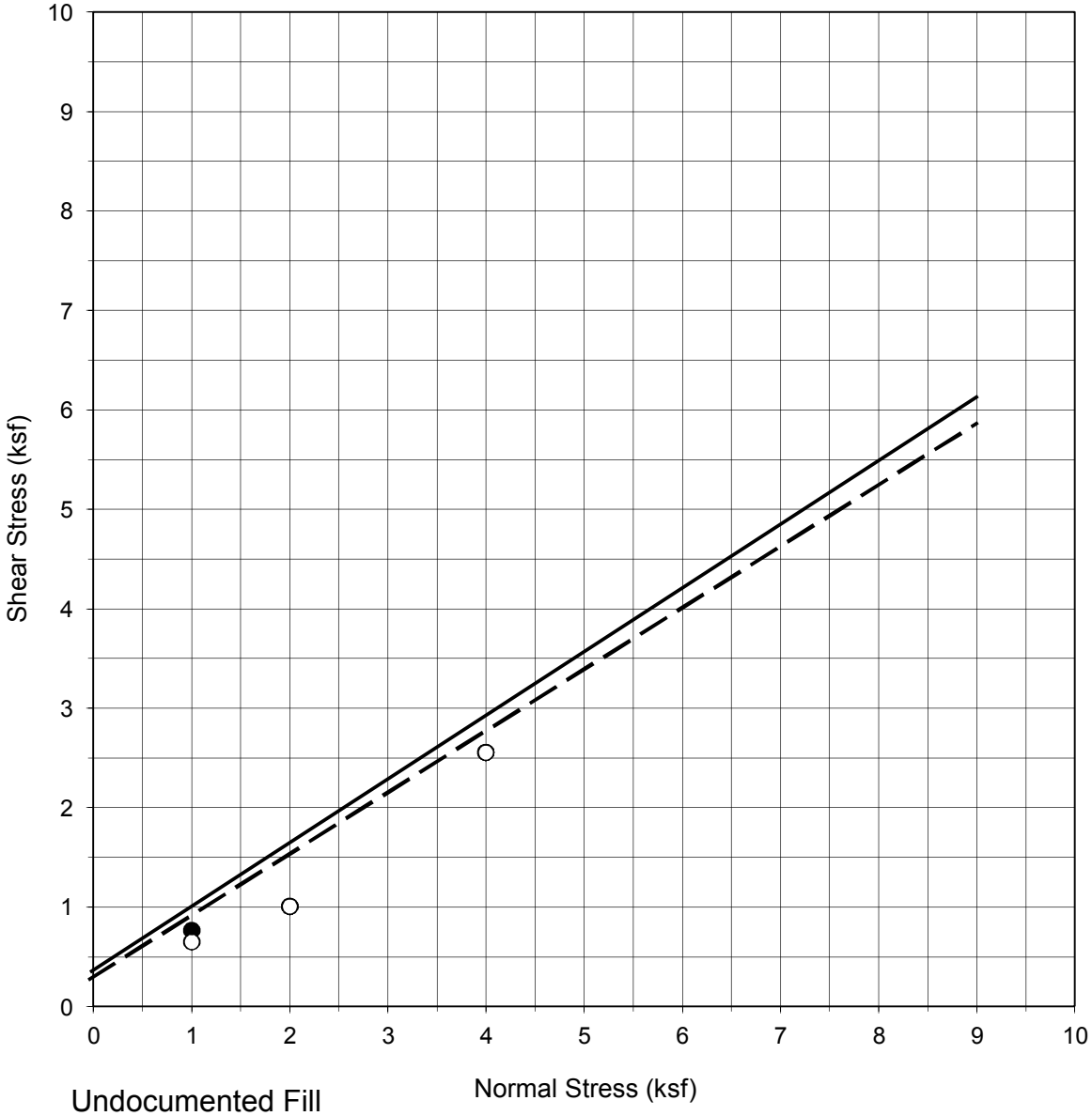
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-5A	2	20	0.005	1.000	0.768	0.648
				2.000	1.008	1.008
				4.000	2.556	2.556

Sample Description: Silty SAND (SM)

Sample Type: Undisturbed

Test Condition: Saturated

Initial Dry Density: 116 pcf

Moisture Content: (before) 16% (after) 25 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	250	50
FRICTION ANGLE (deg)	27 °	30 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

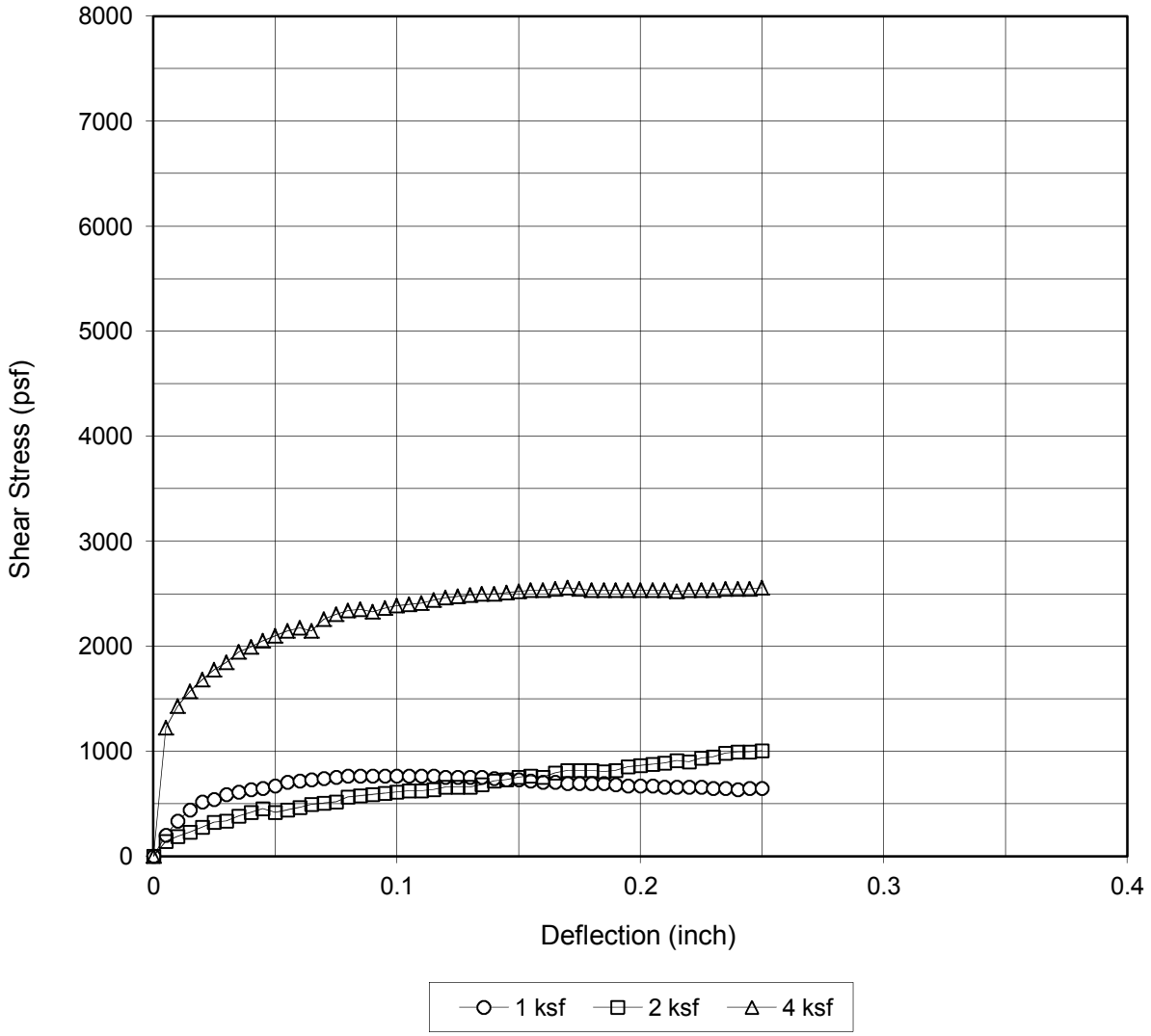
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-5A	2	20	0.005	1000	768	648
				2000	1008	1008
				4000	2556	2556

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

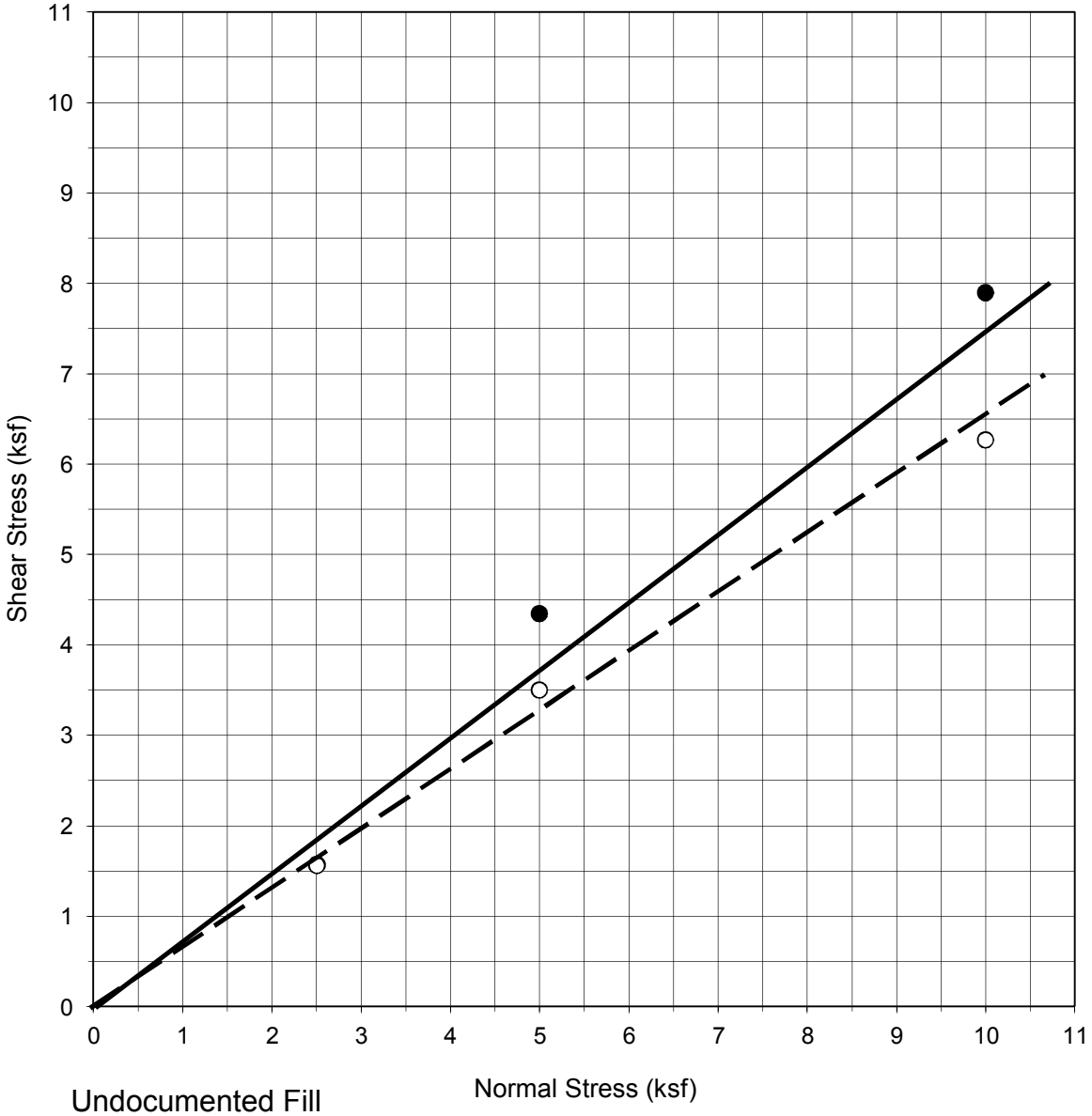
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-5A	3	40	0.005	2.500	1.572	1.560
				5.000	4.344	3.504
				10.000	7.896	6.264

Sample Description: Silty SAND (SM)

Sample Type:

Test Condition: Saturated

Initial Dry Density: 19 pcf

Moisture Content: (before) 8% (after) 18 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	0	0
FRICTION ANGLE (deg)	41 °	33 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

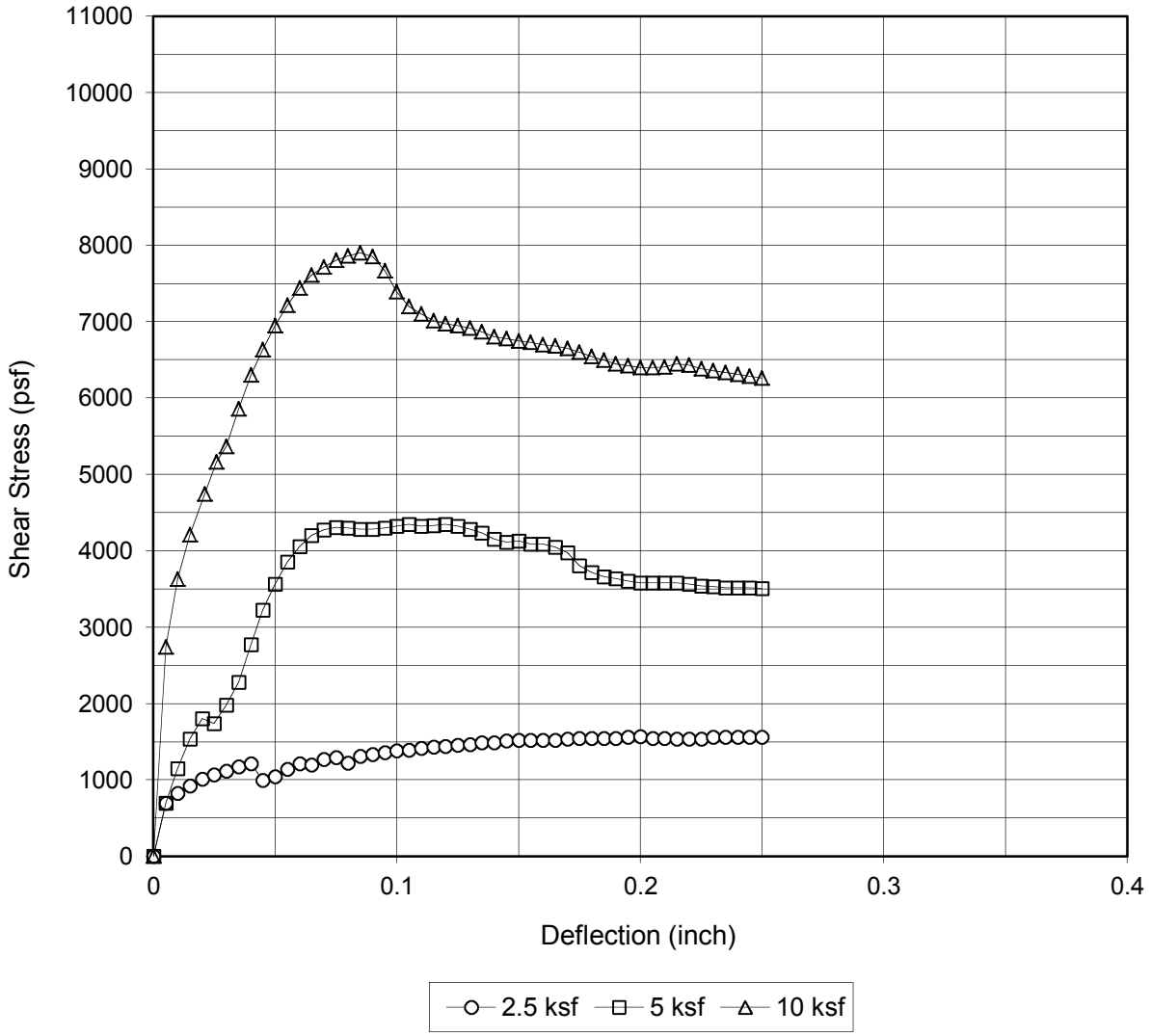
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-5A	3	40	0.005	2500	1572	1560
				5000	4344	3504
				10000	7896	6264

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

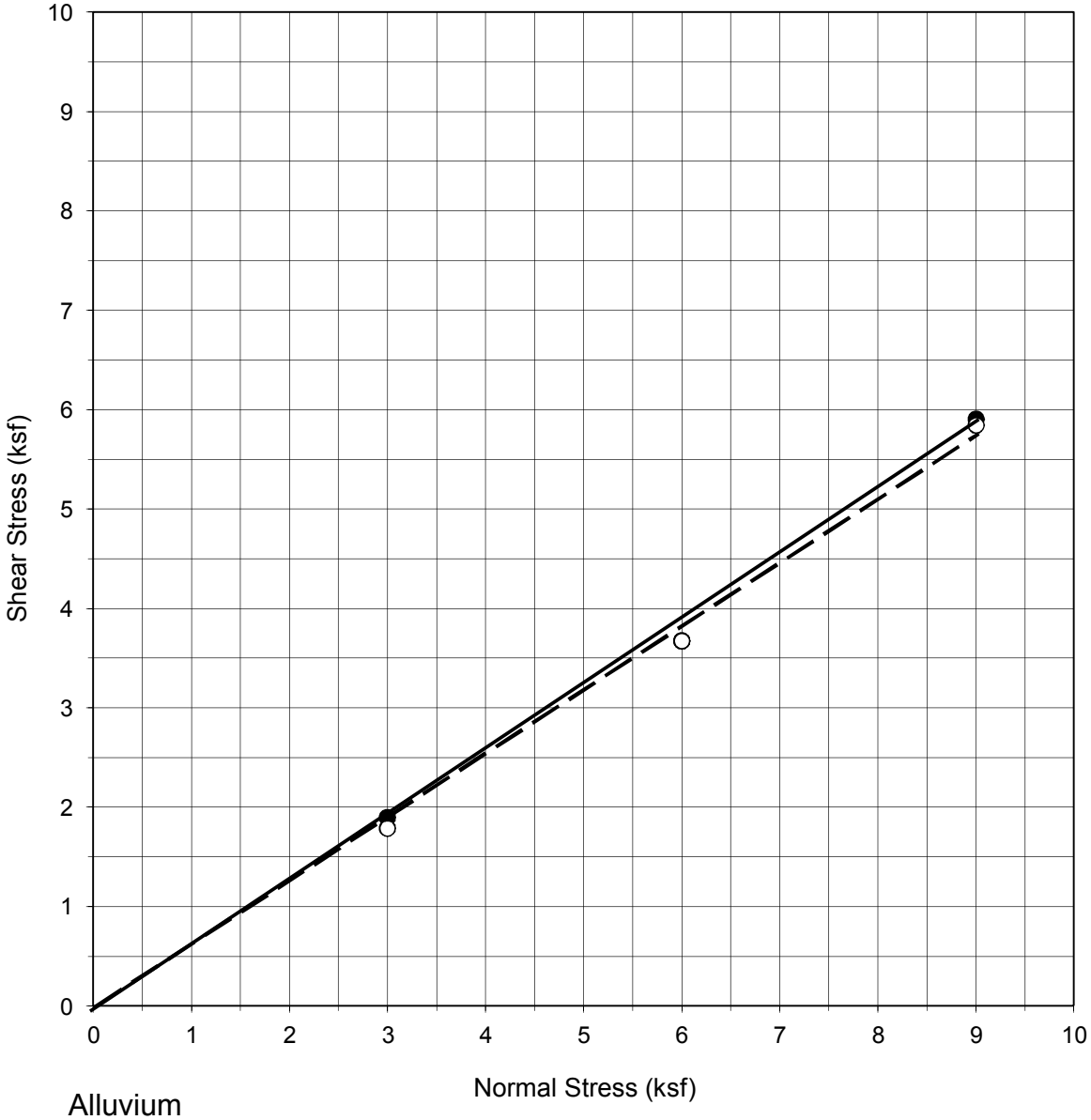
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-5A	5	52	0.005	3.000	1.896	1.788
				6.000	3.672	3.672
				9.000	5.904	5.844

Sample Description: Clayey SAND (SC)

Sample Type: Undisturbed

Test Condition: Saturated

Initial Dry Density: 105 pcf

Moisture Content: (before) 18 (after) 23

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	0	0
FRICTION ANGLE (deg)	34	34

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

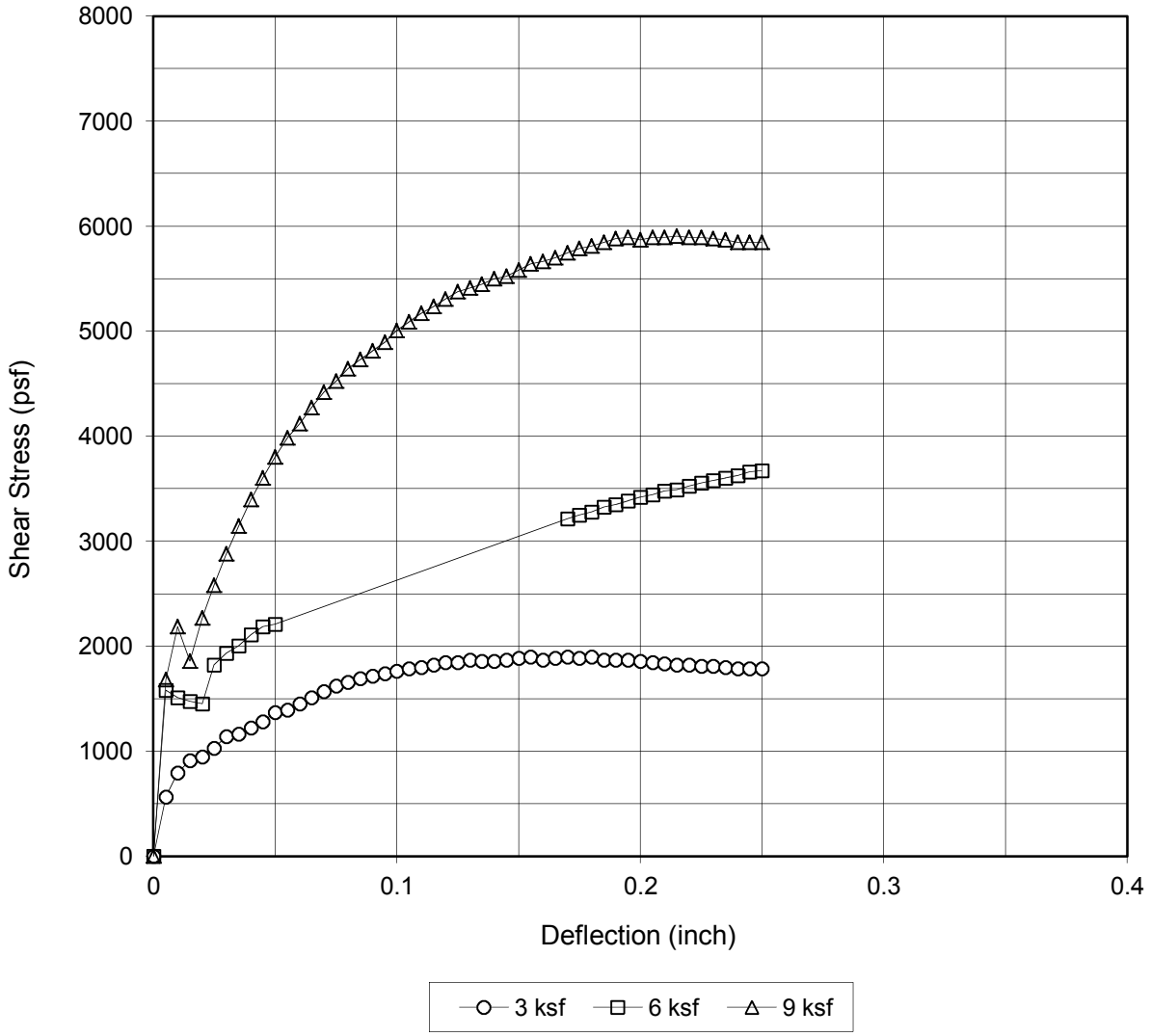
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-5A	5	52	0.005	3000	1896	1788
				6000	3672	3672
				9000	5904	5844

Sample Description: Clayey SAND (SC) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

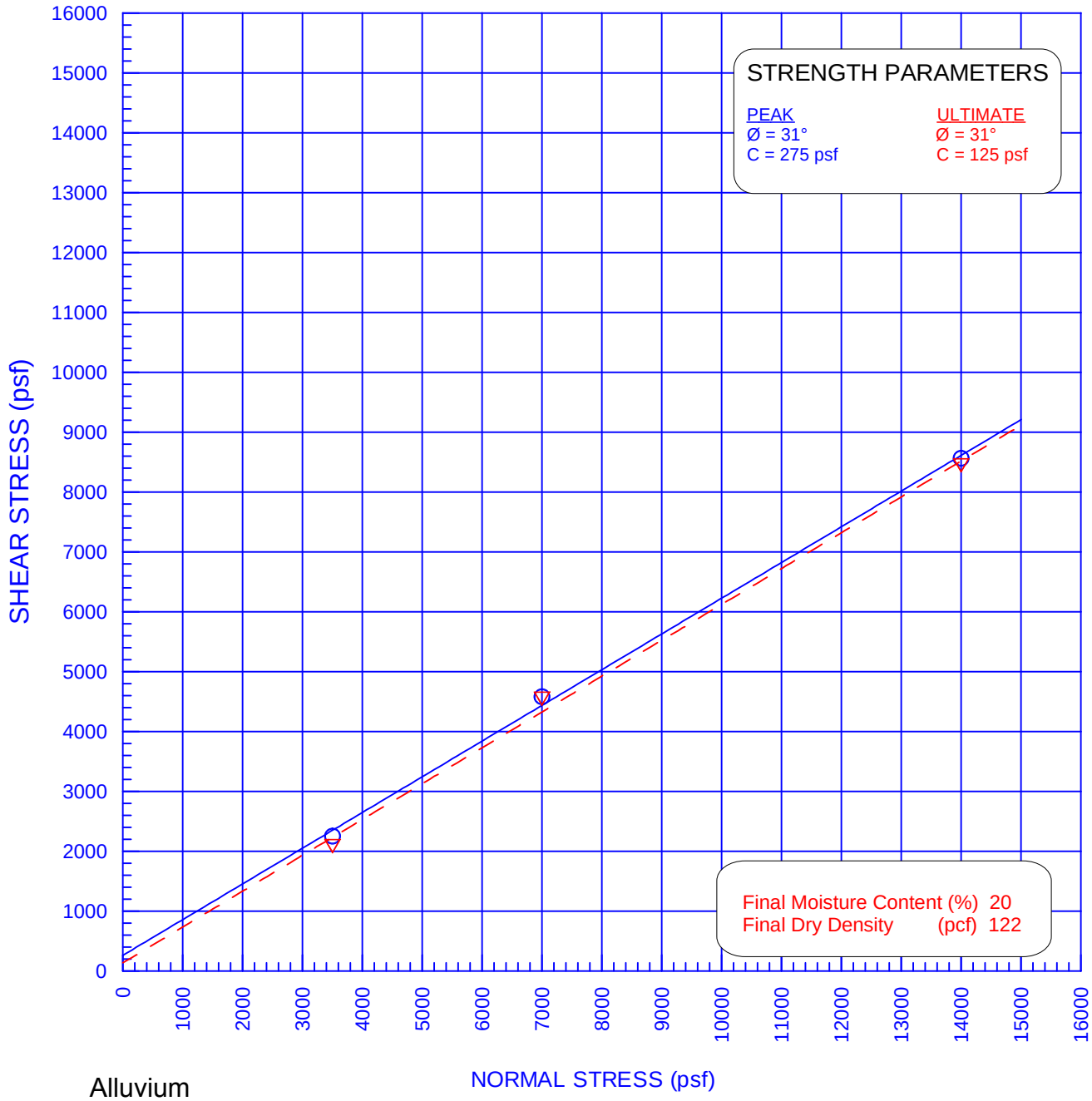
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-6	11	55	0.001	3500	○ 2256	▽ 2208
				7000	○ 4584	▽ 4548
				14000	○ 8567	▽ 8447

Sample Description: Sandy Lean CLAY (CL)

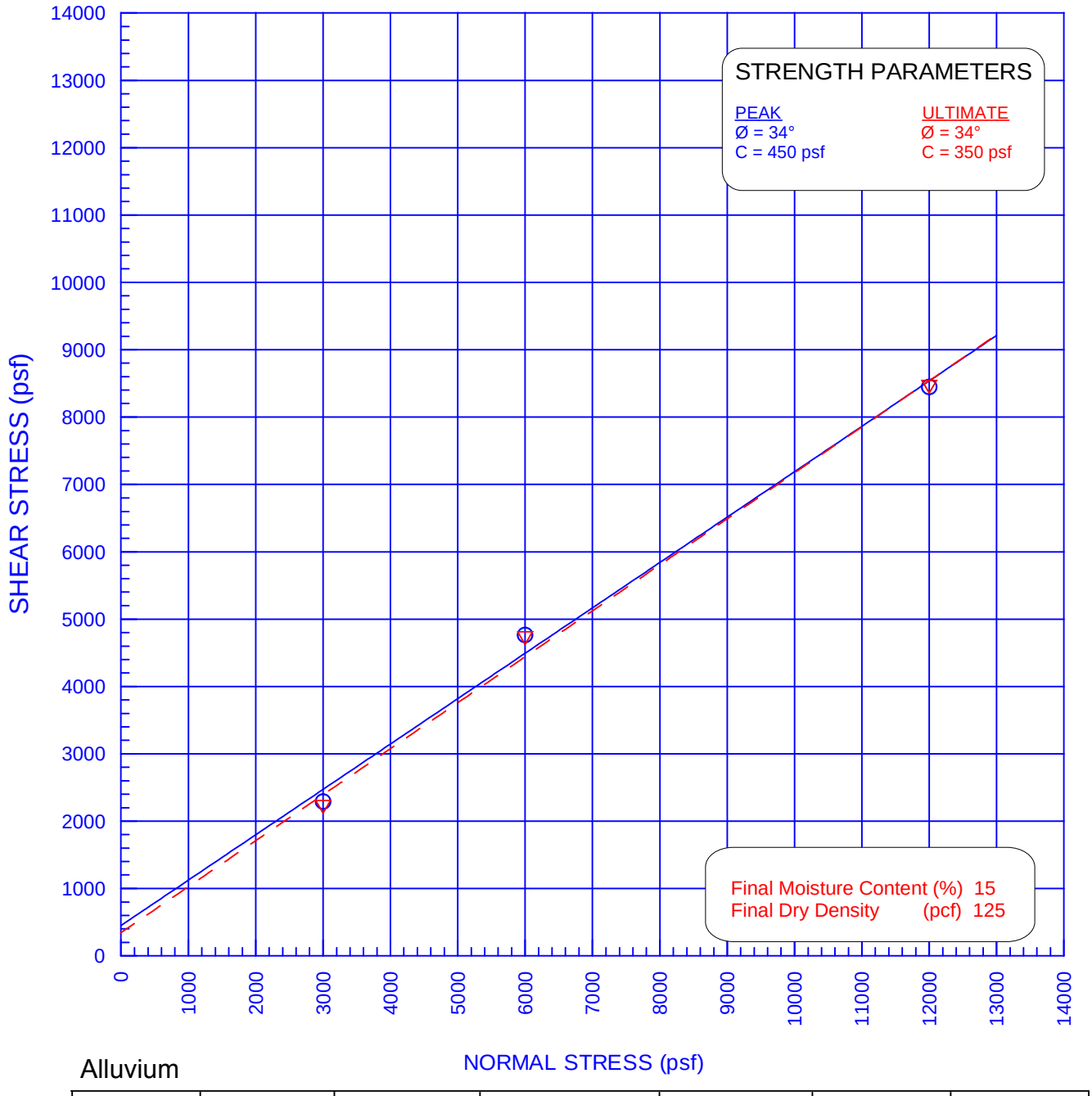
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-8	9	45	0.010	3000	○ 2292	▽ 2210
				6000	○ 4764	▽ 4716
				12000	○ 8447	▽ 8447

Sample Description: Poorly Graded SAND with Silt (SP-SM)

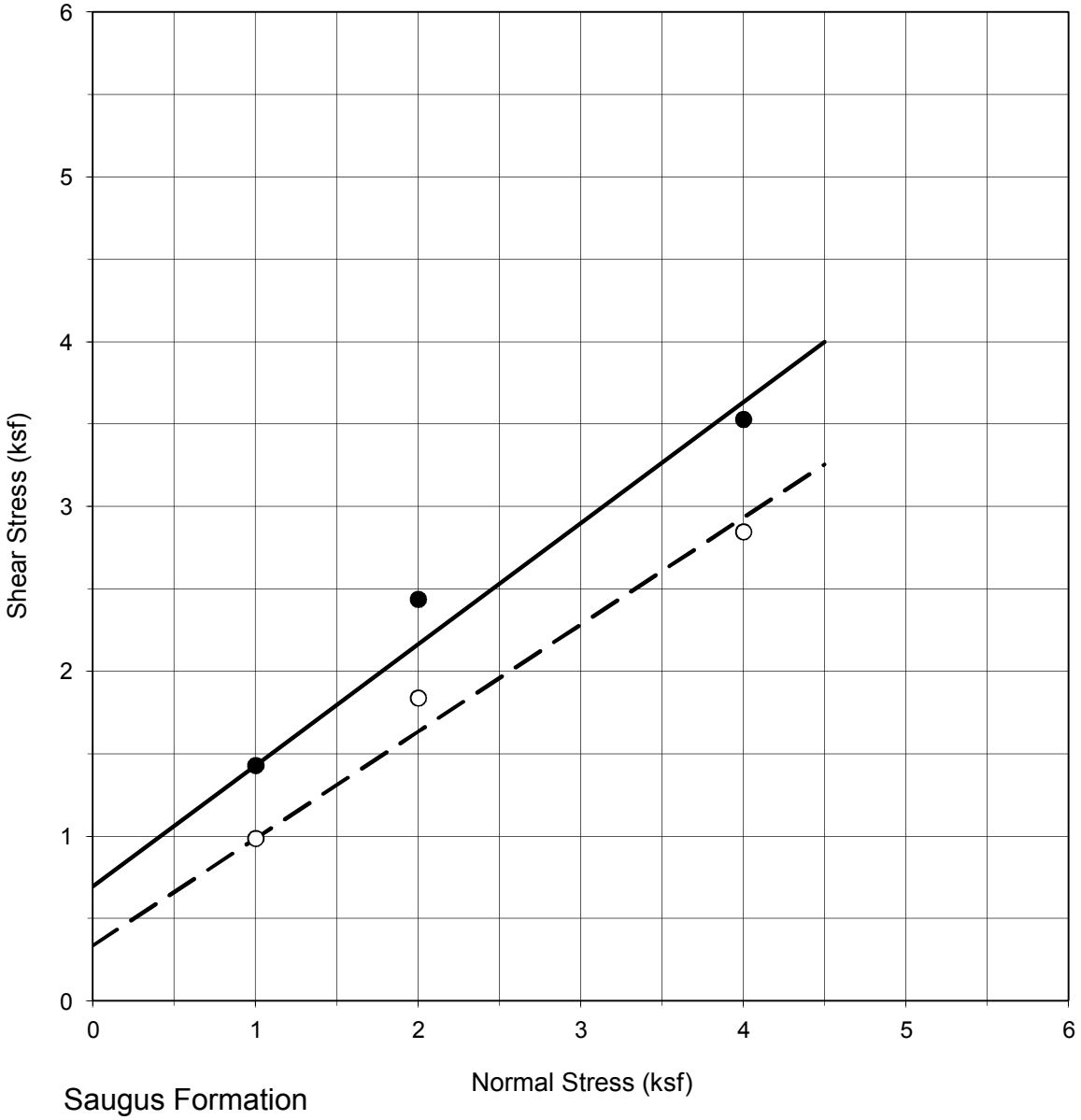
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Saugus Formation

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-14	4	20	0.005	1.000	1.428	0.984
				2.000	2.436	1.836
				4.000	3.528	2.844

Sample Description: Clayey SANDSTONE

Sample Type: Undisturbed

Test Condition: Saturated

Initial Dry Density: 106 pcf

Moisture Content: (before) 14% (after) 28 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	700	350
FRICTION ANGLE (deg)	36 °	33 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

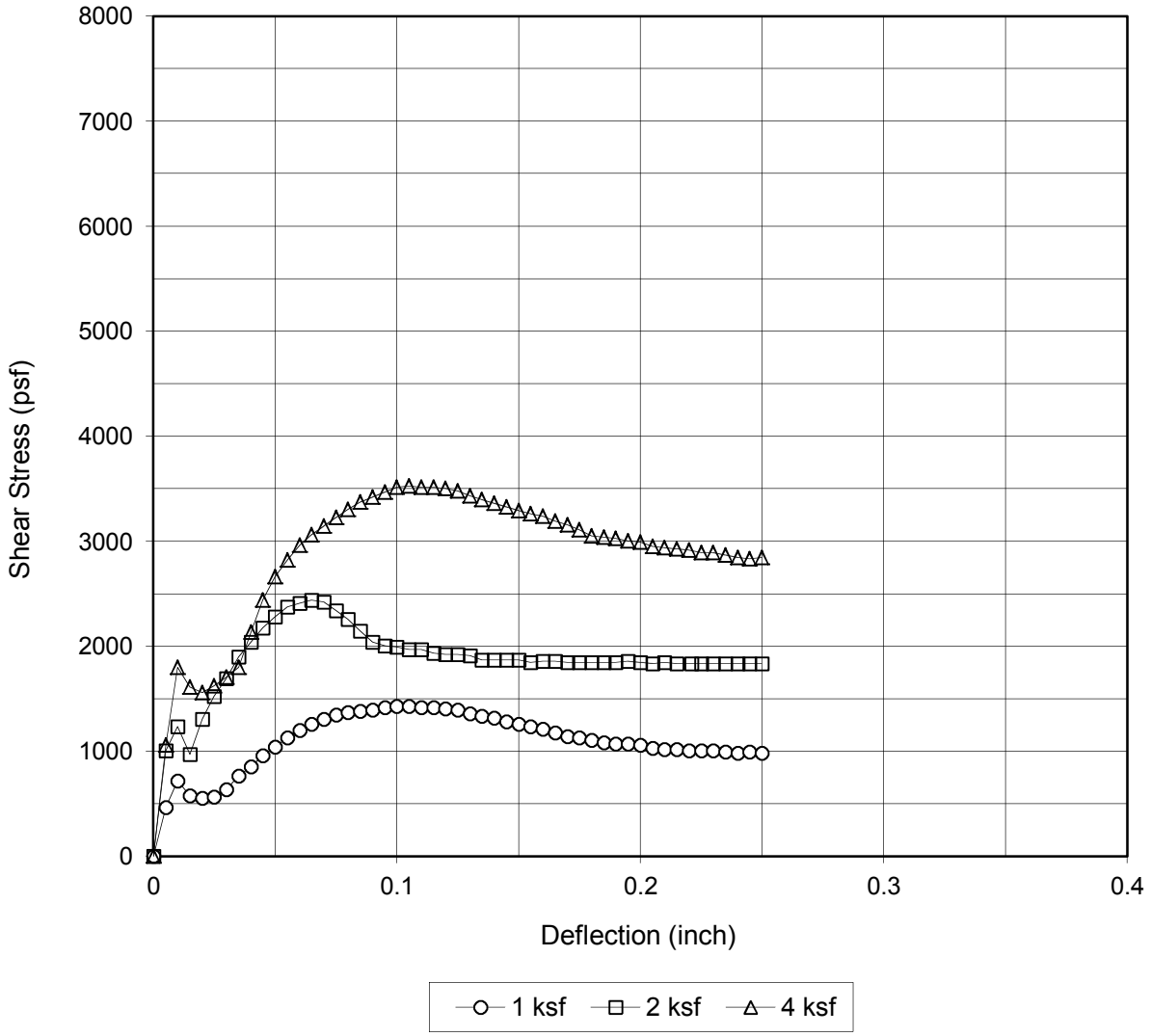
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Saugus Formation

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-14	4	20	0.005	1000	1428	984
				2000	2436	1836
				4000	3528	2844

Sample Description: Clayey SANDSTONE Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

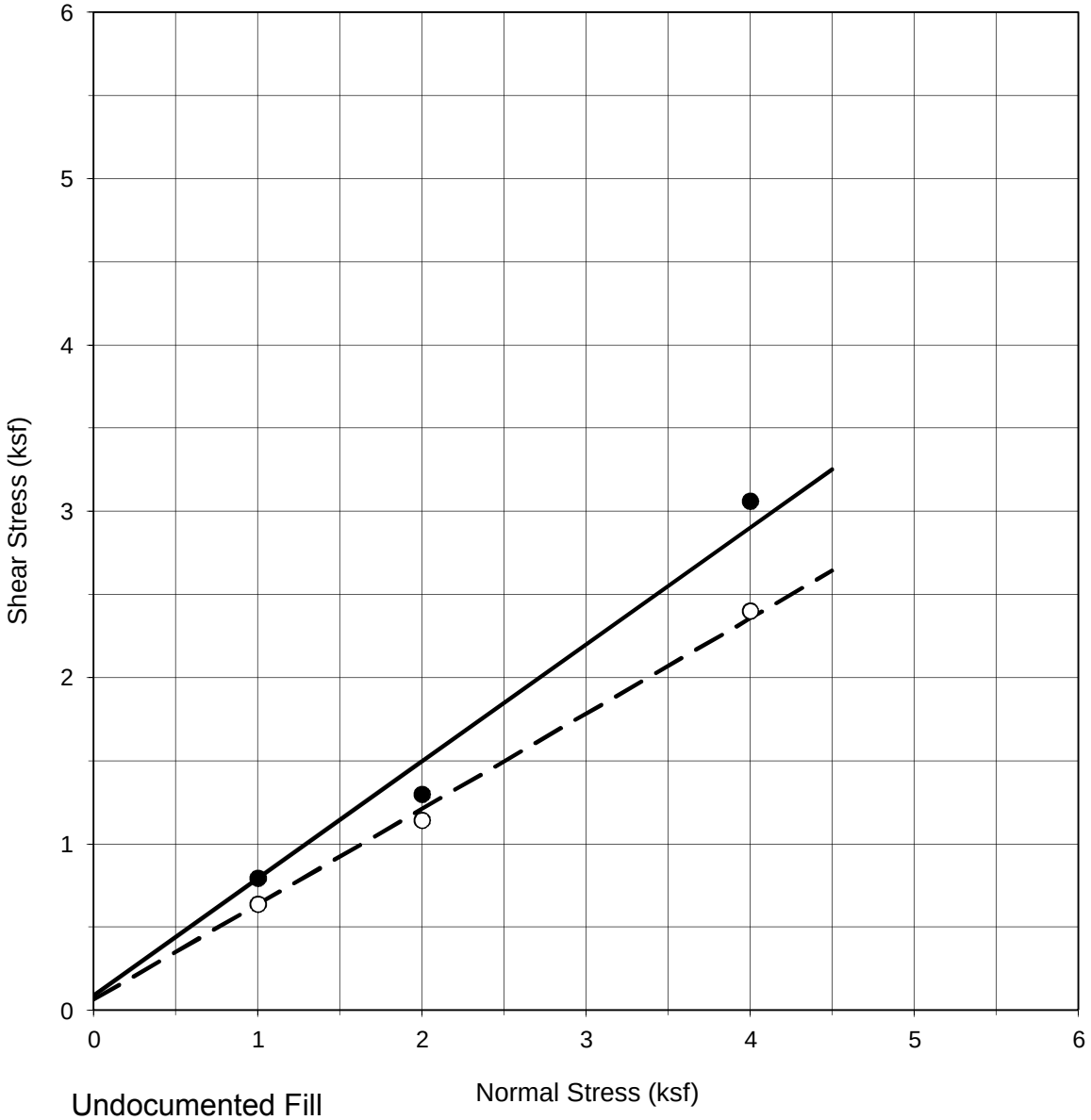
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-16	3	15	0.005	1.000	0.792	0.636
				2.000	1.296	1.140
				4.000	3.060	2.400

Sample Description: Silty SAND (SM) Sample Type: Undisturbed

Test Condition: Saturated Initial Dry Density: 117 pcf

Moisture Content: (before) 11% (after) 21 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	100	50
FRICTION ANGLE (deg)	35 °	30 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

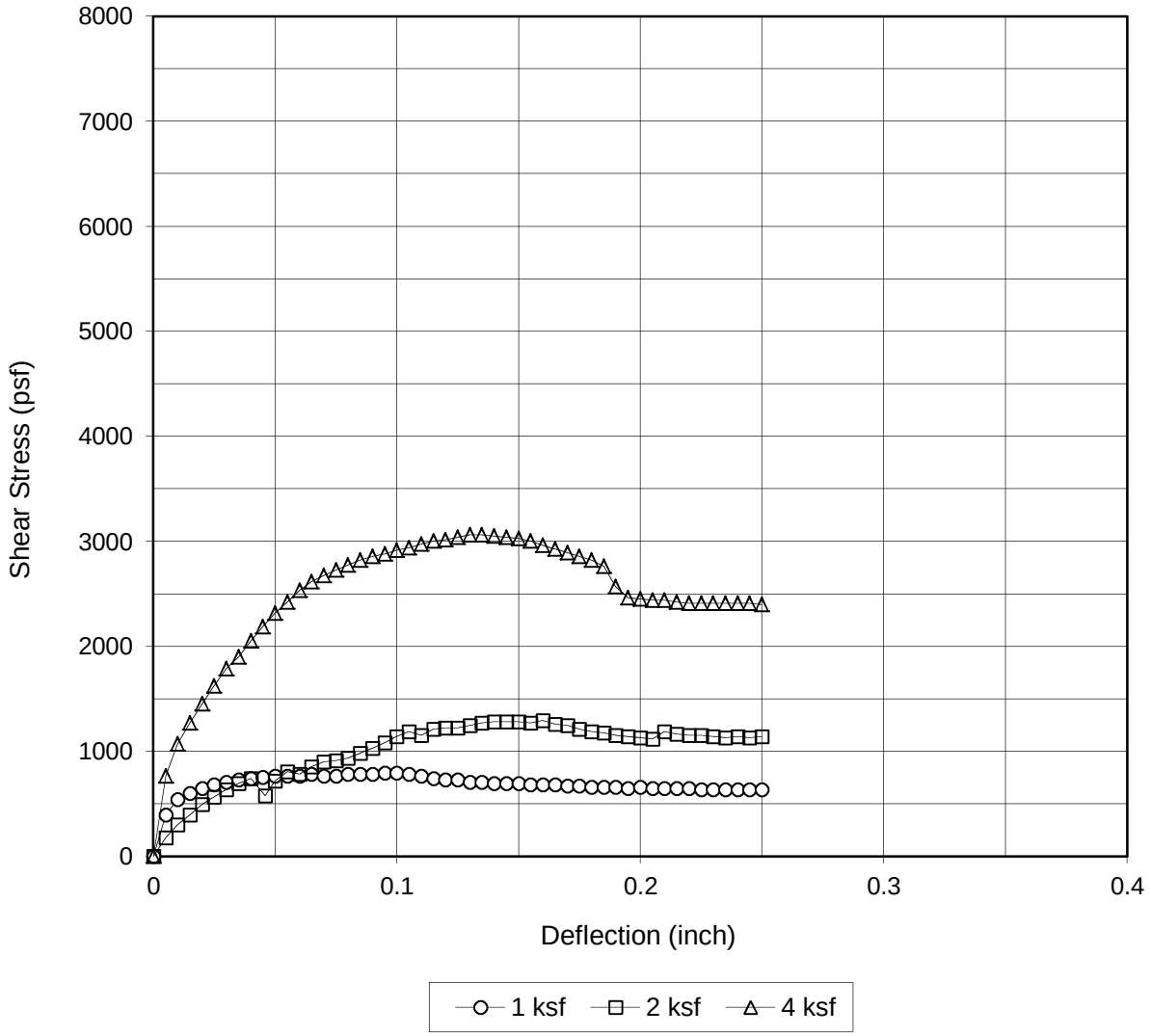
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-16	3	15	0.005	1000	792	636
				2000	1296	1140
				4000	3060	2400

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

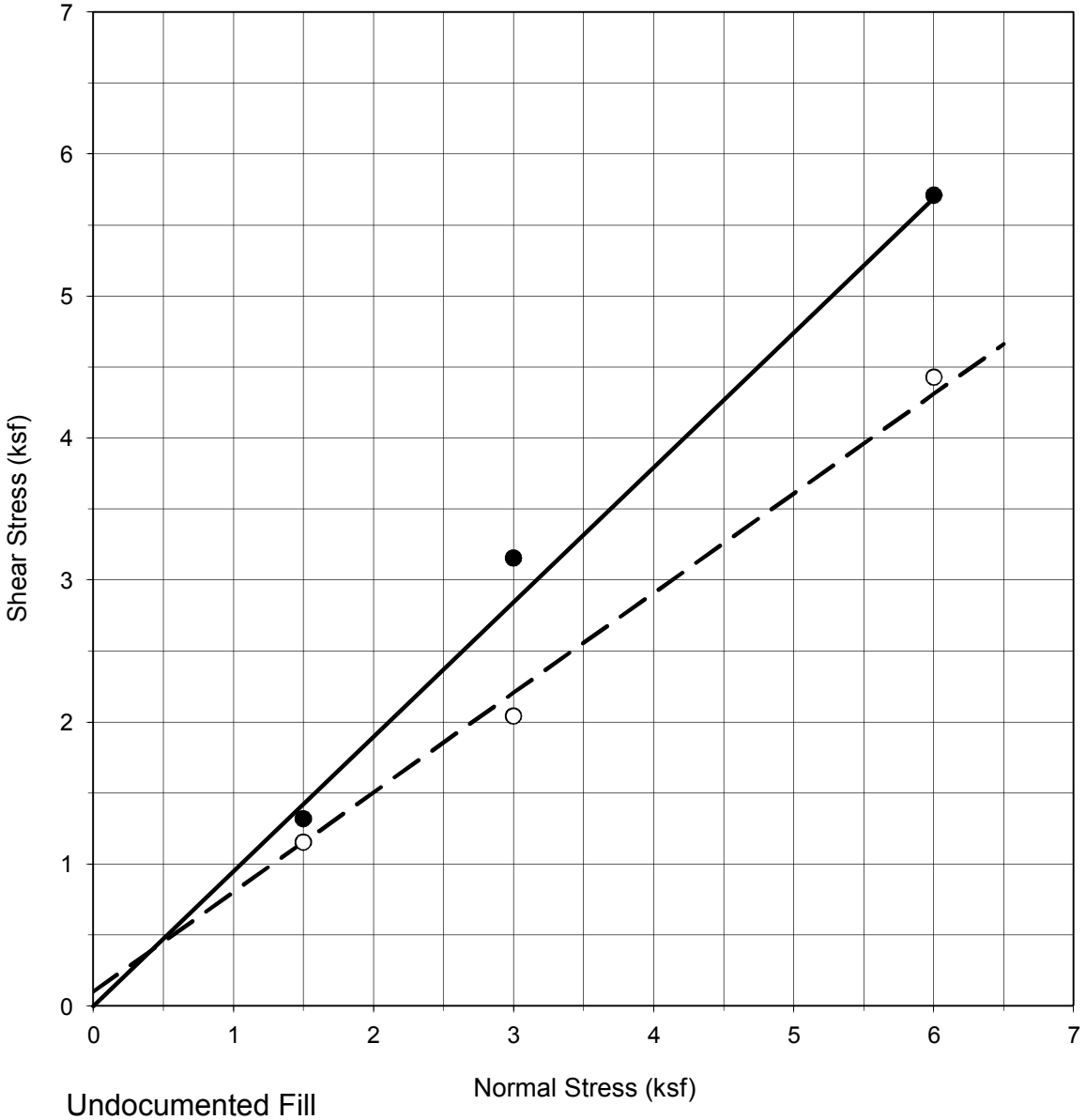
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HAS-16	5	25	0.005	1.500	1.320	1.152
				3.000	3.156	2.040
				6.000	5.712	4.428

Sample Description: Silty SAND (SM) Sample Type:

Test Condition: Saturated Initial Dry Density: 111 pcf

Moisture Content: (before) 7% (after) 15 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	0	100
FRICTION ANGLE (deg)	45 °	35 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

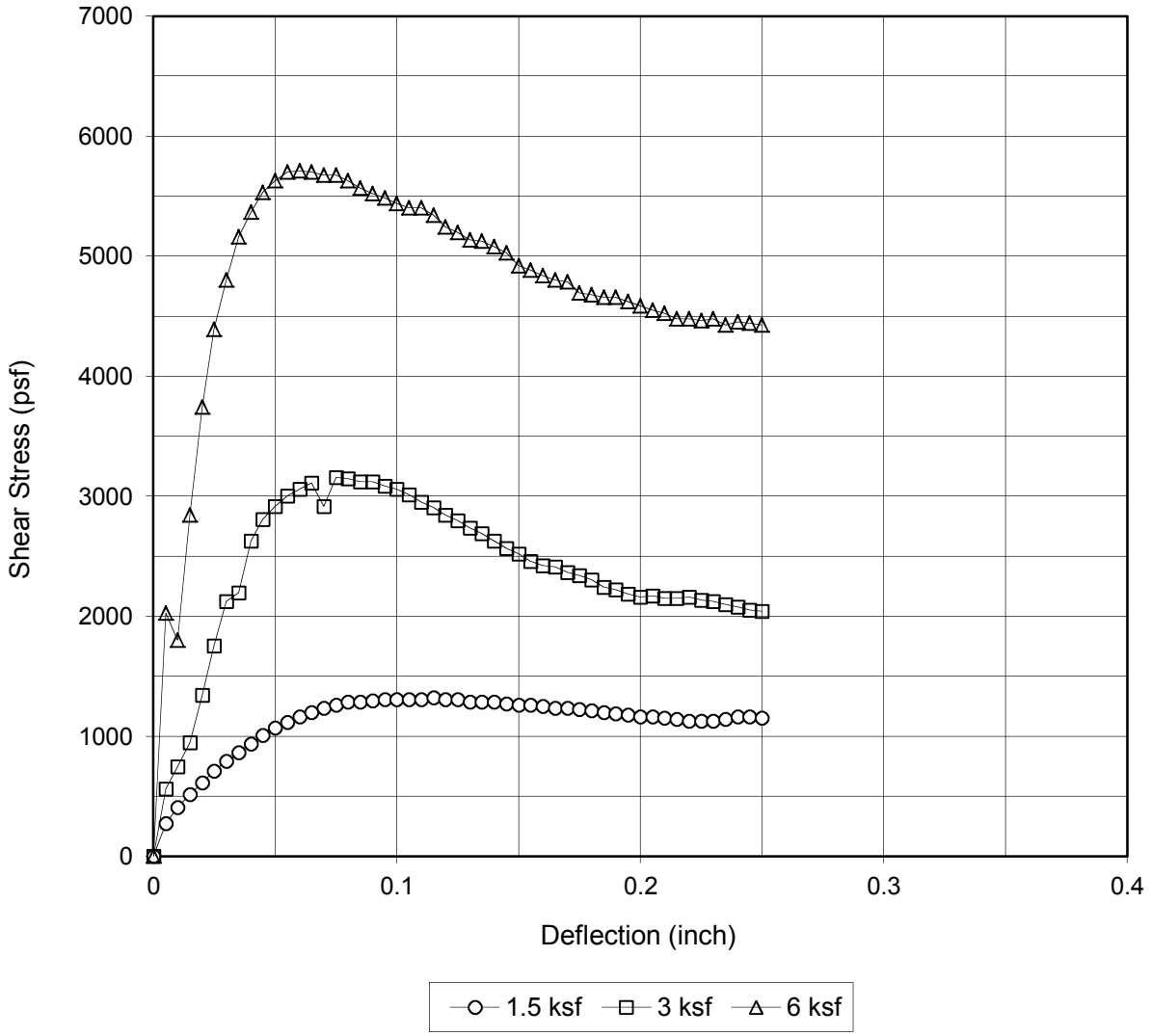
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HAS-16	5	25	0.005	1500	1320	1152
				3000	3156	2040
				6000	5712	4428

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

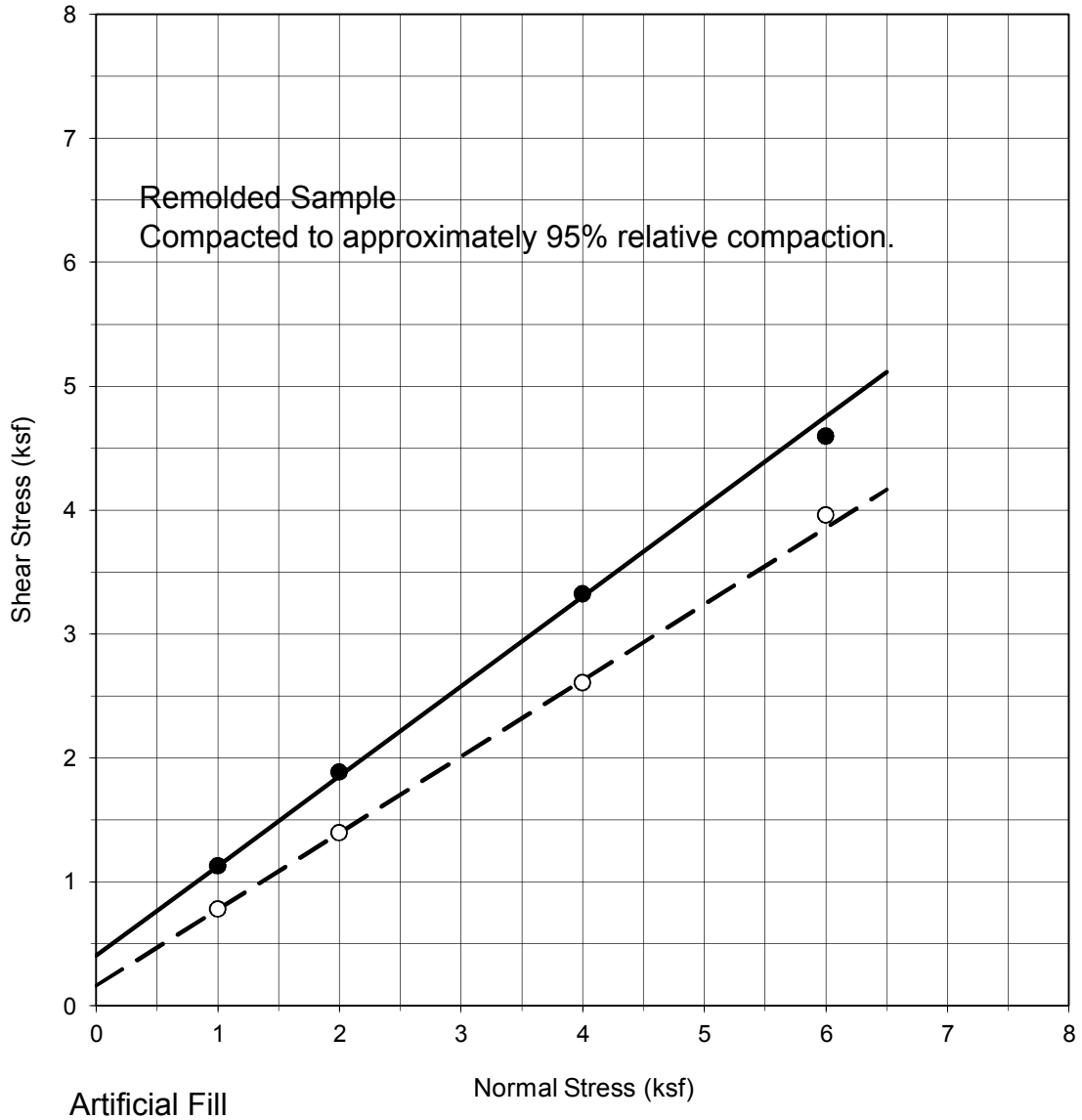
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Artificial Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-17	BK-1	0-5	0.005	1.000	1.128	0.780
				2.000	1.884	1.392
				4.000	3.324	2.604
				6.000	4.596	3.960

Sample Description: Silty SAND (SM)

Sample Type: Remolded to 95□ RC at opt. MC

Test Condition: Saturated

Initial Dry Density: 126 pcf

Moisture Content: (before) 9□ (after) 13 □

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	400	150
FRICTION ANGLE (deg)	36 □	32 □

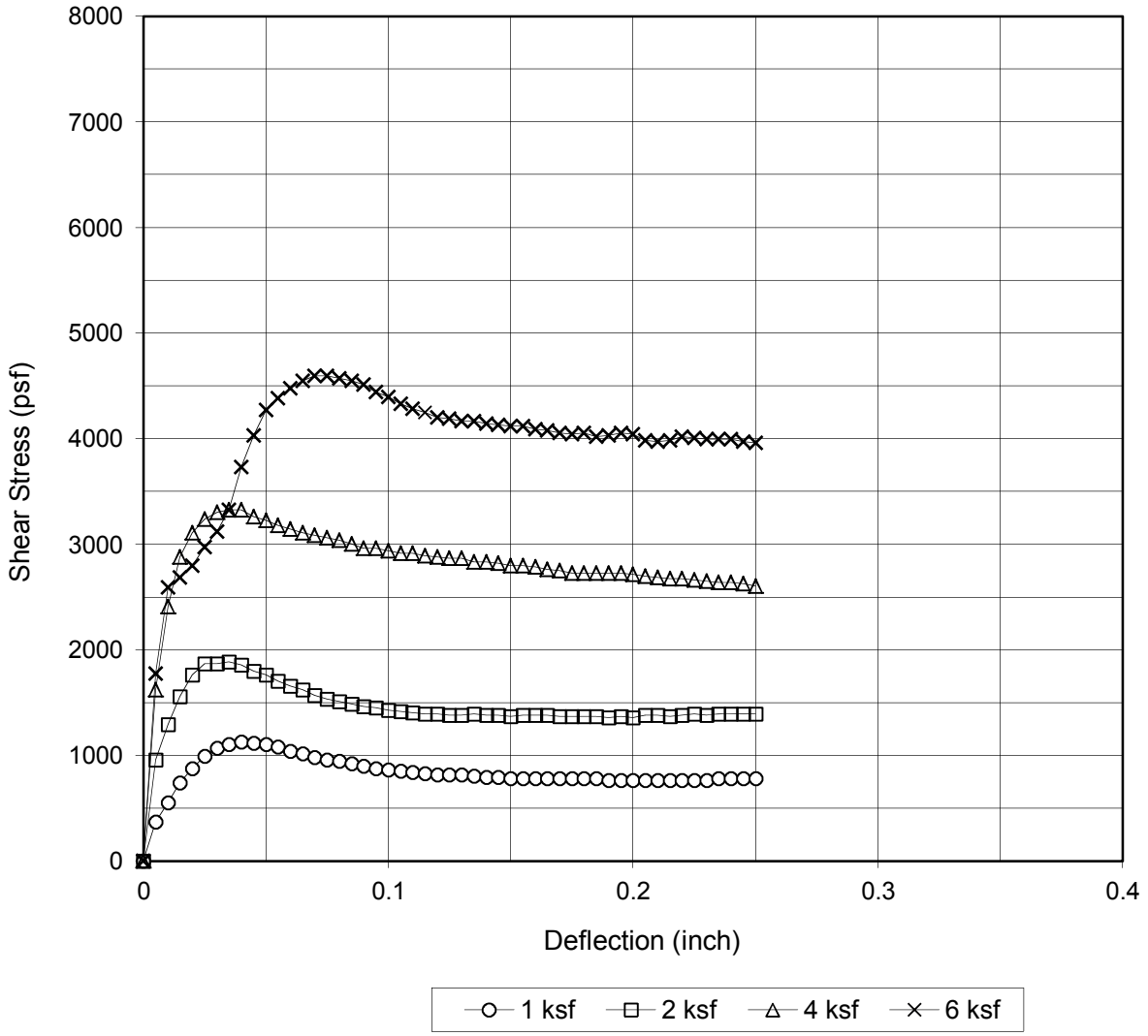
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

URS

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR: DISNEY WORLDWIDE SERVICES, INC.



Artificial Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-17	BK-1	0-5	0.005	1000	1128	780
				2000	1884	1392
				4000	3324	2604
				6000	4.596	3.960

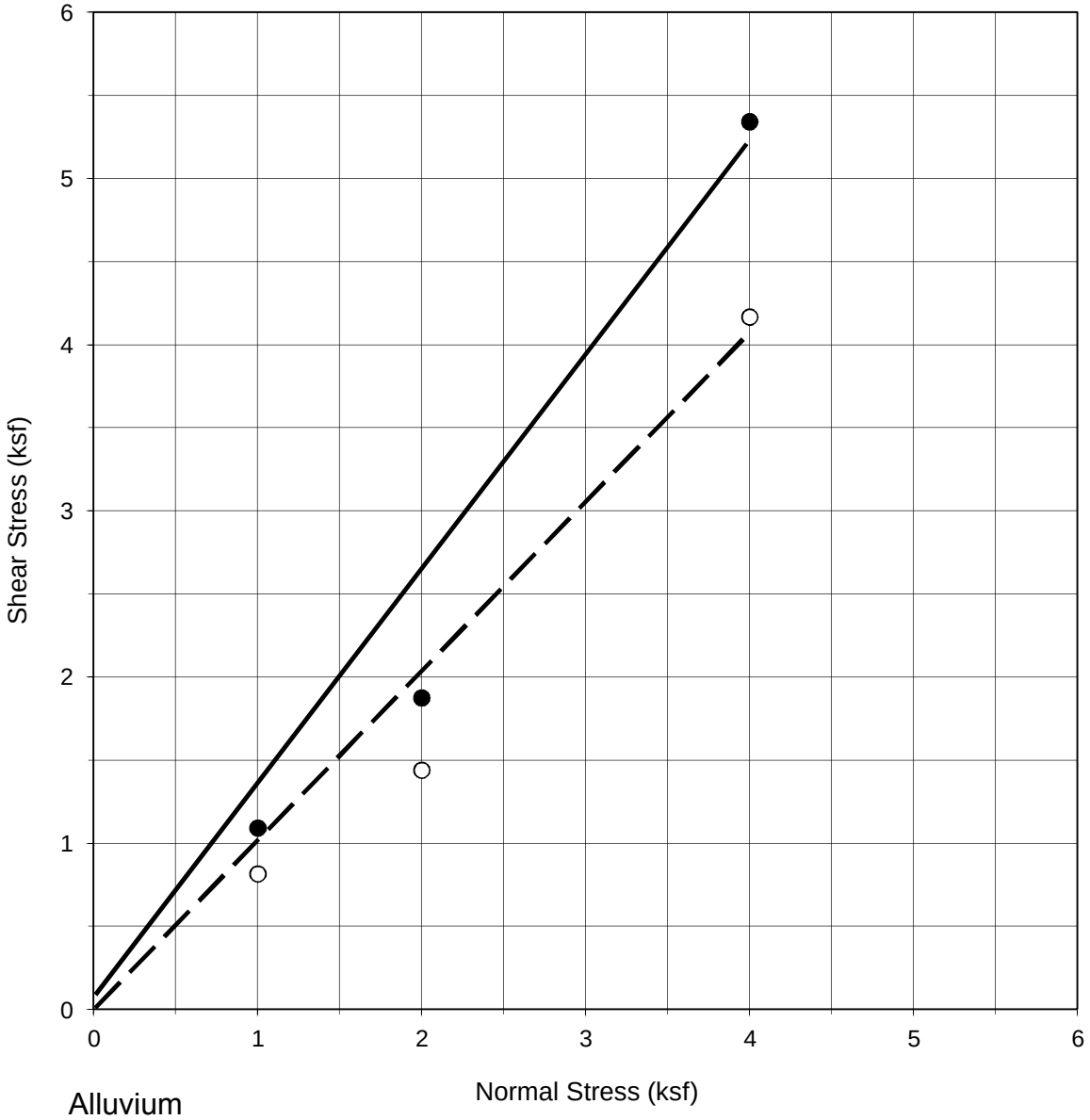
Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

DIRECT SHEAR TEST RESULTS
CONSOLIDATED DRAINED
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-17	3	15	0.005	1.000	1.092	0.816
				2.000	1.872	1.440
				4.000	5.340	4.164

Sample Description: Poorly Graded SAND with Silt (SP-SM) Sample Type: Undisturbed

Test Condition: Saturated Initial Dry Density: 112 pcf

Moisture Content: (before) 14% (after) 17 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	100	0
FRICTION ANGLE (deg)	52 °	46 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

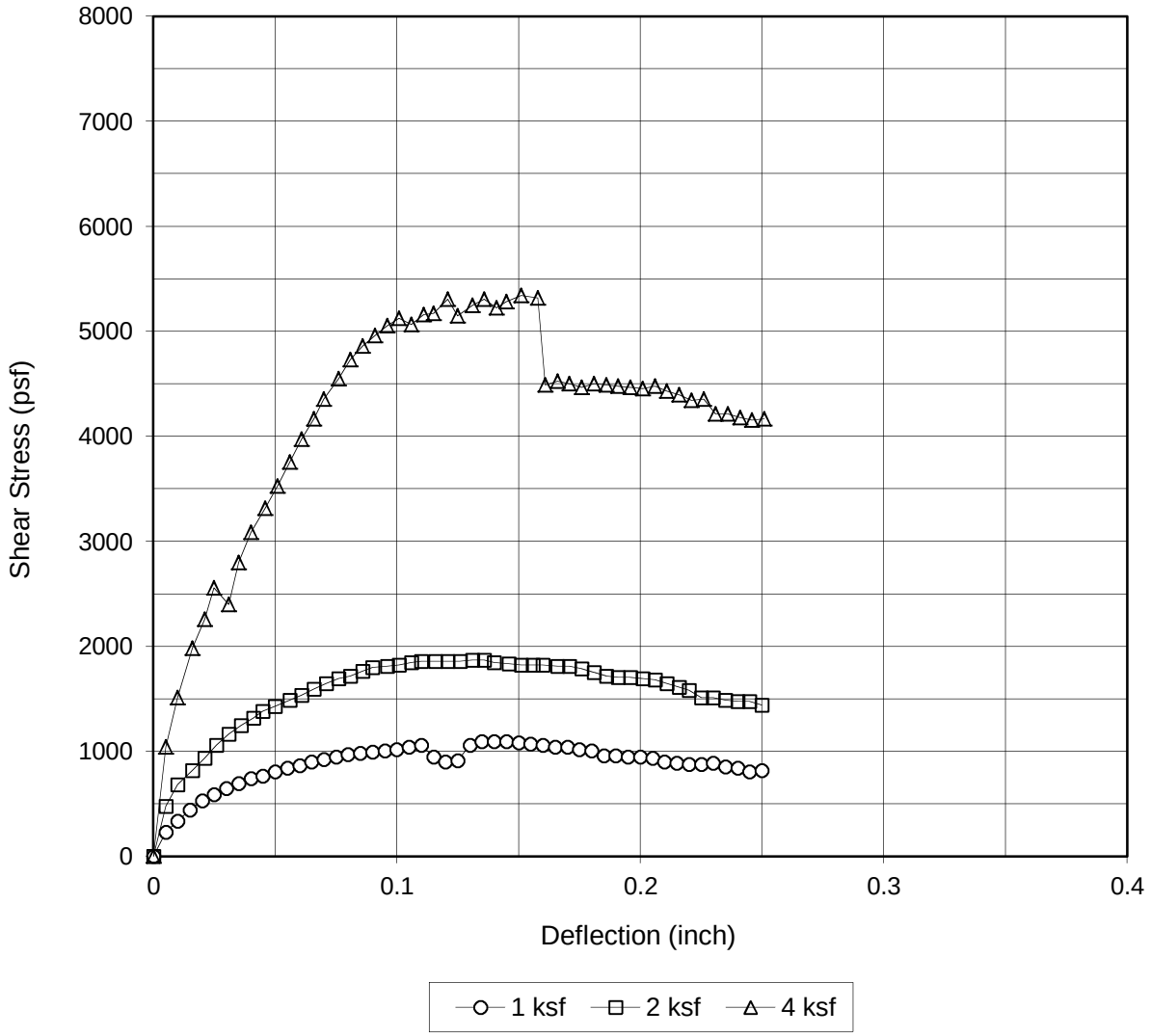
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-17	3	15	0.005	1000	1092	816
				2000	1872	1440
				4000	5340	4164

Sample Description: Poorly Graded SAND with Silt (S Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

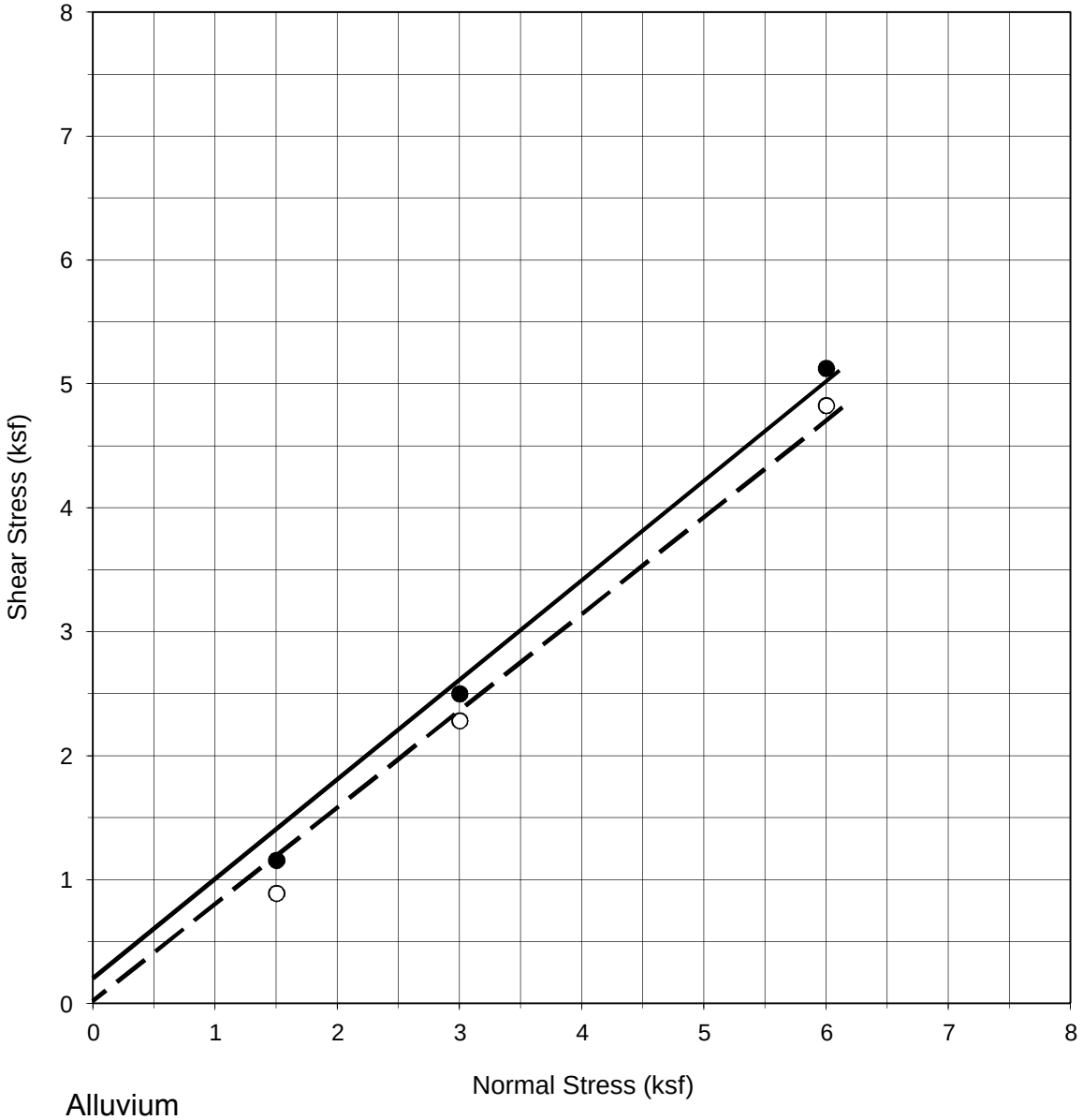
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-17	5	25	0.005	1.500	1.152	0.888
				3.000	2.496	2.280
				6.000	5.124	4.824

Sample Description: Silty SAND (SM) Sample Type: Undisturbed

Test Condition: Saturated Initial Dry Density: 117 pcf

Moisture Content: (before) 11% (after) 21 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	250	0
FRICTION ANGLE (deg)	39 °	39 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

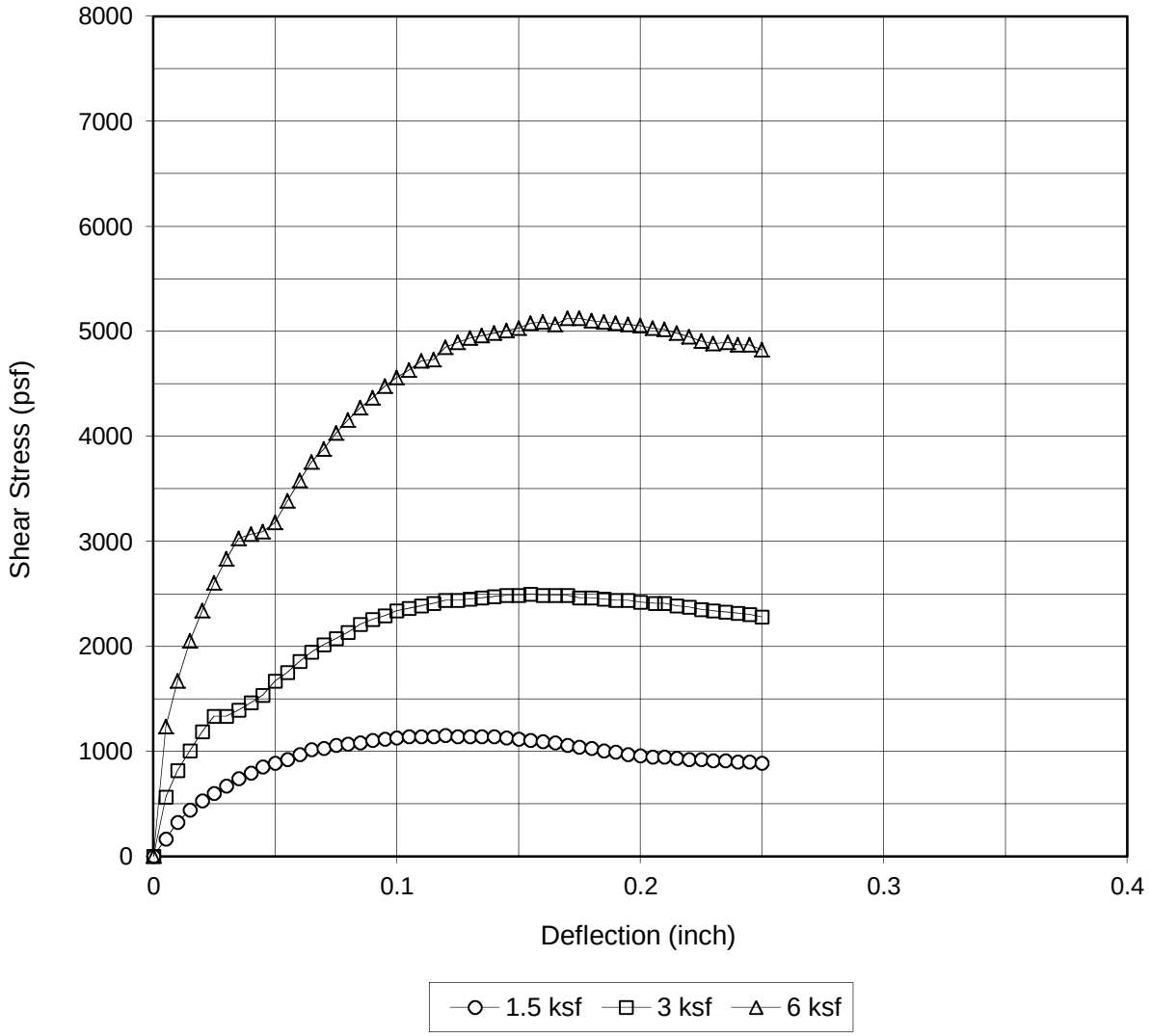
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Alluvium

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-17	5	25	0.005	1500	1152	888
				3000	2496	2280
				6000	5124	4824

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

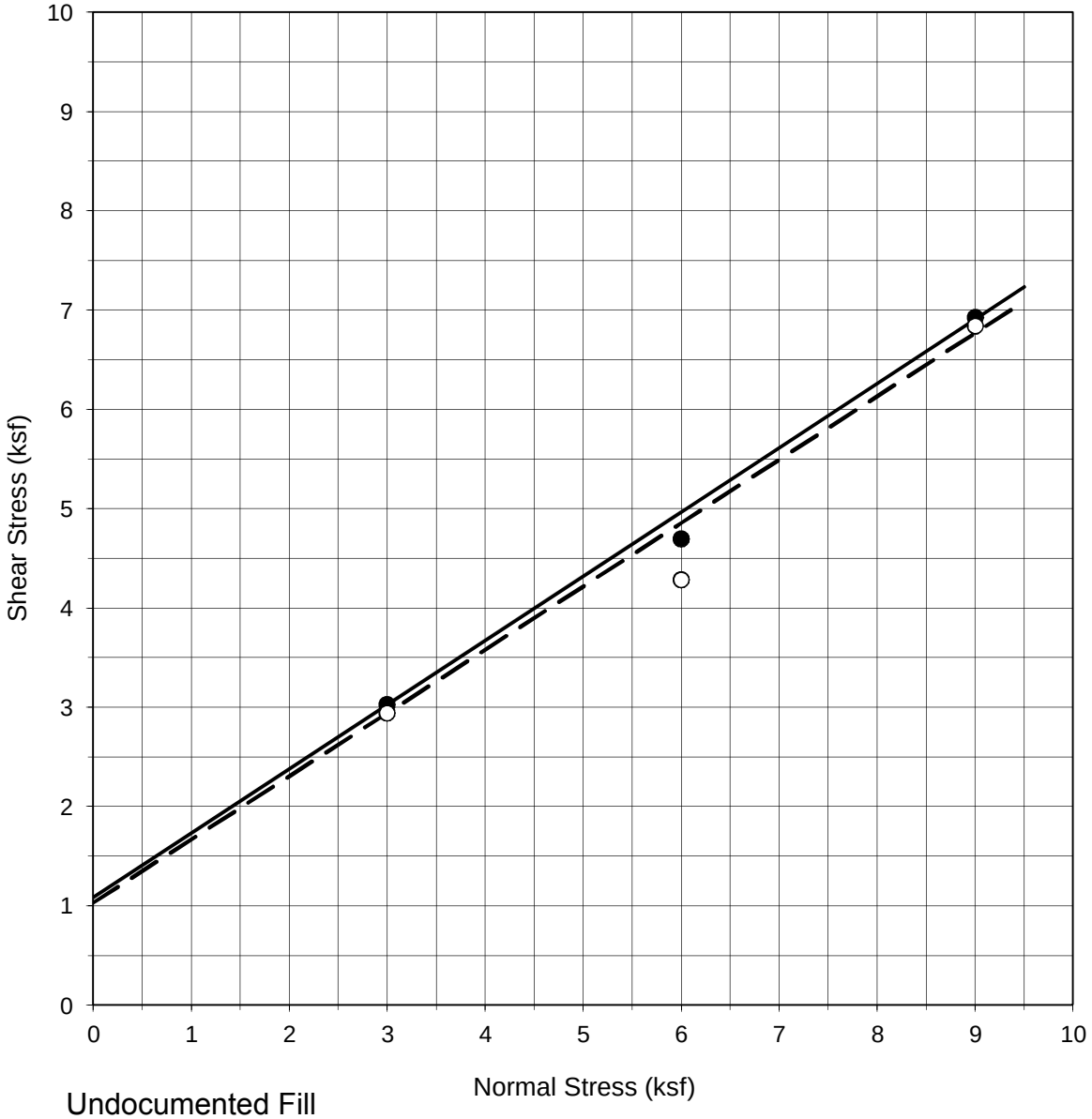
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (ksf)	PEAK STRESS (ksf)	ULTIMATE STRESS (ksf)
HSA-18	5	50	0.005	3.000	3.024	2.940
				6.000	4.692	4.284
				9.000	6.924	6.840

Sample Description: Silty SAND (SM) Sample Type: Undisturbed

Test Condition: Saturated Initial Dry Density: 121 pcf

Moisture Content: (before) 4% (after) 20 %

INTERPRETED STRENGTH DATA	PEAK	ULTIMATE
COHESION (psf)	1100	1050
FRICTION ANGLE (deg)	33 °	33 °

DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

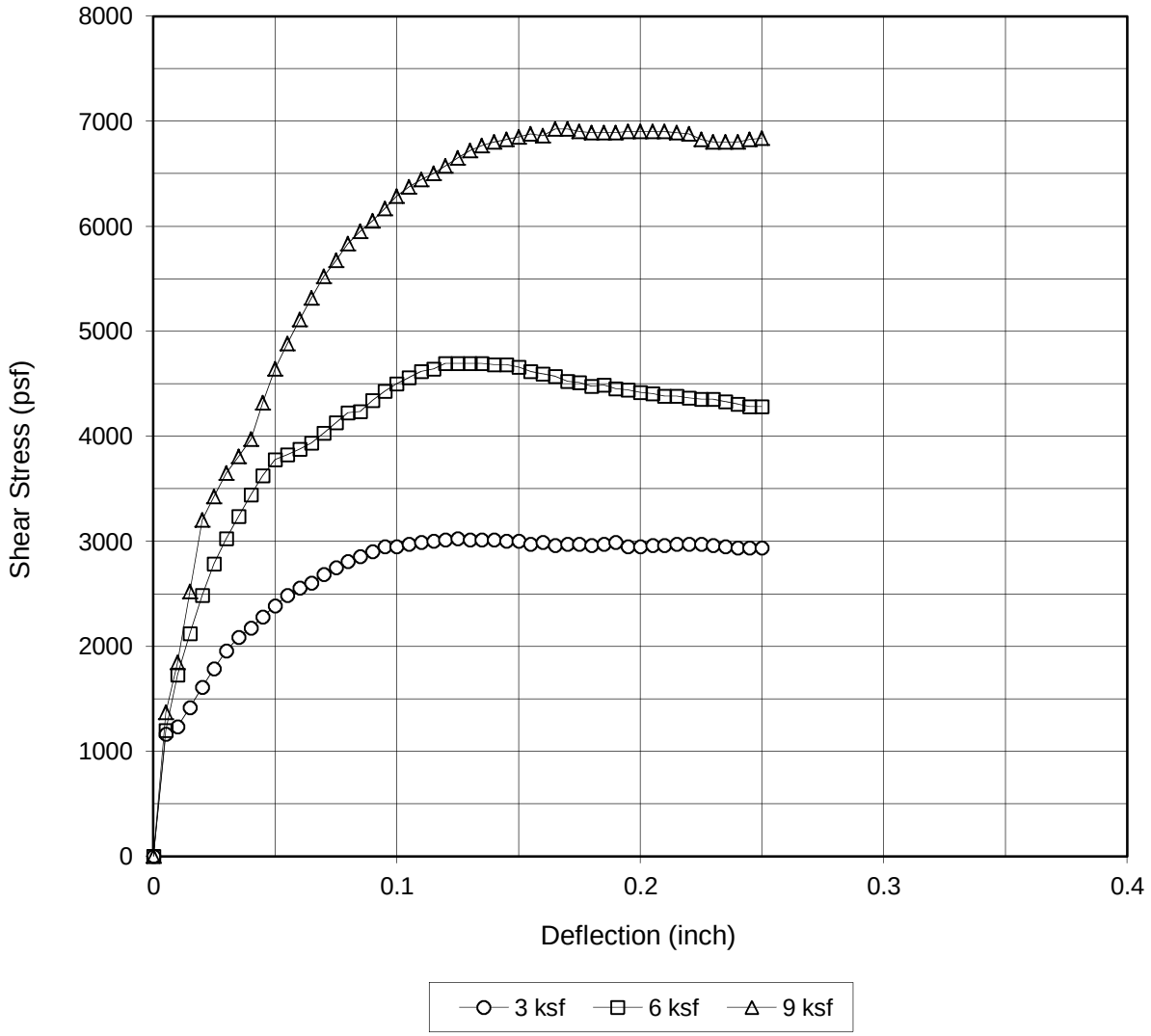
ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216

19802 PLACERITA CANYON ROAD, NEWHALL, CA

FOR: DISNEY WORLDWIDE SERVICES, INC.

URS



Undocumented Fill

BORING NO.	SAMPLE NO.	DEPTH (ft)	STRAIN RATE (in/min)	NORMAL STRESS (psf)	PEAK STRESS (psf)	ULTIMATE STRESS (psf)
HSA-18	5	50	0.005	3000	3024	2940
				6000	4692	4284
				9000	6924	6840

Sample Description: Silty SAND (SM) Sample Type: Saturated

SHEAR STRESS VS DISPLACEMENT

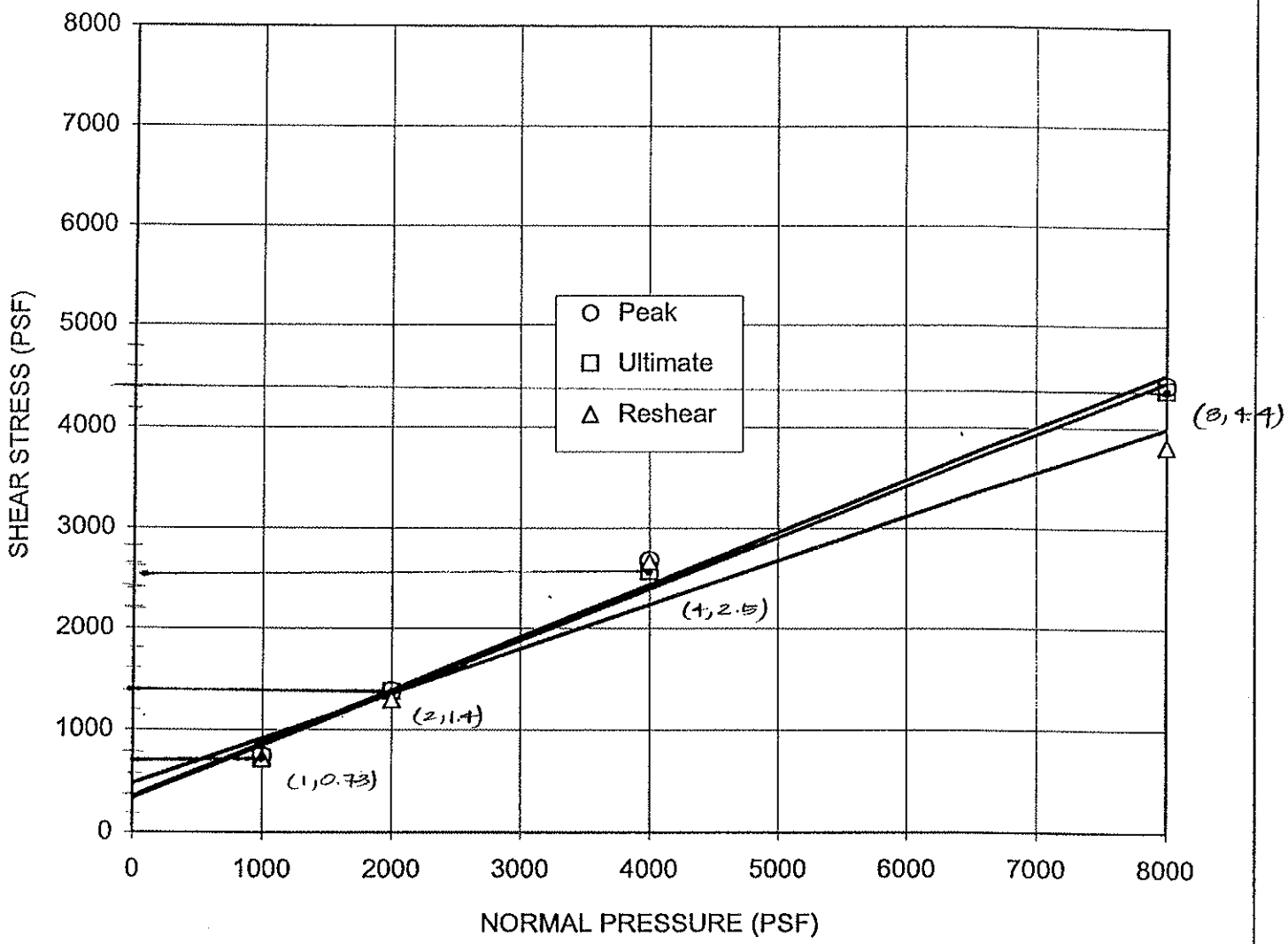
DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR DISNEY WORLDWIDE SERVICES, INC.

URS



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
B-5	S-10	50	Tube	CL	○	351	28
					□	335	27
					△	476	24

Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1000	15.8	26.6
2000	15.8	25.9
4000	15.8	23.9
8000	15.8	20.5

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address: LAR Hillside Grading

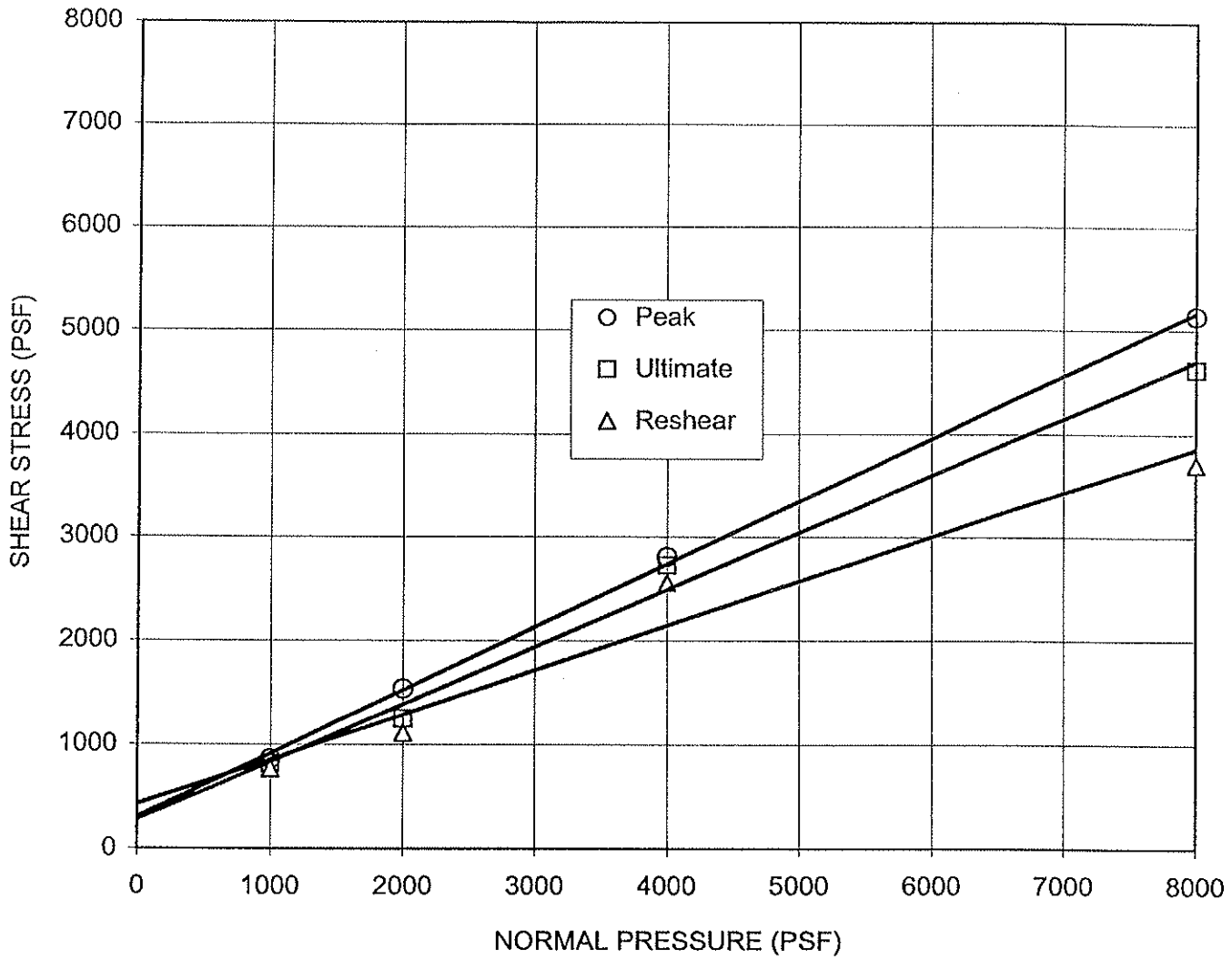
Client: URS Corporation

Project No: 29405484

EGL Project No: 11-008-003

DIRECT SHEAR

03/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
B-6	S-8	40	Tube	CL	○	308	31
					□	280	29
					△	429	23

Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1000	17.2	27.0
2000	17.2	25.8
4000	17.2	22.4
8000	17.2	22.0

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address: LAR Hillside Grading

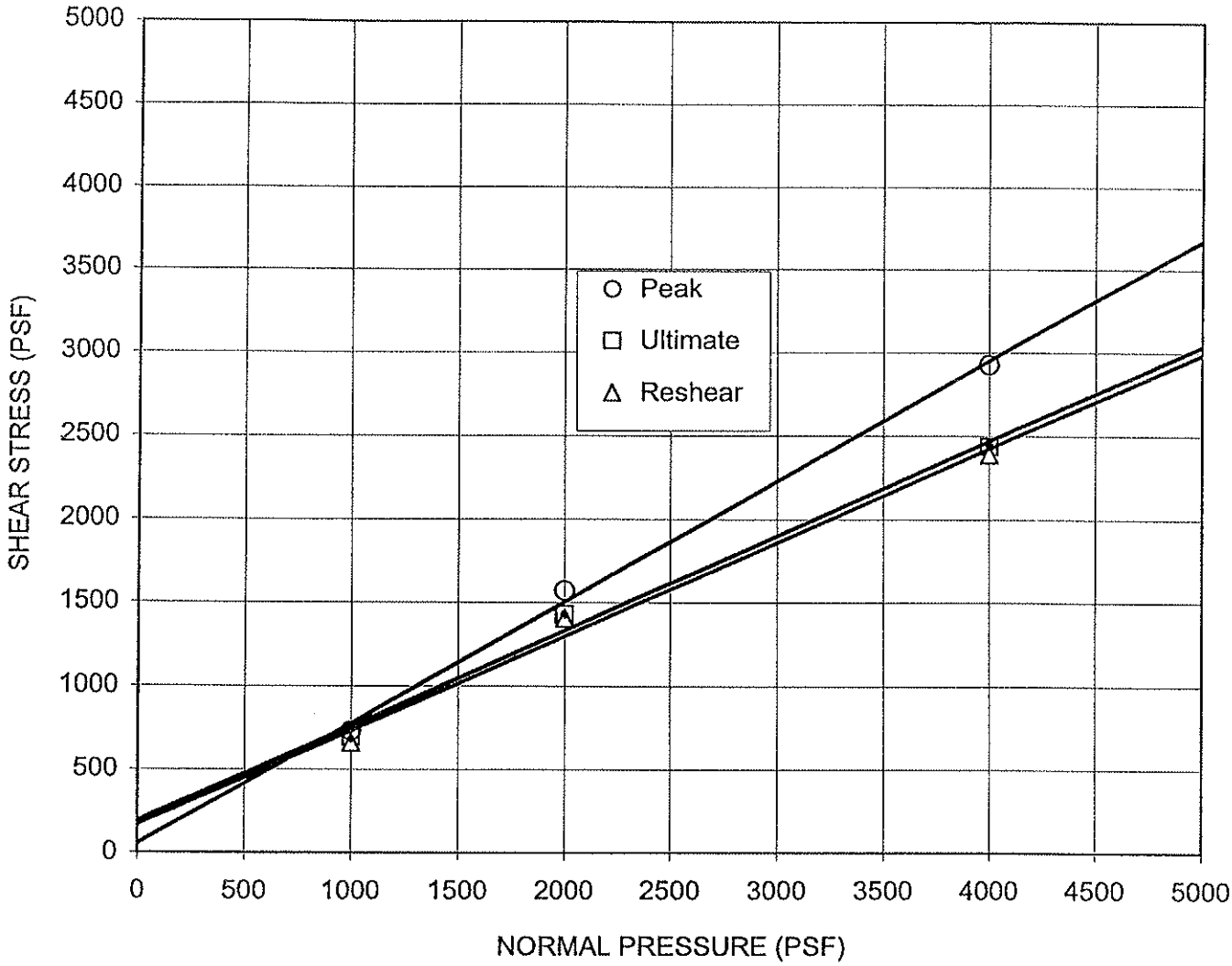
Client: URS Corporation

Project No: 29405484

EGL Project No: 11-008-003

DIRECT SHEAR

03/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-001	1-3	25	Ring	Sandstone	○	54	36
					□	192	30
					△	168	29

Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1000	9.2	20.2
2000	9.2	18.8
4000	9.2	17.3

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address: LAR Hillside Grading

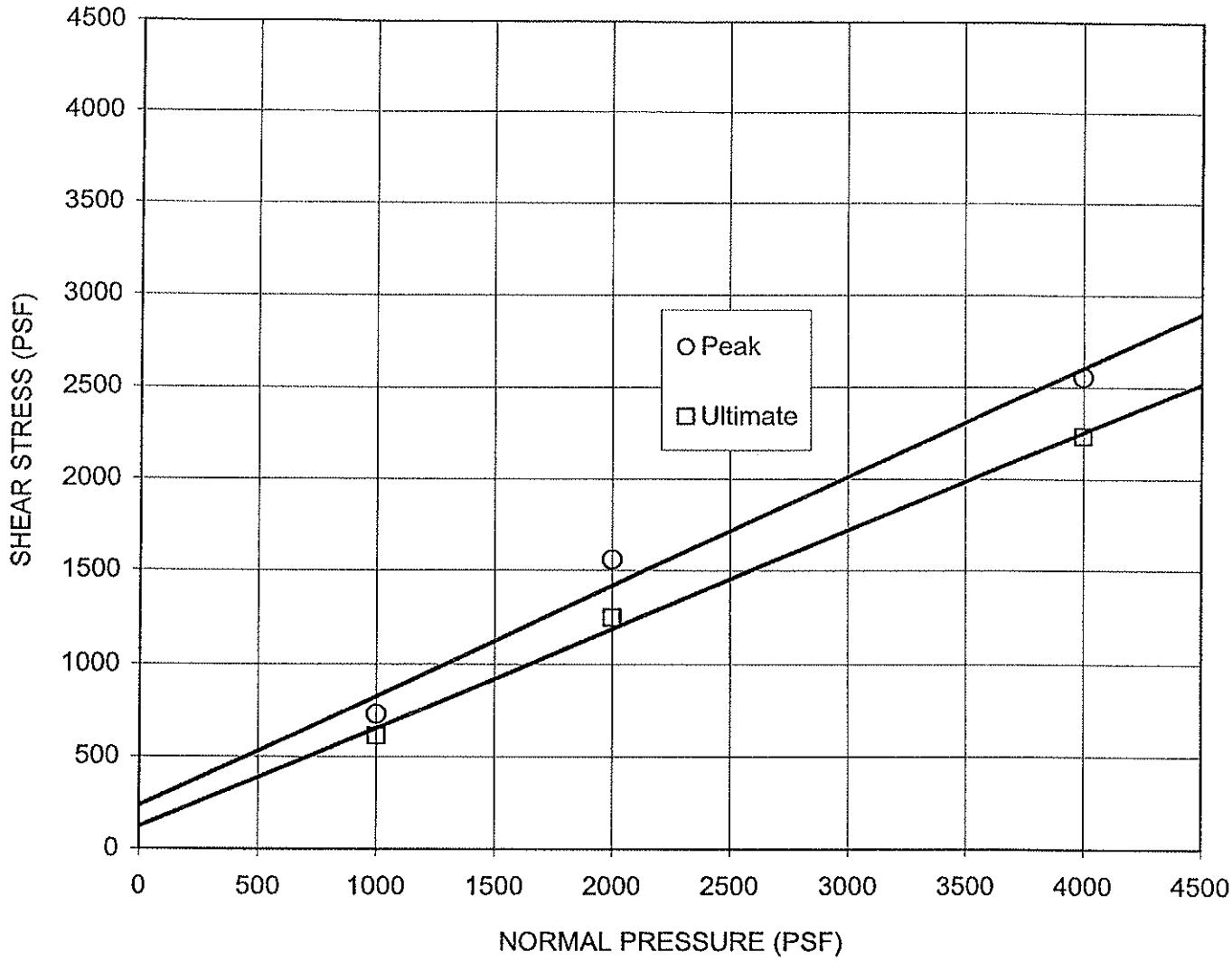
Client: URS Corporation

Project No: 29405484

EGL Project No: 11-008-003

DIRECT SHEAR

03/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-02	S-2	15	Ring	SM	○	234	31
					□	120	28

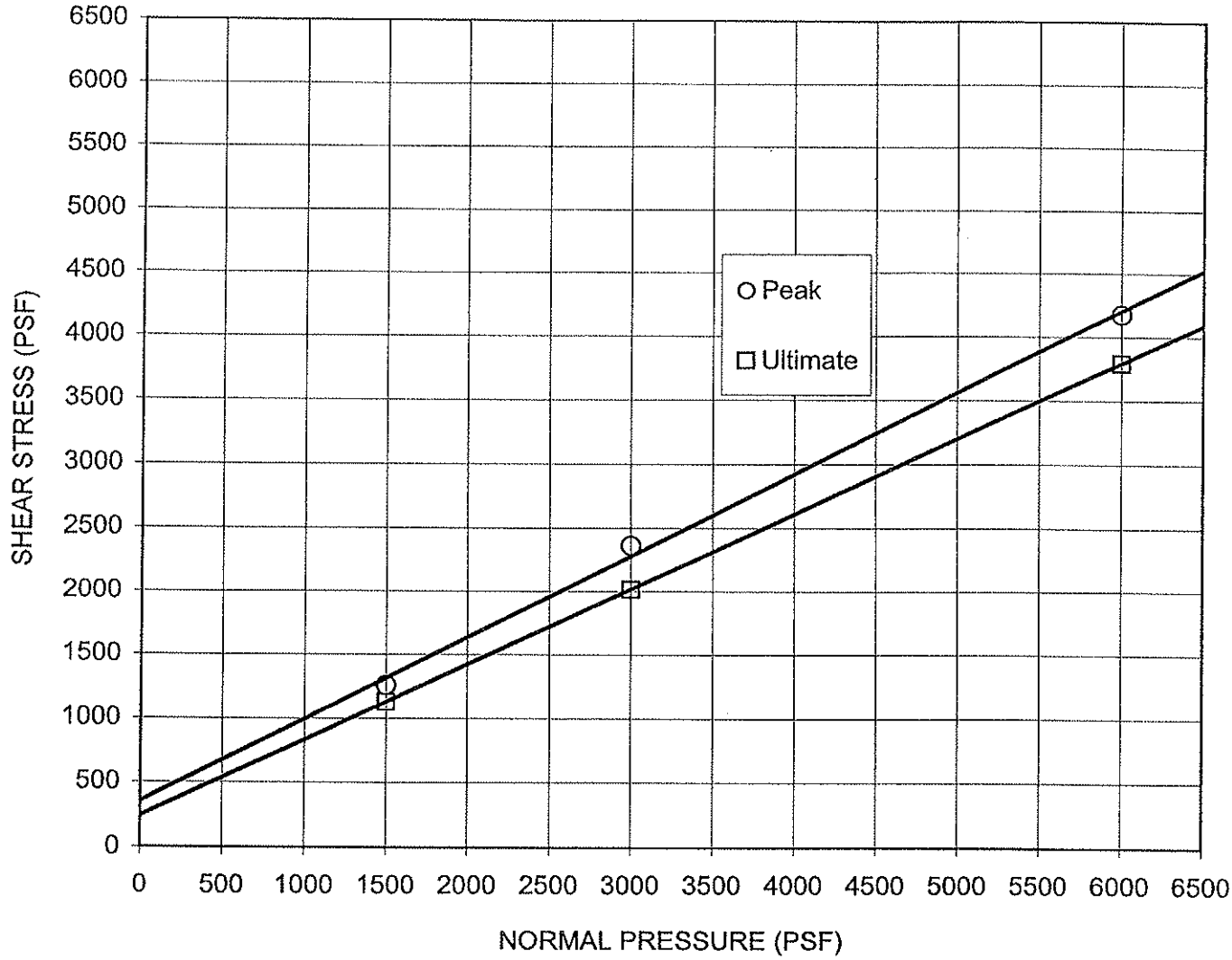
Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1000	8.3	22.3
2000	8.3	21.5
4000	8.3	20.5

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
LAR Hillside Grading
Client: URS Corporation
Project No: 29405484
EGL Project No: 11-008-003

DIRECT SHEAR

02/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-02	S-3	25	Ring	SM	○	354	33
					□	240	31

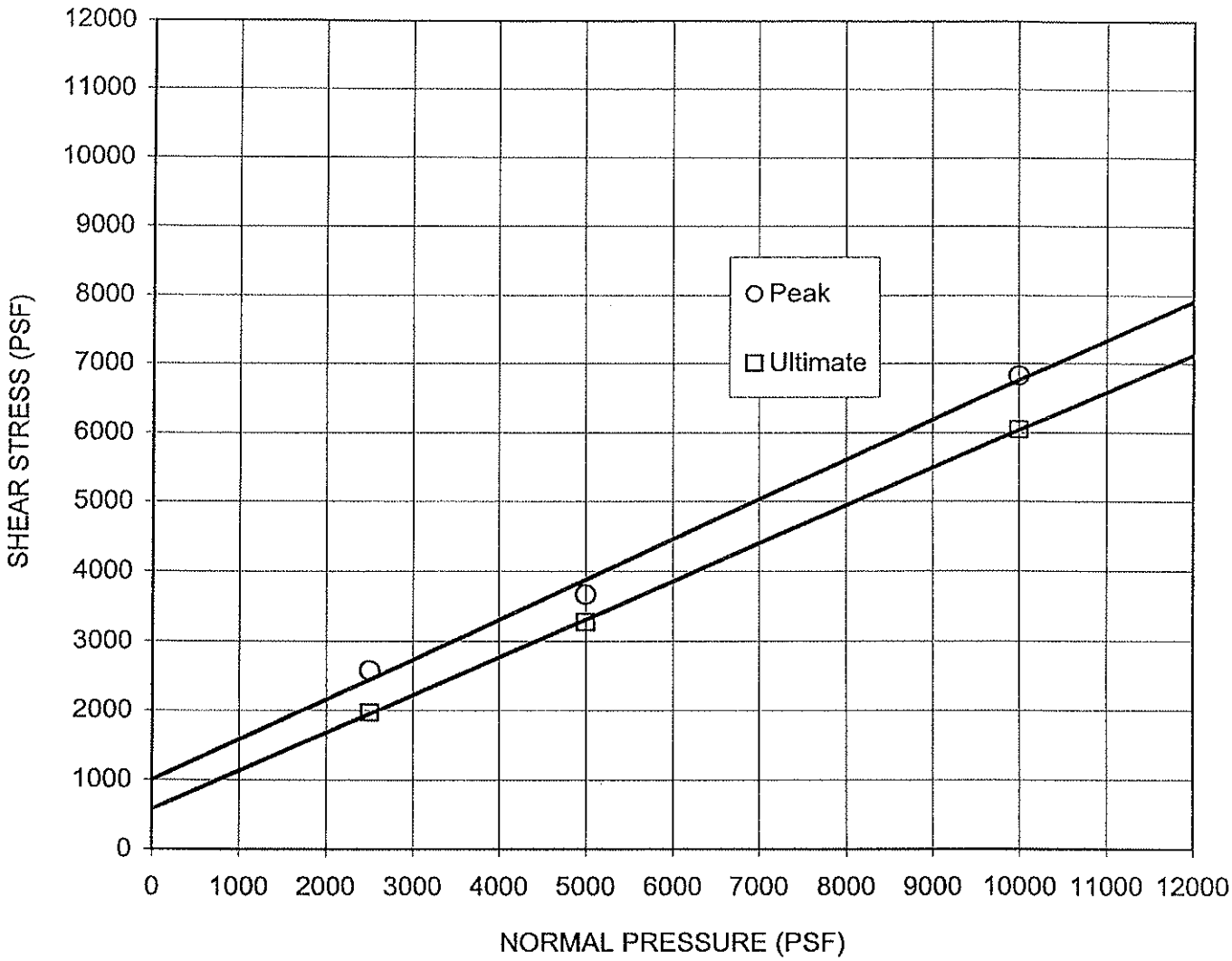
Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1500	6.4	19.6
3000	6.4	19.1
6000	6.4	18.4

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
LAR Hillside Grading
Client: URS Corporation
Project No: 29405484
EGL Project No: 11-008-003

DIRECT SHEAR

02/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-02	S-5	45	Ring	Sandstone	○	1003	30
					□	583	29

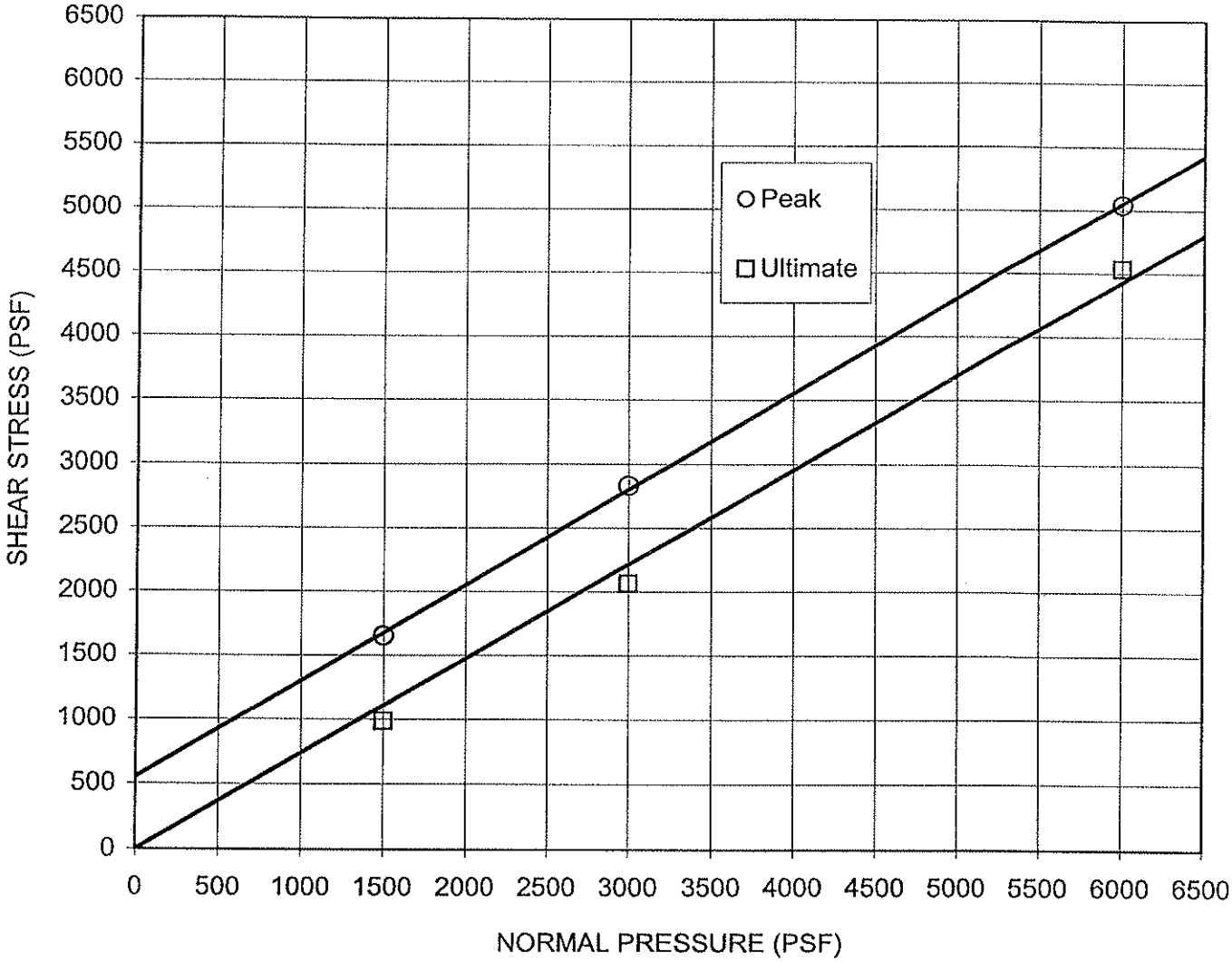
Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
2500	9.1	15.6
5000	9.1	15.0
10000	9.1	13.5

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
LAR Hillside Grading
Client: URS Corporation
Project No: 29405484
EGL Project No: 11-008-003

DIRECT SHEAR

02/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-03	S-3	25	Ring	Claystone	○	552	37
					□	0	35

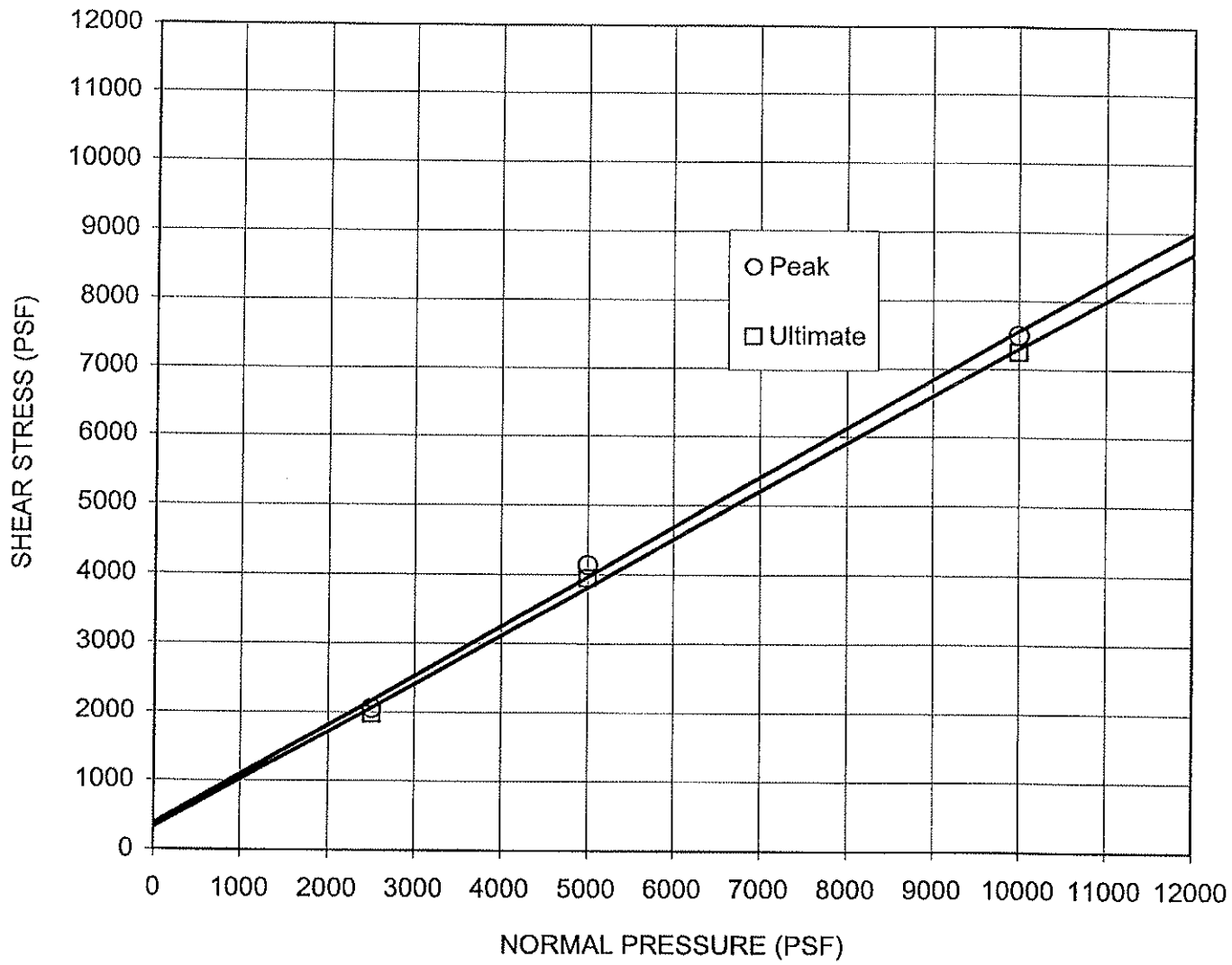
Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
1500	18.0	25.4
3000	18.0	24.8
6000	18.0	22.0

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
LAR Hillside Grading
Client: URS Corporation
Project No: 29405484
EGL Project No: 11-008-003

DIRECT SHEAR

02/11 (ASTM D3080) Figure



Boring No.:	Sample No.	Depth (ft)	Sample Type	Soil Type	Symbol	Cohesion (PSF)	Friction Angle
BA-03	S-5	45	Ring	Claystone	○	373	36
					□	319	35

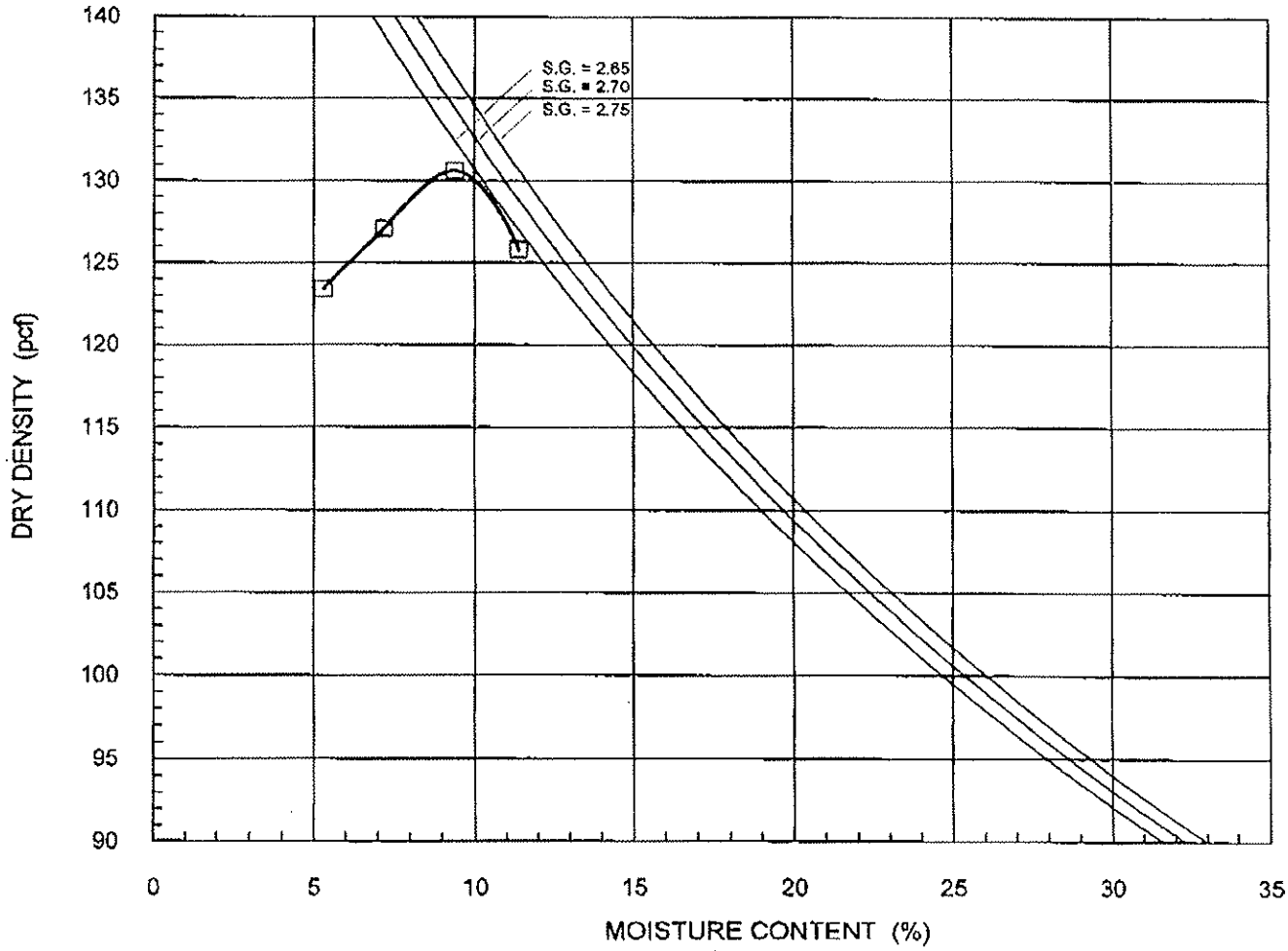
Normal Stress (psf)	Initial Moisture (%)	Final Moisture (%)
2500	12.2	21.8
5000	12.2	20.8
10000	12.2	19.9

ENVIRONMENTAL GEOTECHNOLOGY LABORATORY

Project Address:
LAR Hillside Grading
Client: URS Corporation
Project No: 29405484
EGL Project No: 11-008-003

DIRECT SHEAR

02/11 (ASTM D3080) Figure



SYMBOL	BORING NO	SAMPLE ID	DEPTH (ft)	SAMPLE TYPE	VISUAL CLASSIFICATION	OPTIMUM MOISTURE(%)	MAX. DRY DENSITY(pcf)
□	B-1	BK-1, 2, 3	0-15.0	BULK	SM	9.5	130.5

Note: 3% of cement was added to the soil sample

Environmental Geotechnology Laboratory

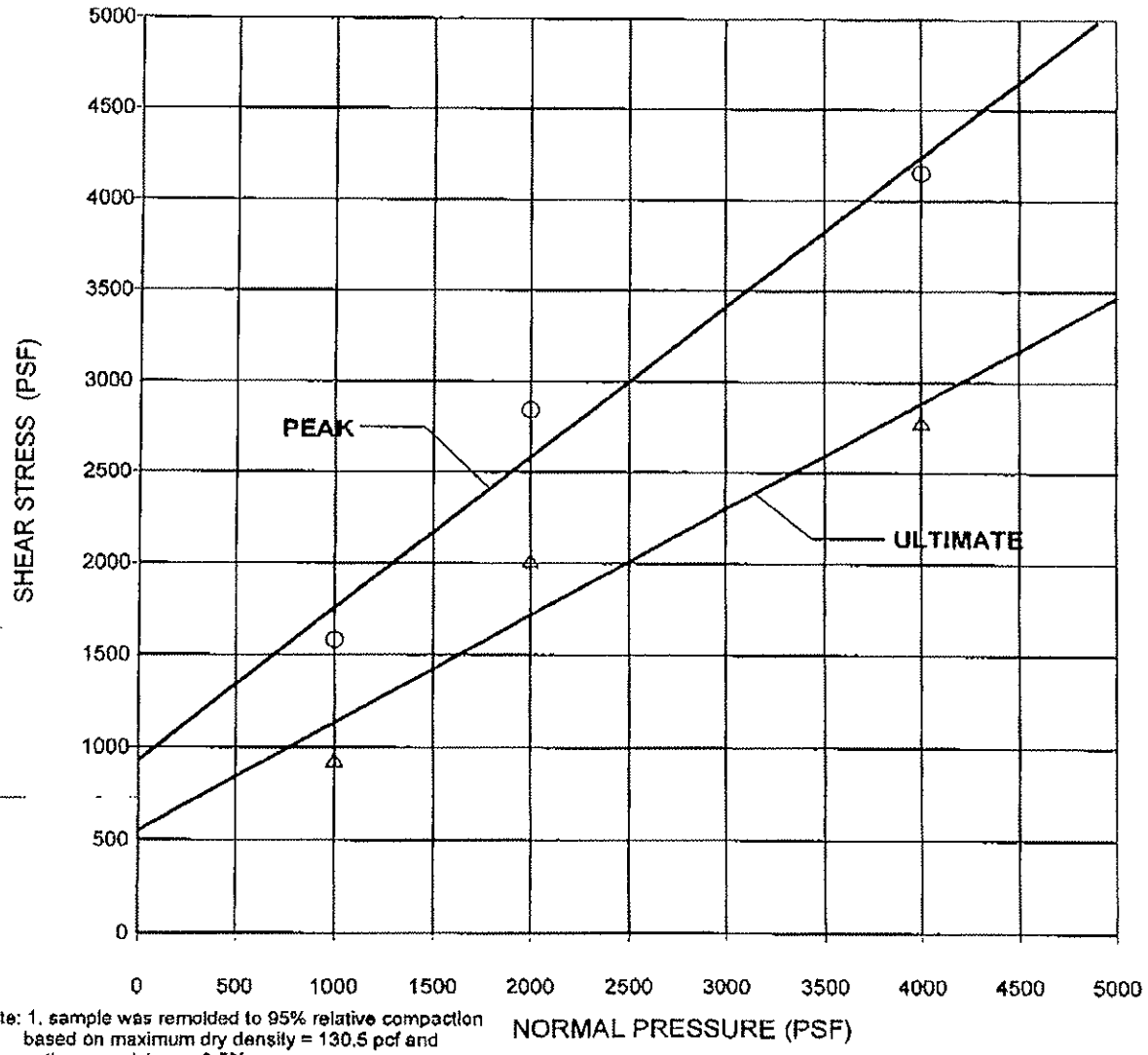
Project Name:Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

MODIFIED PROCTOR

(ASTM D1557)

06/07

FIGURE



Note: 1. sample was remolded to 95% relative compaction based on maximum dry density = 130.5 pcf and optimum moisture = 9.5%
2. 3% cement was added to the soil sample

BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	SYMBOL	COHESION (PSF)	FRICTION ANGLE (DEG)
B-1	BK-1, 2, 3	0-15.0	SM	Bulk (Remolded)	○ PEAK	930	40
					△ ULTIMATE	550	30

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
1000	10.0	14.8
2000	10.0	14.5
4000	10.0	14.4

Environmental Geotechnology Laboratory

Project Address: Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

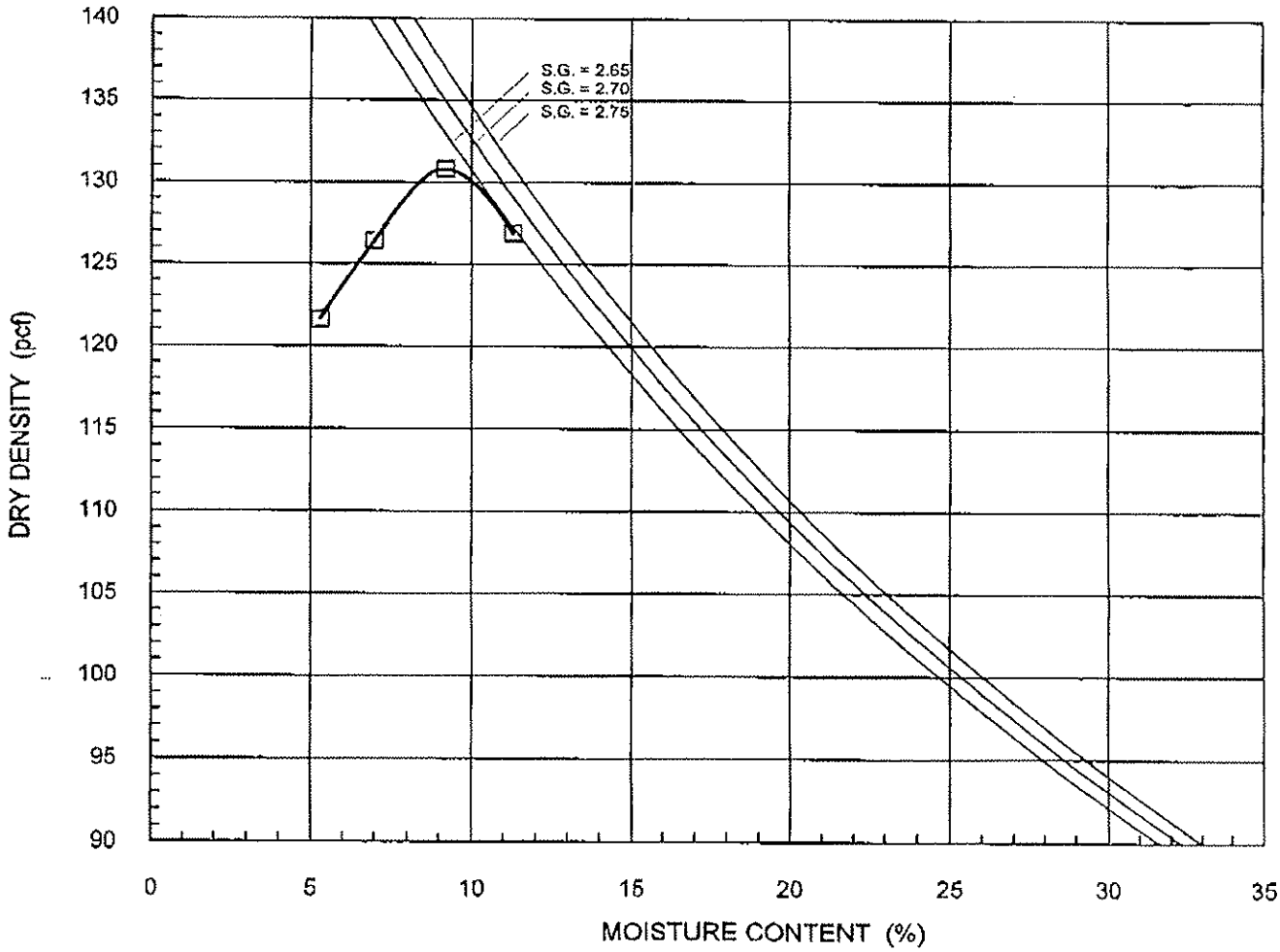
DIRECT SHEAR

(ASTM D3080)

06/06

FIGURE

11819 Goldring Road, Unit A, Arcadia, CA 91006. Tel: (626) 263-3588; Fax: (626) 263-3599



SYMBOL	BORING NO	SAMPLE ID	DEPTH (ft)	SAMPLE TYPE	VISUAL CLASSIFICATION	OPTIMUM MOISTURE(%)	MAX. DRY DENSITY(pcf)
□	B-1	BK-1, 2, 3	0-15.0	BULK	SM	9.5	131.0

Note: 5% of cement was added to the soil sample

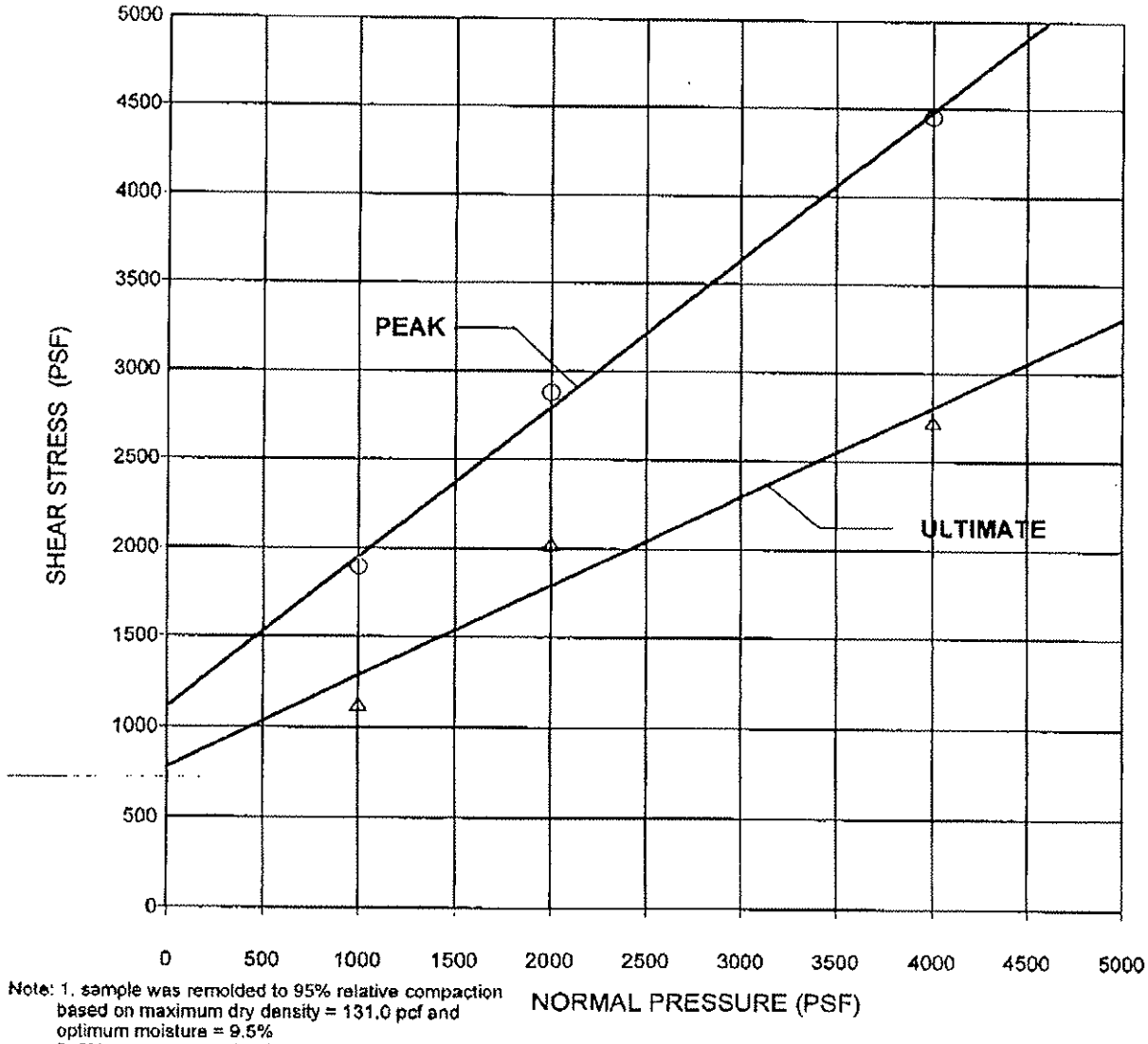
Environmental Geotechnology Laboratory

Project Name:Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

MODIFIED PROCTOR

(ASTM D1557)

06/07 FIGURE



Note: 1. sample was remolded to 95% relative compaction based on maximum dry density = 131.0 pcf and optimum moisture = 9.5%
2. 5% cement was added to the soil sample

BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	SYMBOL	COHESION (PSF)	FRICTION ANGLE (DEG)
B-1	BK-1, 2, 3	0-15	SM	Bulk (Remolded)	○ PEAK	1110	40
					△ ULTIMATE	780	27

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
1000	10.0	15.3
2000	10.0	15.1
4000	10.0	14.7

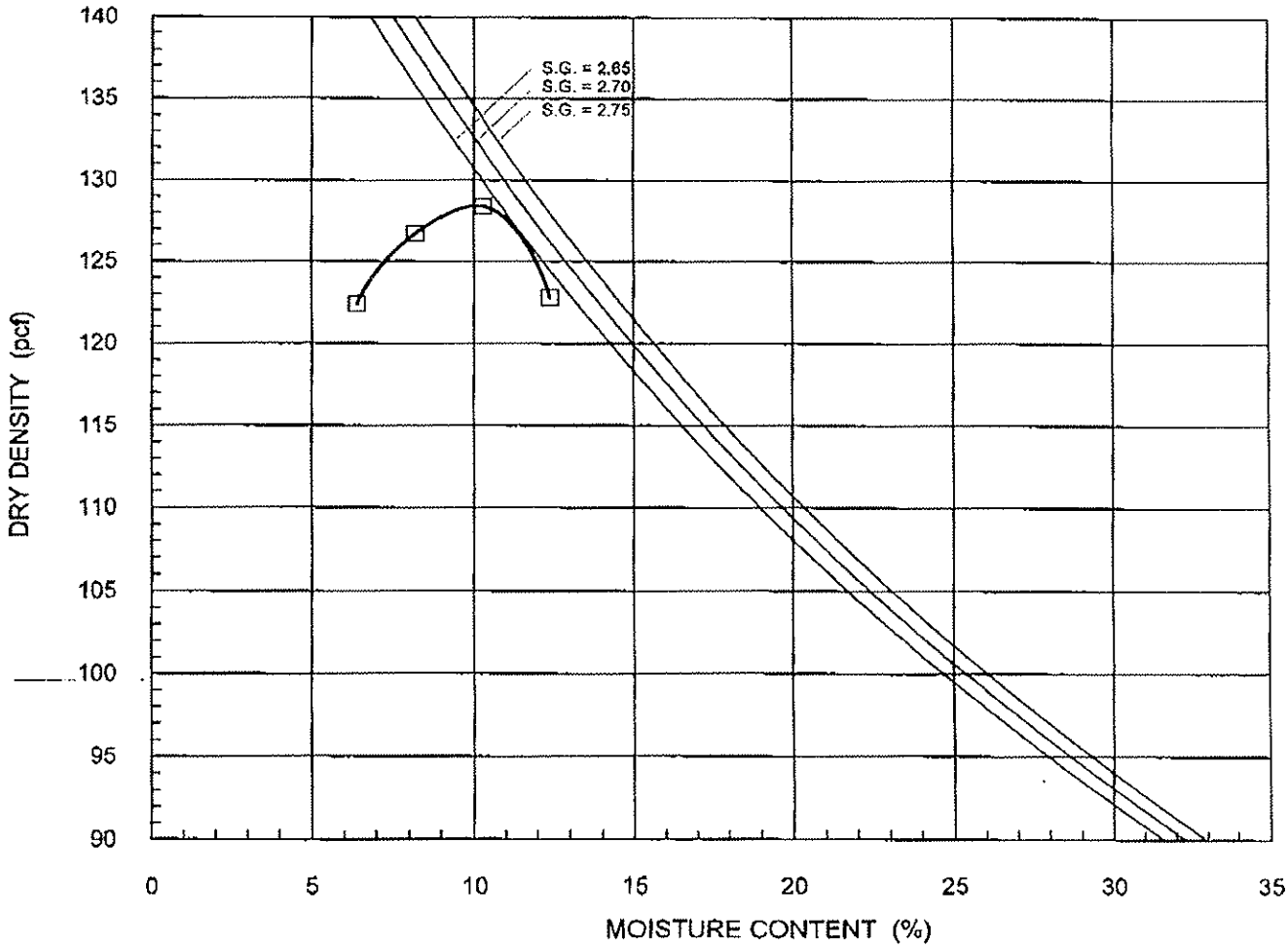
Environmental Geotechnology Laboratory

Project Address: Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

DIRECT SHEAR
(ASTM D3080)

06/06 FIGURE

11819 Goldring Road, Unit A, Arcadia, CA 91006. Tel: (626) 263-3588; Fax: (626) 263-3599



SYMBOL	BORING NO	SAMPLE ID	DEPTH (ft)	SAMPLE TYPE	VISUAL CLASSIFICATION	OPTIMUM MOISTURE(%)	MAX. DRY DENSITY(pcf)
□	B-4	BK-1, 2, 3	0-12.5	BULK	SM	10.0	128.5

Note: 5% of cement was added to the soil sample

Environmental Geotechnology Laboratory

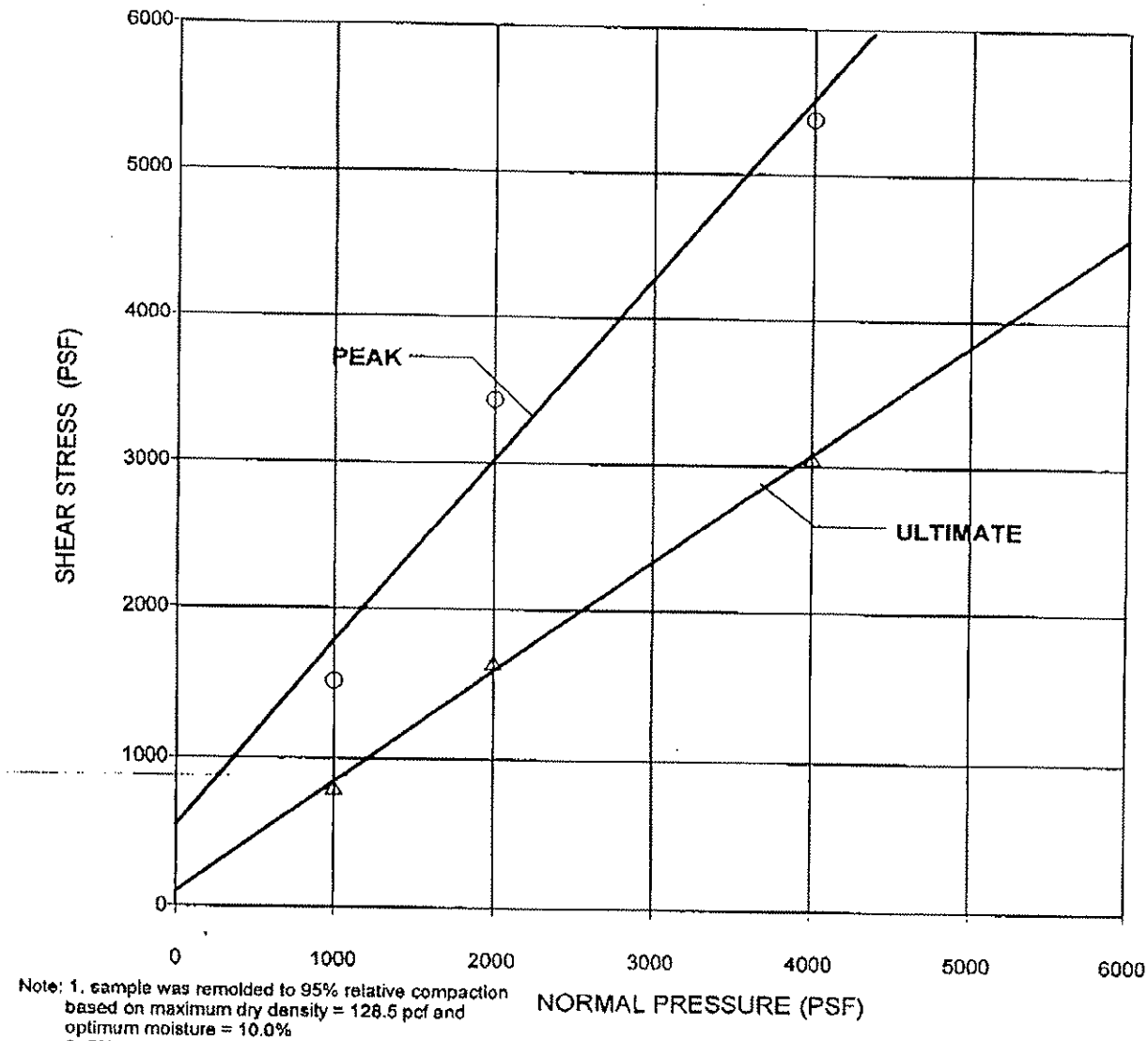
Project Name:Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

MODIFIED PROCTOR

(ASTM D1557)

06/07

FIGURE



Note: 1. sample was remolded to 95% relative compaction based on maximum dry density = 128.5 pcf and optimum moisture = 10.0%
2. 5% cement was added to the soil sample

BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	SYMBOL	COHESION (PSF)	FRICTION ANGLE (DEG)
B-4	BK-1, 2, 3	0-12.5	SM	Bulk (Remolded)	○ PEAK	540	51
					△ ULTIMATE	95	37

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
1000	11.0	15.9
2000	11.0	15.5
4000	11.0	15.3

Environmental Geotechnology Laboratory

Project Address: Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

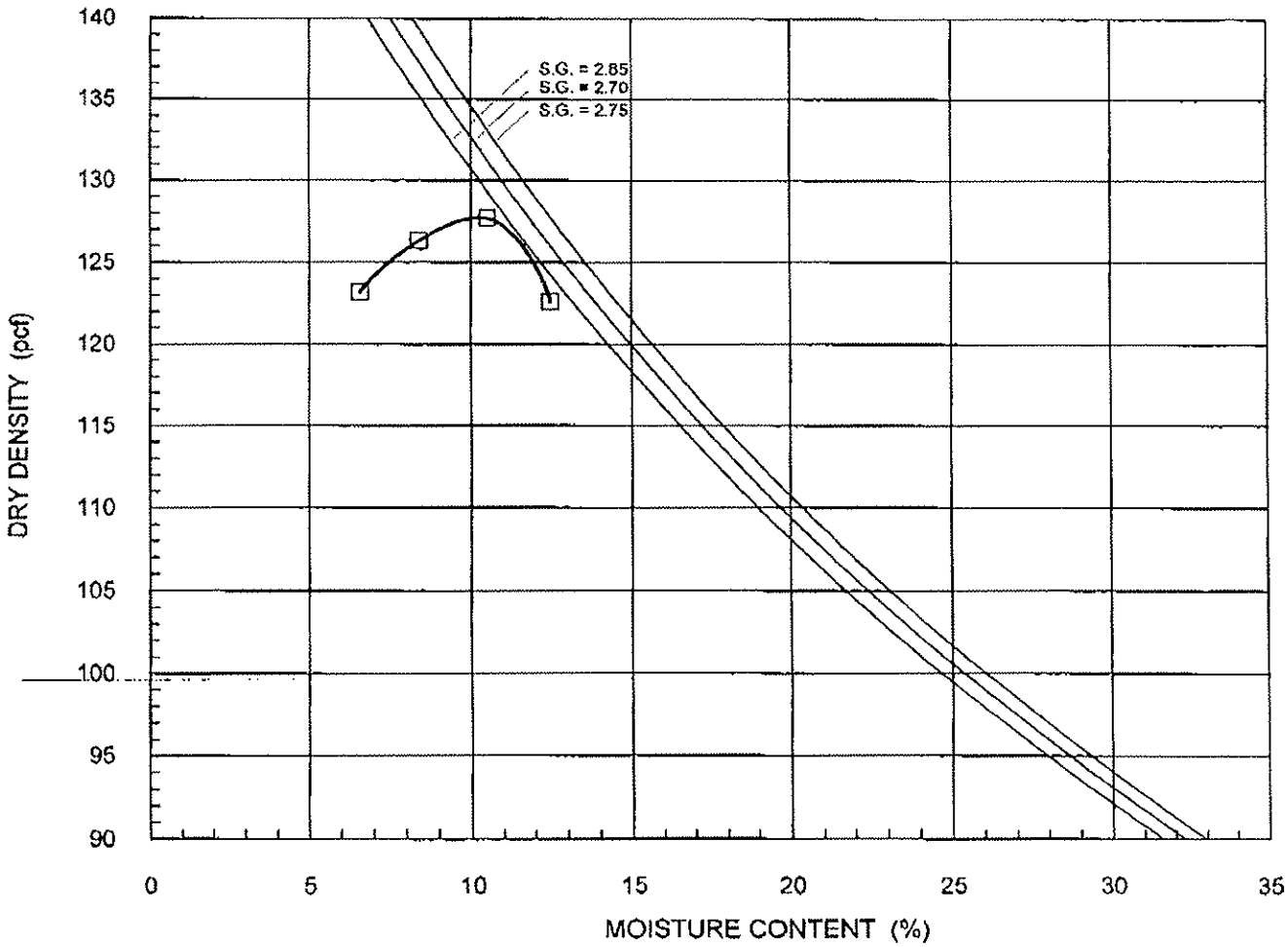
DIRECT SHEAR

(ASTM D3080)

06/06

FIGURE

11819 Goldring Road, Unit A, Arcadia, CA 91006. Tel: (626) 263-3588; Fax: (626) 263-3599



SYMBOL	BORING NO	SAMPLE ID	DEPTH (ft)	SAMPLE TYPE	VISUAL CLASSIFICATION	OPTIMUM MOISTURE(%)	MAX. DRY DENSITY(pcf)
□	B-4	BK-1, 2, 3	0-12.5	BULK	SM	10.0	128.0

Note: 3% of cement was added to the soil sample

Environmental Geotechnology Laboratory

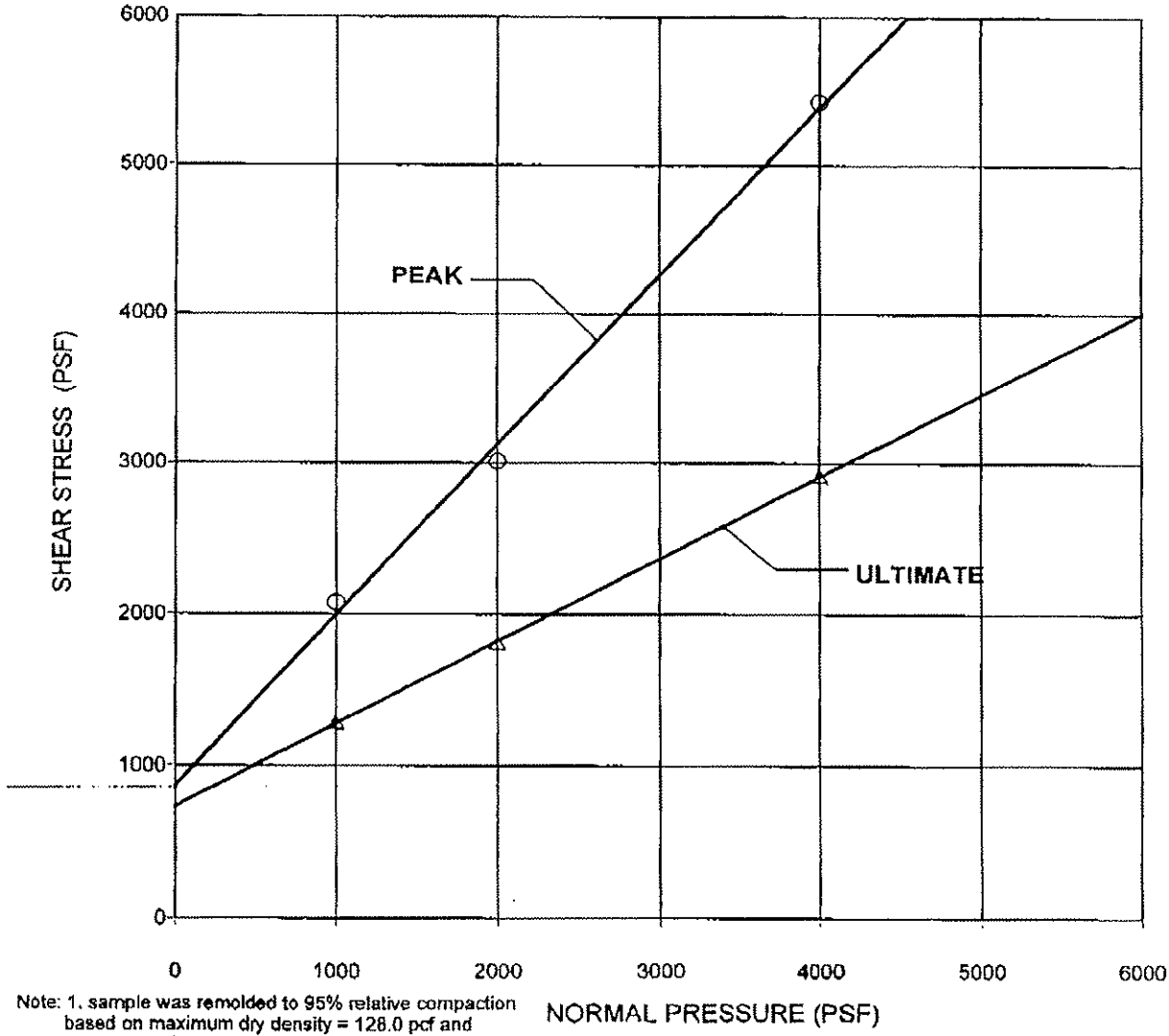
Project Name:Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

MODIFIED PROCTOR

(ASTM D1557)

06/07

FIGURE



Note: 1. sample was remolded to 95% relative compaction based on maximum dry density = 128.0 pcf and optimum moisture = 10.0%
2. 3% cement was added to the soil sample

BOREHOLE NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	SYMBOL	COHESION (PSF)	FRICTION ANGLE (DEG)
B-4	BK-1, 2, 3	0-12.5	SM	Bulk (Remolded)	○ PEAK	870	48
					△ ULTIMATE	730	29

Vertical Loads (PSF)	Moisture Content Before Test (%)	Moisture Content After Test (%)
1000	11.0	14.6
2000	11.0	14.3
4000	11.0	14.2

Environmental Geotechnology Laboratory

Project Address: Rio Hondo Coastal Basins Spreading Grounds
Client: URS
EGL Project No.: 07-008-011

DIRECT SHEAR

(ASTM D3080)

06/06

FIGURE

11819 Goldring Road, Unit A, Arcadia, CA 91006, Tel: (626) 263-3588; Fax: (626) 263-3599

USGS
science for a changing world

Geologic Hazards

Table 1—Shear strengths assigned to geologic formations in the Oat Mountain quadrangle.

SYMBOL	FORMATION NAME	ϕ'	c'(lbs/ft^2)
Qal…	Quaternary deposits (many units combined)	34°	350
Qsw	Slope wash	34°	400
Qc	Caliche	34°	400
Qls	Landslide deposits	30°	500
QTs	Saugus Formation	34°	400
QTsu	Saugus Formation, Upper Member (silty breccia)	34°	450
QTsm	Saugus Formation, Lower Member/Sunshine Ranch Formation	34°	450
Tp	Pico Formation (undifferentiated)	32°	500
Tps	Pico Formation (silt)	30°	500
Tpc	Pico Formation (ss/cg)	34°	500
Tw	Towsley Formation (ss)	34°	550
Tws	Towsley Formation (shale)	30°	550
Twc	Towsley Formation (ss)	34°	550
Tm	Modelo Formation (shale)	31°	550
Tm1	Modelo Formation (shale/mud)	31°	550
Tm2	Modelo Formation (porcellaneous shale)	31°	600
Tm3	Modelo Formation (ss)	34°	550
Tm4	Modelo Formation (shale)	31°	550
Tmd	Modelo Formation (diatomaceous shale)	31°	550
Tms	Modelo Formation (shale)	31°	550
Tto	Topanga Formation (ss)	34°	550
Ttb	Topanga Formation (basalt)	34°	700
Tt1	Topanga Formation (shale)	31°	600
Tt2	Topanga Formation (ss)	34°	550
Tt3	Topanga Formation (shale)	31°	600
Tt4	Topanga Formation (ss)	34°	550
Tl	Llajas Formation (ss, silt, clay, cg)	34°	600
Tlc	Llajas Formation (calcareous ss)	36°	900
Ts	Santa Susana Formation (clay shale)	30°	700
Tsc1	Simi Conglomerate (cg)	34°	850
Tsc2	Simi Conglomerate (shale)	30°	700
Tsc3	Simi Conglomerate (ss)	34°	800

Figure B-40

Kc	Chatsworth Formation (ss)	40°	1000

Conversion: 1 lb/ft^2 = 0.0479 kPa.

AccessibilityFOIAPrivacyPolicies and Notices
U.S. Department of the Interior | U.S. Geological Survey
URL: <http://pubs.usgs.gov/of/1998/ofr-98-113/table1.html>
Questions or Assistance: GS Pubs Web Contact
Page Last Modified: Tue Jun 3 16:45 EDT 2003

Figure B-41

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

STABILIZATION OF A PORTION OF THE HONBY LANDSLIDE, USING A MULTI-DIRECTIONAL APPROACH

Alan W. Rasplicka, P.E., G.E., Member ASCE[1],

and Dean G. Francuch, C.E.G., Member AEG, ASCE[1]

ABSTRACT

A proposed multi-lane cross-city corridor called for grading through an area of numerous deep-seated landslides. The grading plan design called for construction of a 1.5:1(horizontal: vertical) to 2:1, 45 m (150 ft) high cut slope descending from a multi-media receiving facility to the proposed corridor road. The proposed design required an exception to the Uniform Building Code and the City of Santa Clarita Building Code slope requirements. Relocation of the media facility was not feasible due to line-of-site transmission requirements and realignment of the roadway was fixed due to property constraints. A cost effective solution using a combination of sequenced shear keys, geogrid-reinforced buttress fills and soldier piles was designed and constructed at an accelerated schedule. Prior to and during construction, several techniques were used to minimize potential damage to any nearby structures.

INTRODUCTION

In southern California, it is becoming more commonplace to develop landslide-impacted sites that in previous years were not cost effective to mitigate. Due to the current real estate market, lack of affordable housing, and infrastructure needs, it is expected that future development will continue within landslide-impacted areas. Golden Valley Road, a major 6-lane cross-city corridor, is located in the rapidly expanding city of Santa Clarita, Los Angeles County, California (Figure 1). The project consisted of a 1.9 km (1.2 mi) right-of-way constructed concurrently with an adjacent state-of-the-art high school campus. Maximum constructed heights of cut and fill slopes were 45 m (150 ft) at up to 1.5:1 gradients. The project included compaction of 7.6×10^6 m^3 (1.0×10^7 yd^3) of fill from April 2000 to April 2002. This paper discusses the investigation, evaluation, and mitigation of a 7.7 ha (19 ac), 1.1×10^6 m^3 (1.5×10^6 yd^3) landslide designated as Qls 4, a part of the Honby Landslide complex (Francuch, 2002). Landslide Qls 4 mitigation constraints included the immovable, disruption sensitive Media One/Time Warner building complex at the landslide head, the fixed location of the road, and dual 76 cm (30 in) high-pressure natural gas pipelines along the western lateral boundary and landslide toe. The financial damages for disruption of the Media One/Time Warner facility and the gas lines were estimated at thousands of dollars per minute.

---

[1] R.T. Frankian and Associates, 1329 Scott Road, Burbank, CA 91504 (Phone 818-531-1501; FAX 818-531-1511; email:arasplicka@rtfrankian.com dfrancuch@rtfrankian.com .

Figure B-42

Figure 1. Simplified regional geologic map (After Saul, 1983 and Treiman, 1986).

SITE GEOLOGY

The underlying geologic units at the site include Plio-Pleistocene age (0.5 to 3.4 million years old) sandstone, siltstone, and claystone that are highly susceptible to landsliding. There were over 50 major landslides identified within the project limits. The size of the landslides ranged from several hundred cubic meters to over a million cubic meters. Bedding-plane slip from folding and close proximity to the active San Gabriel fault is partially responsible for the abundance of landslides at the site (Figure 2). Geologic data for the investigation was compiled from bucket auger borings at depths up to 33.5 m (110 ft) as well as shallow subsurface test pits and surface outcrops.

Geologic Units

The soil and bedrock materials encountered at the site consist of artificial fill, Recent age (<10,000 years) alluvium, colluvium, landslide debris, Pleistocene age (0.01 to 1.6 million years) terrace deposits, Pleistocene age Pacoima Formation, and Plio-Pleistocene age (0.01 to 5.3 million years) bedrock of the upper Saugus Formation and Sunshine Ranch Member of the Saugus Formation.

Landslide Debris

The landslide material ranged from loose sand and gravel to dense sandstone and siltstone. Depending on the amount of movement or material, the entire landslide or the upper portions of the landslide debris were disturbed and were unsuitable for fill or structural support. With progressive depth in Qls 4, material became more competent, presumably due to decreased movement and lack of surficial weathering processes. It is common practice to completely remove smaller landslides prior to placement of overlying certified engineered fill. However, where complete landslide removal was not required to obtain adequate slope stability safety factors, samples of landslide material were collected and tested for strength and consolidation characteristics.

Figure B-43

Figure 2. Simplified site geologic map with superimposed as-built grade.

Bedrock

Saugus Formation deposits typically consisted of light yellowish brown to pinkish gray, fine- to coarse-grained, pebble- to cobble-bearing sandstones. This unit was moderately well-bedded with high dry strength. The Sunshine Ranch Member of the Saugus Formation deposits were comprised of blue-gray, silty sandstone and claystone which grade upward into dark olive brown siltstone and sandstone, with some concretionary limestone. These units ranged from low dry strength near the surface to high dry strength at depth. Landslide Qls 4 was predominantly composed of the Sunshine Ranch Member materials.

Geologic Structure

Geology structure is dominated on the site by the northwest-trending San Gabriel fault, which forms a major structural boundary within southern California. Deformation along the fault has resulted in the formation of a zone of parallel to sub-parallel faults and fractures approximately 245 m (800 ft) wide (Frankian, R. T. and Associates, 1999). North of the fault, within the area of Qls 4, bedding forms an anticline referred to locally as the Highway Anticline (Oakeshott, 1958), which has resulted in bedding dipping to the southwest, west and northwest under Qls 4 (Figure 3a). As anticipated from the initial investigation (R.T. Frankian and Associates, 1999), a series of high-angle northeast dipping faults were found within the buttress fill backcut for the landslide removals within the head area of the landslide (Figure 3b). The faults formed the failure surface within the head area of Qls 4.

Groundwater

Groundwater was encountered in approximately 95 percent of the exploratory borings. The minimum depth to perched groundwater encountered in the borings within Qls 4 was approximately 11.6 m (38 ft); average depth was 18.6 m (61 ft). Significant perched water was expected above the base of slide planes and was uncovered within the central portion of the landslide during excavation operations (Figure 3a).

Figure B-44

Landslide Qls 4 Failure Mechanism

The underlying geologic conditions at the site include Plio-Pleistocene age sandstone, siltstone, and claystone that are highly susceptible to landslides. Bedding-plane slip and close proximity to the San Gabriel fault are partially responsible for the abundance of landslides at the site. Subsurface data indicate that landslide Qls 4 was a combination-type failure, which incorporated a fault-controlled cross-bedding mechanism at the head and block-glide bedding-plane parallel mechanisms at its base. Landslide Qls 4 ranged in thickness from 30.5 m (100 ft) at the mid-section to 18.2 m (60 ft) near the toe. Within Qls 4, geologic structure, geotechnical sampling, laboratory testing, and slope stability analyses were evaluated by, or obtained from nine down-hole logged bucket auger borings at depths up to 33.5 m (110 ft).

STABILITY ANALYSES

Slope stability analyses were performed using computer software programs that included Tslope and Tslab (TAGA Engineering Software Services, 1984) and the program Slope/W (GEO-SLOPE International Ltd., 1991-1995). The computer

Figure B-45

Figure B-46

programs utilized either Bishop's Simplified Method or Spencer's Method. A minimum factor of safety of 1.5 was required for permanent static conditions and a factor of safety of 1.1 was required for pseudo-static conditions, which included a seismic coefficient of 0.15. For temporary stability, a factor of safety of 1.25 was required.

Even though the temporary factor of safety requirements were met for the planned excavation, soldier pile shoring was recommended between the top of the proposed backcut and the Media One/Time Warner facility (Figure 3b). The decision to recommend the shoring was based upon the magnitude of the landslide mitigation, perched groundwater conditions that could have seasonal rainfall variation, the ability to maintain maximum flexibility during an accelerated construction schedule, and the consequence of distress and/or disruption to the facility. A grading sequence was recommended that provided for temporary stability requirements.

After shoring was installed, an alternative grading sequence was undertaken for construction of the buttress keyway trench located at the toe of the super pad. The evaluation of this alternative grading sequence required analyses of multiple cross sections and a three-dimensional slope stability evaluation. The alternative grading sequence consisted of excavation of the buttress keyway in four separate slots. There were requirements for backfill of each buttress keyway slot to specific elevations that provided support of the up-gradient failure surface prior to progressing to the next buttress keyway slot. Construction of the buttress keyway was performed in accordance with the alternative grading sequence with favorable results while maintaining temporary slope stability requirements.

Shear Strength Parameters

Shear strength parameters were determined based on laboratory direct shear tests performed on samples obtained from the subsurface investigation. Soil parameters used in the slope stability analyses for landslide failure planes were considered to be residual strengths, based upon performing multiple shear tests on the same samples until there is no further decrease in strength. The following shear strength parameters correlated well with on-site slopes that remained stable, as well as observed failures that occurred as a result of temporary excavations during grading operations.

TABLE A. Shear Strength Parameters

MATERIAL	COHESION kg/m^2 (psf)	SHEARING ANGLE RESISTANCE - degrees
Landslide Failure Plane and Clay Bedding Plane (Residual)	976 (200)	10
Landslide Failure Plane and Clay Bedding Plane (Peak)	1831 (375)	19
Saugus Fm. Cross-Bedding	2930 (600)	32

LOSS PREVENTION

Grading activities required soil and rock movement by heavy equipment within 4.6 m (15 ft) of the Media One/Time Warner building complex. In order to prevent damage to the existing television cable and internet distribution facilities, a program of loss prevention techniques was established. The program consisted of a pre-construction building survey, slope inclinometer installation, and vibration monitoring.

A detailed building survey was completed using photography to note any existing interior building distress. The exterior walls and concrete foundation apron were

Figure B-47

logged using paper and pencil technique to create graphic logs of all exterior defects (mortar fractures, concrete cracks, etc.). Logs were completed at a scale of 1cm=0.6m (1 in=5 ft).

A slope inclinometer was installed between the Media One/Time Warner complex and top of the proposed backcut to a depth of 27.4m (90 ft). The purpose of the slope inclinometer was to measure any slope movement of the backcut during removal operations of Qls 4 below the Media One/Time Warner building complex. The slope inclinometer was monitored at least weekly and more frequently during periods of heightened grading activity.

During grading operations around the Media One/Time Warner complex, a seismograph was placed adjacent to the building to monitor for the occurrence of vibrations capable of causing adverse impacts to operations or distress to the building complex.

CONSTRUCTION

Soldier Pile Installation

A row of 20 soldier piles, 15.2 m (50 ft) deep 2.4 m (8 ft) on center were installed approximately 4.6 m (15 ft) north of the building complex, immediately adjacent to the proposed backcut for the landslide removal. The piles were installed within a 76 cm (30 in) diameter flight auger excavation drilled to 15.8 m (52 ft) below ground surface. Each pile consisted of a 53 cm (21 in) steel "I"-beam lowered into the finished excavation, which was then backfilled with concrete by tremie pipe. The tops of the piles were tied together with a 61 cm x 61 cm (24 in x 24 in) concrete grade beam surrounding a 46 cm (18 in) steel I-beam. The grade beam was located 0.6 m (2 ft) below grade to avoid future interference with maintenance vehicles.

Grading Operations

Due to constraints within other areas of the project, it was determined that the original grading sequence for Qls 4 would require modifications. The original grading sequence consisted of excavation of the entire buttress keyway after making sufficient up-gradient removal. The alternative grading sequence called for excavation of the buttress keyway in four slots, while making less up-gradient removals. Construction of the buttress keyway was performed in accordance with the alternative grading sequence with favorable results. After construction of the buttress keyway, the alternative grading sequence was abandoned. Significant removals were made within the central portion of Qls 4 without first making the recommended up-gradient removals. Failure occurred as forewarned, and this required additional slope stability evaluation of a combination 0.75:1 to 2.2:1 52 m (170 feet) high temporary backcut excavation. It was also necessary to re-evaluate the final slope configuration which would require a variable 1:5:1 to 2:1 fill slope with geogrid reinforcement and grading within areas which were originally proposed to remain natural.

Due to the failure of the landslide mass, it was necessary to remove more of the landslide mass than originally recommended. The revised temporary backcut required abandonment of the existing slope inclinometer and installation of a new inclinometer. This mitigation and revisions to the slope configuration would not have been possible and distress to the Media One/Time Warner facility may have occurred if the soldier pile shoring had not been installed. It was also possible to make modifications to the Qls 4 mitigation that were undertaken with minimal delay. The as-built finish slope configuration and the location of the installed geogrid are shown in Figure 2.

CONCLUSIONS

Mitigation of Qls 4 was completed without injury, loss of life, or distress to the

Figure B-48

existing improvements. The constructed buttress fill has performed well with no unusual maintenance or repairs required.

REFERENCES

Francuch, D. G. (2002) "Stabilization of a portion of the Honby Landslide complex, Santa Clarita, California." *Geological Society of America Abstracts, Cordilleran Meeting,* Corvallis, Oregon, USA.

Frankian, R. T. and Associates (1999) "Geotechnical and Geologic Grading Plan Review, Proposed Golden Valley Road and High School, Santa Clarita, California." Prepared for the City of Santa Clarita, California, Vol. I-IV.

GEO-SLOPE International Ltd. (1991-1995) "SLOPE/W." Calgary, Alberta, Canada.

Oakeshott, G. B. (1958) "Geology and Mineral Deposits of San Fernando Quadrangle, Los Angeles County, California." California Division of Mines Bulletin 172, 147p.

Saul, R. B. and Wooten, T. M. (1983) "Geology of the south half of the Mint Canyon Quadrangle, Los Angeles County, California." California Division of Mines Open File Report, 83-24, 139p.

TAGA Engineering Software Services (1984) "TSLOPE and TSTAB." 2855 Telegraph Avenue, Suite 415, Berkeley, California, USA, 94705.

Treiman, J.T. (1987) "Landslide hazards in the east half of the Newhall Quadrangle, Los Angeles County, California." California Division of Mines Open File Report, 87-16.

Figure B-49

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SOILS ENGINEERING REVIEW SHEET

Address: 900 S. Fremont Ave., Alhambra, CA 91803
Telephone: (626) 458-4925
Fax: (626) 458-4913

District Office 8.2
Job Number LX001129
Sheet 1 of 1

Tentative Map (Tract)	53653
Location	Santa Clarita
Developer/Owner	Warner Brothers Entertainment Inc.
Engineer/Architect	Daly Owens Group
Soils Engineer	Pacific Soils Engineering, Inc. (102453-T)
Geologist	Same as above

DISTRIBUTION:
1 Drainage
1 Grading
1 Geo/Soils Central File
. District Engineer
1 Geologist
1 Soils Engineer
1 Engineer/Architect

Review of:
Revised Tentative Map (Tract) Dated By Regional Planning 12/14/05
Soils Engineering and Geologic Report Dated 3/10/04
Previous review sheet dated 9/28/05

ACTION:
Tentative Map feasibility is not recommended for approval.

REMARKS:

As Previously Requested:

1. The Tentative Map dated by Regional Planning 9/6/05 does not conform with the geotechnical maps of the submitted report. Provide geotechnical maps and tentative map which conform, as requested by the Geology Section.

2. On Page 20 of the submitted report it states that the calculated (estimated) value for the seismically induced settlement ranged from ¼ to ¾ inches. The substantiating liquefaction analyses for these reported values were not provided within the copies of the submitted report. Therefore as previously requested, provide the substantiating liquefaction analyses and evaluate the potential for seismically induced settlement (**dry and saturated soils**), lateral spreading, surface manifestation, etc. The analyses must be performed for soils within the upper 50 feet, as a minimum, for shallow foundation, or greater depth where deep foundation and/or subterranean structure is proposed. The historic-high water table shall be used in the analyses, unless other information is provided which indicates a higher or lower level is appropriate. Recommend mitigation as necessary. The liquefaction data and analyses must conform to the State of California Division of Mines and Geology "Special Publication 117", dated 1997 and "Recommended Procedure For Implementation of DMG Special Publication 117", dated March 1999.

3. Provide the correlations between CPT/SPT utilized within the liquefaction analyses, as necessary. Provide references as necessary.

4. The CPT interpretations in Appendix III of the submitted report indicate several layers classified as Clay, Silt, and Clayey Silt. Provide substantiating data/test and references to verify that the soils layers classified as Clay, Silt, and Clayey Silt are non-liquefiable, e.g. "Chinese Criteria" (Seed and Idriss, 1982, etc.), as necessary.

5. Address potential debris flow(s) from natural slopes and/or swales (i.e. surficial creep, Qcol, etc.) located adjacent to proposed development, as requested by the Geology Section. Recommend mitigation measures as necessary.

6. On the submitted geotechnical maps, several debris basins are shown on the subject site. Provide slope stability analyses considering rapid drawdown condition for debris basins with slopes steeper than 3:1 gradient and designed with outlet structures, as necessary. Also, provide a geotechnical cross section, for each section analyzed, showing the critical failure plane used in the analyses. Indicate the various shear strength parameters used in the analyses, in the appropriate segments of each failure plane. Show locations of the cross sections used in slope stability analyses on the geotechnical map. Recommend mitigation if factors of safety are below County minimum standards.

7. Show the following on the geotechnical map:
   a. Location of all proposed settlement monuments.
   b. All recommended mitigation measures.

8. Requirements of the Geology Section are attached.

9. Include a copy of this review sheet with your response.

REGISTERED PROFESSIONAL ENGINEER
YOSHIYA MORISAKU
No. 67687
Exp. 6/30/07
STATE OF CALIFORNIA

Reviewed by Yoshiya Morisaku Date 1/17/06

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.
P:\Yosh\53653TentTc

PLATE VI-6
Figure B-50

PACIFIC SOILS ENGINEERING, INC.
10653 PROGRESS WAY, P.O. BOX 2249, CYPRESS, CALIFORNIA 90630
TELEPHONE: (714) 220-0770, FAX: (714) 220-9589
(Corporate Headquarters)

D.R. HORTON
c/o Daly Owens Group
31304 Via Colinas, Suite 103
Westlake Village, CA 91362

April 11, 2006

Work Order 102453-RT

Attention: Mr. Jasch Janowicz

Subject: **UPDATED PRELIMINARY GEOTECHNICAL REPORT AND RESPONSE TO COUNTY OF LOS ANGELES GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION REVIEW SHEETS**
Proposed Lyons Canyon Ranch Development
Tentative Tract Map No. 53653
Lyons Canyon/Santa Clarita Area
COUNTY OF LOS ANGELES, CALIFORNIA

References: (See Appendix I)

Gentlemen:

Pursuant to your request, presented herein is this firm's Updated Preliminary Geotechnical Report and Response to County of Los Angeles Geotechnical and Materials Engineering Division (GMED) Review Sheets (Appendix VI) for the proposed Lyons Canyon Ranch development (Tentative Tract No. 53653). The major soils engineering/geologic issues considered within this document include:

- Unsuitable soil removals;
- Plan cut, fill and natural slope stability;
- Liquefaction potential;
- Hydrocollapse potential;
- Engineering and excavation characteristics of onsite earth materials;
- Preliminary foundation design parameters;
- Slope and lot maintenance recommendations.

This report is subject to review by the controlling authorities for the above subject project. Pacific Soils Engineering, Inc., (PSE) appreciates the opportunity to provide you with geotechnical consulting services. If you have any questions or should you require additional information, please contact the undersigned at (714) 220-0770.

Respectfully submitted,
PACIFIC SOILS ENGINEERING, INC.

By: _____
WILLIAM D. JONES
Civil Engineering Associate

By: _____ by RHS
CRAIG R. NISBETT
Engineering Geology Associate

Reviewed By: _____
PAUL J. ERNST/RGE 2317
RCE 46394/Reg. Exp.: 3-31-07
Manager of Geotechnical Services

REGISTERED PROFESSIONAL ENGINEER
PAUL J. ERNST
No. GE2317
Exp. 3/31/07
GEOTECHNICAL
STATE OF CALIFORNIA

_____
RICHARD H. SPINDLER
CEG 1802/Reg. Exp.: 4-30-06
Certified Engineering Geologist

Distr.: (1) Addressee
(3) D.R. Horton – Attn. Mr. Rick Coop
(2) County of Los Angeles, Dept. Public Works GMED – Attn: Soils and Geology
WDJ/CRN/PJE/RHS:cp-jp-2453RT03

It is anticipated that after removal operations are completed, moisture conditioning and recompaction of the exposed alluvial soils (where left in place), will result in a 1± inch subsidence in the main canyon area. Where complete removal of alluvial material occurs, subsidence of the underlying bedrock should be negligible.

As is the case with every project, contingencies should be made to adjust the earthwork balance when grading is in progress and actual conditions are better defined.

5.1.3 Expansion Potential

Based upon test results conducted on selected samples, the coarser-grained rock from the Saugus Formation and alluvial materials derived from it are anticipated to possess expansion potential ranging from "very low" to "low", while the finer-grained Saugus deposits, the Pico Formation and alluvial materials derived from them are anticipated to possess expansion potential ranging from "low" to "high" when tested in accordance with UBC Standard 18-2 and classified in accordance with Table 18-I-B. Claystone/mudstone within the Saugus and Pico Formations may possess expansion potential in the "medium" to "high" range.

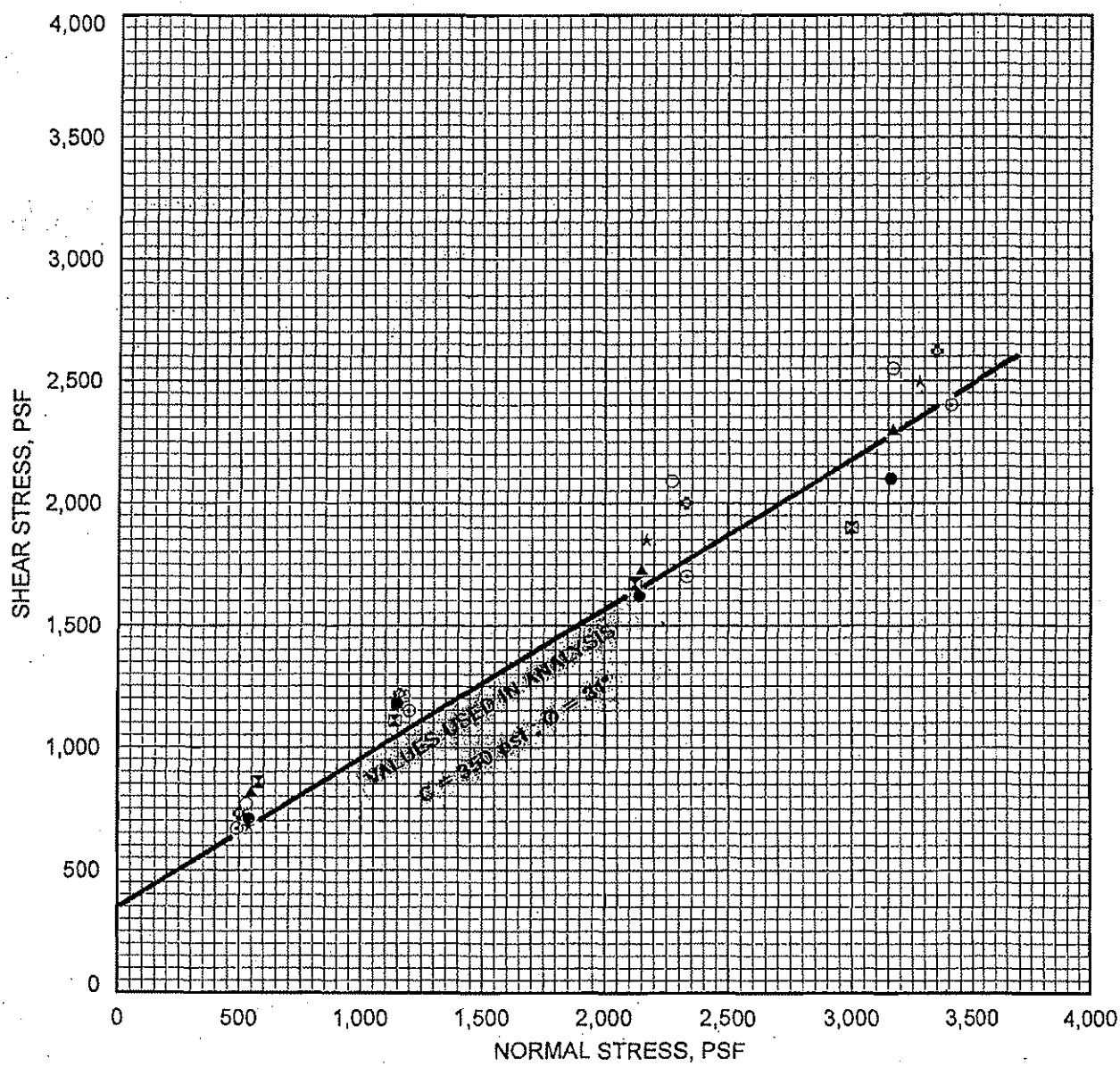
5.1.4 Shear Strength Characteristics

Based on the results of laboratory testing and engineering analyses, the following residual shear strength parameters were utilized for this study and are summarized below and presented graphically on the indicated plates in Appendix I:

SHEAR STRENGTH PARAMETERS			
Material	Cohesion, C (psf)	Friction Angle, ϕ (degrees)	Plate
Compacted Fill (90% R.C.)	350	31	B-1
Sunshine Ranch Member (Tsr)	350	35	B-2
Pico Formation (Tp)	450	42	B-3
Alluvium/Colluvium (Qal/Qcol)	250	15	*

* Estimated.

DIRECT SHEAR TEST
REMOLDED



ENGINEERED FILL (90% R.C.)	COHESION	psf.
	FRICTION ANGLE	degrees

symbol	boring	depth (ft.)	symbol	boring	depth (ft.)
●	B-10	30.0			
⊠	B-11	30.0			
▲	B-12	30.0			
★	B-13	50.0			
⊙	B-2	10.0			
✡	B-6B	10.0			
○	B-7	5.0			

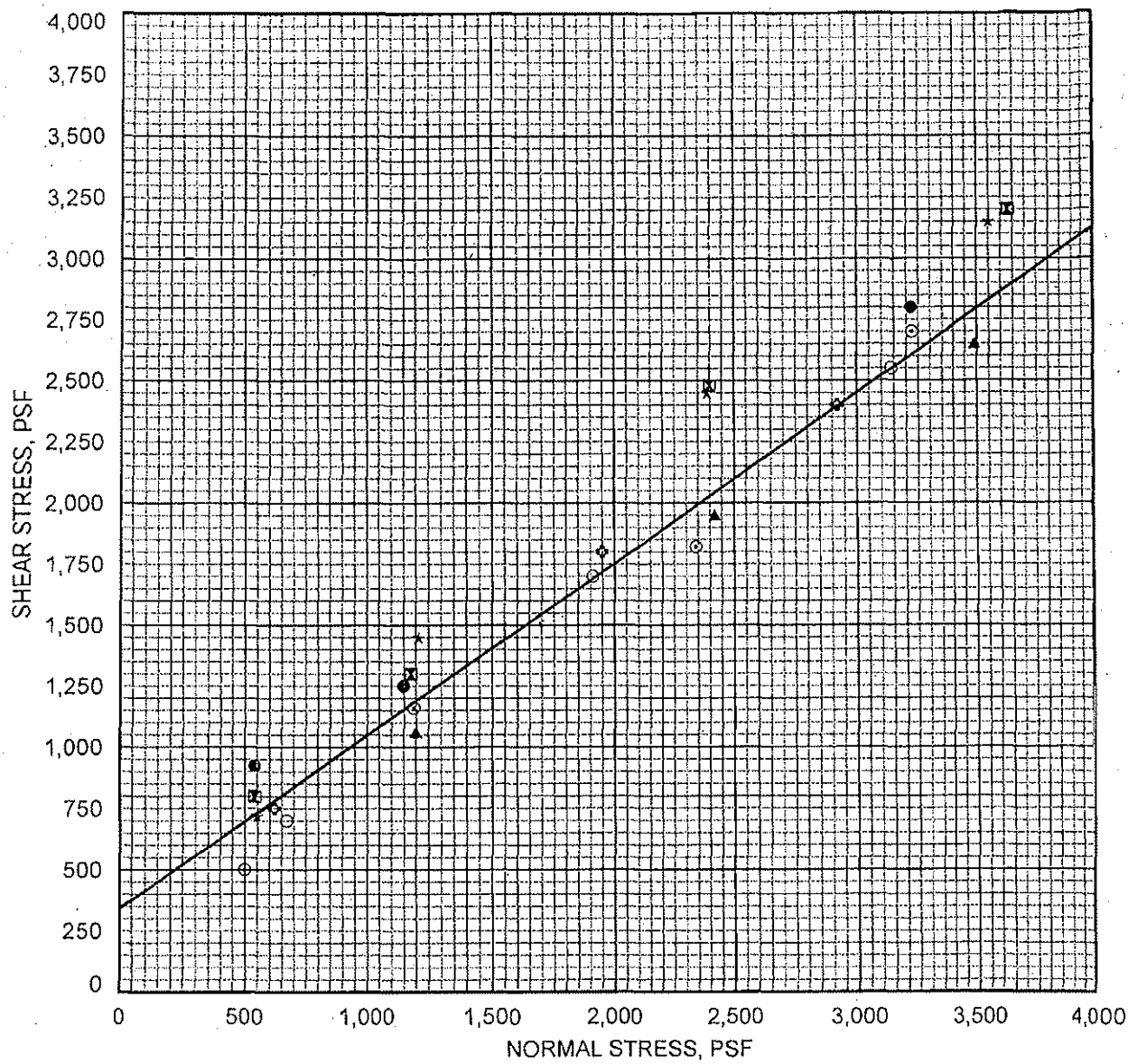
DIRECT SHEAR TEST

PACIFIC SOILS ENGINEERING, INC.
10653 PROGRESS WY. CYPRESS, CA 90630 714-220-0770

W.O. 102453-T **PLATE B-1**

Figure B-53

DIRECT SHEAR TEST
Undisturbed/Saturated



BEDROCK, SUNSHINE RANCH MEMBER (Tsp)	COHESION	350 psf.
	FRICTION ANGLE	35 degrees

symbol	boring	depth (ft.)	symbol	boring	depth (ft.)
●	B-13	20.0			
⊠	B-6B	15.0			
▲	B-7	5.1			
★	B-8	20.0			
⊙	B-9	40.0			
◇	EP-205	6.0			
○	EP-205	10.0			

DIRECT SHEAR TEST

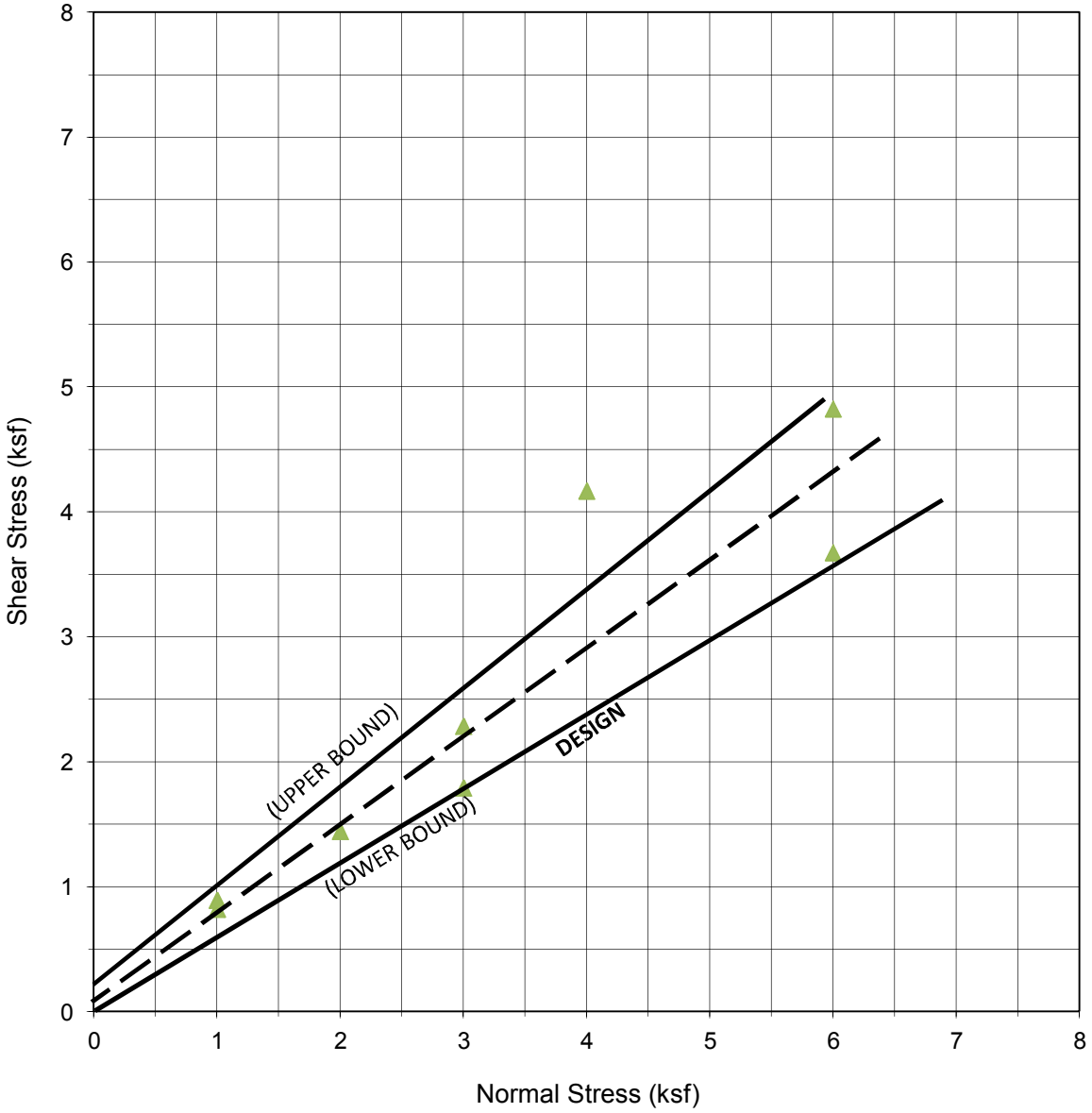
PACIFIC SOILS ENGINEERING, INC.
10653 PROGRESS WY. CYPRESS, CA 90630 714-220-0770

W.O. 102453-RT PLATE B-2

Figure B-54

APPENDIX C

ENGINEERING ANALYSIS



DIRECT SHEAR TEST RESULTS

CONSOLIDATED DRAINED

ASTM D 3080

ALLUVIUM

Test Condition: Saturated

Sample Type: Undisturbed

Moisture Content:

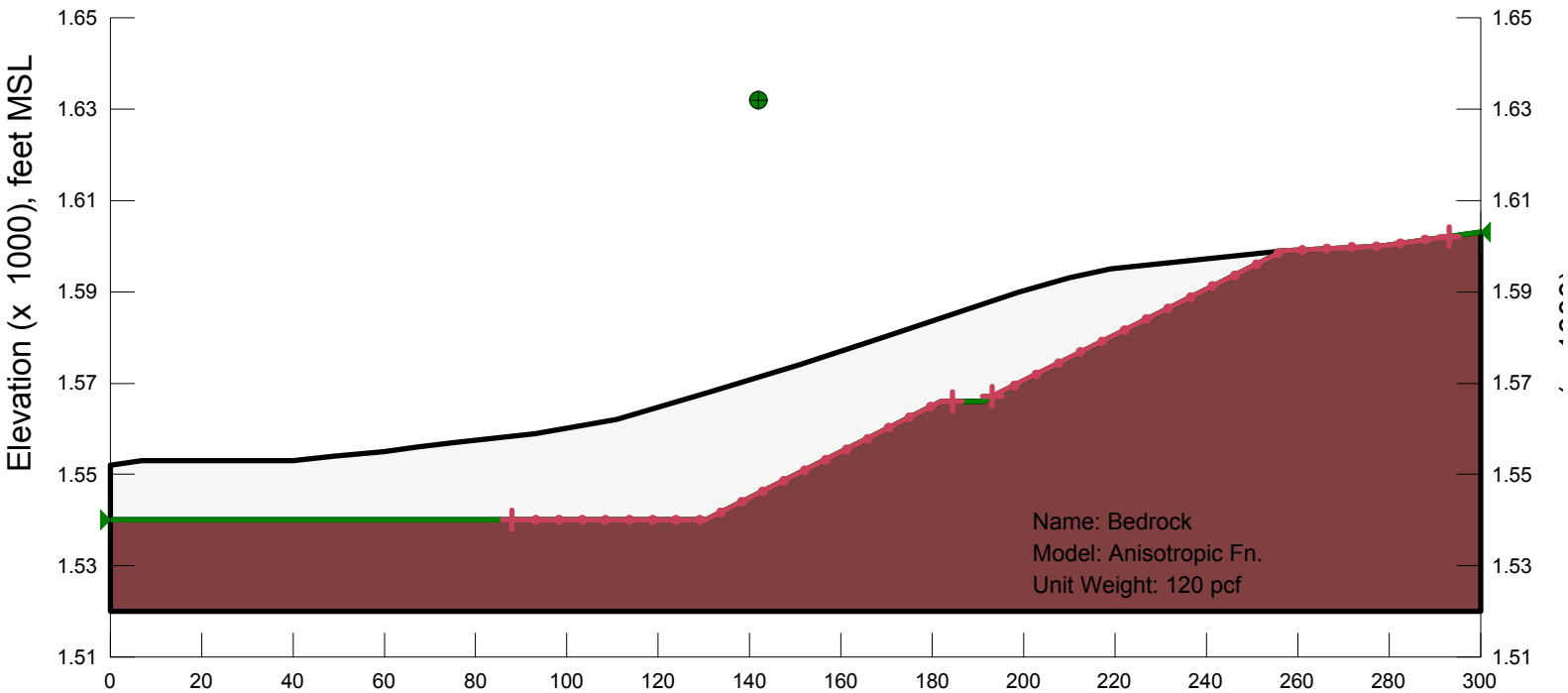
Initial Dry Density

INTERPRETED STRENGTH DATA	ULTIMATE
COHESION (psf)	0
FRICTION ANGLE (deg)	31 □

VESTING TENTATIVE TRACT MAP NO. 71216
19802 PLACERITA CANYON ROAD, NEWHALL, CA
FOR: DISNEY WORLDWIDE SERVICES, INC.

URS

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

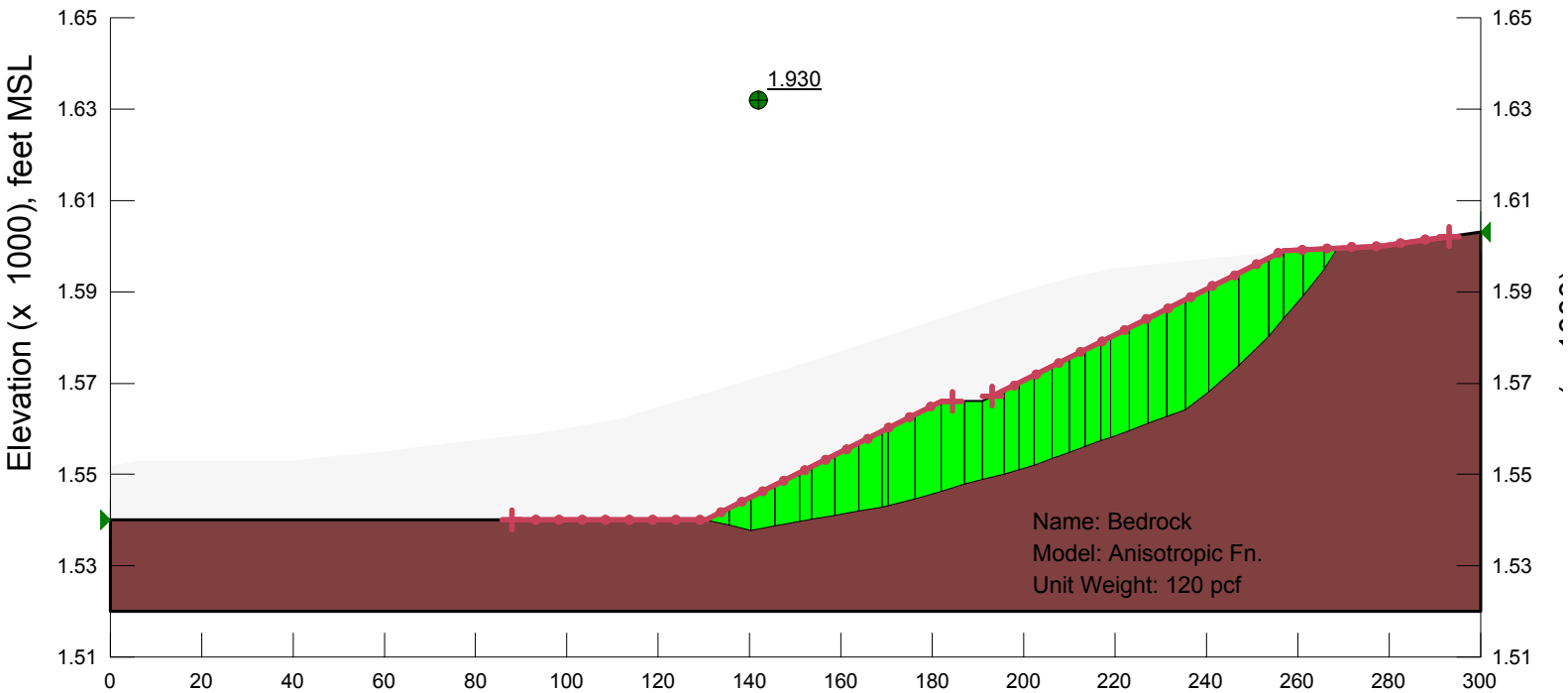


Across Bedding:
phi □ 33 degrees
c □ 350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-2

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

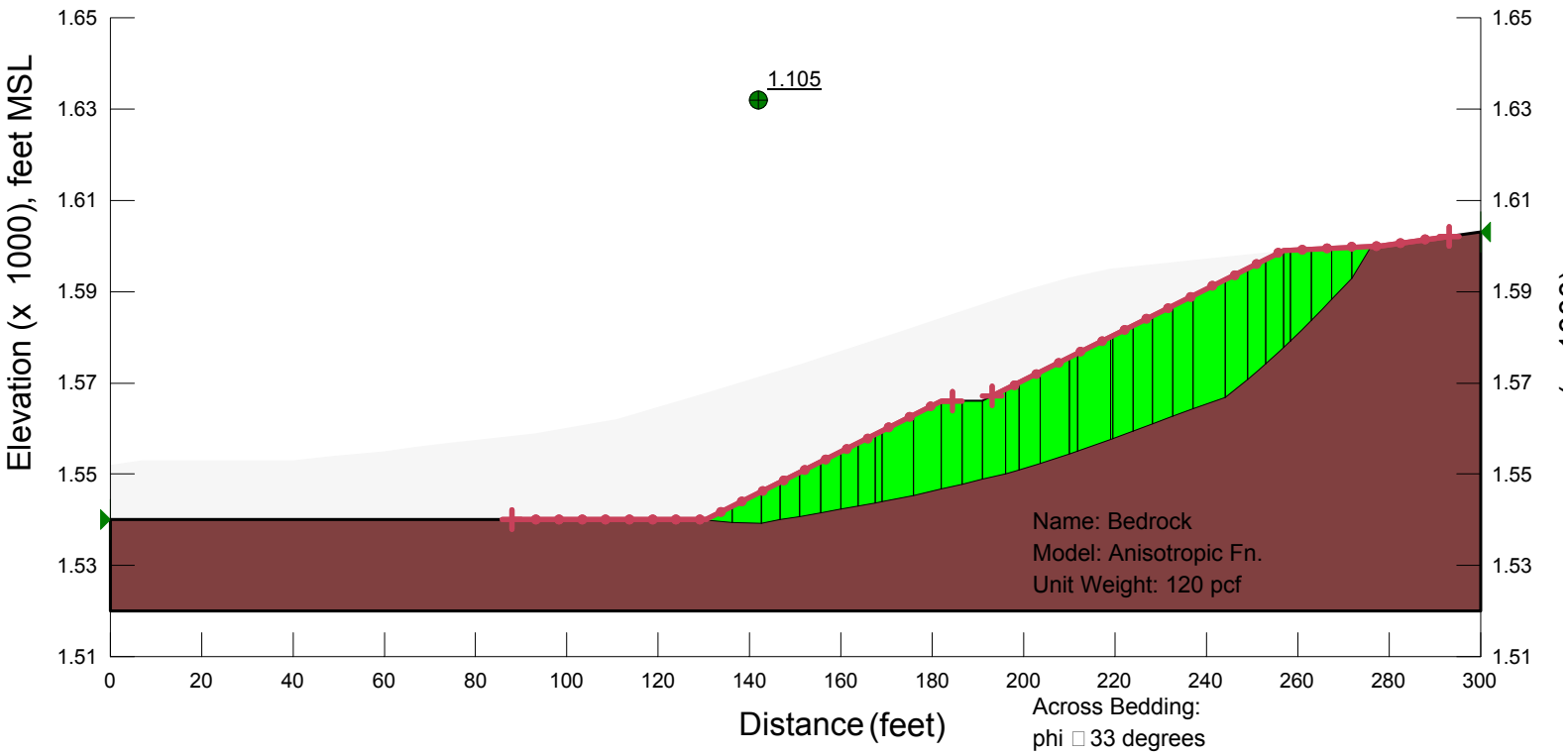


Across Bedding:
phi □ 33 degrees
c □ 350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-3

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes
Horizontal Seismic Load: 0.27g

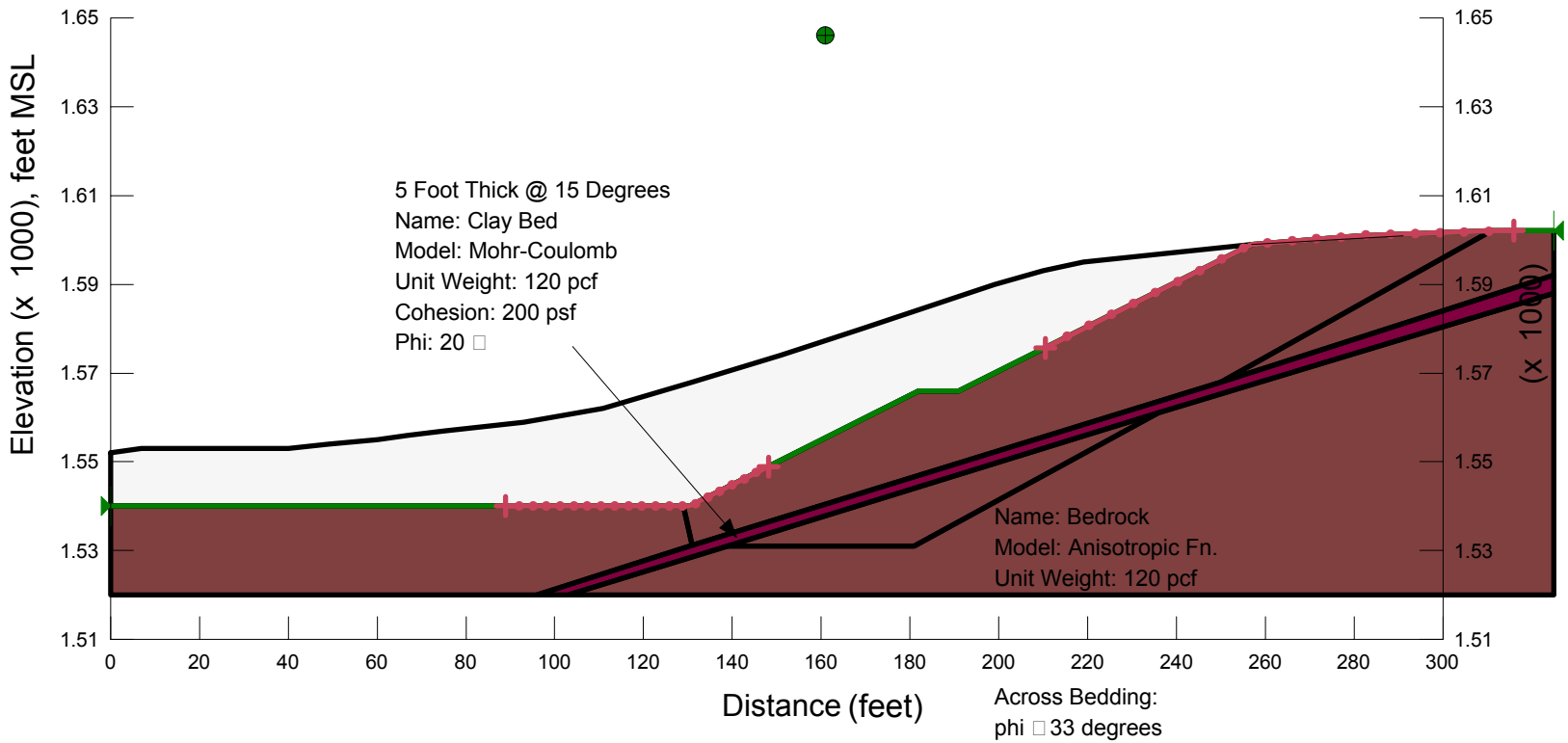


Across Bedding:
phi □ 33 degrees
c □ 350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-4

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes
Horz Seismic Load: 0.27

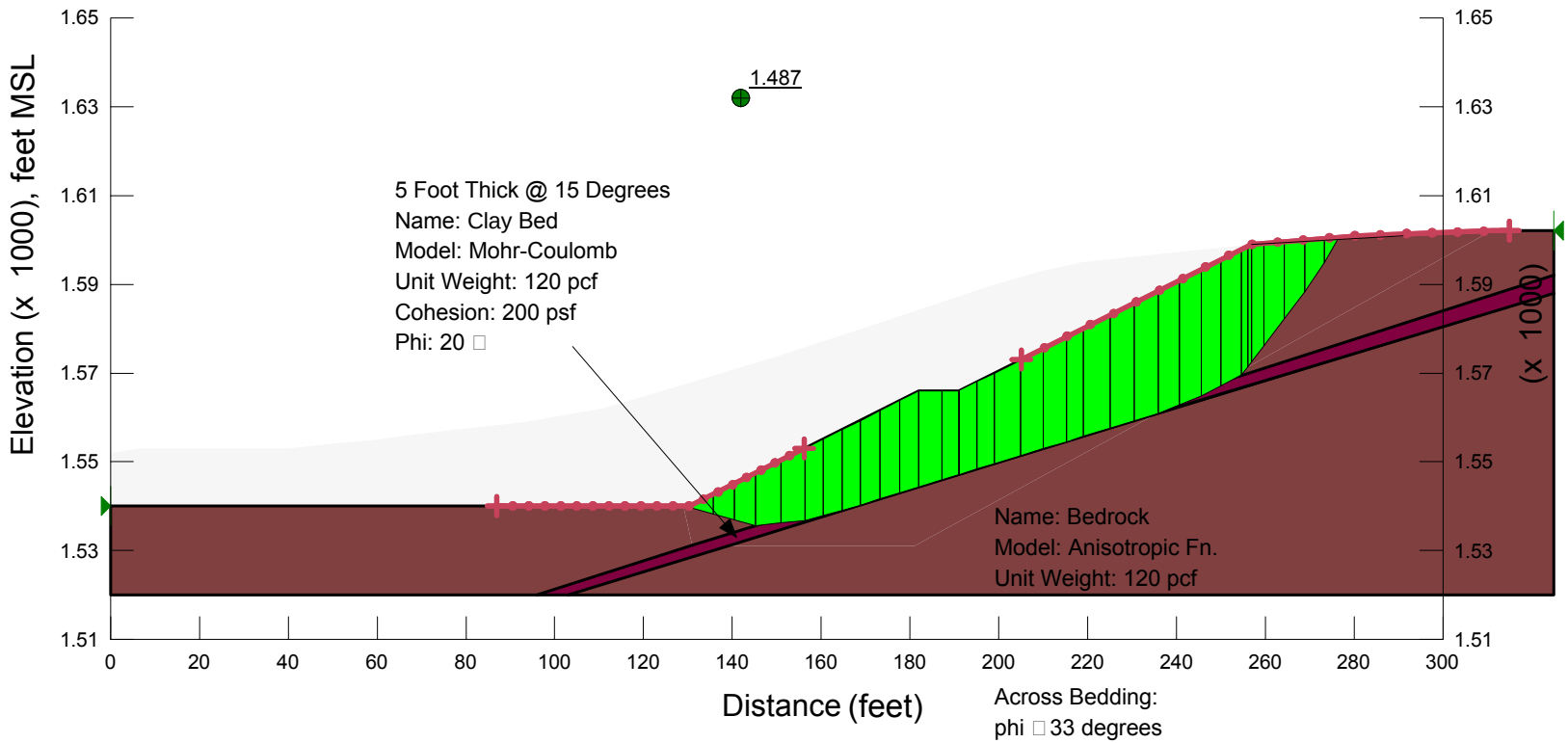


Across Bedding:
phi □33 degrees
c □350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-5

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes
Horz Seismic Load: 0

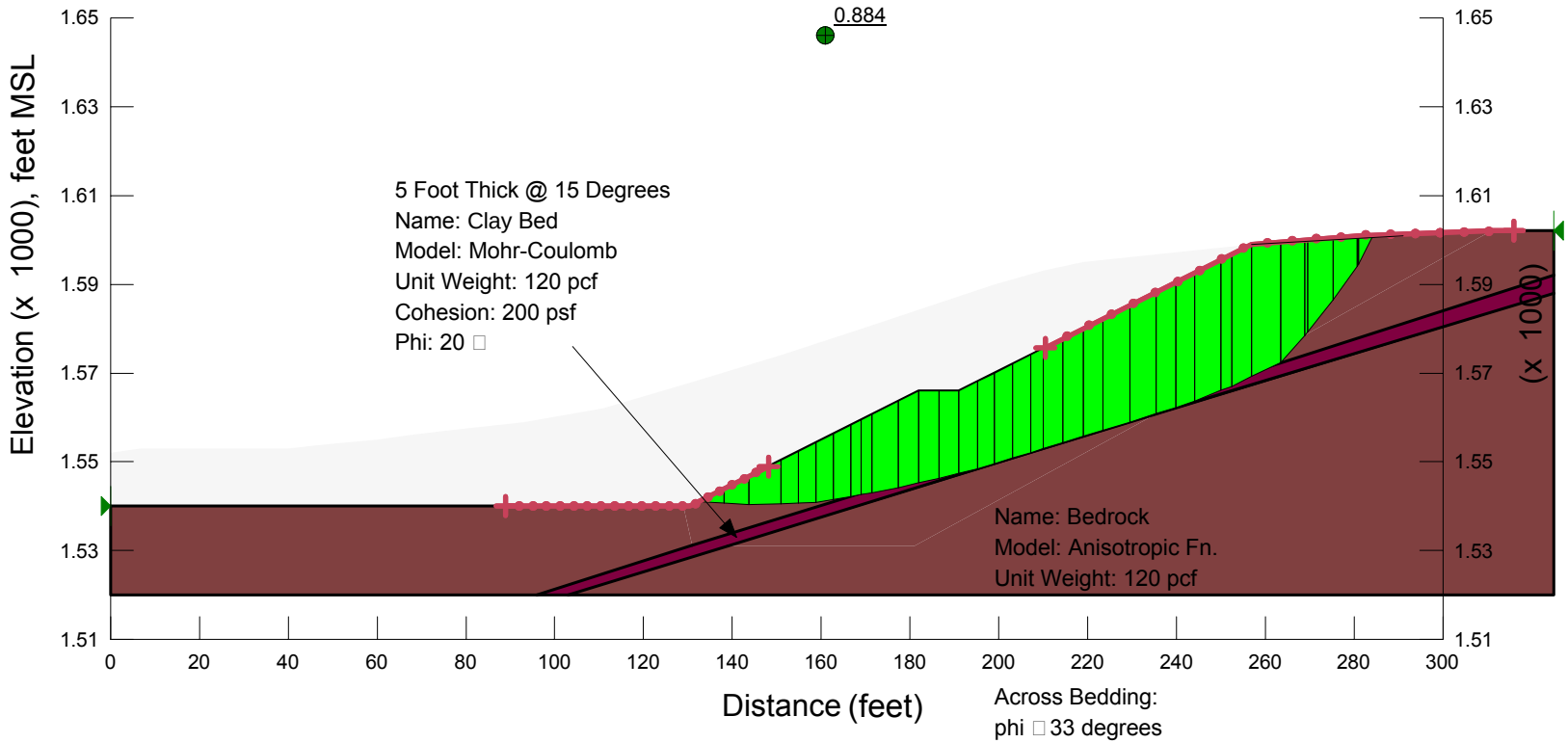


Across Bedding:
phi □33 degrees
c □350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-6

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes
Horz Seismic Load: 0.27



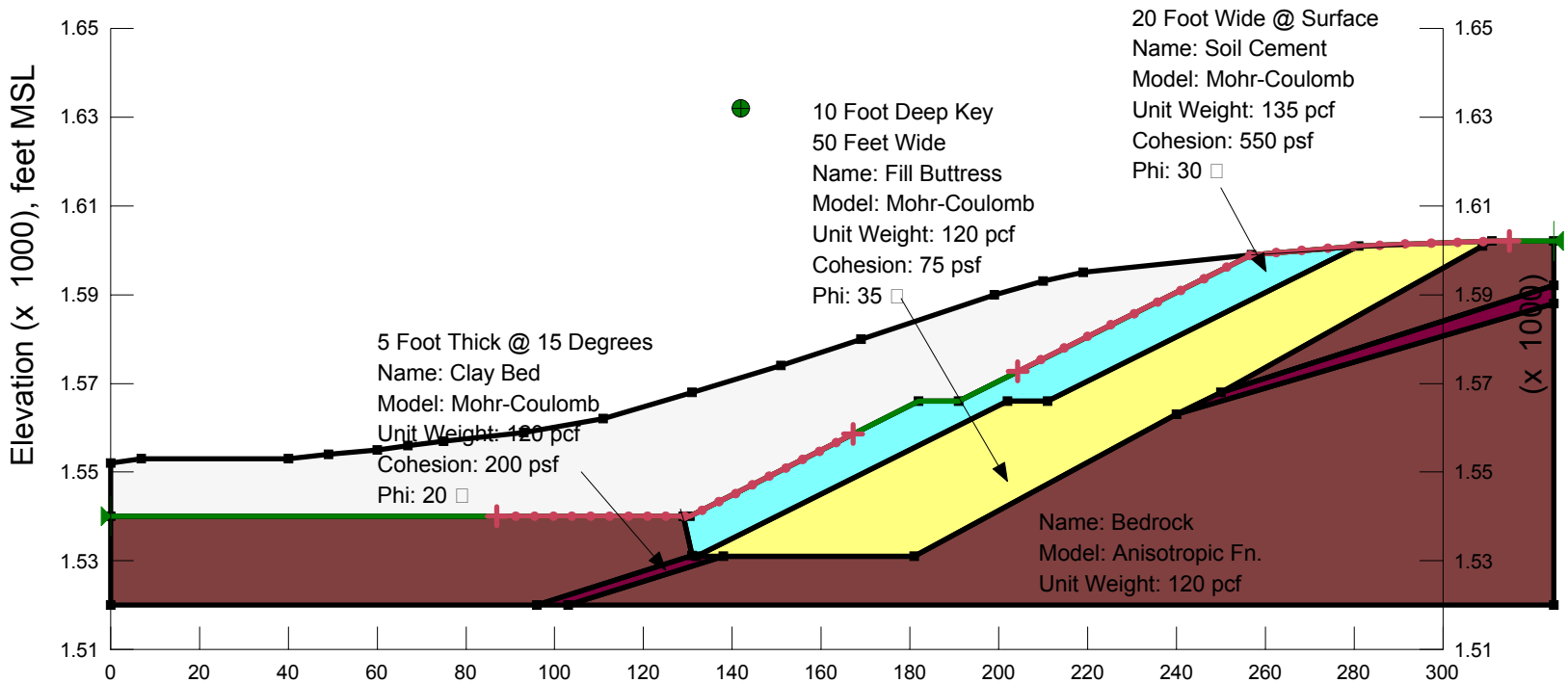
Across Bedding:
phi □33 degrees
c □350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-7

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

(Hypothetical Clay Bed Condition with Mitigation)



Across Bedding:
phi □ 33 degrees
c □ 350 psf

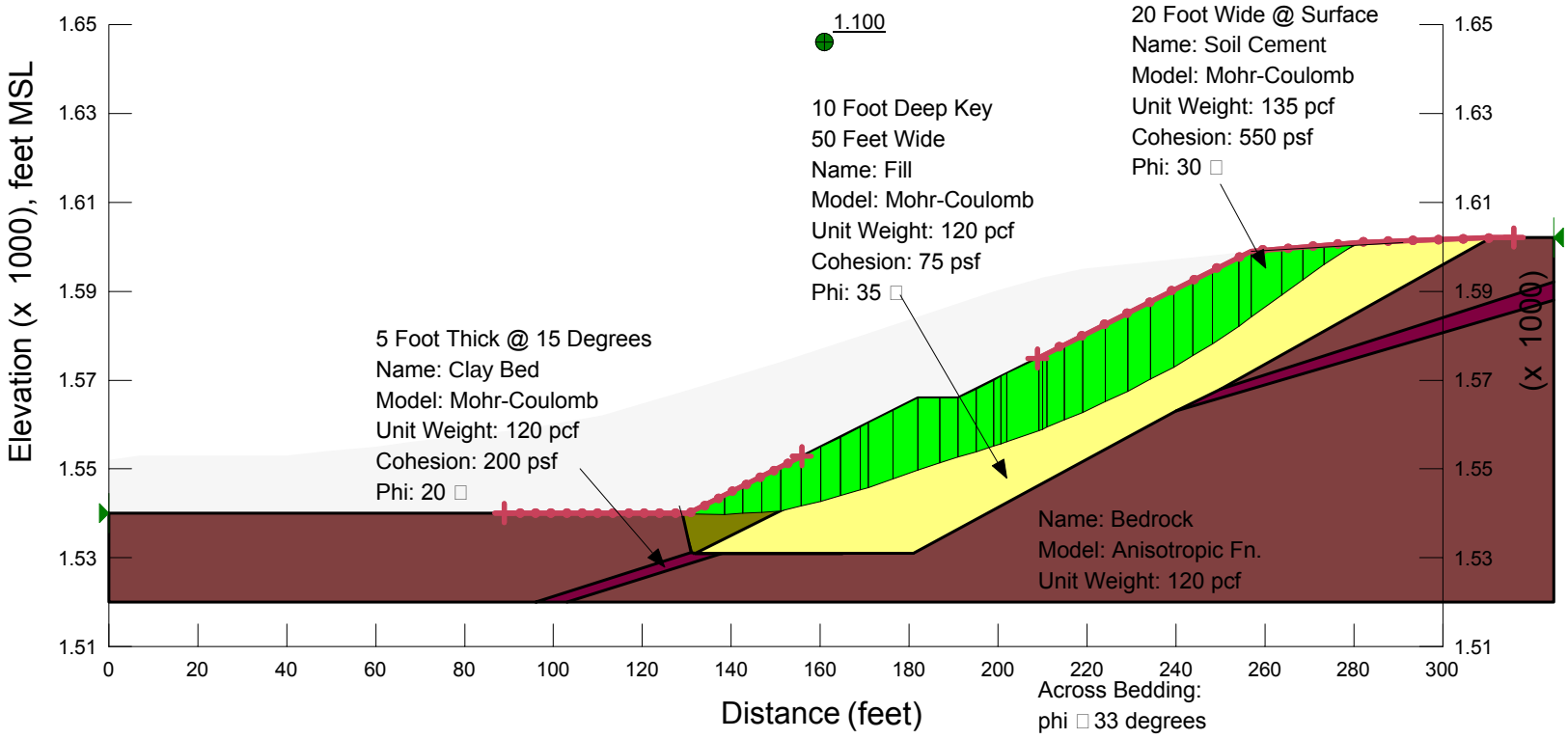
Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-8

Vesting Tentative Tract Map No. 71216
Cross Section A-A'

(Hypothetical Clay Bed Condition with Mitigation)

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes
Horizontal Seismic Load: 0.27g



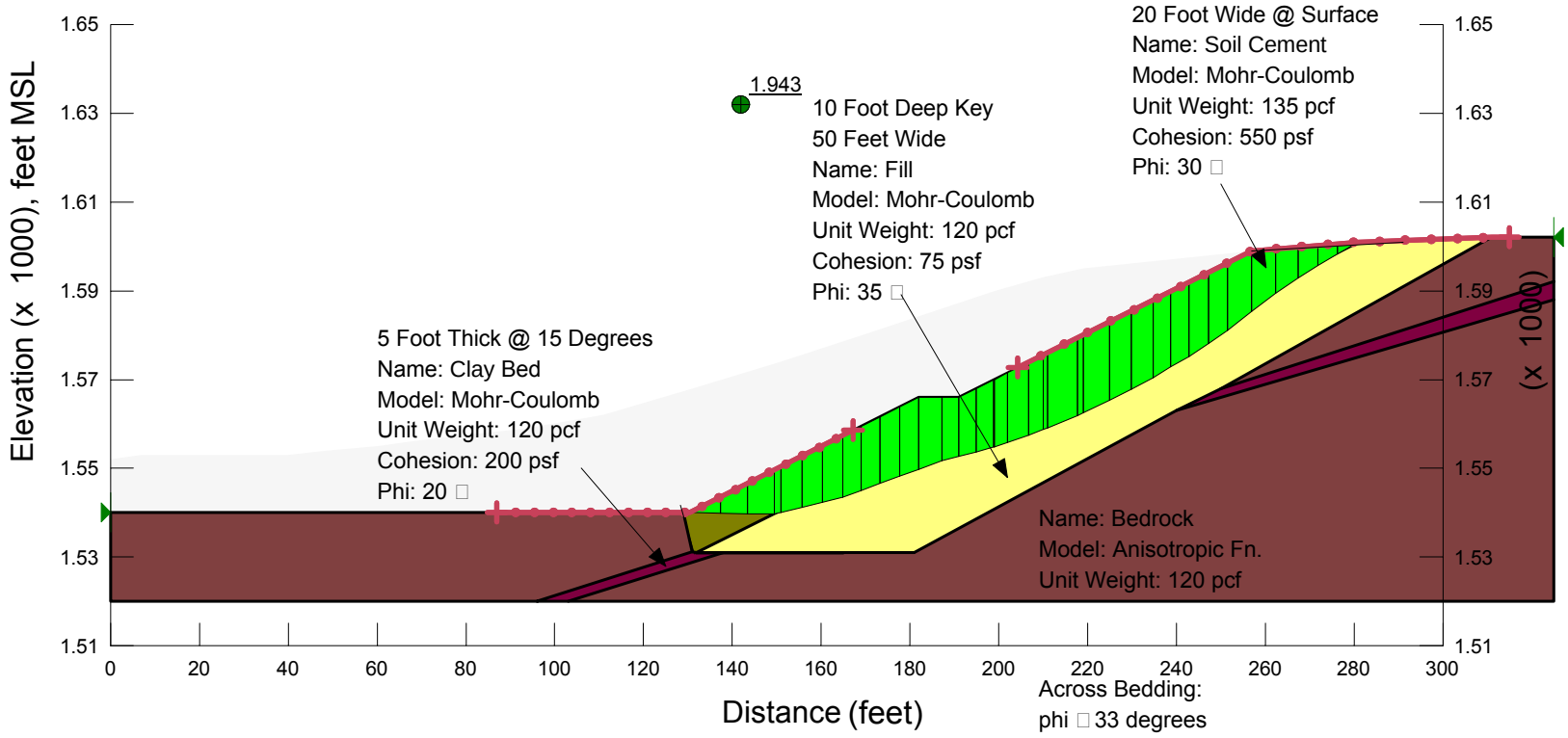
Across Bedding:
phi □ 33 degrees
c □ 350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-9

Vesting Tentative Tract Map No. 71216
Cross Section A-A'
Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

(Hypothetical Clay Bed Condition with Mitigation)



Across Bedding:
phi □ 33 degrees
c □ 350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □ 27 degrees
c □ 335 psf

Figure C-10

CROSS SECTION A
DATA INPUT FOR SLOPE STABILITY ANALYSES

Point Data

ID	X	Y	Lab	el
1	0 1	552		Point+Number
2	7 1	553		Point+Number
3	40	1553		Point+Number
4	49	1554		Point+Number
5	60	1555		Point+Number
6	67	1556		Point+Number
7	75	1557		Point+Number
8	93	1559		Point+Number
9	111	1562		Point+Number
10	131	1568		Point+Number
11	151	1574		Point+Number
12	169	1580		Point+Number
13	199	1590		Point+Number
14	210	1593		Point+Number
15	219	1595		Point+Number
16	257	1599		Point+Number
17	311	1602		Point+Number
18	325	1592		Point+Number
19	0	1520		Point+Number
20	325	1520		Point+Number
21	0	1540		Point+Number
22	130.5	1540		Point+Number
23	182	1566		Point+Number
24	191	1566		Point+Number
25	325	1588		Point+Number
26	96	1520		Point+Number
27	103	1520		Point+Number
28	129	1540		Point+Number
29	131	1531		Point+Number
30	181	1531		Point+Number
31	138	1531		Point+Number
32	240	1563		Point+Number
33	250	1568		Point+Number
34	309	1601		Point+Number
35	325	1602		Point+Number
36	132	1531		Point+Number
37	202	1566		Point+Number
38	211	1566		Point+Number
39	281	1601		Point+Number

Strength Parameters

Soil Cement

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 550 psf

Phi 30 °

Phi-B 0 °

Fill Buttress

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 75 psf

Phi 35 °

Phi-B 0 °

Clay Bed

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 200 psf

Phi 20 °

Phi-B 0 °

Bedrock

Model Anisotropic Fn.

Unit Weight 120 pcf

Cohesion 1 psf

Phi 1 °

C-Anisotropic Strength Fn. C

Model Spline Data Point Function

Function Modifier Factor vs. Inclination

Curve Fit to Data 100 %

Segment Curvature 0 %

Y-Intercept 350

Data Points Inclination (°), Modifier Factor

Data Point (0, 350)

Data Point (9.99, 350)

Data Point (10, 335)

Data Point (20, 335)

Data Point (20.01, 350)

Data Point (90, 350)

Phi-Anisotropic Strength Fn. Phi

Model Spline Data Point Function

Function Modifier Factor vs. Inclination

Curve Fit to Data 100 %

Segment Curvature 0 %

Y-Intercept 33

Data Points Inclination (°), Modifier Factor

Data Point (0, 33)

Data Point (9.99, 33)

Data Point (10, 27)

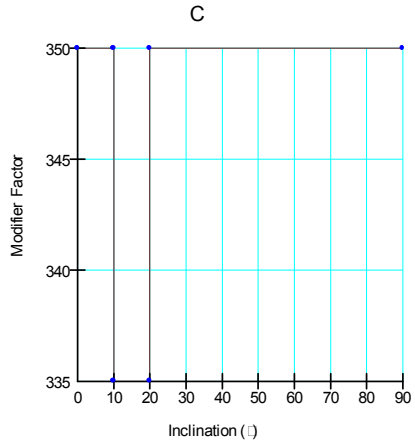
Data Point (20, 27)

Data Point (20.01, 33)

Data Point (90, 33)

Phi-B 0 °

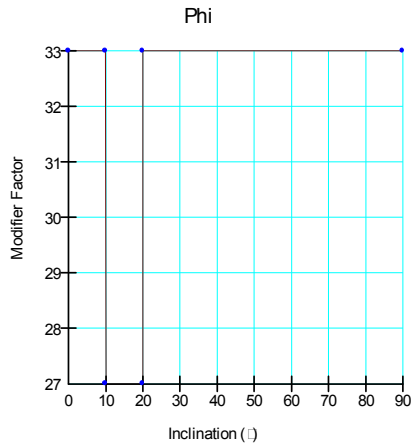
Anisotropic Function for Cohesion



C

Inclination (°)	Modifier Factor
0	3 50
0	3 50
2.142857142857143	350
4.285714285714286	350
6.428571428571429	350
8.571428571428571	350
9.99	35 0
10	33 5
10.71428571428571	335
12.85714285714286	335
15	33 5
17.14285714285714	335
19.28571428571429	335
20	33 5
20.01	3 50
21.42857142857143	350
23.57142857142857	350
25.71428571428572	350
27.85714285714286	350
30	35 0
32.14285714285715	350
34.28571428571429	350
36.42857142857143	350
38.57142857142857	350
40.71428571428572	350
42.85714285714285	350
45	35 0
47.14285714285715	350
49.28571428571429	350
51.42857142857143	350
53.57142857142857	350
55.71428571428572	350
57.85714285714285	350
60	35 0
62.14285714285715	350
64.28571428571429	350
66.42857142857143	350
68.57142857142857	350
70.71428571428571	350
72.85714285714286	350
75	35 0
77.14285714285714	350
79.28571428571429	350
81.42857142857143	350
83.57142857142857	350
85.71428571428571	350
87.85714285714286	350
90	35 0
90	35 0

Anisotropic Function for Friction Angle

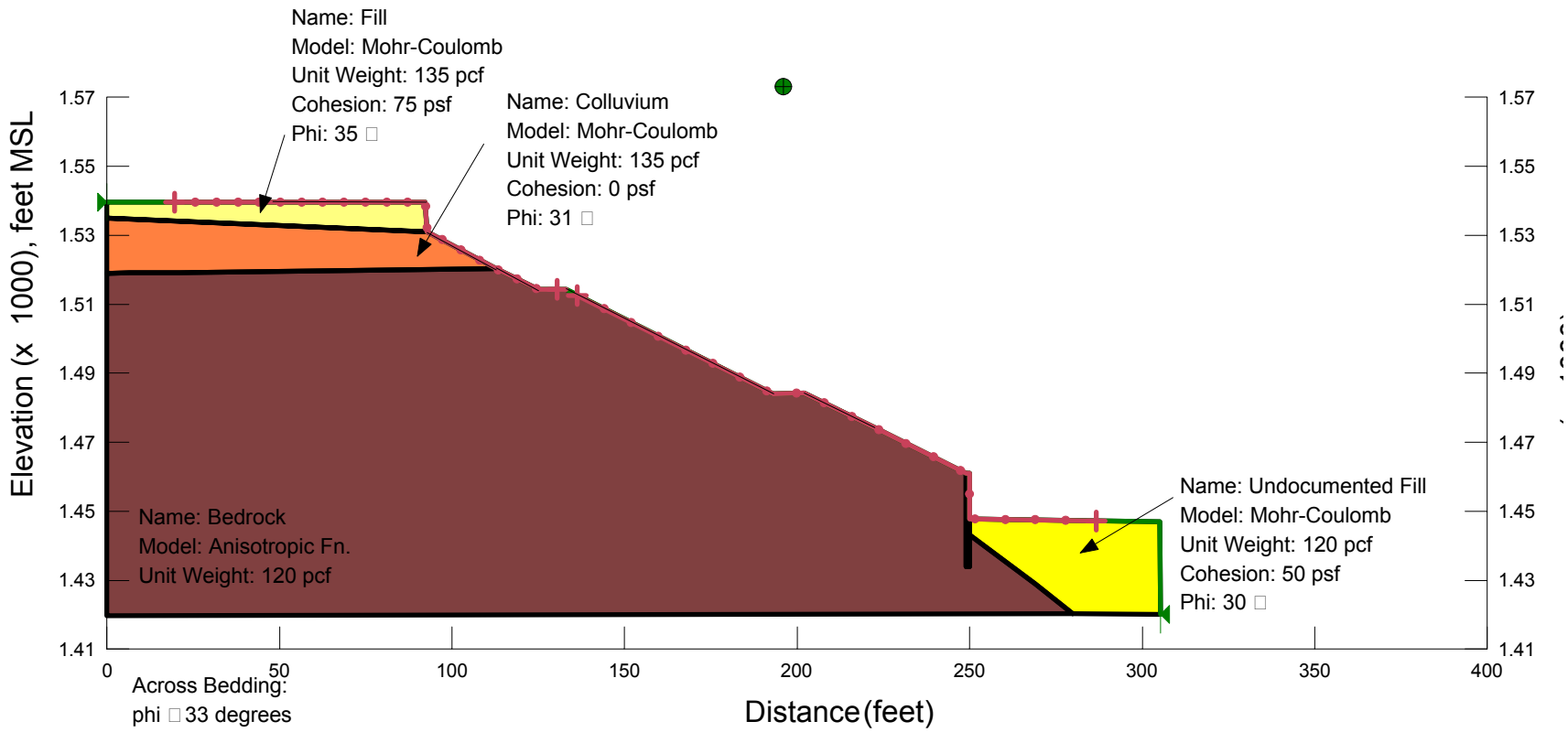


Phi

Inclination (°)	Modifier Factor
0	3
0	3
2.142857142857143	33
4.285714285714286	33
6.428571428571429	33
8.571428571428571	33
9.99	33
10	27
10.71428571428571	27
12.85714285714286	27
15	27
17.14285714285714	27
19.28571428571429	27
20	27
20.01	33
21.42857142857143	33
23.57142857142857	33
25.71428571428572	33
27.85714285714286	33
30	33
32.14285714285715	33
34.28571428571429	33
36.42857142857143	33
38.57142857142857	33
40.71428571428572	33
42.85714285714285	33
45	33
47.14285714285715	33
49.28571428571429	33
51.42857142857143	33
53.57142857142857	33
55.71428571428572	33
57.85714285714285	33
60	33
62.14285714285715	33
64.28571428571429	33
66.42857142857143	33
68.57142857142857	33
70.71428571428571	33
72.85714285714286	33
75	33
77.14285714285714	33
79.28571428571429	33
81.42857142857143	33
83.57142857142857	33
85.71428571428571	33
87.85714285714286	33
90	33
90	33

Vesting Tentative Tract Map No. 71216
Cross Section B-B'

Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



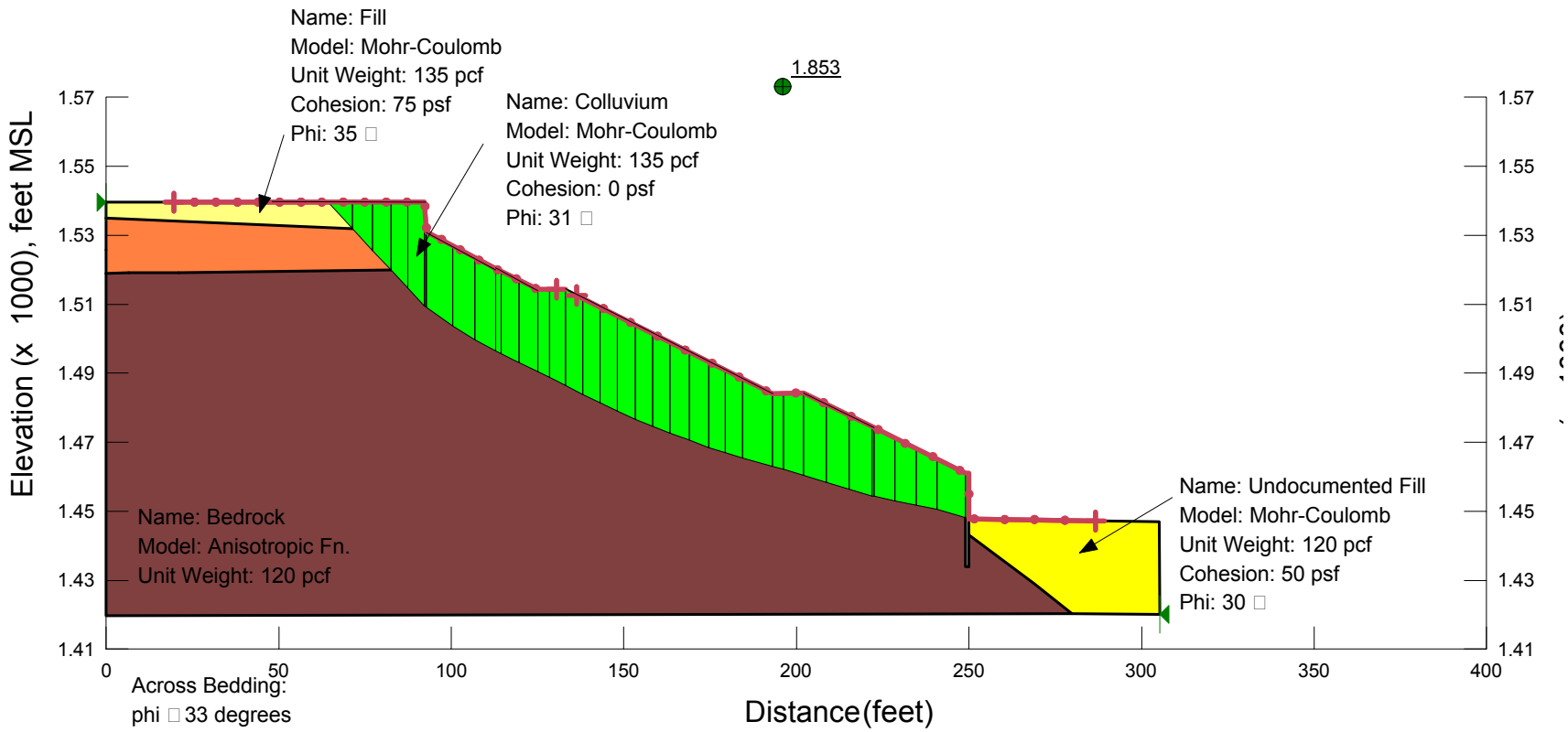
Across Bedding:
phi □33 degrees
c □350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-15

Vesting Tentative Tract Map No. 71216
Cross Section B-B'

Name: 1a - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



Across Bedding:
phi □33 degrees
c □350 psf

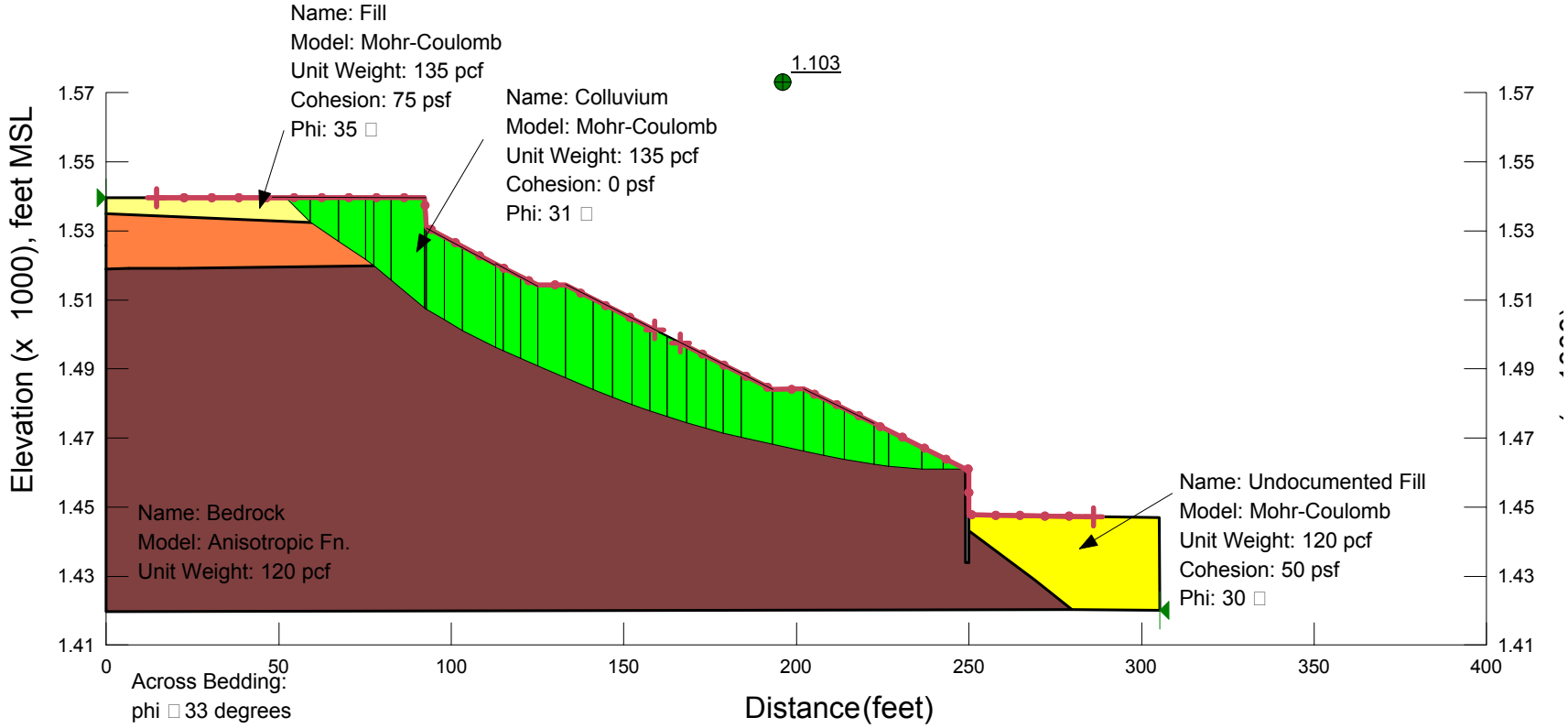
Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-16

Vesting Tentative Tract Map No. 71216
Cross Section B-B'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g



Across Bedding:
phi □33 degrees
c □350 psf

Along Bedding (15 degrees □/- 5 degrees):
phi □27 degrees
c □335 psf

Figure C-17

CROSS SECTION B
DATA INPUT FOR SLOPE STABILITY ANALYSES

Point Data

ID	X	Y Lab	el
1	400	1420	Point+Number
2	0 1	539.5	Point+Number
3	92.25	1539.5	Point+Number
4	92.75	1531	Point+Number
5	305	1486	Point+Number
6	273	1488	Point+Number
7	249	1489	Point+Number
8	230	1490	Point+Number
9	222	1491	Point+Number
10	217	1492	Point+Number
11	213	1494	Point+Number
12	207	1498	Point+Number
13	202	1500	Point+Number
14	196	1504	Point+Number
15	186	1509	Point+Number
16	178	1513	Point+Number
17	168	1516	Point+Number
18	159	1519	Point+Number
19	153	1521	Point+Number
20	141	1525	Point+Number
21	127	1528	Point+Number
22	103	1529	Point+Number
23	0	1535	Point+Number
24	249	1461	Point+Number
25	112.75	1520.25	Point+Number
26	0	1519	Point+Number
27	0	1521	Point+Number
28	0	1525.75	Point+Number
29	6.5	1519	Point+Number
30	21	1519	Point+Number
31	125	1514.25	Point+Number
32	133	1514.25	Point+Number
33	193	1484	Point+Number
34	202	1484.25	Point+Number
35	222.5	1474.25	Point+Number
36	250	1461	Point+Number
37	250	1434	Point+Number
38	249	1434	Point+Number
39	250	1447.75	Point+Number
40	0	1419.75	Point+Number
41	269	1429	Point+Number
42	305.25	1420	Point+Number
43	305	1447	Point+Number
44	279.75	1420.25	Point+Number
45	250	1443.25	Point+Number

Strength Parameters

Undocumented Fill

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 50 psf

Phi 30 °

Phi-B 0 °

Fill

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 75 psf

Phi 35 °

Phi-B 0 °

Colluvium

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 0 psf

Phi 31 °

Phi-B 0 °

Bedrock

Model Anisotropic Fn.

Unit Weight 120 pcf

Cohesion 1 psf

Phi 1 °

C-Anisotropic Strength Fn. C

Model Spline Data Point Function

Function Modifier Factor vs. Inclination

Curve Fit to Data 100 %

Segment Curvature 0 %

Y-Intercept 350

Data Points Inclination (°), Modifier Factor

Data Point (0, 350)

Data Point (9.99, 350)

Data Point (10, 335)

Data Point (20, 335)

Data Point (20.01, 350)

Data Point (90, 350)

Phi-Anisotropic Strength Fn. Phi

Model Spline Data Point Function

Function Modifier Factor vs. Inclination

Curve Fit to Data 100 %

Segment Curvature 0 %

Y-Intercept 33

Data Points Inclination (°), Modifier Factor

Data Point (0, 33)

Data Point (9.99, 33)

Data Point (10, 27)

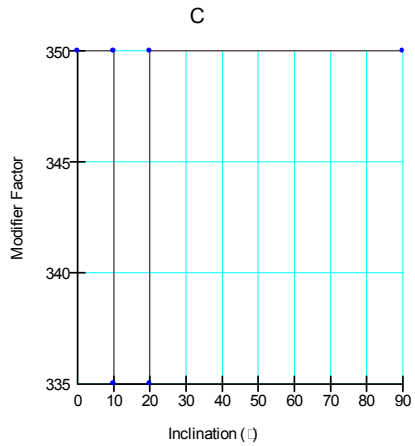
Data Point (20, 27)

Data Point (20.01, 33)

Data Point (90, 33)

Phi-B 0 °

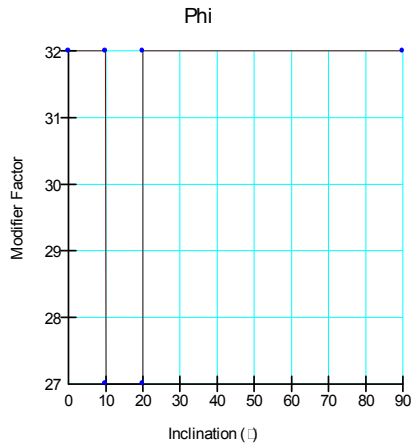
Anisotropic Function for Cohesion



C

Inclination (°)	Modifier Factor
0	350
0	350
2.142857142857143	350
4.285714285714286	350
6.428571428571429	350
8.571428571428571	350
9.99	0
10	5
10.71428571428571	335
12.85714285714286	335
15	5
17.14285714285714	335
19.28571428571429	335
20	5
20.01	50
21.42857142857143	350
23.57142857142857	350
25.71428571428572	350
27.85714285714286	350
30	0
32.14285714285715	350
34.28571428571429	350
36.42857142857143	350
38.57142857142857	350
40.71428571428572	350
42.85714285714285	350
45	0
47.14285714285715	350
49.28571428571429	350
51.42857142857143	350
53.57142857142857	350
55.71428571428572	350
57.85714285714285	350
60	0
62.14285714285715	350
64.28571428571429	350
66.42857142857143	350
68.57142857142857	350
70.71428571428571	350
72.85714285714286	350
75	350
77.14285714285714	350
79.28571428571429	350
81.42857142857143	350
83.57142857142857	350
85.71428571428571	350
87.85714285714286	350
90	350
90	350

Anisotropic Function for Friction Angle



Phi

Inclination (°)	Modifier Factor
0	3 2
0	3 2
2.142857142857143	32
4.285714285714286	32
6.428571428571429	32
8.571428571428571	32
9.99	32
10	27
10.71428571428571	27
12.85714285714286	27
15	27
17.14285714285714	27
19.28571428571429	27
20	27
20.01	32
21.42857142857143	32
23.57142857142857	32
25.71428571428572	32
27.85714285714286	32
30	32
32.14285714285715	32
34.28571428571429	32
36.42857142857143	32
38.57142857142857	32
40.71428571428572	32
42.85714285714285	32
45	32
47.14285714285715	32
49.28571428571429	32
51.42857142857143	32
53.57142857142857	32
55.71428571428572	32
57.85714285714285	32
60	32
62.14285714285715	32
64.28571428571429	32
66.42857142857143	32
68.57142857142857	32
70.71428571428571	32
72.85714285714286	32
75	32
77.14285714285714	32
79.28571428571429	32
81.42857142857143	32
83.57142857142857	32
85.71428571428571	32
87.85714285714286	32
90	32
90	32

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

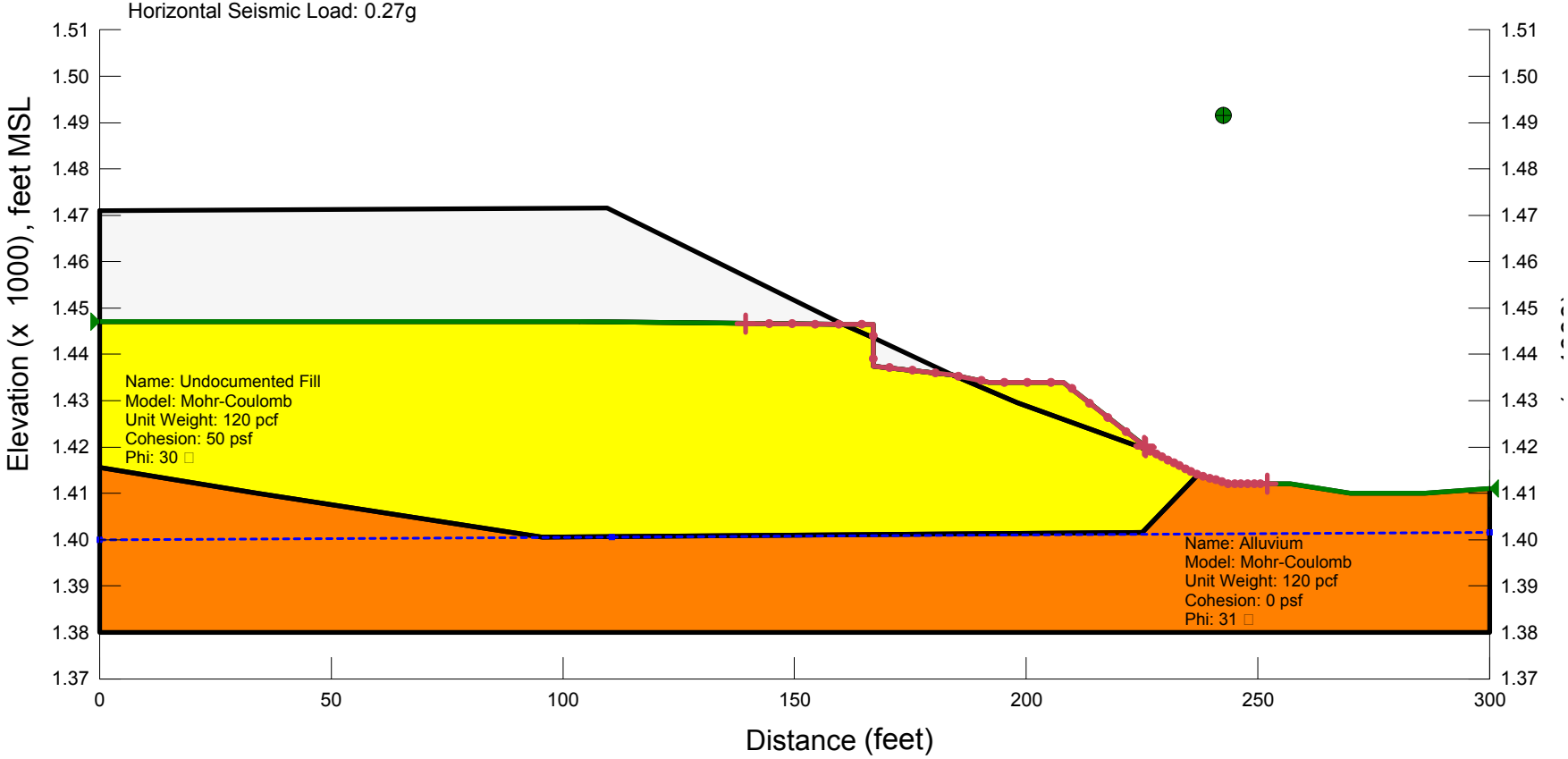


Figure C-22

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

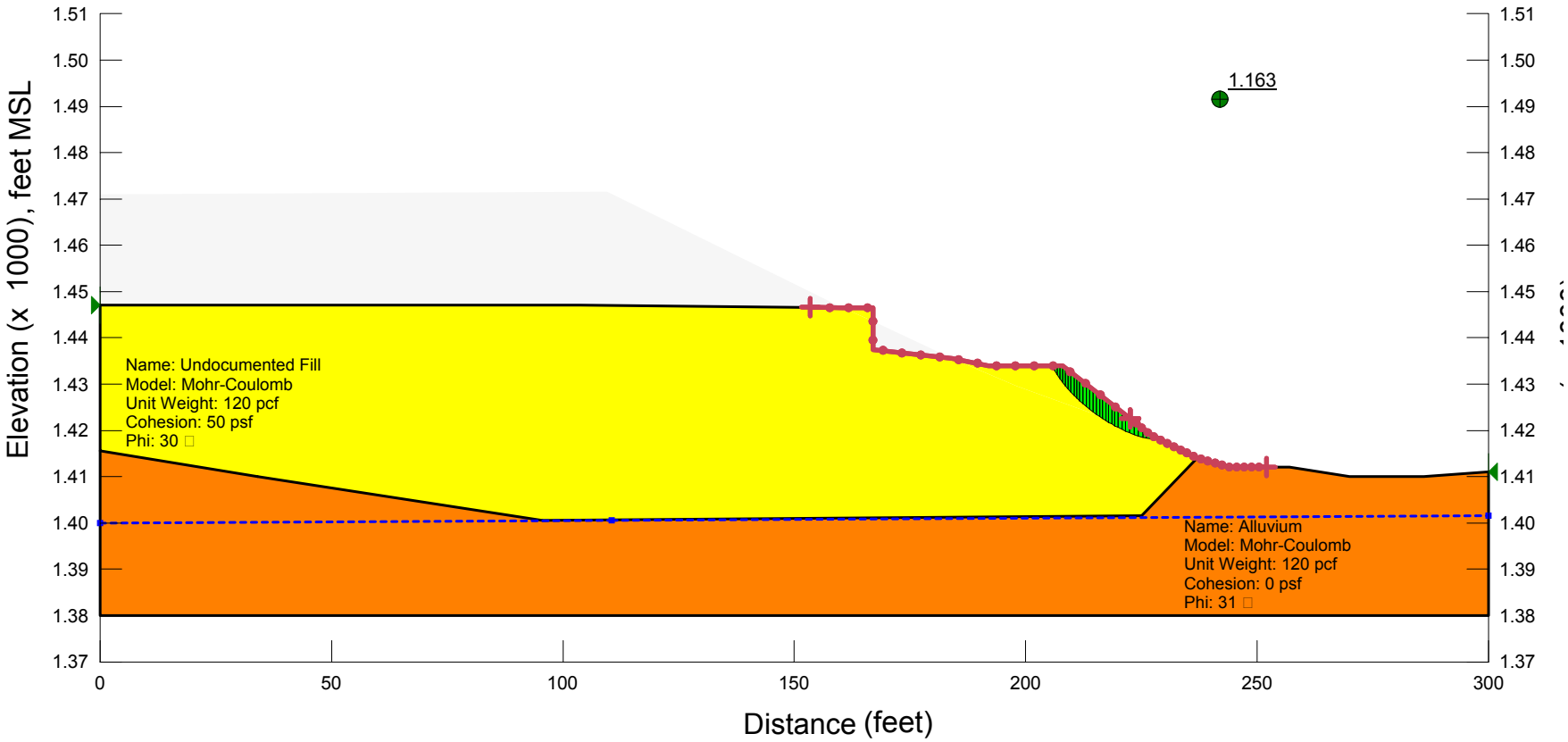


Figure C-23

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

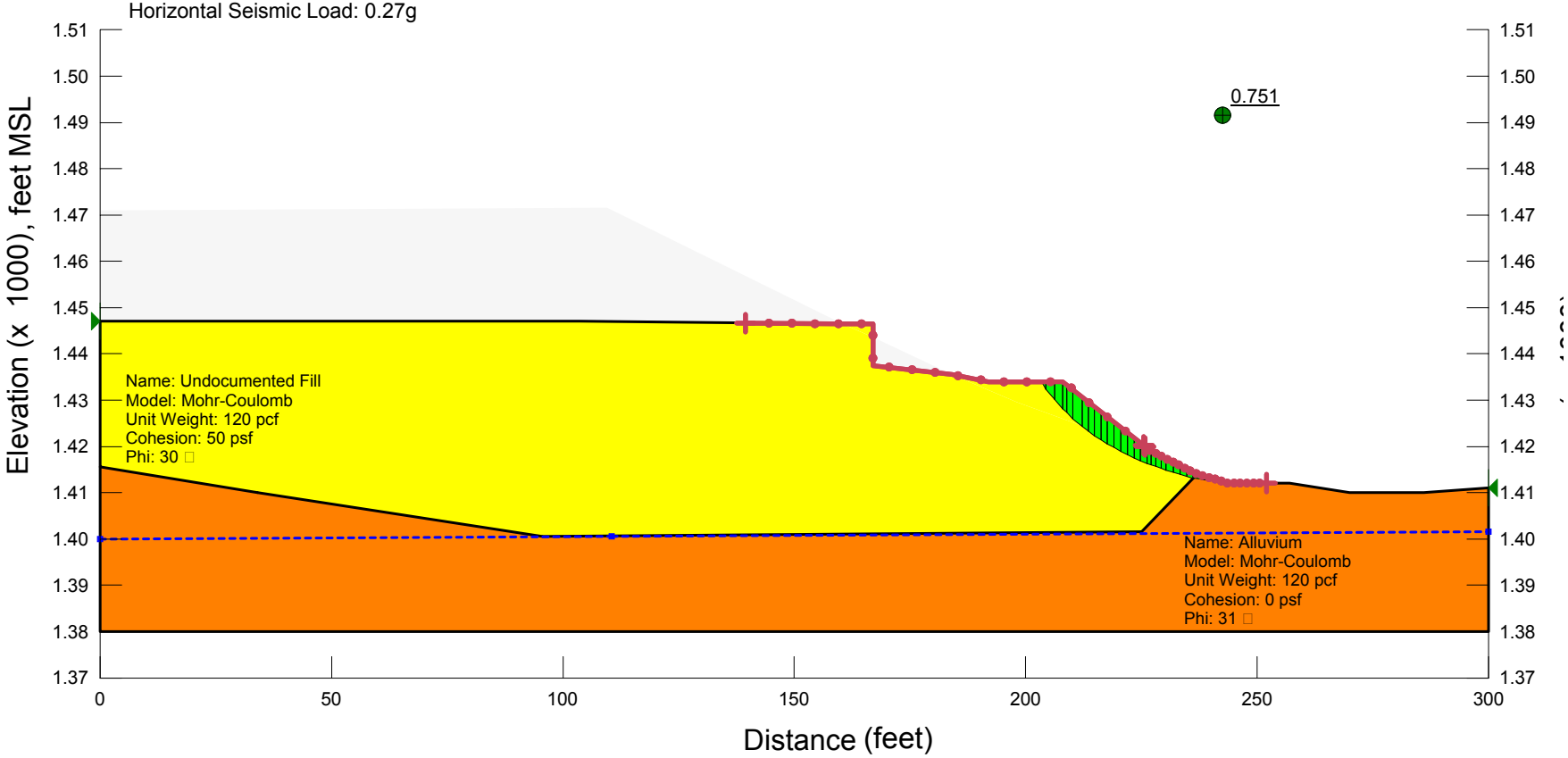


Figure C-24

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

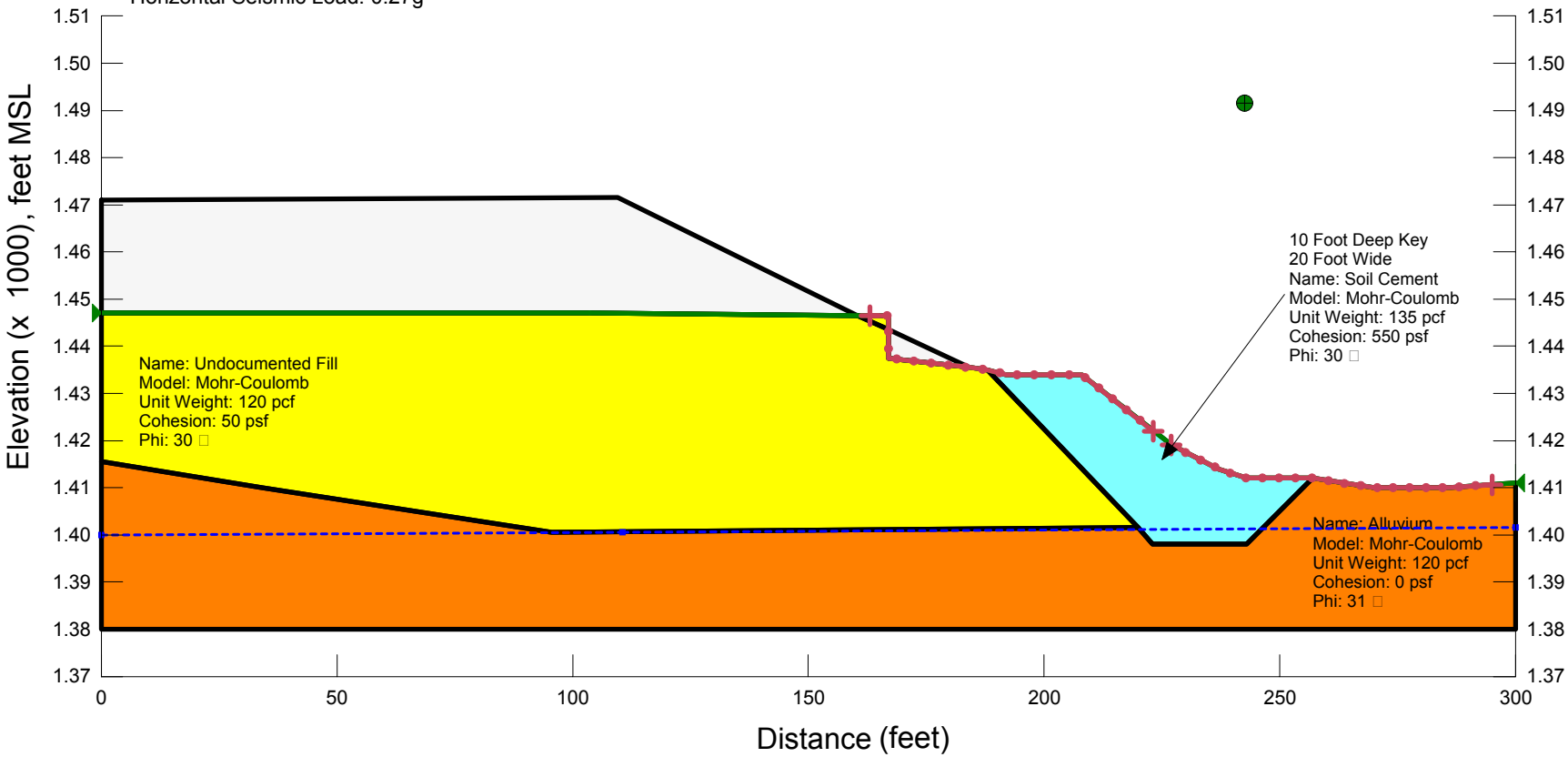


Figure C-25

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

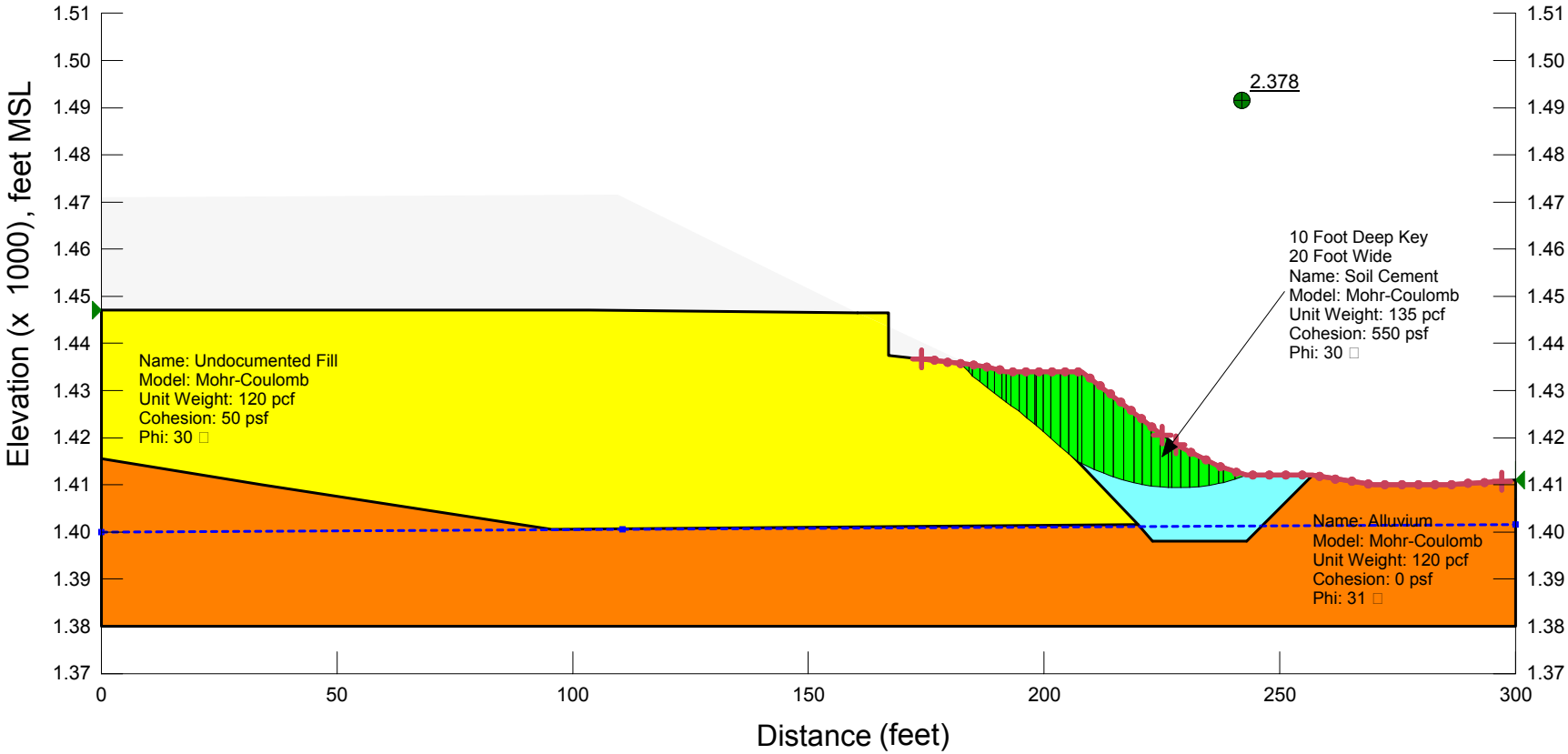


Figure C-26

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

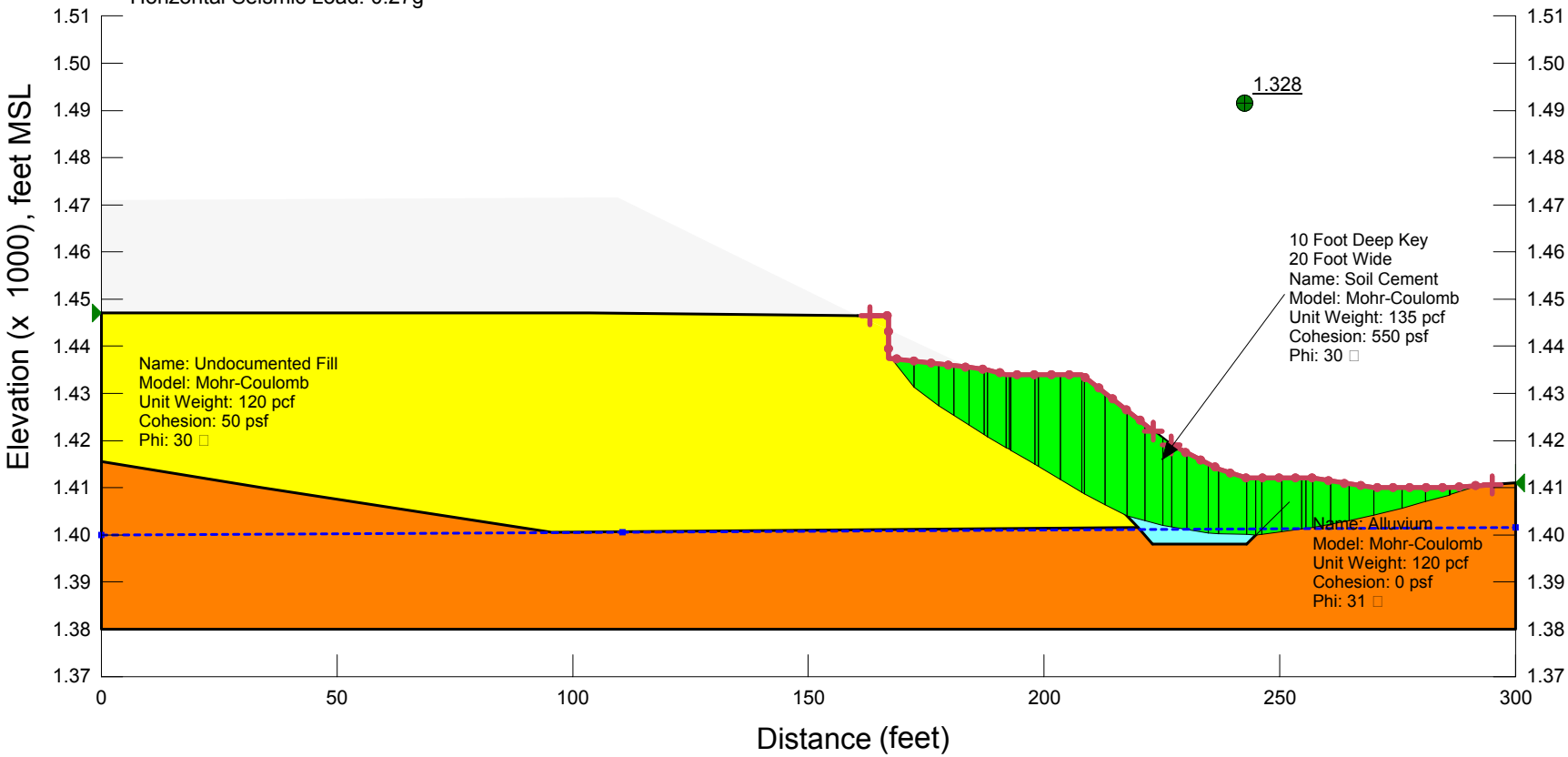


Figure C-27

Vesting Tentative Tract Map No. 71216
Cross Section C-C'

Name: 1a - Static w/ Rapid Drawdown
Method: Spencer
Optimize Critical Slip Surface Location: Yes

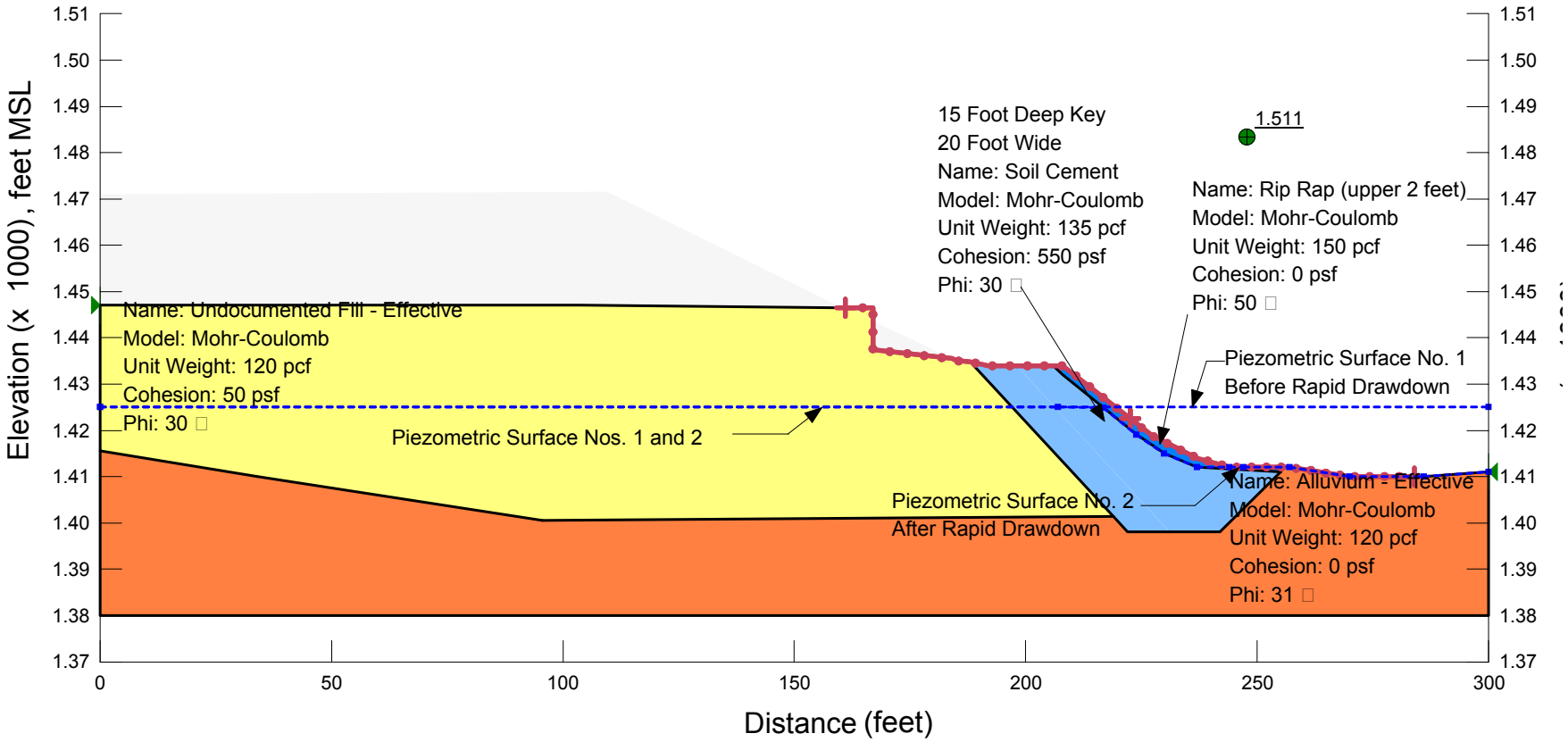


Figure C-28

CROSS SECTION C
DATA INPUT FOR SLOPE STABILITY ANALYSES

Point Data

ID	X	Y	Lab	el
1	0	1	380	Point+Number
2	300	1380		Point+Number
3	300	1411		Point+Number
4	286	1410		Point+Number
5	270	1410		Point+Number
6	257	1412		Point+Number
7	244	1412		Point+Number
8	237	1414		Point+Number
9	227	1419		Point+Number
10	208	1434		Point+Number
11	192	1434		Point+Number
12	167	1437.5		Point+Number
13	167	1446.5		Point+Number
14	103.5	1447		Point+Number
15	-0.00171	1447		Point+Number
16	218.93	1401.4		Point+Number
17	95.5	1400.5		Point+Number
18	34	1410		Point+Number
19	0	1415.5		Point+Number
20	184	1435.5		Point+Number
21	167	1443.5		Point+Number
22	160.5	1446.5		Point+Number
23	109.5	1471.5		Point+Number
24	0	1471		Point+Number
25	208	1432		Point+Number
26	224	1419		Point+Number
27	255	1411		Point+Number
28	237	1412		Point+Number
29	206	1434		Point+Number
30	255	1412		Point+Number
31	230	1415		Point+Number
32	198	1434		Point+Number
33	242	1398		Point+Number
34	231	1398		Point+Number
35	185	1435.07		Point+Number
36	188	1434.75		Point+Number
37	222	1398		Point+Number

Cross Section C – Data Input for Slope Stability Analyses

Strength Parameters

Rip Rap (upper 2 feet)

Model Mohr-Coulomb

Unit Weight 150 pcf

Cohesion 0 psf

Phi 50 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Soil Cement

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 550 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Undocumented Fill - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 50 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 50 psf

Drawdown Total Phi 30.01 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Alluvium - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 0 psf

Phi 31 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 31.01 °

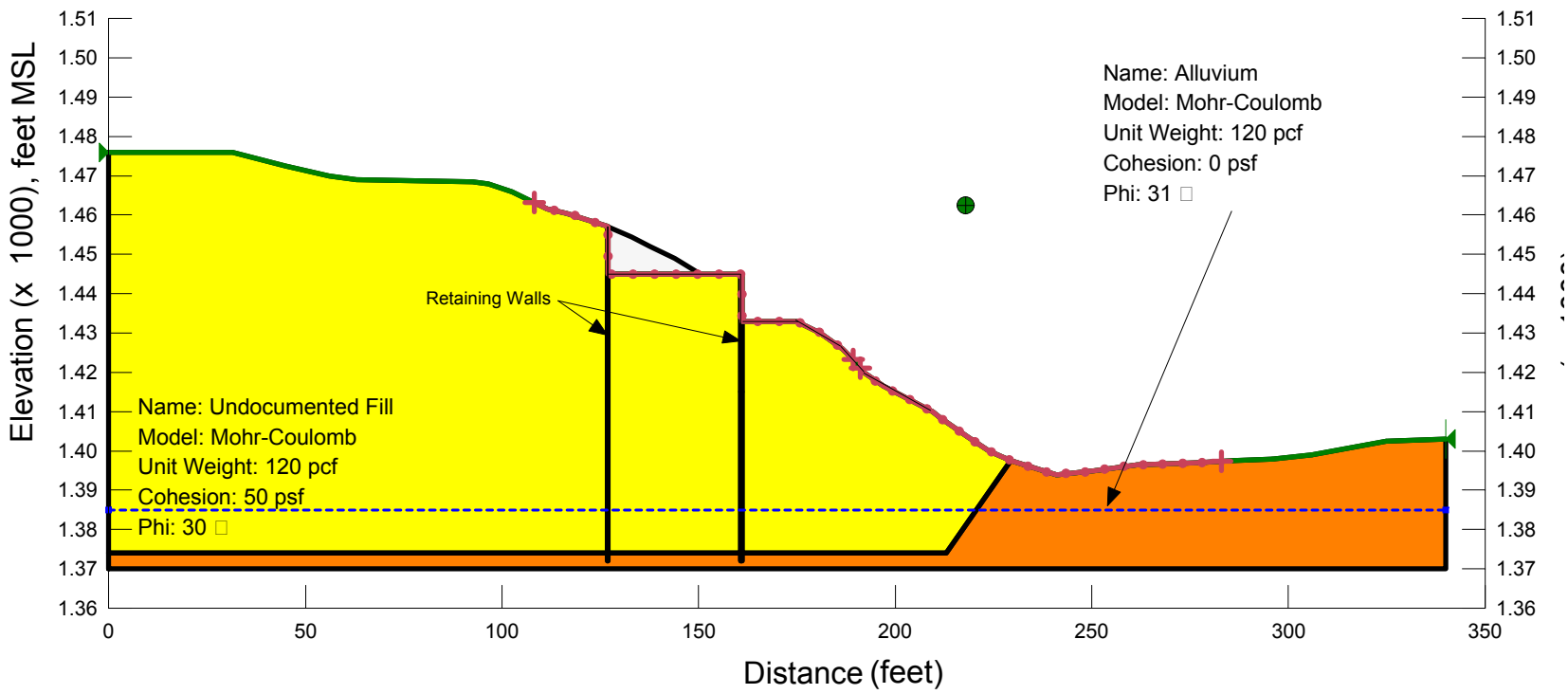
Pore Water Pressure

Piezometric Line 1

Piezometric Line After

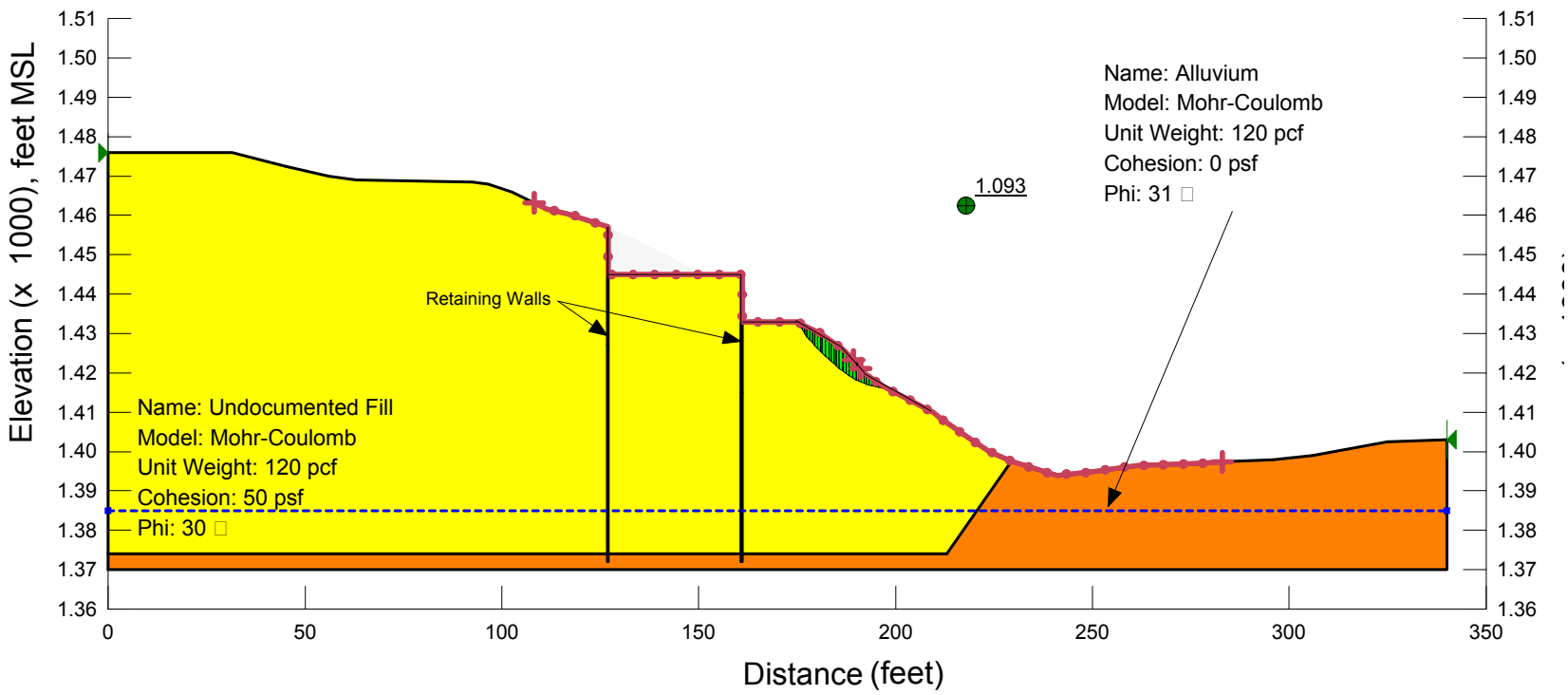
Vesting Tentative Tract Map No. 71216
Cross Section D-D'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



Vesting Tentative Tract Map No. 71216
Cross Section D-D'

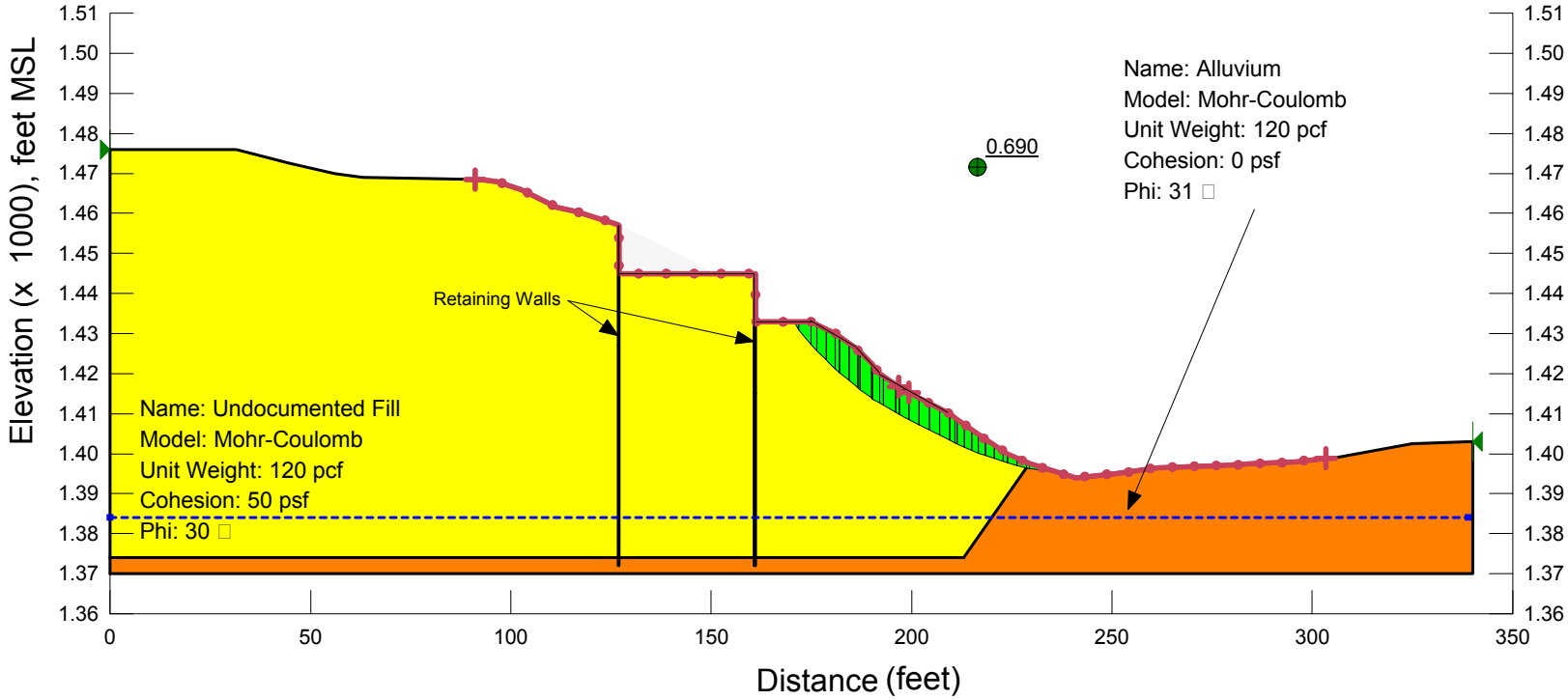
Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



Vesting Tentative Tract Map No. 71216
Cross Section D-D'

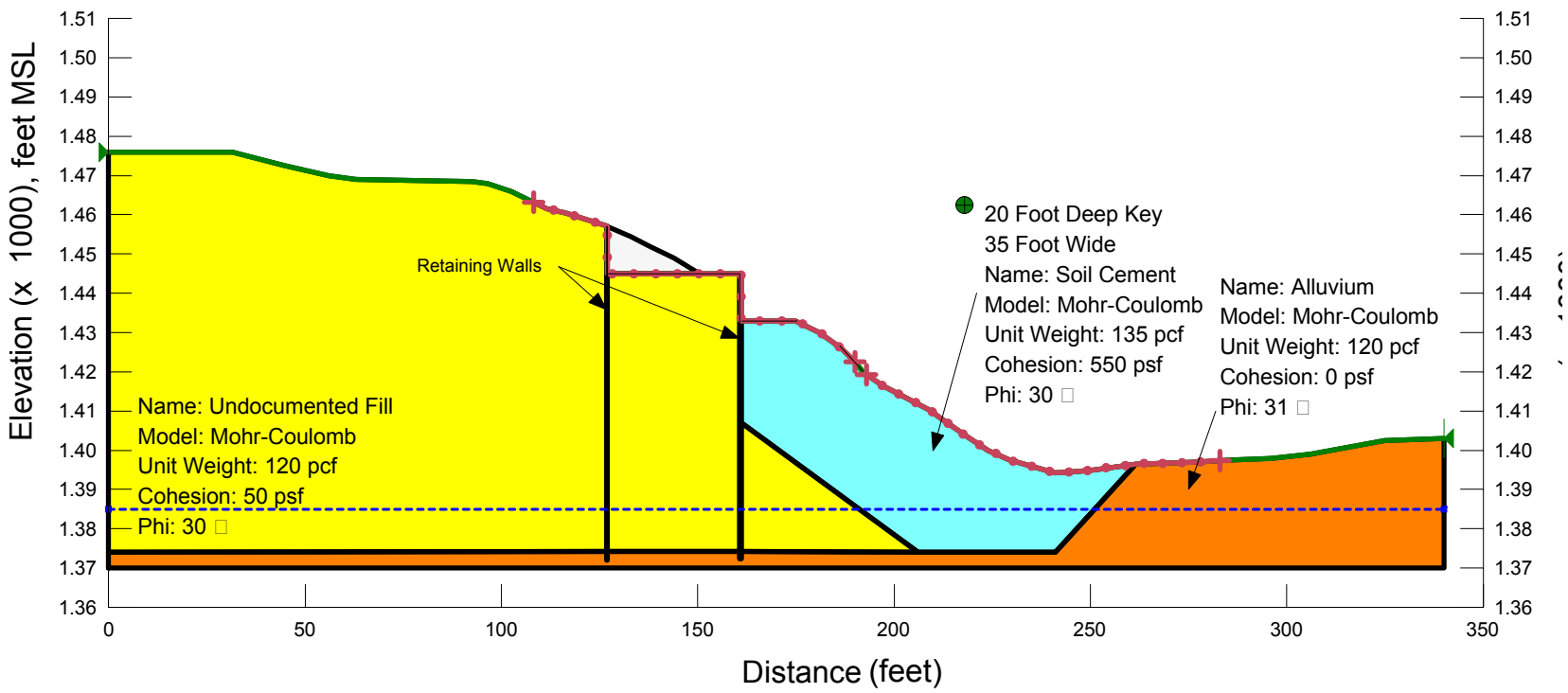
Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g



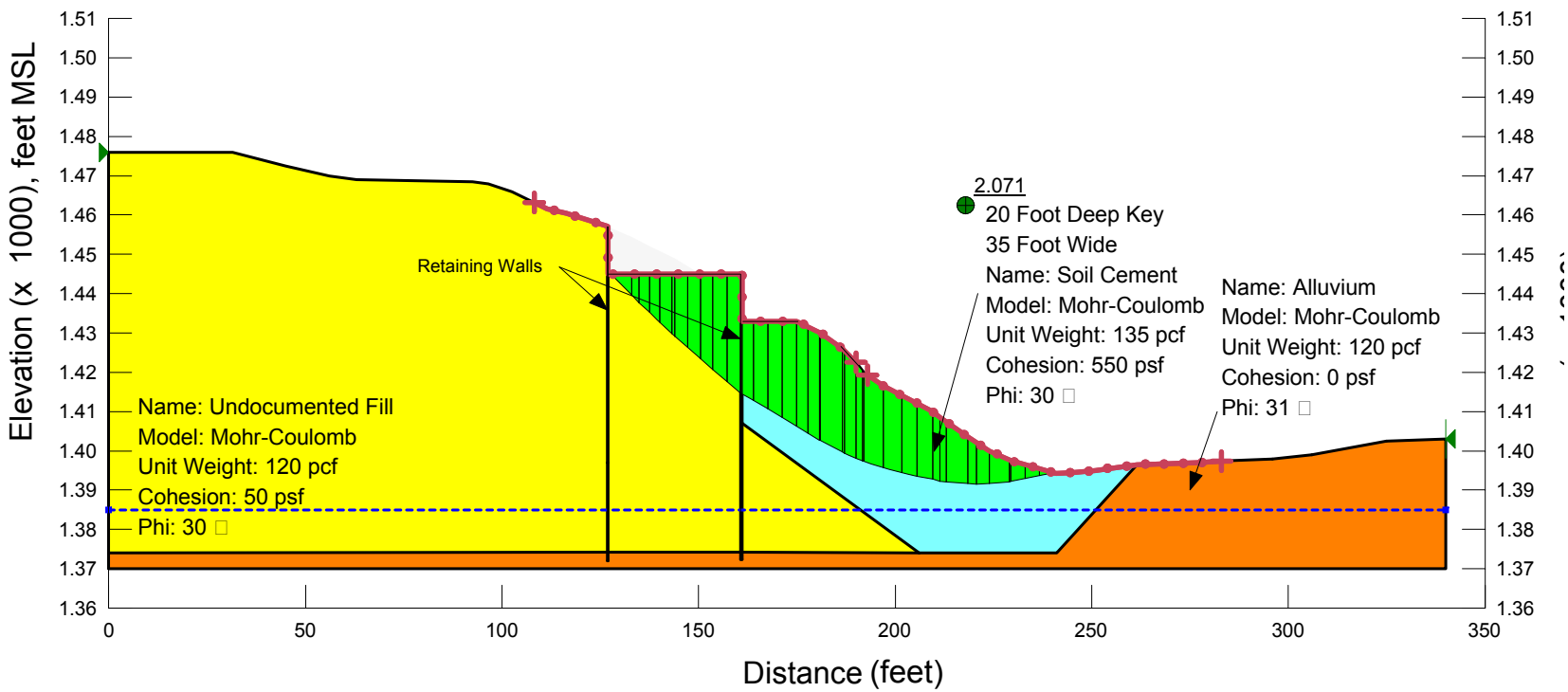
Vesting Tentative Tract Map No. 71216
Cross Section D-D'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



Vesting Tentative Tract Map No. 71216
Cross Section D-D'

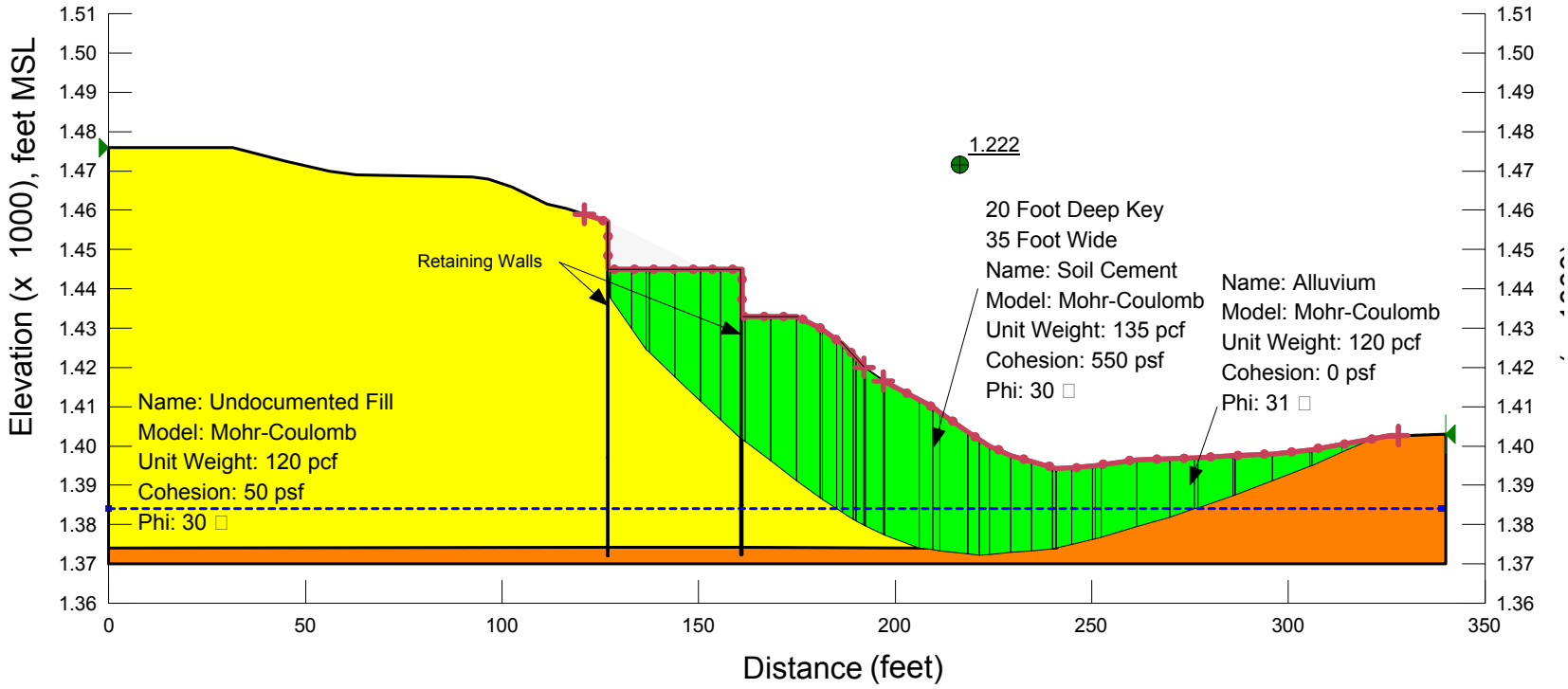
Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes



Vesting Tentative Tract Map No. 71216
Cross Section D-D'

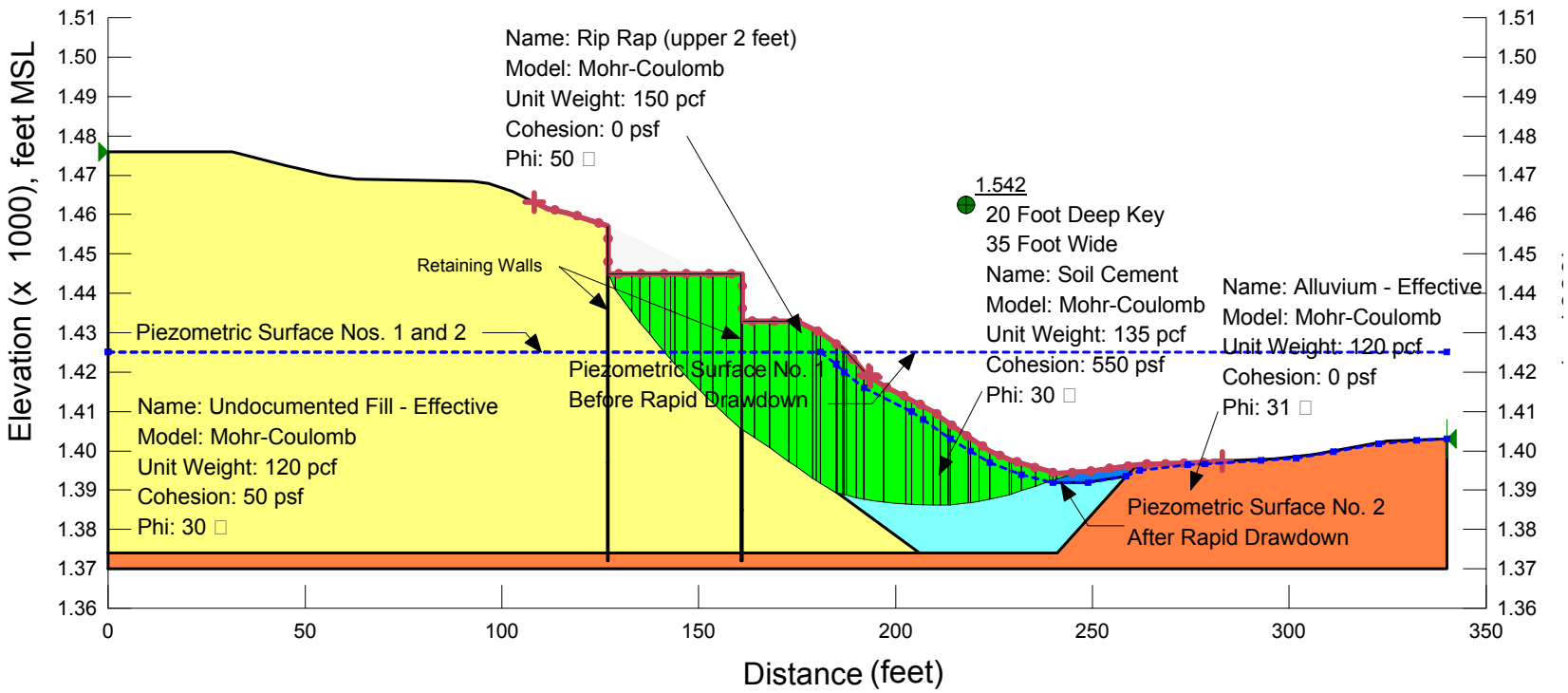
Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g



Vesting Tentative Tract Map No. 71216
Cross Section D-D'

Name: 1a - Rapid Drawdown
Method: Spencer
Optimize Critical Slip Surface Location: Yes



CROSS SECTION D
DATA INPUT FOR SLOPE STABILITY ANALYSES

Point Data

ID	X	Y	Label
1	400	1380	Point+Number
2	0 1	374	Point+Number
3	0 1	370	Point+Number
4	340	1370	Point+Number
5	340	1403	Point+Number
6	325	1402.5	Point+Number
7	306	1399	Point+Number
8	296	1398	Point+Number
9	286	1397.5	Point+Number
10	277	1397	Point+Number
11	261.5	1396.5	Point+Number
12	229.5	1397.5	Point+Number
13	206	1374	Point+Number
14	190	1422.5	Point+Number
15	175	1433	Point+Number
16	161	1445	Point+Number
17	150.5	1445	Point+Number
18	127	1457	Point+Number
19	127	1445	Point+Number
20	133	1454.5	Point+Number
21	137.5	1452	Point+Number
22	144	1449	Point+Number
23	116.5	1460.5	Point+Number
24	111.5	1461.5	Point+Number
25	102.5	1466	Point+Number
26	96.5	1468	Point+Number
27	92.5	1468.5	Point+Number
28	0	1476	Point+Number
29	31.5	1476	Point+Number
30	45	1472.5	Point+Number
31	56	1470	Point+Number
32	63	1469	Point+Number
33	161	1433	Point+Number
34	161	1438.8	Point+Number
35	181	1430	Point+Number
36	186.5	1426	Point+Number
37	192	1420	Point+Number
38	209.5	1410	Point+Number
39	224	1400	Point+Number
40	218.5	1403.5	Point+Number
41	211.459	1408.5	Point+Number
42	197	1416.5	Point+Number
43	126.75	1457.08	Point+Number
44	126.75	1445	Point+Number
45	126.75	1374	Point+Number
46	127	1374	Point+Number
47	160.75	1445	Point+Number
48	160.75	1374	Point+Number
49	161	1374	Point+Number
50	160.75	1433	Point+Number
51	126.75	1397.00	Point+Number
52	127	1397.00	Point+Number
53	160.75	1384.99	Point+Number
54	161	1384.99	Point+Number
55	241	1374	Point+Number
56	240.818	1394.32	Point+Number
57	245	1394.39	Point+Number
58	161	1407	Point+Number
59	250.931	1395.04	Point+Number
60	258.617	1393.47	Point+Number
61	248	1392	Point+Number
62	240	1392	Point+Number
63	232	1394	Point+Number
64	224	1397	Point+Number
65	219	1400	Point+Number
66	214	1403	Point+Number
67	207	1408	Point+Number
68	204	1410	Point+Number
69	192	1416	Point+Number
70	187	1420	Point+Number
71	185	1422	Point+Number
72	179	1427	Point+Number
73	173	1430	Point+Number
74	168	1433	Point+Number
75	161	1372	Point+Number
76	127	1372	Point+Number
77	126.75	1372	Point+Number
78	160.75	1372	Point+Number
79	181	1425	Point+Number

Cross Section D – Data Input for Slope Stability Analyses

Strength Parameters

Rip Rap (upper 2 feet)

Model Mohr-Coulomb

Unit Weight 150 pcf

Cohesion 0 psf

Phi 50 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Soil Cement

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 550 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Undocumented Fill - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 50 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 50 psf

Drawdown Total Phi 30.01 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Alluvium - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 0 psf

Phi 31 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 31.01 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

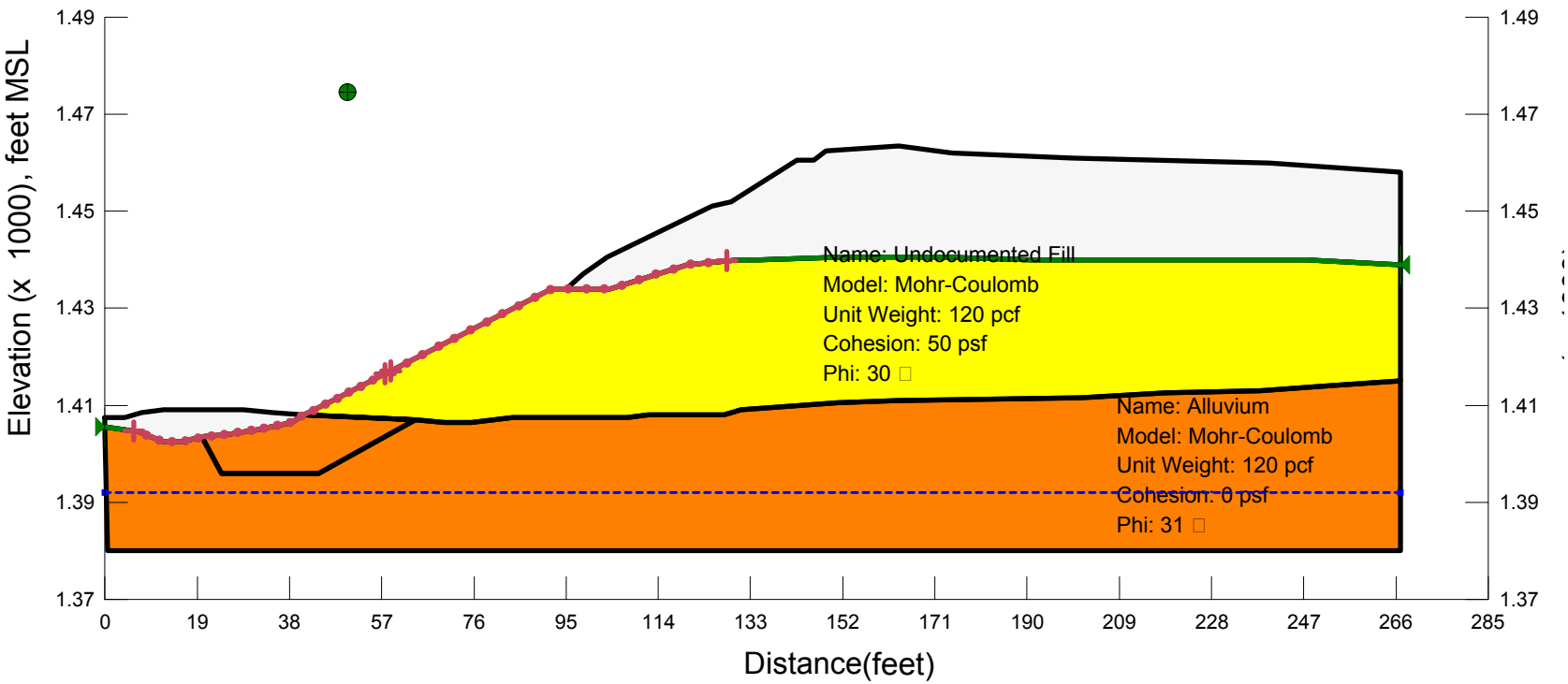


Figure C-40

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

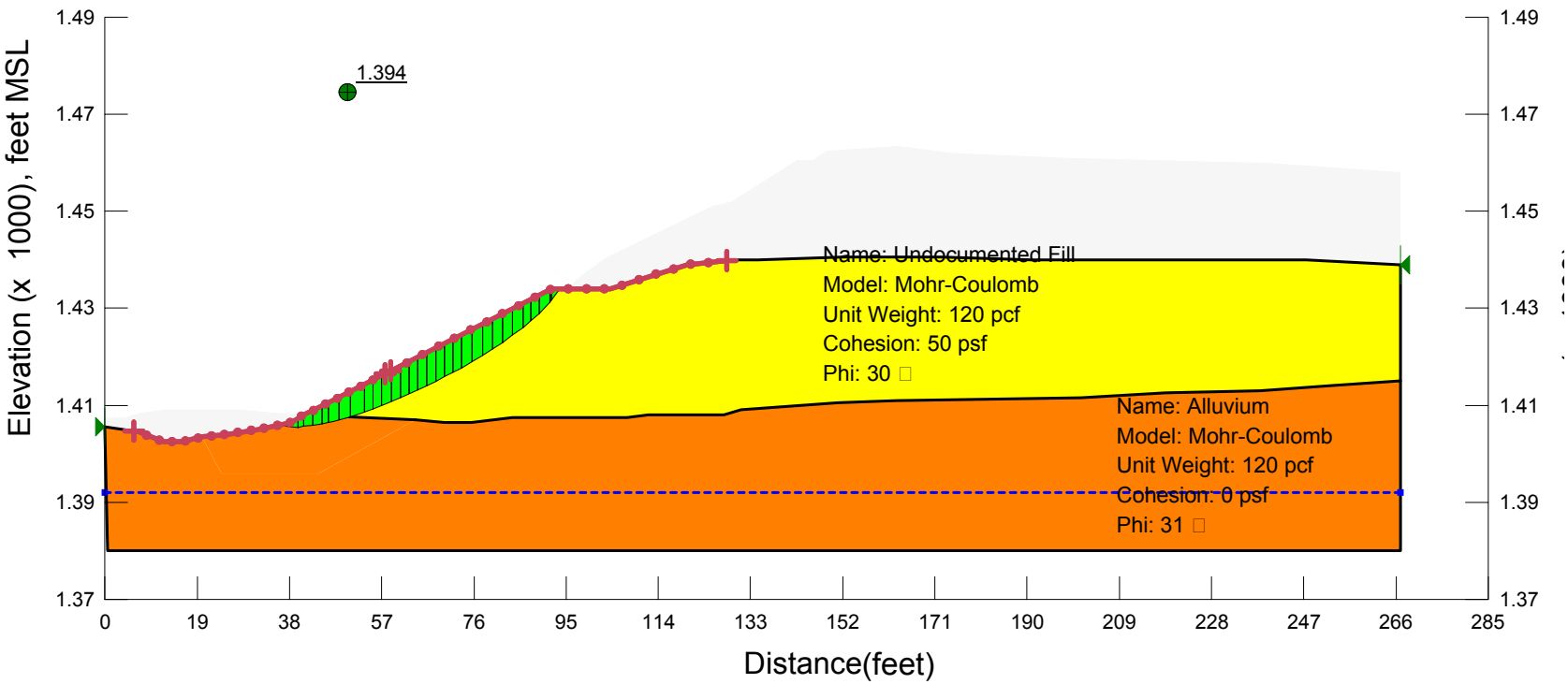


Figure C-41

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

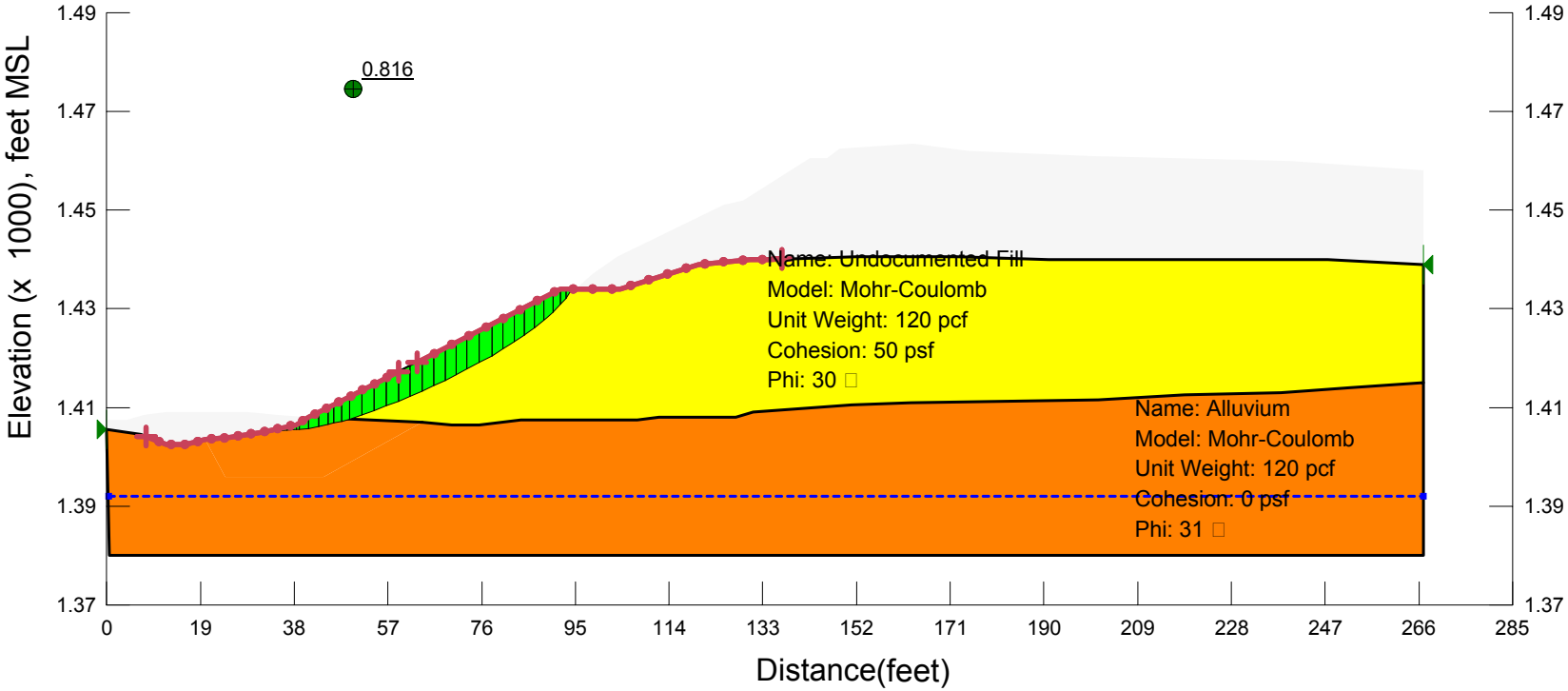


Figure C-42

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

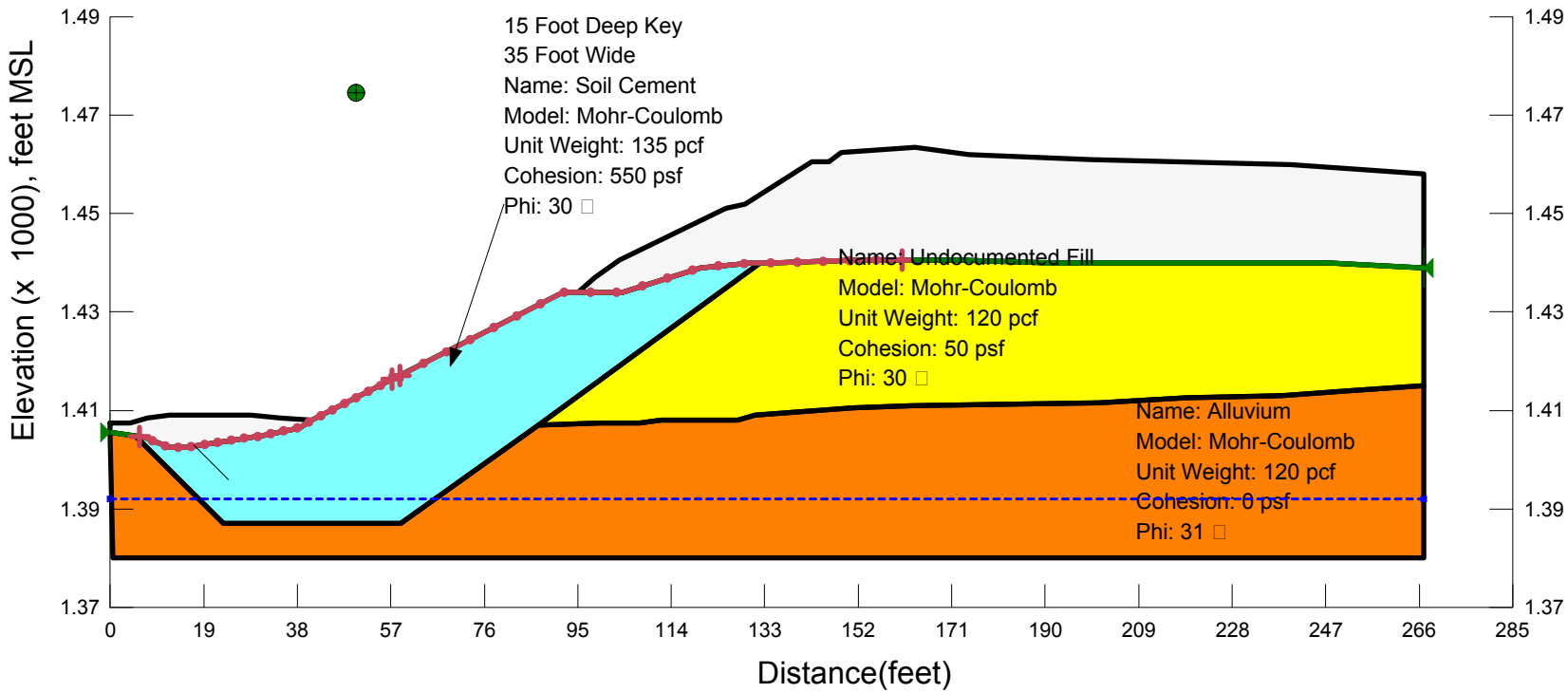


Figure C-43

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1c - Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

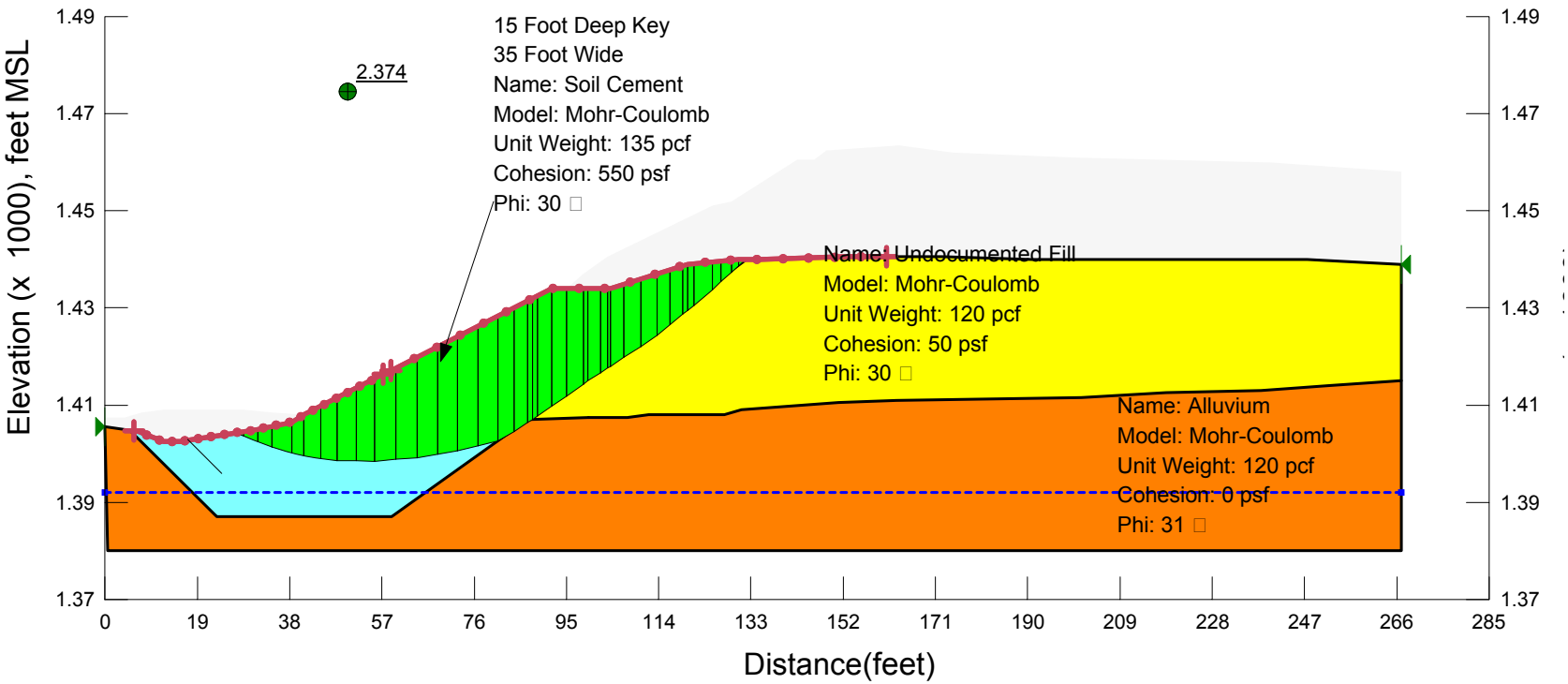


Figure C-44

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1b - Psuedo-Static
Method: Spencer
Optimize Critical Slip Surface Location: Yes

Horizontal Seismic Load: 0.27g

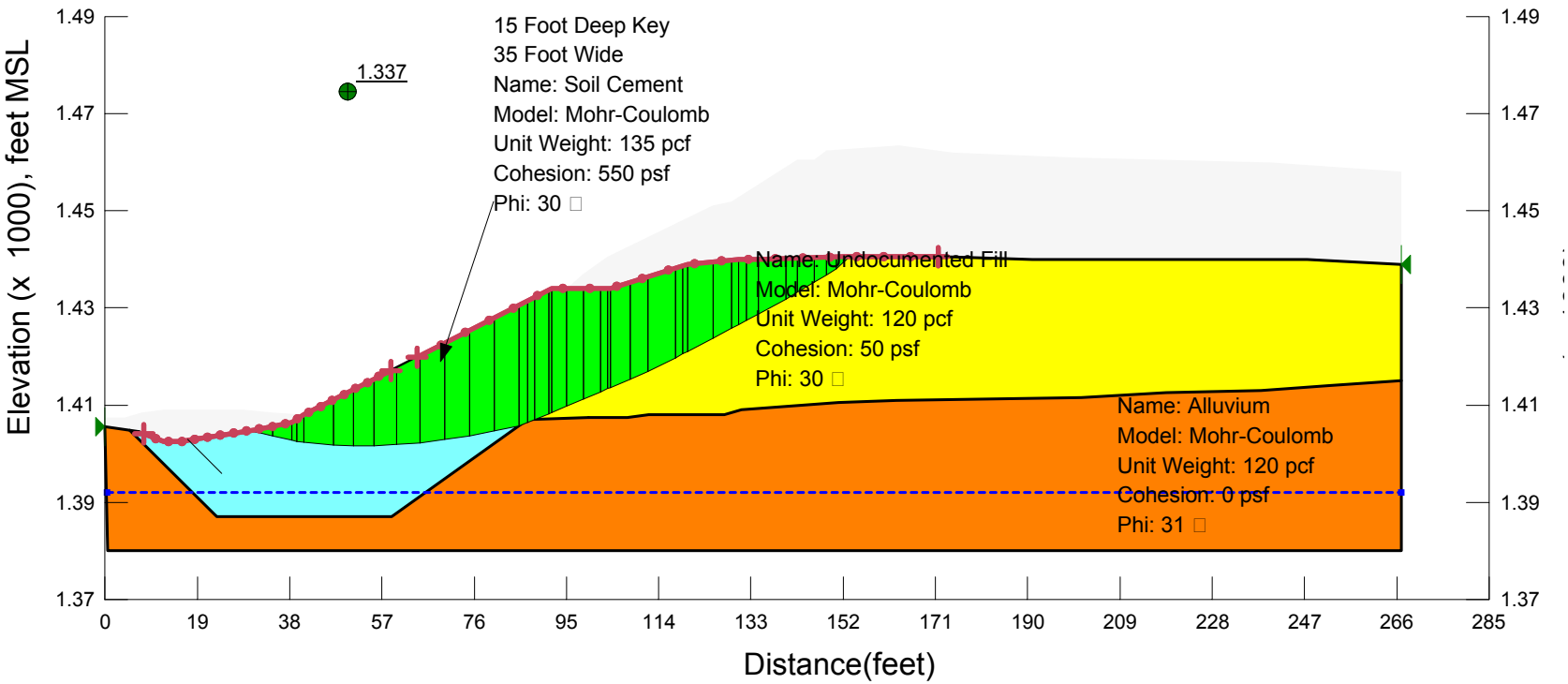


Figure C-45

Vesting Tentative Tract Map No. 71216
Cross Section E-E'

Name: 1a - Static w/ Rapid Drawdown
Method: Spencer
Optimize Critical Slip Surface Location: Yes

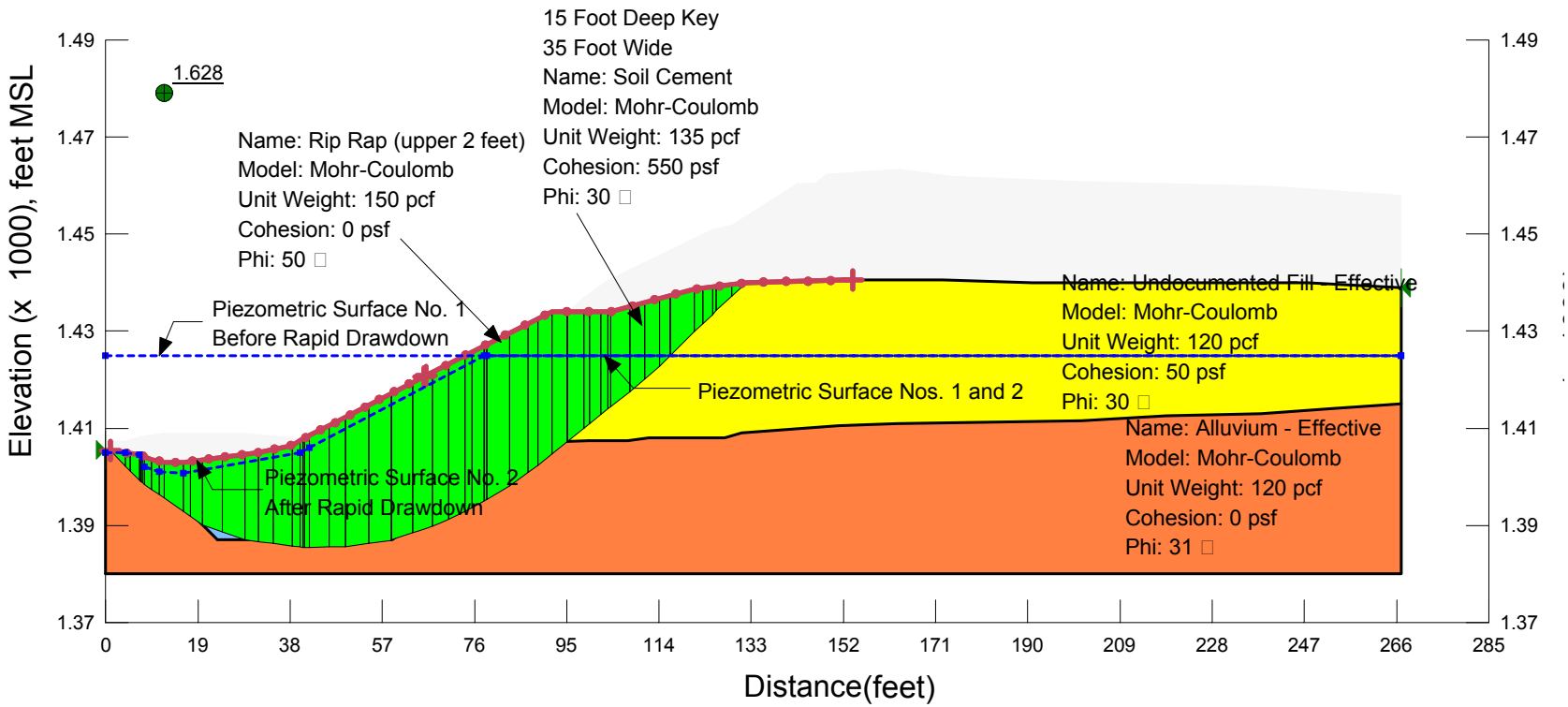


Figure C-46

CROSS SECTION E
DATA INPUT FOR SLOPE STABILITY ANALYSES

Point Data

ID	X	Y Lab	el
1	0 1	405.5	Point+Number
2	0 1	407.5	Point+Number
3	7 1	404.5	Point+Number
4	9.5	1403.5	Point+Number
5	12	1403	Point+Number
6	31.5	1405	Point+Number
7	38.5	1406.5	Point+Number
8	41	1408	Point+Number
9	87	1407	Point+Number
10	104	1434	Point+Number
11	98.5	1437	Point+Number
12	103.5	1440.5	Point+Number
13	125	1451	Point+Number
14	129	1452	Point+Number
15	142.5	1460.5	Point+Number
16	146	1460.5	Point+Number
17	148.5	1462.5	Point+Number
18	163.5	1463.5	Point+Number
19	174.5	1462	Point+Number
20	199.5	1461	Point+Number
21	240	1460	Point+Number
22	267	1458	Point+Number
23	267	1439	Point+Number
24	267	1415	Point+Number
25	267	1380	Point+Number
26	0	1380	Point+Number
27	99.5	1407.5	Point+Number
28	107.5	1407.5	Point+Number
29	112	1408	Point+Number
30	127.5	1408	Point+Number
31	131	1409	Point+Number
32	151	1410.5	Point+Number
33	163	1411	Point+Number
34	201	1411.5	Point+Number
35	218.5	1412.5	Point+Number
36	238	1413	Point+Number
37	244	1413.5	Point+Number
38	252	1414	Point+Number
39	4	1407.5	Point+Number
40	7.5	1408.5	Point+Number
41	12	1409	Point+Number
42	17.5	1409	Point+Number
43	24	1409	Point+Number
44	28.5	1409	Point+Number
45	34.5	1408.5	Point+Number
46	46	1410.5	Point+Number
47	92	1434	Point+Number
48	132.00	1440	Point+Number
49	152	1440.5	Point+Number
50	172.5	1440.5	Point+Number
51	191	1440	Point+Number
52	247.5	1440	Point+Number
53	95	1434	Point+Number
54	92	1432	Point+Number
55	40	1405	Point+Number
56	4	1404.92	Point+Number
57	23	1387	Point+Number
58	59	1387.00	Point+Number
59	102	1434	Point+Number
60	96	1430.81	Point+Number
61	123	1434	Point+Number
62	121.312	1438.64	Point+Number
63	16	1403	Point+Number
64	5	1404.78	Point+Number
65	42	1406	Point+Number
66	16	1400.75	Point+Number
67	11	1401	Point+Number
68	8	1402	Point+Number
69	74	1425	Point+Number
70	78.538	1425	Point+Number

Cross Section E – Data Input for Slope Stability Analyses

Strength Parameters

Rip Rap (upper 2 feet)

Model Mohr-Coulomb

Unit Weight 150 pcf

Cohesion 0 psf

Phi 50 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Soil Cement

Model Mohr-Coulomb

Unit Weight 135 pcf

Cohesion 550 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 0 psf

Drawdown Total Phi 0 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Undocumented Fill - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 50 psf

Phi 30 °

Phi-B 0 °

Drawdown Total Cohesion 50 psf

Drawdown Total Phi 30.01 °

Pore Water Pressure

Piezometric Line 1

Piezometric Line After

Alluvium - Effective

Model Mohr-Coulomb

Unit Weight 120 pcf

Cohesion 0 psf

Phi 31 °

Phi-B 0 °

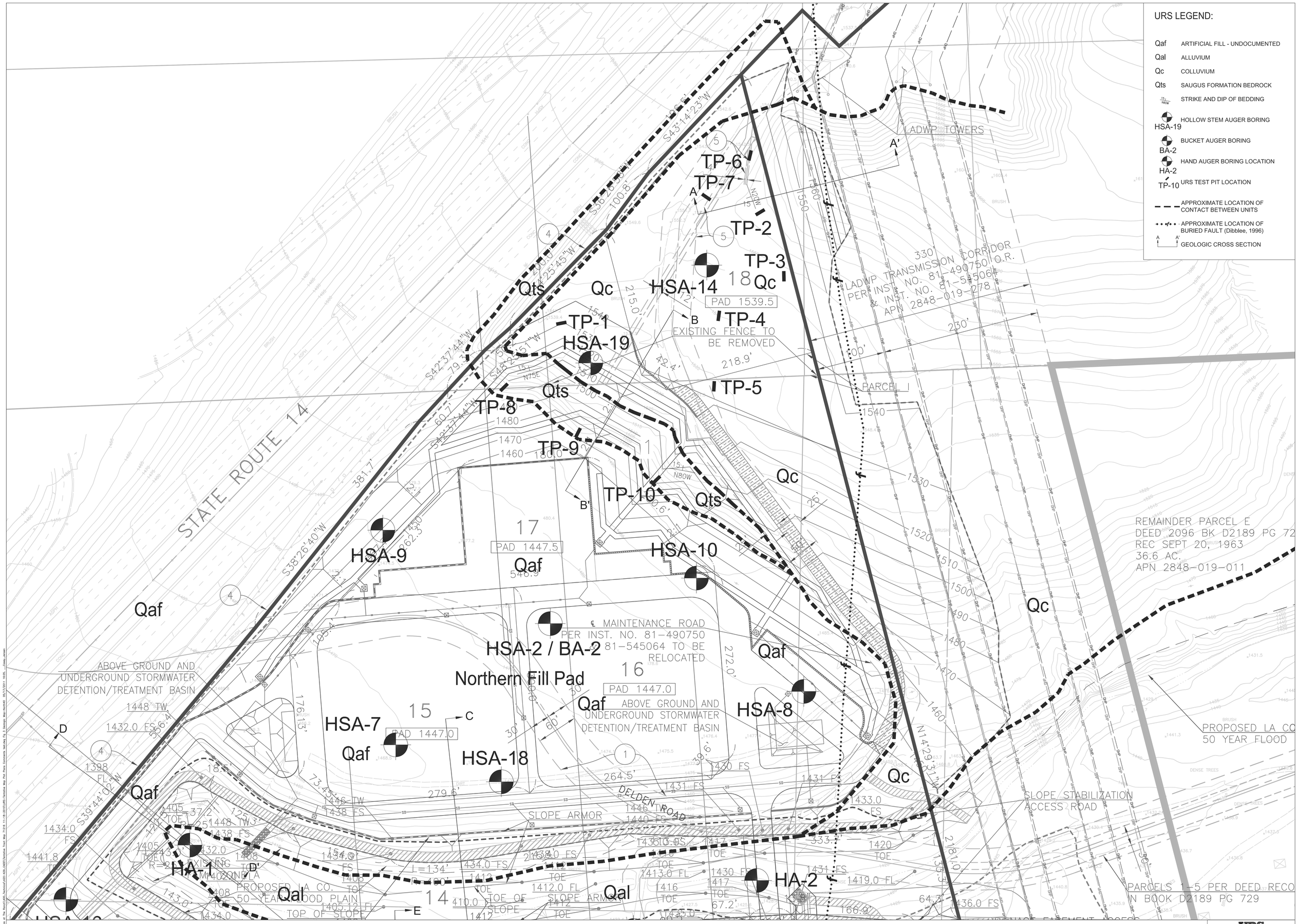
Drawdown Total Cohesion 0 psf

Drawdown Total Phi 31.01 °

Pore Water Pressure

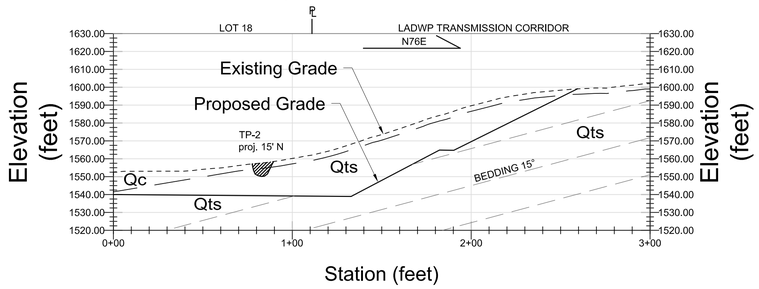
Piezometric Line 1

Piezometric Line After

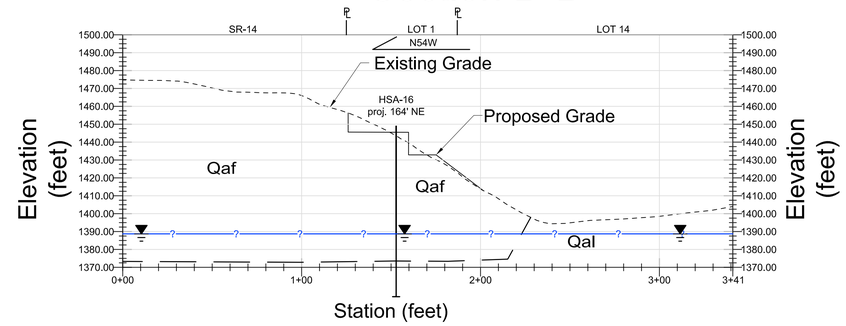

URS LEGEND:
Qaf ARTIFICIAL FILL - UNDOCUMENTED
Qal ALLUVIUM
Qc COLLUVIUM
Qts SAUGUS FORMATION BEDROCK
STRIKE AND DIP OF BEDDING
HSA-19 HOLLOW STEM AUGER BORING
BA-2 BUCKET AUGER BORING
HA-2 HAND AUGER BORING LOCATION
TP-10 URS TEST PIT LOCATION
APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
APPROXIMATE LOCATION OF BURIED FAULT (Dibblee, 1996)
A A' GEOLOGIC CROSS SECTION
STATE ROUTE 14
LADWP TOWERS
LADWP TRANSMISSION CORRIDOR PER INST. NO. 81-490750 O.R. & INST. NO. 81-545064 APN 2848-019-278
PARCEL I
REMAINDER PARCEL E DEED 2096 BK D2189 PG 72 REC SEPT 20, 1963 36.6 AC. APN 2848-019-011
PAD 1539.5
PAD 1447.5
PAD 1447.0
EXISTING FENCE TO BE REMOVED
℄ MAINTENANCE ROAD PER INST. NO. 81-490750 81-545064 TO BE RELOCATED
Northern Fill Pad
ABOVE GROUND AND UNDERGROUND STORMWATER DETENTION/TREATMENT BASIN
DELDEN ROAD
SLOPE ARMOR
SLOPE STABILIZATION ACCESS ROAD
PROPOSED LA CO 50 YEAR FLOOD
PROPOSED LA CO. 50 YEAR FLOOD PLAIN
TOP OF SLOPE
PARCELS 1-5 PER DEED RECO IN BOOK D2189 PG 729
TP-1
TP-2
TP-3
TP-4
TP-5
TP-6
TP-7
TP-8
TP-9
TP-10
HSA-14
HSA-19
HSA-9
HSA-10
HSA-2 / BA-2
HSA-7
HSA-18
HSA-8
HA-1
HA-2
Qaf
Qal
Qc
Qts
0 40 80 120
SCALE, feet
URS
GEOLOGIC MAP NORTH
Proj. No.: 29405568
Project: TRACT MAP NO. 71216 LOS ANGELES COUNTY, CA
Date: JAN 2011
Figure: 3

URS LEGEND:
Qaf ARTIFICIAL FILL - UNDOCUMENTED
Qal ALLUVIUM
Qc COLLUVIUM
Qts SAUGUS FORMATION BEDROCK
STRIKE AND DIP OF BEDDING
HSA-19 HOLLOW STEM AUGER BORING
BA-2 BUCKET AUGER BORING
HA-2 HAND AUGER BORING LOCATION
TP-10 URS TEST PIT LOCATION
APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
APPROXIMATE LOCATION OF BURIED FAULT (Dibblee, 1996)
A A' GEOLOGIC CROSS SECTION
HSA-7
HSA-8
HSA-18
HSA-1
HA-1
HSA-16
HA-2
HSA-11 & 11A
HSA-13
HSA-5 & 5A
HSA-4
HSA-6
HSA-17
HSA-1 & 1A / BA-1
HSA-3
HSA-12
Southern Fill Pad
ABOVE GROUND AND UNDERGROUND STORMWATER DETENTION/TREATMENT BASIN
ABOVE GROUND STORMWATER DETENTION BASIN
DELDEN ROAD
SLOPE ARMOR
PROPOSED LA CO. 50-YEAR FLOOD PLAIN
SLOPE STABILIZATION ACCESS ROAD
DRAINAGE EASEMENT AC
EXISTING BUILDING AND TO BE REMOVED
EXISTING FEMA ZONE A
EXISTING FENCE TO BE REMOVED
LADWP POWER LINES
EXISTING BUILDING TO BE RELOCATED
EXISTING SEPTIC SYSTEM TO BE REM
EXISTING 7' STORM DRAIN
VARIABLE WIDTH EASEMENT FOR FIRE ACCESS, INGRESS AND EGRESS, PUBLIC UTILITIES, & DRAINAGE PURPOSES
DRAINAGE EASEMENT ACCESS
EXIST 24" CMP STORM DRAIN PIPE
PLACERITA CANYON RD
MAINTENANCE ROAD IN FAVOR OF LADWP SEE NOTE 7 PER INST. NO. 81-490750 & 81-545064 TO BE RELOCATED
CALTRANS R/W SEE SHT. T-4
REMAINDER PARCEL K INST. NO. 98-243231. O.R. REC. FEB 12, 1998
LADWP TRANSMISSION
PER INST. NO. 81-
& INST. NO. 2848-0
SCALE, feet
URS
GEOLOGIC MAP SOUTH
Proj. No.: 29405568
Date: JAN 2011
Project: TRACT MAP NO. 71216 LOS ANGELES COUNTY, CA
Figure: 4

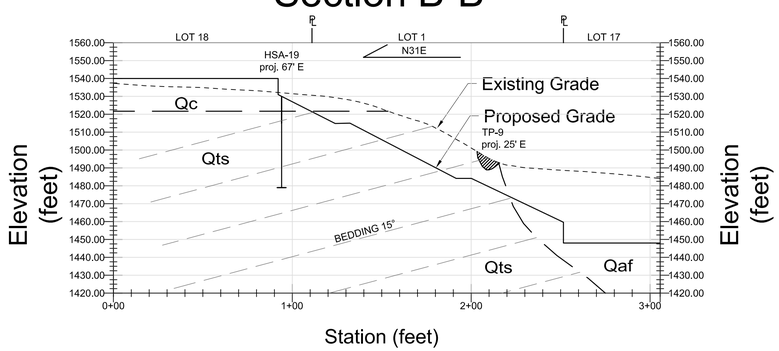
Section A-A'



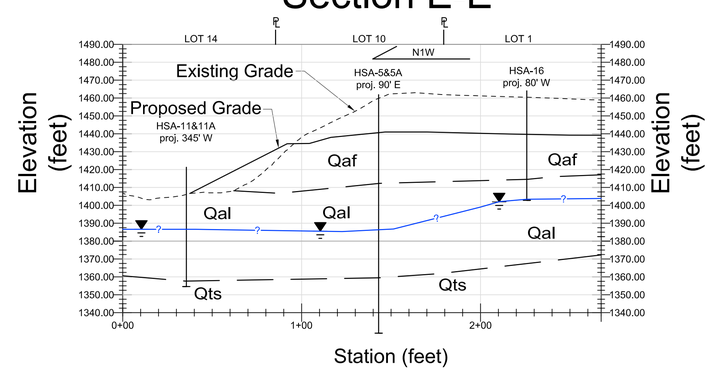
Section D-D'



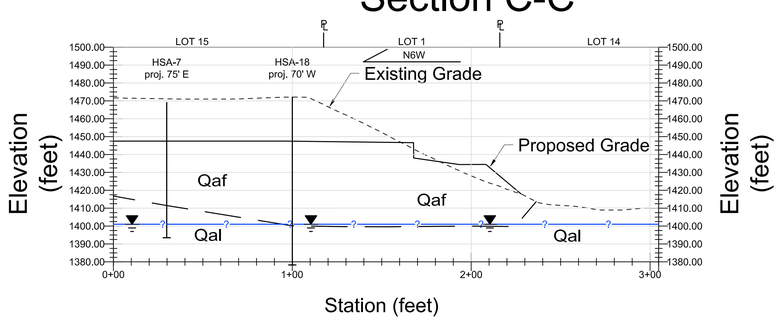
Section B-B'



Section E-E'



Section C-C'



GEOLOGIC CROSS-SECTION LEGEND:

——— ———	APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
— — — —	CONCEPTUAL BEDDING PROJECTION BASED ON MAPPED GEOLOGY
▼ ?	QUERIED LOCATION OF GROUNDWATER
N59W	ORIENTATION OF CROSS SECTION
Qaf	ARTIFICIAL FILL - UNDOCUMENTED
Qal	ALLUVIUM
Qc	COLLUVIUM
Qts	SAUGUS FORMATION BEDROCK

0 40 80 120
SCALE, feet

URS

GEOLOGIC CROSS SECTIONS

Proj. No.: 29405568	Date: MAY 2011
Project: TRACT MAP NO. 71216 NEWHALL, CA 91321	Figure: 5

L:_29405568_Disney ABC Studios at The Ranch\400_Technical\420-429_0400\AOAD-URS-sections2011-05.dwg sections 05/17/2011 16:28, __Casey_Jensen

URS

August 17, 2011

County of Los Angeles
Department of Public Works
900 South Fremont Avenue
Alhambra, California 91803-1331

Attention: Mr. Yoshiya Morisaku

Subject: Transmittal – Response to Comments
Vesting Tentative Tract Map No. 71216
Golden Oak Ranch
19802 Placerita Canyon Road
Newhall, California 91321
TR 0171216, CUP 200900126, ENV200900112

In response to County of Los Angeles Department of Public Works review letters dated August 3, 2011, URS Corporation (URS) is submitting the attached response to soils engineering and geologic review sheet comments for vesting tentative tract map no. 71216 (Project) in Los Angeles County, California. Please review the attached response to comments with attachments and provide additional comments as necessary.

If you have any questions regarding this response to comments, please contact us.

Sincerely,

URS CORPORATION

PROFESSIONAL GEOLOGIST
CASEY LEE JENSEN
No. 2320
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
ARNEL M. BICOL
GE No. 2646
EXP. 12-31-12
GEOTECHNICAL
STATE OF CALIFORNIA

Casey Lee Jensen, PG, CEG
Project Manager / Engineering Geologist

Arnel Bicol, P.E., G.E.
Principal Engineer

Attachment: Responses to Soils Engineering and Geologic Review Sheet Comments (2 copies)

CC: Disney Worldwide Services, Inc. – Mr. Dan McBrearty (via email)
Truman & Elliott, LLP – Ms. Kathleen Truman (via email)

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017-3437
Tel: 213.996.2200
Fax: 213.996.2290

DISNEY|ABC STUDIOS AT THE RANCH
County of Los Angeles

RESPONSES TO SOILS ENGINEERING AND GEOLOGIC REVIEW SHEET COMMENTS

Vesting Tentative Tract No. TR 071216

August 17, 2011

COUNTY:	**Los Angeles, CA**	**REVIEW AGENCY:**	**County of Los Angeles**
CHECK BY:	**Charles Nestle/Yoshi Morisaku**	**TITLE NO.:**	**Preliminary Geotechnical Investigation for Vesting Tentative Tract No. 071216**
RESPONDED BY:	**Casey Jensen**	**DATE:**	**November 9, 2009 (1st Submittal)**
DATE:	**August 17, 2011**		**November 25, 2009 (1st Response)**
			May 25, 2010 (2nd Submittal)
			June 25, 2010 (2nd Response)
			March 8, 2011 (3rd Submittal)
			April 21, 2011 (3rd Response)
			May 31, 2011 (4th Submittal)
			August 3, 2011 (4th Response)
			August 17, 2011 (5th Submittal)
		APPLICATION DEEMED COMPLETE	

Item	Review Comments	Responses	Action/Status	Responder
	PUBLIC WORKS – GEOTECHNICAL AND MATERIALS ENGNIEERING DIVISION, SOILS ENGINEERING REVIEW SHEET. (MORISAKU) 8/3/11			
1.	In the submitted report it appears to indicate that soil cement buttress keyway will be constructed to meet County standards for slope stability. Verify the locations of the proposed soil cement buttress and clearly delineate all areas of proposed soil cement buttress on the geotechnical maps.	Figures 3, 4 and 5 Geologic Maps and Cross Sections (attached) have been modified to show the currently proposed locations of the soil cement buttress.		
2.	From the latest submitted geotechnical maps it appears a bridge may be constructed over the existing channel. Verify and provide foundation recommendations considering the existing uncertified fill on the northern portion of the subject site. If a bridge will be constructed clearly delineate and show the location of the bridge and bridge abutments on the geotechnical map.	The bridge foundations will be supported on piles similar to the building foundations which are also located in the uncertified fill on the northern portion of the subject site. Figures 3 and 4 Geologic Maps (attached) have been modified to show the location of the bridge abutments. The bridge will span between the two abutments.		
3.	Address total and differential settlement for any proposed utilities that may be constructed on the subject site. Provide recommendations for utilities considering the existing uncertified fill and the predicted settlement.	Total settlement is listed at each boring location (where boring data supported analysis) on Table A (attached, see column labeled Seismic-Induced Liquefaction and Dry Sand Settlement). Consolidation Settlement Due to Fill Placement will occur prior to utility installation. Differential settlement between boring locations was calculated to be less than 1 inch per 30 feet (per Section 3.5.19 Differential Settlement). The future design level geotechnical report will investigate and address settlement of utilities. Based on the future settlement analysis, URS will likely recommend utility pipes with gaskets at joint connections to accommodate settlement of proposed utilities. Settlement sensitive utilities that cannot tolerate any settlement will utilize pile foundations where appropriate.		
4.	Requirements of the Geology Section are attached.	Noted		
5.	Include a copy of this review sheet with your response.	Noted		

Note A.	NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY ENGINEER: PER THE SOILS ENGINEER, SEISMICALLY INDUCED SETTLEMENT WILL BE MITIGATED WITH THE INSTALLATION OF PILE FOUNDATIONS. AT THE BUILDING OR GRADING PLAN STAGE, ADDITIONAL EXPLORATION WILL BE REQUIRED TO VARIFY [sic] TOTAL DEPTH OF PROPOSED PILE FOUNDATIONS PROPOSED PILE FOUNDATIONS MUST BE FOUNDED IN COMPETENT MATERIAL BELOW THE DEPTH OF SOILS SUSCEPTABLE TO LIQUEFACTION.	Noted		
	PUBLIC WORKS – GEOTECHNICAL AND MATERIALS ENGNIEERING DIVISION, GEOLOGY REVIEW SHEET (NESTLE) 8/3/11			
1.	The Soils Engineering review dated 8/3/11 is attached.	Noted, see above.		
Note.	Much of the site is underlain by alluvium and undocumented fill. Only partial removal of these materials is currently proposed and settlement of these materials beyond County maximum allowable limits is expected. Mitigation by supporting structures on deep foundations is proposed, and although not specifically stated, infrastructure for utilities would also require deep foundation support. We recommend that Land Development Division and the Department of Regional Planning determine if deep foundations area an acceptable mitigation for excessive settlement.	Noted. The future design level geotechnical report will investigate and address settlement of utilities. Based on the future settlement analysis, URS will likely recommend utility pipes with gaskets at joint connections to accommodate settlement of proposed utilities.		

Attachments:

1. County of Los Angeles Department of Public Works, Geotechnical And Materials Engineering Division, Geologic Review Sheet
2. County of Los Angeles Department of Public Works, Geotechnical And Materials Engineering Division, Soils Engineering Review Sheet
3. Revised Figure 3 – Geologic Map North
4. Revised Figure 4 – Geologic Map South
5. Revised Figure 5 – Geologic Cross Sections
6. Table A – Summary of Hollow-Stem Boring Data and Analysis

County of Los Angeles Department of Public Works
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION
GEOLOGIC REVIEW SHEET
900 So. Fremont Ave., Alhambra, CA 91803
TEL. (626) 458-4925

DISTRIBUTION
1 Geologist
__ Soils Engineer
1 GMED File
1 Subdivision

TENTATIVE TRACT MAP 71216
SUBDIVIDER Golden Oak Ranch Properties
ENGINEER David Evans and Associates, Inc.
GEOLOGIST & SOILS ENGINEER URS

TENTATIVE MAP DATED 3/15/10 (Rev.)
LOCATION Newhall
REPORT DATE 5/31/11, 2/28/11, 3/22/10

The Regional Planning Commission, developer, and engineer are advised that:

PRIOR TO RECOMMENDING APPROVAL OF THE TENTATIVE TRACT OR PARCEL MAP:

1. The Soils Engineering review dated 8/3/11 is attached.

Note: Much of the site is underlain by alluvium and undocumented fill. Only partial removal of these materials is currently proposed and settlement of these materials beyond County maximum allowable limits is expected. Mitigation by supporting structures on deep foundations is proposed, and although not specifically stated, infrastructure for utilities would also require deep foundation support. We recommend that Land Development Division and the Department of Regional Planning determine if deep foundations are an acceptable mitigation for excessive settlement.

NOTE Provide a copy of this review with your resubmittal

Prepared by _____ Reviewed by _____ Date 8/3/11
Charles Nestle

Please complete a Customer Service Survey at http://dpw.lacounty.gov/go/gmedsurvey

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION

SOILS ENGINEERING REVIEW SHEET

Address: 900 S. Fremont Ave., Alhambra, CA 91803
Telephone: (626) 458-4925
Fax: (626) 458-4913

District Office 8.2
Job Number GMTR
Sheet 1 of 1

Review No. 3

DISTRIBUTION:
____ Drainage
____ Grading
____ Geo/Soils Central File
____ District Engineer
____ Geologist
____ Soils Engineer
____ Engineer/Architect

Tentative Tract Map 71216
Location Newhall
Developer/Owner Golden Oak Ranch Properties
Engineer/Architect David Evans and Associates, Inc.
Soils Engineer URS (Project No. 09405568)
Geologist Same as above

Review of:
Revised Tentative Tract Map Dated by the Processing Center 3/15/10
Soils Engineering and Geology Report Dated **5/31/11**, 2/28/11, 3/22/10
Previous Review Sheet Dated 4/14/11

ACTION:
Tentative Map feasibility is not recommended for approval.

REMARKS:

1. In the submitted report it appears to indicate that soil cement buttress keyway will be constructed to meet County standards for slope stability. Verify the locations of the proposed soil cement buttress and clearly delineate all areas of proposed soil cement buttress on the geotechnical maps.

2. From the latest submitted geotechnical maps it appears a bridge may be constructed over the existing channel. Verify and provide foundation recommendations considering the existing uncertified fill on the northern portion of the subject site. If a bridge will be constructed clearly delineate and show the location of the bridge and bridge abutments on the geotechnical map.

3. Address total and differential settlement for any proposed utilities that may be constructed on the subject site. Provide recommendations for utilities considering the existing uncertified fill and the predicted settlement.

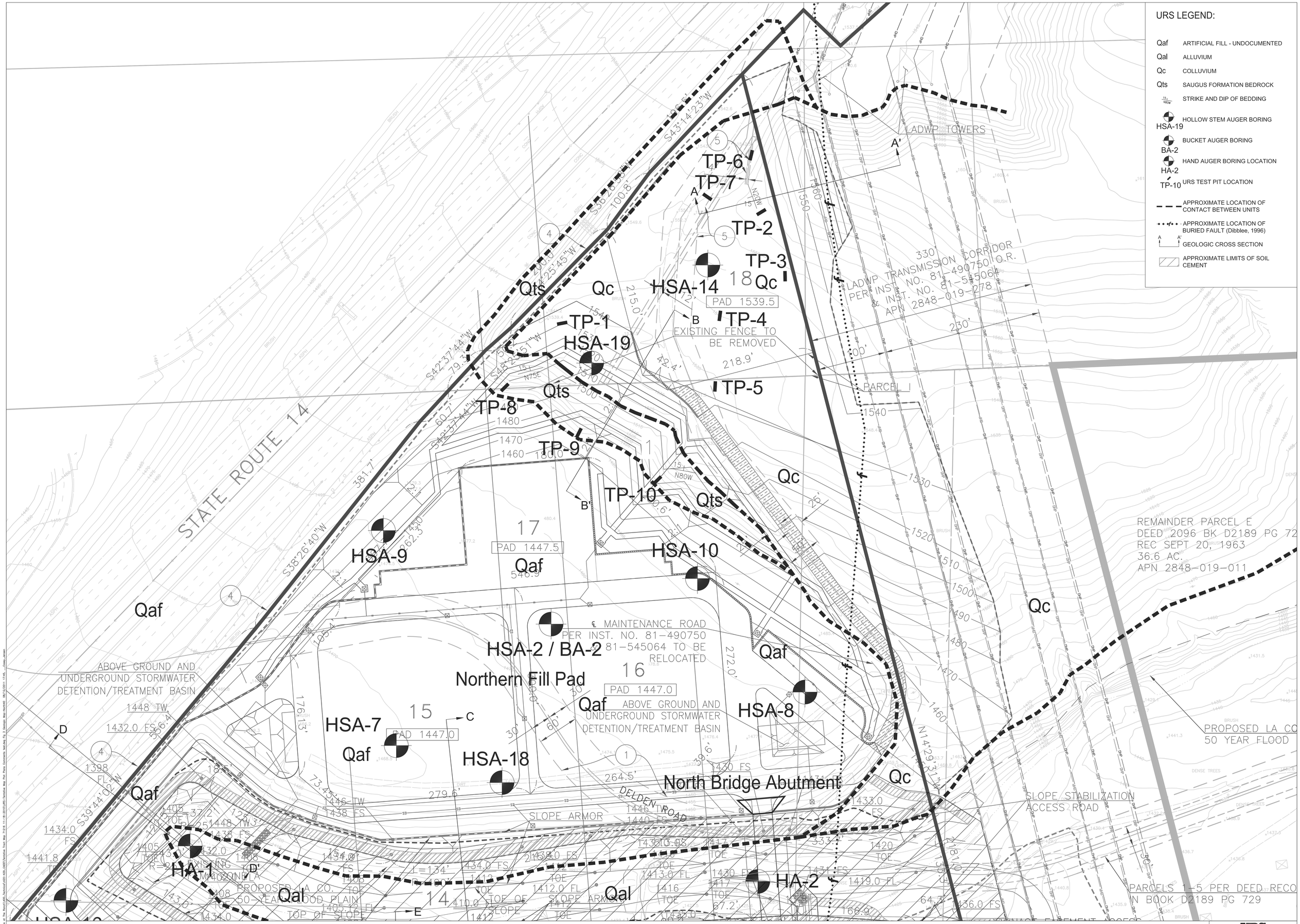
4. Requirements of the Geology Section are attached.

5. Include a copy of this review sheet with your response.

NOTE(S) TO THE PLAN CHECKER/BUILDING AND SAFETY ENGINEER:
A. PER THE SOILS ENGINEER, SEISMICALLY INDUCED SETTLEMENT WILL BE MITIGATED WITH THE INSTALLATION OF PILE FOUNDATIONS. AT THE BUILDING OR GRADING PLAN STAGE ADDITIONAL EXPLORATION WILL BE REQUIRED TO VARIFY TOTAL DEPTH OF PROPOSED PILE FOUNDATIONS. PROPOSED PILE FOUNDATIONS MUST BE FOUNDED IN COMPETENT MATERIAL BELOW THE DEPTH OF SOILS SUSCEPTIBLE TO LIQUEFACTION.

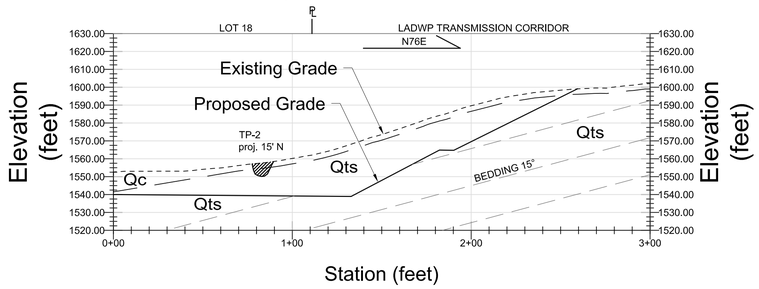
Reviewed by Yoshiya Morisaki Date 8/3/11

NOTICE: Public safety, relative to geotechnical subsurface exploration, shall be provided in accordance with current codes for excavations, inclusive of the Los Angeles County Code, Chapter 11.48, and the State of California, Title 8, Construction Safety Orders.
P:\Yosh\71216, TentT-NA_3

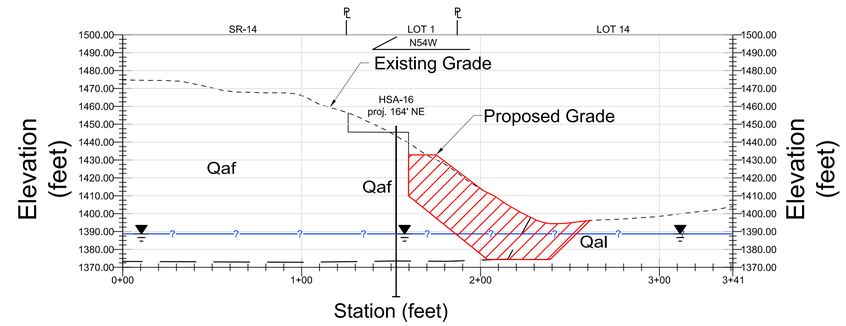

URS LEGEND:
Qaf ARTIFICIAL FILL - UNDOCUMENTED
Qal ALLUVIUM
Qc COLLUVIUM
Qts SAUGUS FORMATION BEDROCK
STRIKE AND DIP OF BEDDING
HSA-19 HOLLOW STEM AUGER BORING
BA-2 BUCKET AUGER BORING
HA-2 HAND AUGER BORING LOCATION
TP-10 URS TEST PIT LOCATION
APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
APPROXIMATE LOCATION OF BURIED FAULT (Dibblee, 1996)
A A' GEOLOGIC CROSS SECTION
APPROXIMATE LIMITS OF SOIL CEMENT
STATE ROUTE 14
LADWP TOWERS
LADWP TRANSMISSION CORRIDOR PER INST. NO. 81-490750 O.R. & INST. NO. 81-545064 APN 2848-019-278
PARCEL I
REMAINDER PARCEL E
DEED 2096 BK D2189 PG 72
REC SEPT 20, 1963
36.6 AC.
APN 2848-019-011
PAD 1539.5
PAD 1447.5
PAD 1447.0
EXISTING FENCE TO BE REMOVED
℄ MAINTENANCE ROAD PER INST. NO. 81-490750 81-545064 TO BE RELOCATED
Northern Fill Pad
ABOVE GROUND AND UNDERGROUND STORMWATER DETENTION/TREATMENT BASIN
North Bridge Abutment
DELDEN ROAD
SLOPE ARMOR
SLOPE STABILIZATION ACCESS ROAD
PROPOSED LA CO 50 YEAR FLOOD
PARCELS 1-5 PER DEED RECO IN BOOK D2189 PG 729
TOP OF SLOPE
TOE OF SLOPE
HSA-1 HSA-2 / BA-2 HSA-7 HSA-8 HSA-9 HSA-10 HSA-14 HSA-18 HSA-19
TP-1 TP-2 TP-3 TP-4 TP-5 TP-6 TP-7 TP-8 TP-9 TP-10
Qaf Qal Qc Qts
SCALE, feet
URS
GEOLOGIC MAP NORTH
Proj. No.: 29405568
Date: AUG 2011
Project: TRACT MAP NO. 71216 LOS ANGELES COUNTY, CA
Figure: 3

URS LEGEND:
Qaf ARTIFICIAL FILL - UNDOCUMENTED
Qal ALLUVIUM
Qc COLLUVIUM
Qts SAUGUS FORMATION BEDROCK
STRIKE AND DIP OF BEDDING
HSA-19 HOLLOW STEM AUGER BORING
BA-2 BUCKET AUGER BORING
HA-2 HAND AUGER BORING LOCATION
TP-10 URS TEST PIT LOCATION
APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
APPROXIMATE LOCATION OF BURIED FAULT (Dibblee, 1996)
A A' GEOLOGIC CROSS SECTION
APPROXIMATE LIMITS OF SOIL CEMENT
HSA-7
HSA-8
HSA-18
North Bridge Abutment
HSA-1
HA-1
HA-2
HSA-16
HSA-11 & 11A
HSA-13
South Bridge Abutment
HSA-5 & 5A
HSA-4
HSA-6
HSA-17
HSA-1 & 1A / BA-1
HSA-3
HSA-12
Southern Fill Pad
ABOVE GROUND AND UNDERGROUND STORMWATER DETENTION/TREATMENT BASIN
ABOVE GROUND STORMWATER DETENTION BASIN
DELDEN ROAD
SLOPE ARMOR
SLOPE STABILIZAT
ACCESS ROAD
DRAINAGE EASEMENT AC
EXISTING BUILDING AND
TO BE REMOVED
EXISTING FEMA ZONE A
EXISTING FENCE TO BE REMOVED
LADWP POWER LINES
EXISTING BUILDING TO BE RELOCATE
EXISTING SEPTIC SYSTEM TO BE REM
EXISTING 7'
STORM DRAI
VARIABLE WIDTH EASEMENT FOR FIRE ACCESS, INGRESS AND EGRESS, PUBLIC UTILITIES, & DRAINAGE PURPOSES
DRAINAGE EASEMENT ACCESS
EXIST 24" CMP STORM DRAIN PIPE
PLACERITA CANYON RD
PLACERITA CANYO
MAINTENANCE ROAD IN FAVOR OF LADWP SEE NOTE 7 PER INST. NO. 81-490750 & 81-545064 TO BE RELOCATED
CALTRANS R/W SEE SHT. T-4
REMAINDER PARCEL K INST. NO. 98-243231. O.R. REC. FEB 12, 1998
LADWP TRANSMISSIO
PER INST. NO. 81-
& INST. NO. 2848-0
SCALE, feet
URS
GEOLOGIC MAP SOUTH
Proj. No.: 29405568
Date: AUG 2011
Project: TRACT MAP NO. 71216 LOS ANGELES COUNTY, CA
Figure: 4

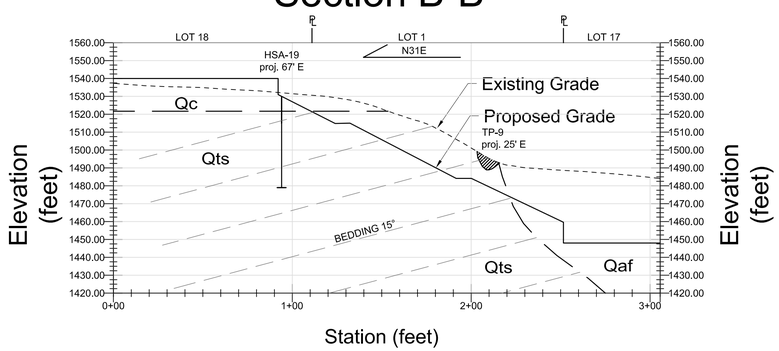
Section A-A'



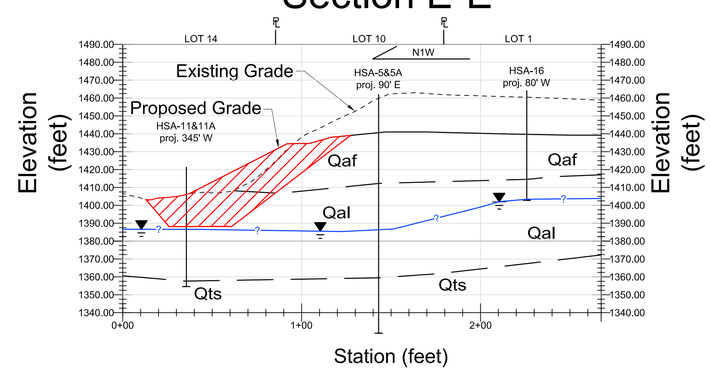
Section D-D'



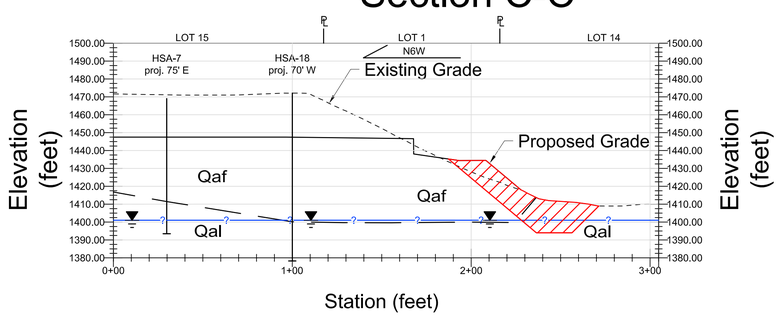
Section B-B'



Section E-E'



Section C-C'



GEOLOGIC CROSS-SECTION LEGEND:

——— ———	APPROXIMATE LOCATION OF CONTACT BETWEEN UNITS
— — — —	CONCEPTUAL BEDDING PROJECTION BASED ON MAPPED GEOLOGY
▼ ?	QUERIED LOCATION OF GROUNDWATER
N59W	ORIENTATION OF CROSS SECTION
Qaf	ARTIFICIAL FILL - UNDOCUMENTED
Qal	ALLUVIUM
Qc	COLLUVIUM
Qts	SAUGUS FORMATION BEDROCK
	APPROXIMATE LIMITS OF SOIL CEMENT IMPROVEMENT

0 40 80 120
SCALE, feet

URS

GEOLOGIC CROSS SECTIONS

Proj. No.: 29405568
Project: TRACT MAP NO. 71216
NEWHALL, CA 91321
Date: MAY 2011
Figure: 5

L:_29405568_Disney ABC Studios at The Ranch\400_Technical\420-429_0400\AC40-URS-sections2011-08.dwg sections 08/12/2011 15:25, __Casey_Jensen

Table A - SUMMARY OF HOLLOW-STEM BORING DATA AND ANALYSIS

Boring	Approximate Ground Surface Elevation (feet, msl)	Boring Depth (feet)	Approximate Bottom of Boring Elevation (feet, msl)	Depth to Ground water (feet)	Approximate Groundwater Elevation (feet, msl)	Approximate Fill Thickness (feet)	Bottom of Fill Elevation (feet, msl)	Approximate Depth to Bedrock (feet)	Approximate Top of Bedrock Elevation (feet, msl)	Proposed Finished Grade Elevation (feet, msl)	Adjacent Lot Numbers	Proposed Cut/Fill Height (ft)	Consolidation Settlement Due to Fill Placement (inch)	Seismic-Induced Liquefaction and Dry Sand Settlement (inch)	Foundation Type/ Pile or Shallow Foundation	Pile Tip Elevation (feet, msl)	Pile Length (feet)	Pile Type (driven or drilled)
HSA-1 1A, BA-1	1452	63	1389	50	1402	60	1392	60	1392	1442	2, 3	11		5.6	Pile	1387	55	Driven
HSA-2, BA-2	1477	46	1431	NE		61	1416			1447	15, 16, 17	30			Pile			Driven
HSA-3	1453	32	1421	NE		21	1432	25	1428	1441	3, 4	12		0	Shallow/Pile	1421	20	Drilled/Driven
HSA-4	1449	72	1377	63	1386	41	1408			1443	1, 2	6		2.7	Pile	1368	75	Driven
HSA-5 5A	1461	133	1328	75	1386	50	1411			1440	10	21		7.7	Pile	1370	70	Driven
HSA-6	1463	62	1401	61	1402	51	1412			1441	1, 9, 10, 11	23			Pile			Driven
HSA-7	1469	76	1393	72	1398	61	1408			1447	1,15	22		5.5	Pile	1372	75	Driven
HSA-8	1480	53	1427	NE		39	1441			1447	1, 16	33		0	Shallow/Pile	1417	30	Drilled/Driven
HSA-9	1475	60	1415	NE		39	1436			1470	1, 15, 17	5		0.7	Pile	1420	50	Driven
HSA-10	1489	43	1446	NE		34	1455	41	1448	1447	1, 16, 17	42		0	Shallow/Pile	1420	27	Drilled/Driven
HSA-11 11A	1421	67	1354	12	1409	5	1416	66	1355	1440	11, 12, 14	-19	2.2	5.9	Pile	1360	80	Driven
HSA-12	1441	27	1414	NE				7	1434	1441	1, 5, 6, 20	1		0	Shallow/Pile	1415	26	Drilled
HSA-13	1431	17	1414	16	1415					1440	7, 13, 14	-9			Pile			Driven
HSA-14	1545	29	1516	NE				11	1534	1540	18	6		0	Shallow Foundation			
HSA-16	1449	96	1353	75	1374	75	1374			1442	1	7		0	Pile	1365	77	Driven
HSA-17	1427	52	1375	15	1412					1441	5, 6, 7, 8	-14	1.1	0.4	Pile	1380	61	Driven
HSA-18	1473	92	1381	70	1403	70	1403			1447	14, 15, 16	26		0.2	Pile	1385	62	Driven
HSA-19	1530	51	1479	NE				5	1525	1515	1, 17, 18	15		0	Pile	1495	20	Drilled/Driven

Notes:

1. NE not encountered
2. To reduce down drag on pile due to consolidation of clayey soils, pile installation shall not commence until the estimated consolidation settlement due to fill placement is completed (estimated duration, 2 months). As an alternative, the pile capacity can be reduced for down drag forces. Within cut areas, the existing pad will be cut about 1 to 32 feet to the final grade; therefore, due to the nature of the onsite soils, the majority of any heave would be completed within a short period.