

## Memorandum

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**To:** Rafael Reyes  
Department of Transportation  
District 11, MS#58

**Date:** May 27, 2009  
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E.A 11-  
286401

**From:** DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
Geotechnical Services  
Office of Geotechnical Design – South 2, Branch D

**Subject:** Foundation Recommendations for Overhead Sign at SB I-5 North of Camp Del Mar OC

### Introduction

In accordance with your request, a limited foundation investigation has been conducted for the proposed Changeable Message Sign (CMS) to be located off the right shoulder of South Bound I-5 approximately 200 feet north of the Camp Del Mar Over Crossing at approximately Post Mile 54.8. The CMS structure will be a cantilevered structure and supported on a Caltrans Standard CIDH pile foundation. The current limited foundation investigation included a review of project plans, review of the Caltrans Standard Plans, review of archived boring information and the preparation of this memorandum. No exploratory borings or laboratory tests were conducted for the purpose of this investigation.

### Site Geology and Subsurface Conditions

Based on our review of archived Log of Test Borings (LOTB's) for the Camp Del Mar Over Crossing Bridge, the site is believed to be underlain by Coastal Terrace Deposits comprised of medium dense to dense and very dense, predominantly light brown and tan, silty fine to medium sand with scattered gravel. The sands are uncemented. No ground water was encountered in any of the borings drilled for the existing structure.

### Recommendations

The proposed CIDH pile foundation will extend nearly 30 feet below the existing ground

surface. The site soils consist primarily of uncemented medium dense to very dense, fine to medium sand with scattered gravel. The subsurface materials are competent and capable of supporting the CIDH pile foundation. The pile hole excavation may be accomplished through the use of relatively standard large diameter augering equipment. While no adverse soil conditions are anticipated, layers of loose, potentially caving sand and gravel may be encountered during pile hole excavation. Construction should be advised of this possibility.

OGDS staff is available for further assistance. Should you have any additional questions or require clarification, please contact Zia Yazdani at (858) 467-4054.

*Zia Yazdani*

Zia Yazdani

Associate Materials and Research Engineer.

cc Brian Hinman  
File

