CMAG ENGINEERING, INC.

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July 14, 2021
Project No. 15-142-SC

Waterways Consulting, Inc.
509A Swift Street
Santa Cruz, California 95060

Attn: Matt Weld, PE

SUBJECT: **ADDENDUM TO GEOTECHNICAL REPORT**
Proposed Buena Vista Amphibian Pond
Watsonville, Santa Cruz County, California

REFERENCE: CMAG Engineering, Inc. (October 10, 2019). *Geotechnical Investigation, Proposed Buena Vista Amphibian Pond, Watsonville, Santa Cruz County, California.* Project No. 15-142-SC.

Dear Mr. Weld:

In accordance with your authorization, we have completed an addendum to the existing geotechnical investigation for the subject project. This addendum presents additional geotechnical recommendations based on the field exploration and laboratory testing presented in the referenced report. It is a pleasure being associated with you on this project. If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office.

Sincerely,

CMAG ENGINEERING, INC.

Adrian L. Garner, PE, GE
Principal Engineer
C 66087, GE 2814
Expires 6/30/22

Distribution: Addressee (Electronic Copy)

1.0 INTRODUCTION

Based on our conversations with Waterways Consulting, Inc. (Waterways), it is our understanding that the fill quantities for the construction of the pond, using the on-site suitable earth materials as described in Section 7 of the referenced report (CMAG, 2019), fall short of the project requirements.

The recommendations presented in this addendum supersede the recommendations in the referenced report. All other recommendations presented in the report, not included in this addendum, should be adhered to.

2.0 RECOMMENDATIONS

Our recommendations outlined in the referenced report include removal of the silty sand alluvial soils in upper 3.5 to 4 feet across the site and separating them from the underlying Aromas Sands. Due to the cohesionless nature of the soils in the upper 3.5 to 4 feet, they were not recommended for use as fill for the construction of the pond. To achieve the required fill quantities for the project, it is our opinion that the silty sands in the upper 3.5 to 4 feet may be **blended** with the underlying Aromas Sand for the construction of the **embankment.** However, this recommendation does **not** apply for the construction of the clay liner. The silty sandy alluvial soils in upper 3.5 to 4 feet must be thoroughly blended with the Aromas Sand (on-site clayey sand and sandy lean clay) for the embankment fill. **The Geotechnical Engineer must observe the blending process and the finished product prior to placement of fill.**

3.0 LIMITATIONS

Our addendum was performed in accordance with the usual and current standards of the profession, as they relate to this and similar localities. No other warranty, expressed or implied, is provided as to the conclusions and professional advice presented in this report.

Soil and geologic conditions can vary significantly between sample locations.

As in most projects, conditions revealed during construction excavation may be at variance with preliminary findings. If this occurs, the changed conditions must be evaluated by the Project Geotechnical Engineer and the Geologist, and revised recommendations be provided as required.

This addendum is issued with the understanding that it is the responsibility of the Owner, or of his Representative, to ensure that the information and recommendations contained herein are brought to the attention of the Architect and Engineer for the project and incorporated into the plans, and that it is ensured that the Contractor and Subcontractors

implement such recommendations in the field.

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

The findings of this addendum are considered valid as of the present date. However, changes in the conditions of a site can occur with the passage of time, whether they be due to natural events or to human activities on this or adjacent sites. In addition, changes in applicable or appropriate codes and standards may occur, whether they result from legislation or the broadening of knowledge.

Accordingly, this addendum may become invalidated wholly or partially by changes outside our control. Therefore, this addendum is subject to review and revision as changed conditions are identified.