3. REQUIREMENTS FOR CONSULTANTS PROVIDING CORROSION ASSESSMENTS OF DEPARTMENT PROJECTS

This section outlines the roles and responsibilities of consultants providing corrosion investigation services and corrosion mitigation recommendations for Department projects. In addition, this section can be used by Department staff providing consultant oversight of corrosion investigation services and mitigation recommendations prepared by consultants.

The flowchart at the end of this section outlines the roles and responsibilities of the various Department functional groups assisting consultants performing corrosion investigations and lists the responsibilities of the consultant.

Foundation investigations are required for all structures (including bridges, tunnels, retaining walls, MSE walls, sound walls, ground anchor walls, sign structures, maintenance stations, pumping plants/stations, toll plazas, culverts, etc.). All foundation investigations require a corrosion investigation and evaluation. Preliminary and final Foundation Reports prepared by consultants should include all available corrosion data for the site and a brief discussion of the data. If corrosion data is not available or is insufficient to provide conclusive information regarding the corrosivity of the site, then additional corrosion sampling and testing is required per Department guidelines during the field investigation phases. If corrosion data can still not be obtained, then the site should be assumed to be corrosive and corrosion mitigation required. In such cases it is recommended that the Corrosion Branch be consulted.

Consultants should follow the recommendations for preparing reports as discussed in the following Geotechnical Division documents (see References): ***Caltrans Geotechnical Manual***, and the ***Foundation Reports for Bridges.***

Consultants under contract to provide design related recommendations should include corrosion recommendations consistent with Department guidelines. Corrosion design recommendations should be based on the worst case test results from the site in accordance with Department guidelines. Sufficient information regarding the number and location of soil borings, sampling, and testing should be included to allow a thorough review of any corrosion recommendations by Department staff.

Corrosion testing of soil (both surface and subsurface soil samples) and water samples shall be performed in accordance with the applicable ***California Test*** *(CT)* (see References). If procedures and equipment other than those specified in the applicable *CT* are used, those variations must be approved, documented, and presented with the corrosion test results.

References to the test methods used for corrosion testing must be included on each page that presents the corrosion test results and analysis. Some variations

(like a one-point resistivity test instead of a minimum resistivity test) will not be allowed. If in doubt about whether alternative test methods are acceptable or not, contact the Corrosion Branch of METS before starting any testing.

Minimum resistivity and pH tests are outlined in ***CT 643*** (see References). Test procedures for determining water-soluble sulfate and chloride contents are outlined in ***CT 417*** and ***CT 422*** (see References). Consultants should follow the guidelines presented in this document for performing corrosion assessments of project sites when performing work for the Department.

The Corrosion Branch of METS is available to review all corrosion investigations conducted by consultants, should additional assistance be needed. Upon request from the functional groups performing oversight, the Corrosion Branch will comment on the corrosion aspects of Materials Reports, Geotechnical Design Reports, Foundation Reports, and Preliminary Reports prepared by consultants.