

DEPARTMENT OF TRANSPORTATION
ENGINEERING SERVICE CENTER
Transportation Laboratory
5900 Folsom Boulevard
Sacramento, California 95819-4612



METHOD OF TEST FOR FRACTURE AND DEFLECTION OF METAL TRAFFIC SIGNAL SECTION HOUSING

CAUTION: Prior to handling test materials, performing equipment setups, and/or conducting this method, testers are required to read “**SAFETY AND HEALTH**” in Section E of this method. It is the responsibility of whoever uses this method to consult and use departmental safety and health practices and determine the applicability of regulatory limitations before any testing is performed. Users of this method do so at their own risk.

A. SCOPE

This method covers the procedure for evaluating the ability of a metal traffic section to resist failure due to a simulated wind loading.

B. APPARATUS

1. Two 609.6-mm long sections of 38.1-mm diameter standard steel pipe with 101.6 mm of thread at one end of each pipe.
2. Four lock nuts (type used for signal face mounting).
3. One 101.6 x 152.4 mm x 12.7-mm structural steel plate with a 50.8-mm diameter hole in its center.
4. A rigid clamping device.
5. A loading device.
6. Deflection measuring apparatus (2.5-mm resolution).

C. TEST PROCEDURE

1. Assemble a single section, without the optical unit, as shown in Figure 1.
2. Slowly apply test load¹ at point indicated on Figure 1.
3. Under the test load, observe and record any fracture in the housing and measure the deflection at the point of load.

D. REPORTING OF RESULTS

Report test results on Form TL-6039.

E. SAFETY AND HEALTH

Laboratory Safety

Prior to handling, testing or disposing of any materials, testers are required to read Caltrans Laboratory Safety Manual-Part A, Section 5.0, Hazards and Employee Exposure; Part B, Sections: 5.0; Safe Laboratory Practices; 6.0, Personal Protective Apparel and Equipment; and Part C, Section 1.0; Safe Laboratory Practices.