

Letter to Contractor Following Surface Smoothness Testing

All deck surfaces must be tested for surface smoothness to be assured of compliance with the *Contract Specifications*, Section 51-1.01D(3)(b)(ii), *Concrete Structures – General – Quality Assurance – Department Acceptance – Testing Concrete Surfaces – Surface Smoothness*. Note that the specifications have the following requirements:

1. Surfaces to be tested include the completed roadway surfaces of structures, approach slabs, the adjacent 50 feet of approach pavement, surfaces of concrete decks to be covered with another material, and completed concrete deck surfaces, including ramps and landings of a pedestrian overcrossing (POC).
2. Except for a POC, testing will be with a bridge profilograph in the longitudinal direction, and with a 12-foot straightedge in the transverse direction.
3. POC deck surfaces will be tested with a 12-foot straightedge in the longitudinal direction and a 6-foot straightedge in the transverse direction.

1 - Straightedging Deck Surfaces

When the *Contract Specifications* require the use of a straightedge to check deck surfaces, the decks must be systematically checked with a 12-foot straightedge over the entire area. This should be done as soon as the concrete curing process is complete. Any places which do not meet specifications should be marked with spray paint.

2 - Profilograph Testing of Deck Surfaces

When the *Contract Specifications* require the use of the bridge profilograph to check deck surfaces, the deck will be tested in accordance with [California Test 547, Method of Test for Surface Smoothness Using the Bridge Profilograph](#). High points in excess of 0.02 foot should be marked with spray paint. It is the Contractor's responsibility to schedule the profilograph testing operations. The Contractor shall request testing at least 10 days prior to need and must ensure that the entire area to be tested has been cleared and cleaned of all obstructions.

3 - Letter to Contractor

As soon as possible after testing the deck with the profilograph and/or the straightedge, a letter should be written to the Contractor advising that the deck has been checked for compliance with the profilograph requirements and/or the straightedge requirements. The letter should describe the specific locations that fail to meet the straightedge specifications or describe any deficiencies in meeting the profilograph specification.

The letter should state that the specific deficiencies must be corrected before the contract can be accepted. After the deficiencies have been corrected, or if the entire deck initially complies with the applicable straightedge or profilograph requirements, then write the Contractor a letter stating that the deck was checked and that it complies with the profilograph requirements and/or the straightedge requirements, whichever is applicable. See Section 3.1 below for a sample portion of a letter relative to concrete decks or concrete approach slabs which are to be covered with one inch or more of another material. See Section 3.2 below for a sample portion of a letter relative to the completed surfaces of bridge decks, approach slabs, and adjoining 50 feet of approach pavement.

The specifications allow the Engineer to point out a contract deficiency to the Contractor at any time. However, once the Engineer is completely satisfied that the deck surface complies with the specifications and has given the Contractor a letter advising them of this, it is the mark of an ethical Engineer to consider the matter closed.

3.1 Sample portion of a letter for concrete decks or concrete approach slabs which are to be covered with one inch or more of another material.

The finished surface of the deck concrete at _____
Bridge No. _____ has been tested for compliance with the straightedge requirements in Sections 51-1.01D(3)(b)(ii), *Concrete Structures – General – Quality Assurance – Department Acceptance – Testing Concrete Surfaces – Surface Smoothness*, and 51-1.03F(5)(a), *Concrete Structures – Construction – Finishing Concrete – Finishing Roadway Surfaces – General*, of the *Contract Specifications*.

(USE EITHER)

All areas tested were found to comply with the specified straightedge requirements.

(OR)

Areas that do not meet the straightedge requirements have been marked, and are located as noted below:

(EXAMPLES) Sta. 300+52 (5 ft to 15 ft from Right EOD)

 Sta. 301+60 (10 ft from Right EOD)

 Hinge in Span 3 (Entire bridge width)

 Transversely across longitudinal construction joint (Sta. 300+10 to 302+10)

These deficiencies must be corrected before the _____
overlay is placed. (describe overlay)

Notification must be given to the Resident Engineer prior to performing the corrective action.

