

BART Agreement Number: 6M8143

Approval Date: 1/05/2021

Work Plan: No. B.06-02 – Material Testing Services of Hanger Rods and Connections

Scope:

The scope of services for this Work Plan includes the deflection/strain testing of a connection configuration using a urethane material as described below.

A. MATERIAL PREPARATION

Urethane material is being shipped as a sheet instead of washer format needed for testing. Consultant shall prepare material accordingly:

1. Manufacture a die stamp to match washer size.
2. Cut out washers from the sheet of Urethane supplied by BART representative.

B. CONNECTION CONFIGURATION TESTING:

Consultant shall utilize a testing fixture as shown herein to orient the hanger rods and connection hardware subject to testing. A 3-input data acquisition system shall be employed to continuously record and plot the hanger rod strain values against the concrete block displacement.

An array of dial indicators shall be used to measure any lateral displacement of the steel washers in relationship to the either the beam or concrete block bearing surfaces at the final position of the concrete blocks. Each configuration shall be tested at three (3) 3 torque values to be specified by BART. Each test shall be repeated three times, yielding 9 data sets for each configuration tests as per the following:

1. Setup A: Urethane Springs

See Section 6.0 Test Setup for the connection set up configuration.

Prime: HDR

Subconsultant	Amount	DBE (Y/N)	SBE (Y/N)
Inspection Services, Inc.	\$ 9,950	Y	Y

Total Work Plan Value: \$ 13,823