

SPECIAL PROVISION

PROJECT #
PIN #

SECTION 02479S

MONITORING SETTLEMENT OF ADJACENT STRUCTURES

Add Section 02479:

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Monitoring settlement of adjacent structures or other settlement-sensitive facilities, that arise from construction of embankments, retaining walls, and other settlement inducing roadway elements.

1.2 RELATED SECTIONS

- A. Section 01721: Survey

1.3 REFERENCES Not Used

1.4 DEFINITIONS Not Used

1.5 SUBMITTALS

- A. Settlement Monitoring Locations Plan for review at least 10 calendar days before starting adjacent construction work.
- B. Baseline measurements for information submitted at least 4 calendar days before starting adjacent construction work.
 - 1. Submit digital file containing dates and at least 2 measurements at each settlement-monitoring location.
 - 2. Signed and sealed by a Professional Land Surveyor licensed in the State of Utah
- C. Weekly monitoring report for information submitted no later than the Wednesday of the following week.
 - 1. Submit digital file containing a log of all measurements at each settlement-monitoring location.

2. Signed and sealed by a Professional Land Surveyor licensed in the State of Utah.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Refer to Section 01721 for equipment requirements.
 1. Meet ± 0.01 foot for horizontal and vertical tolerances for the monitoring of settlement of adjacent structures and other settlement-sensitive facilities.
 2. Equipment for Department use as specified in Section 01721 is not required

PART 3 EXECUTION

3.1 GENERAL

- A. Monitor settlement at the locations shown.
- B. Make prior arrangements with the property owner to allow access to the property during daylight hours only, and identify appropriate locations to monitor and take measurements.

3.2 BASELINE MEASUREMENT

- A. Notify the Engineer at least 10 calendar days before starting adjacent construction work.
 1. Mark the intended settlement monitoring locations according to the authorized settlement location plan, at least 7 calendar days before starting adjacent construction work.
- B. Measure the elevation of the intended settlement-monitoring locations twice (at least 2 days apart), with the later measurement taken no later than 4 calendar days before starting adjacent construction work.
 1. If the initial set of readings differ by more than 0.02 ft., perform additional measurements (at least one day following the latest set of readings) prior to starting adjacent construction work.

3.3 SETTLEMENT MONITORING

- A. Measure elevations of the settlement-monitoring locations at least once per week after construction has begun.

- B. Continue weekly measurements until the Engineer determines that the frequency of measurements can be revised or discontinued.

3.4 REMOVAL AND RESTORATION

- A. Remove settlement-monitoring identification materials once settlement measurements are discontinued.
- B. Restore settlement-monitoring locations to their original condition.

END OF SECTION