


TO: SUPERSEDED BY EB 21-057 EFFECTIVE 11/24/21	<h1>ENGINEERING INSTRUCTION</h1> <p>NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
Distribution: 30 Main Office 32 Regions 34 Special	SUBJECT: SCOUR MONITOR REPORTING AND MAINTENANCE REQUIREMENTS Subject Code: 7.35-12
APPROVED:  8/29/90 ARUN M. SHIROLE, Deputy Chief Engineer (Structures)	Code: E.I. 90-32 Date: 08/30/90 Supersedes:

A bridge scour monitoring device has been installed on several State bridges. This monitor consists of a 1-1/2" diameter steel rod probe with PVC casing enclosed in a 2-1/2"-3" steel conduit. The conduit is attached to a bridge pier or abutment with the lower end of the steel rod probe resting on the earth (or protective rip-rap) supporting the foundation. The upper end of the rod is attached by steel cable to a reel. Rotary movement of the reel measures the distance the cable unwinds, which is equal to the scour loss at the probe end. The device provides a digital readout of the scour measurements.

The purpose of this E.I. is to establish a procedure for reading and reporting the scour measurement. In addition, required maintenance activities are given.

Recording Scour Measurements

The Regional Director will appoint a suitable Regional Group to record the scour measurements. The following suggested schedule may be adjusted with the concurrence of the Regional Structures Engineer in accordance with local conditions.

- . Everyday during heavy floods when flood warnings have been issued. Readings shall continue until the flood subsides and the flood warning lifted.
- . Immediately after every flash flood.
- . Once every two weeks during the normal spring runoff period.
- . Once every two months, ± 4 days during the remainder of the year.

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Each time a reading is taken, it will be reported, in writing, to the Regional Structures Engineer. The Regional Structures Engineer will review the report to determine if action should be taken. The original report shall be retained in the BIN Folder for the bridge.

Warning Lights

Some scour monitors may include a red warning light which will be automatically triggered if the probe descends a predetermined amount. It is important that all Regional personnel and Local Public Safety Officers be made aware of this signal, and be advised of the need to immediately report an illuminated warning light to the Regional Maintenance Engineer and the Regional Structures Engineer. After normal work hours, the Regional Duty Office will be responsible for notifying the Regional Maintenance Engineer and the Regional Structures Engineer.

Maintenance of the Scour Monitoring Device

The Regional Director shall be responsible for assuring that the scour monitoring device is checked for proper operation once each year during the dry season. The purpose of this off-season check is to assure that the probe can drop unrestricted when scour occurs. Readings should be recorded before and after the probe is reset and reported to the Regional Structures Engineer.

Batteries should be checked every time a scour reading is made and replaced, as necessary. Questions should be directed to the Bridge Safety Assurance Unit of the Structures Design and Construction Division at (518) 485-1587. This Engineering Instruction shall take effect immediately.