

**STATE PROJECT NO. 0130-0188  
REHABILITATION OF BRIDGE NO. 07044  
INTERSTATE 84 OVER OLIVER BROOK  
TOWN OF SOUTHURY**

**PROJECT DESCRIPTION**

---

**Project Location:**

Bridge No. 07044 conveys Oliver Brook beneath Interstate 84 (I-84) in the Town of Southbury. The structure is located approximately ¾ mile east of the Exit 14 interchange of I-84 and State Route 172.

**Existing Bridge:**

Bridge No. 07044, built in 1961, is a 120-inch diameter asphalt coated corrugated metal pipe (ACCMP) with a total length of approximately 290 feet and a ballast between 15 and 25 feet. I-84 consists of two 12-foot travel lanes with a left and right shoulder traveling east and two 12-foot travel lanes with a left and right shoulder traveling west, separated by approximately 100 feet of vegetated median. The AADT of I-84 over the structure is 74,700 total vehicles per day, 37,400 eastbound and 37,300 westbound (2018 CTDOT Traffic Logs). The overall bridge rating is serious (Rating=3) primarily due to the condition of the invert. The full length of the pipe invert, 50 inches in width, is severely deteriorated. Section loss up to 5-feet long and 3-foot wide is present, as well as holes over 3 feet long and 5 inches wide, resulting in voids 8 inches below the invert in some locations. The culvert is supported by reinforced concrete cradles and collars at the inlet and outlet, which has failed at the outlet due to heavy embankment erosion from a broken 15-inch ACCMP conveying drainage from I-84 through the concrete collar. A perched outlet condition has created a 12-foot diameter scour hole undermining the cradle up to 8 feet wide and 27 inches deep. Five-foot by ten-foot sections of an undermined concrete channel adjacent to the outlet has broken off into the channel. The embankment along the waterway downstream of the outlet has eroded up to 6 feet high and 4 feet laterally.

Single phase aerial utilities including Frontier Communications of Connecticut and Crown Castle Fiber Networks exist in the project vicinity along Russell Road. There are no known underground utilities within the project area. The Project Site is not within an Aquifer Protection Area and is not within the FEMA 100-year floodplain. Inland wetlands were flagged downstream of the outlet within the project area. A review of the CTDEEP Natural Diversity Database (NDDB) indicates that the project area is not located within an area of known habitat for endangered, threatened, or special concern species (NDDB map dated December 2022).

**Proposed Bridge Rehabilitation:**

The purpose and need of this project is to address the structural condition of the bridge. The rehabilitation will consist of constructing a 9-foot corrugated aluminum pipe within the existing 10-foot pipe. The annular space between the existing pipe and the new pipe would be filled with controlled low strength material. Prior to the construction of the structural pipe liner, the existing pipe should be cleaned and any voids around the existing pipe should be filled with pressure grout. Angled corner baffles should be installed to facilitate fish passage and may be fastened to the proposed liner between the corrugations. Additionally, this rehabilitation includes the installation of a concrete fishway at the outlet.

The concrete cradle at the inlet will be protected in place while the deteriorated concrete collar is removed and replaced. The concrete cradle at the outlet would be removed, the existing culvert cut back approximately 12 feet and reinforced concrete endwall/wingwalls constructed. Water handling will likely consist of cofferdams and low flow pumping through the existing culvert. The endwall/wingwalls shall be installed in concert with the construction of the concrete fishway.

Permanent construction access roads will be established off I-84 to reach the upstream and downstream ends of the structure to facilitate the completion of the proposed work. All proposed rehabilitation work can generally be performed with minimal,

temporary disturbance to the travel way, consisting of off-peak lane and shoulder closures. Sections of the existing R-B 350 guiderail would require temporary removal to maintain admittance to the construction access roads.

Construction is anticipated to begin in the spring of 2026.

Currently, the construction cost is to be undertaken with 90% Federal funds and 10% State funds.