

Feature Release  
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**And the Fort was Still There**  
**Maine Bridge Project Gets Underway with a Blast**

PROSPECT, Maine -- Fort Knox, the 150-year-old sentinel that guarded Maine's Penobscot River Valley from British attack, had never taken enemy fire. Yet fears that it could become a civilian casualty turned a minor blasting project into a critically important element in the campaign to construct a new Waldo-Hancock Bridge, a vital link of U.S. Route 1 south of Bangor.

As Maine Drilling and Blasting prepared to lay the groundwork for the west shore foundation pier, members of the Friends of Fort Knox raised concerns that vibration would damage one of the state's most popular historic attractions, just 1,500 feet from the blast site.

Concerns for the fort's safety, however, were quickly allayed, first during informational meetings with Fort Knox board members, and later by data recorded during a series of test blasts. Seismographs monitored at the fort recorded no disturbance.

In the end, said Tom Doe, project manager for the Maine Department of Transportation, we were quite pleased. And, no doubt, relieved as well, because this \$65 to \$75 million bridge construction job is not on any normal timetable. In fact, safety concerns raised last summer about the present bridge put the project on a light-speed fast track. According to Doe, a project of this scale in Maine could be usually be counted on to take six years with bureaucratic and legislative delays built in. The new bridge, for which a groundbreaking ceremony was held on Dec. 4, 2003, is slated to open for traffic by the summer of 2005, less than two years later.

Meeting that goal means overcoming obstacles at a dead-run and avoiding potential delays. With that in mind, the pressure was on the blasting subcontractor, first to assuage the concerns of the fort's defenders and then to proceed with pace and precision, reducing about 2,000 cubic yards of rock to rubble without shaking loose even a grain of the fort's crumbling ancient mortar.

However, while fears about the fort got the ink in local papers, the blasters were equally concerned with preserving the structural integrity of the present bridge pier, just a stone's throw (125 feet) from the heavily matted blast site. On that account too, seismograph readings taken at the base of the pier were well within acceptable limits, .43 feet per second, less impact than that created by jumping on the floor in a wood-frame house, according to Wayne Flagg, division manager for Maine Drilling and Blasting. The company, based in Gardiner, Maine, operates in all New England states.

The blasting paved the way for a footing that will hold one of the two 420-foot pylons supporting the two-lane, single-plane, cable-stayed bridge that will carry coastal traffic between the towns of Prospect and Verona Island. An observation deck is planned for the top of the western tower. According to the MDOT, no other bridge in the United States features such an attraction.

The current long-span suspension bridge, with a total length of 2,040 feet, was the first of its kind in the state. Designed by David B. Steinman, it was constructed in 1931 at a cost of \$846,000. Though originally a toll road, the bridge paid for itself in 22 years and the toll was removed.

In 1998, the Maine D.O.T. accepted a study group's recommendation for a major rehabilitation that could extend the bridge's useful life by about 75 years. However, a month after work began on the south main cable in May 2003, inspections revealed more corrosion and cable breakage than expected. The bridge was immediately posted and trucks weighing more than 12 tons were banned until temporary measures could be taken to strengthen the cables. At the same time, the D.O.T. decided to fast-track the construction of a new bridge.

The design developed by the Figg Engineering Group, was described by the D.O.T. as simple, clean and historical, and overwhelmingly approved by a 30-member community panel. The granite theme of the design pays homage to the significance the stone has had on the local economy over the past two centuries; the pylon shape of the towers is modeled after the Washington Monument, built, at least partially, from granite quarried from nearby Mt. Waldo.

The bridge construction contract was awarded to a heavyweight team including a joint venture of Cianbro Corporation and Reed and Reed along with The Lane Construction Corporation and Flatiron Construction Inc.