



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street, Suite 900

Boston, MA 02114-2524

MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

ROBERT W. GOLLEDGE, JR.
SECRETARY

Tel. (617) 626-1000
Fax. (617) 626-1181
<http://www.mass.gov/envir>

September 7, 2006

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Route 28 at Finlay Road and Pond Road Intersection
Improvement Project
PROJECT MUNICIPALITY : Orleans
PROJECT WATERSHED : Cape Cod
EOEA NUMBER : 13850
PROJECT PROPONENT : MassHighway
DATE NOTICED IN MONITOR : August 8, 2006

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.03 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

As described in the Environmental Notification Form (ENF), this project consists of widening and re-alignment of the Route 28 at Finlay Road and Pond Road intersection. The purpose of the project is to improve vehicular and pedestrian safety at the intersection by creating a traditional four way intersection with usable paved shoulders. The work will consist of a combination of full depth pavement reconstruction within the limits of the roadway widening, cold planning and overlay of the existing roadway surface and placement of a bituminous concrete berm. Incidental work will include roadway drainage improvements, guardrail relocation, the installation of new curbing, the adjustment of utilities, the application of pavement markings and new signage and creation of painted islands.

The project also includes the construction of a 24" diameter flood control/overflow structure (FCS) to be constructed at the edge of the Bordering Vegetated Wetlands (BVWs)

located west of the Route 28 intersection and south of Finlay Road in order to convey flows from high intensity storm events into Crystal Lake. The new outlet at Crystal Lake will run parallel to the town landing and will be fitted with an energy dissipater and riprap pad in order to prevent erosion and sedimentation. This FCS is not intended to receive stormwater runoff from the proposed roadway improvements. Instead, the FCS has been proposed to mitigate an existing flooding concern with a kettle pond located on Kettle Pond Road, approximately 0.20 miles from the intersection of Route 28 at Finlay Road and Pond Road.

Portions of the project site are located within Estimated and Priority Habitat areas regulated under the Massachusetts Endangered Species Act (MESA) and the Massachusetts Wetlands Protection Act (WPA). The proponent has contacted the Natural Heritage and Endangered Species Program (NHESP) to determine what species are located within the Estimated and Priority Habitat. Documentation received from NHESP during this ENF review process has indicated that the intersection improvements appear to be exempt under the MESA regulations and that NHESP had no rare species concerns associated with the project. Additionally, the project will be filed with NHESP under the WPA Notice of Intent process for further review.

The project is undergoing MEPA review pursuant to Section 11.03(11)(b) because the project is located within the Pleasant Bay Area of Critical Environmental Concern (ACEC). The project will require an Order of Conditions from the Orleans Conservation Commission (and a Superseding Order of Conditions if the Order is appealed). The project may require a NPDES permit from the U.S. Environmental Protection Agency (U.S. EPA). The project may be subject to Coastal Zone Management (CZM) federal consistency review. The project may require a Chapter 91 permit from the Massachusetts Department of Environmental Protection (MassDEP), because Crystal Lake is classified as a Great Pond.

The project will receive both state bond funds and Federal Congestion Mitigation and Air Quality Improvement Program funds, and is being undertaken by a State Agency. Therefore, MEPA jurisdiction for this project is broad and shall extend to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment.

Intersection Improvements

The proposed improvements at the Route 28 and Finlay and Pond Road intersection appear to be capable of effectively improving site geometry and safety while minimizing impact and/or damage to the environment. This redevelopment project will be conducted within existing road right-of-ways, with limited tree and vegetation removal associated with construction processes. The stormwater management capabilities of the intersection will be improved to the extent practicable, resulting in increased Total Suspended Solids (TSS) removal and the introduction of deep sump hooded catch basins and leaching catch basins. Pedestrian and bicycle movements at the intersection will be accommodated through an increased shoulder width and improved road geometry. The proponent has considered future traffic mitigation opportunities through the provision of traffic signal control infrastructure, should future traffic conditions warrant the installation of a traffic signal.

Flood Control Structure

The bulk of comments received and discussion at the site consultation meeting focused on the proposed FCS. As presented in the ENF, this FCS will not convey stormwater flows associated with the intersection improvement project. The FCS has been proposed to alleviate springtime flooding conditions associated with a kettle pond in a neighborhood located west of the Route 28 intersection. The relationship of this project to the intersection improvements is unclear and it is my understanding that this FCS was requested by the Town of Orleans. Excess flows conveyed to the kettle pond and BVWs during extreme storm events will ultimately discharge into Crystal Lake, an Outstanding Resource Water (ORW) located within an ACEC. Crystal Lake is also considered a Critical Area under the MassDEP Stormwater Management Policy, because it contains public swimming beaches (Standard 6) and is designated as a Great Pond by MassDEP. Therefore, the proposed flood control structure raises several concerns associated with the creation of a new connection from an upstream non-ORW designated water body to an existing designated ORW.

The proponent should work with local officials, MassDEP, and the ACEC program to evaluate the existing drainage area associated with the kettle pond, the BVW south of Finlay Road, and Crystal Lake to determine the hydrologic connection between the various wetland areas. A drainage study prepared by Vanasse Hangen Brustlin, Inc. (VHB) in 1998 assesses kettle pond drainage improvements, but does not specifically propose the current drainage improvement alternative presented in the ENF. Data should be provided to MassDEP and the ACEC program during the WPA review process and should: characterize the extent of the wetland system contributing to this structure; the anticipated volumes being conveyed to Crystal Lake; potential impact to rare or priority habitat; and demonstrate that the proposed system complies with MassDEP Stormwater policies. Consideration should be given to how contributing flows may affect the water quality of Crystal Lake. This information will provide a greater understanding of contributing flows to the kettle pond, and will allow for evaluation of impacts to the downstream ORWs should a connection be established.

The proponent should also investigate the feasibility of improving the culverted area between the kettle pond and the BVW. At the time of the site consultation meeting, this culvert was buried. Therefore, the functionality of this existing connection point was unable to be evaluated. It is unclear if flood storage capacity could be expanded utilizing improved existing structures in lieu of the proposed FCS that would discharge to Crystal Lake. The proponent should evaluate this alternative during the WPA review process in advance of installing the proposed FCS.

Finally, the proponent should consider alternatives that may reduce the impact of the discharge outfall pipe adjacent to the Crystal Lake boat ramp. The proponent should confirm that appropriate levels of energy dissipation have been provided during the WPA review process to reduce erosion during extreme storm events. The proponent should ensure that an erosion and sedimentation plan is in place to maintain the entire length of the discharge pipe throughout its lifetime and that the integrity of the boat ramp and small beach area is maintained consistent with existing conditions.

The proponent has committed to working with the MassDEP, Orleans Conservation Commission and ACEC program in the permitting and review of the project. While I am not recommending further review under the MEPA regulations for this project, the proponent must provide the supplemental information requested by the MassDEP with the Notice of Intent filing to the Orleans Conservation Commission. Additionally, the proponent should provide materials to the ACEC program as part of this Notice of Intent process to ensure that measures are taken to avoid, minimize or mitigate damage to the environment. If it is determined that CZM federal consistency review is required, the proponent shall provide materials to CZM for their consideration as well. Consideration should be given to the concerns raised by the Orleans Health Department as the project proceeds through local permitting processes. I am certain that based upon input received during the MEPA comment period from State agencies and interested parties, that the proponent can resolve any remaining issues during the State permitting process. No further MEPA review is required.

September 7, 2006
Date


Robert W. Golledge, Jr.

Comments received:

- 08/17/2006 Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program
- 08/22/2006 Department of Conservation and Recreation – ACEC Program
- 08/22/2006 Town of Orleans – Health Department
- 08/24/2006 Massachusetts Office of Coastal Zone Management
- 08/25/2006 Donald H. Powers
- 08/25/2006 Massachusetts Department of Environmental Protection – SERO
- 08/28/2006 Massachusetts Executive Office of Transportation
- 08/28/2006 Friends of Crystal Lake
- 08/28/2006 Orleans Pond Coalition
- 08/28/2006 Cape Cod Commission

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