

ENF Environmental Notification Form

<i>For Office Use Only</i> Executive Office of Environmental Affairs	
EOEA No.:	13277
MEPA Analyst:	Bill Gagne
Phone: 617-626-	1025

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Yarmouth--Reconstruction of Willow Street from approximately 650 feet North of the Barnstable Town Line to approximately 500 feet North of the Route 6, Exit 7 Ramps		
Street: Willow Street, Higgins Crowell Road and Oak Avenue		
Municipality: Yarmouth	Watershed: Cape Cod	
Universal Transverse Mercator Coordinates: 19 394800E 4614480N to 395420E 4615930N (NAD27)	Latitude: 41°40.63'N to 41°41.41'N	Longitude: 70°15.83'W to 70°15.40'W (NAD27)
Estimated commencement date: Fall 2004	Estimated completion date: Fall 2006	
Approximate cost: \$2.35 million	Status of project design: 75%complete	
Proponent: The Massachusetts Highway Department (MassHighway)		
Street: 10 Park Plaza		
Municipality: Boston	State: MA	Zip Code: 02116
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Lori Macdonald		
Firm/Agency: MassHighway	Street: Ten Park Plaza, Room 4260	
Municipality: Boston	State: MA	Zip Code: 02116
Phone: (617) 973-7764	Fax: (617) 973-8879	E-mail: lori.macdonald@mhd.state.ma.us

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes No

Has this project been filed with MEPA before?
 Yes (EOEA No. _____) No

Has any project on this site been filed with MEPA before?
 Yes (EOEA No. _____) No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:

a Single EIR? (see 301 CMR 11.06(8))	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Special Review Procedure? (see 301CMR 11.09)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Phase I Waiver? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): 80% of the construction costs will be federally funded and 20% will be state funded.

Are you requesting coordinated review with any other federal, state, regional, or local agency?
 Yes (Specify _____) No

List Local or Federal Permits and Approvals:

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- | | | |
|---------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Land | <input type="checkbox"/> Rare Species | <input type="checkbox"/> Wetlands, Waterways, & Tidelands |
| <input type="checkbox"/> Water | <input type="checkbox"/> Wastewater | <input checked="" type="checkbox"/> Transportation |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Air | <input type="checkbox"/> Solid & Hazardous Waste |
| <input type="checkbox"/> ACEC | <input type="checkbox"/> Regulations | <input type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
LAND				<input type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/ Extension Permit <input checked="" type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i> National Pollution Discharge Elimination System – Notice of Intent and Storm Water Pollution Prevention Plan
Total site acreage	24.9Ac			
New acres of land altered		2.9Ac		
Acres of impervious area	4.9Ac	4.0Ac	8.9Ac	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0		
Acres of new non-water dependent use of tidelands or waterways		0		
STRUCTURES				
Gross square footage	NA	NA	NA	
Number of housing units	NA	NA	NA	
Maximum height (in feet)	NA	NA	NA	
TRANSPORTATION				
Vehicle trips per day	24,600	0	24,600	
Parking spaces	NA	NA	NA	
WATER/WASTEWATER				
Gallons/day (GPD) of water use	NA	NA	NA	
GPD water withdrawal	NA	NA	NA	
GPD wastewater generation/ treatment	NA	NA	NA	
Length of water/sewer mains (in miles)	NA	NA	NA	

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? **No. The project will not involve the conversion of public parkland or other Article 97 public natural resources located within the project limits. The Yarmouth Campground shown on the plans is a privately owned year-round residential community.**

Yes (Specify _____) No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

Yes (Specify _____) No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify _____) No

The southern limits of the project are located within or adjacent to a mapped Priority Site of Rare Species.

Discussions with the Massachusetts Natural Heritage and Endangered Species Program (MNHESP) are on going. See attached MNHESP Priority Habitat Map.

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

Yes (Specify In compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MassHighway's Cultural Resource Section (CRS) will coordinate its project review with the MA State Historic Preservation Officer (SHPO) for potential project impacts on National/State Register-listed or National Register-eligible properties, districts or sites. In a letter dated February 10, 2003 to MassHighway (attached), the Massachusetts Historical Commission indicated that the project is adjacent to two properties listed on MHC's Inventory of Historic and Archaeological Assets of the Commonwealth: 48 Willow Street and 54 Willow Street. MassHighway CRS staff will identify the proximity of these properties to the project area, and if necessary, evaluate their eligibility for inclusion in the National Register. The northernmost limits of the project area fall within the Old King's Highway Regional Historic District. Ornamental traffic signals will be installed at two Route 6 intersections as requested by the Old King's Highway Regional Historic District Commission) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify MassHighway will conduct an intensive survey to determine whether archaeological resources are located within the project limits. Based on the results of its historic and archaeological surveys, MassHighway's CRS staff will forward its National Register eligibility evaluations and project effect finding to the MA SHPO for review under Section 106.) No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify _____) No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

The Massachusetts Highway Department in cooperation with the Town of Yarmouth is proposing to reconstruct Willow Street from approximately 200 meters (m) (650 feet (ft)) north of the Barnstable Town Line to approximately 150 m (500 ft) north of the Route 6, Exit 7 ramps in the Town of Yarmouth, a distance of approximately 1.6 km (1.0 mile). The proposed project will improve access to transportation facilities in the area such as the Barnstable Municipal Airport, the Steamship Authority and the Hyannis Transportation Center. The basis of the project comes from the long-range plan developed for the Hyannis/West Yarmouth area¹. Elements of the project include widening Willow Street from a two to four lane cross-section with shoulders and a raised vegetated center median, the installation of signals and turning lanes at the intersections of the Exit 7 ramps and the intersection at the relocated Higgins Crowell Road, relocating Oak Avenue to form a four-way intersection with Willow Street and the relocated Higgins Crowell Road, the installation of signing and pavement markings and other incidental items in order to improve traffic operations and minimize congestion in the project area. An Environmental Notification Form (ENF) is required because the proposed work involves the widening of an existing roadway by four or more feet for one-half or more miles (301 CMR 11.03(6)(b)(1b) and altering bank or terrain located ten or more feet from the existing roadway for one-half or more miles, unless necessary to install a structure or equipment (301 CMR 11.03(6)(b)(2a)).

¹ McDonough & Sully, Inc., Barnstable Yarmouth Transportation Plan, 1997.

Existing Conditions: Within the project area, Willow Street is a two-lane arterial with travel lanes typically 3.35m to 3.65m (11-12 ft) wide and shoulders that vary in width from 0.3m to 0.6m (1-2 ft). The existing right-of-way along this portion of Willow Street is 1948 County Layout approximately 10.06m (33 ft) wide from the southern limits of the project to just south of Higgins Crowell Road and 1953 State Highway Layout from south of Higgins Crowell Road to just north of the Exit 7 westbound ramps and then turns back to County Layout for the remainder of the project limits.

Willow Street at Route 6, Exit 7 is a north/south route that connects Route 6A to the north and Route 28 (via Yarmouth Road) to the south and serves as an access way to downtown Hyannis. The Willow Street Exit is a direct link from Route 6 to the new Steamship Authority parking lot located at the corner of Yarmouth Road and Main Street in Hyannis, the Barnstable Municipal Airport, and the Hyannis Transportation Center which accommodates both bus service and the Cape Cod Railroad (See Figure 2). In addition, Exit 7 serves as a primary access route to the Cape Cod Hospital from Route 6. Willow Street is also used as a main connector to Route 28 in West Yarmouth via Higgins Crowell Road. Higgins Crowell Road also intersects with Buck Island Road, an alternative to Route 28 for east-west traffic in the area. Ansel Hallet Road services an industrial zone in the Town and current businesses include shipping companies such as Federal Express and UPS. Commercial development is also located on Ansel Hallet Road, east along Higgins Crowell Road and south of the project limits along the length of Yarmouth Road. Additional adjacent land uses consist of the Barnstable Municipal Airport, a MassHighway maintenance depot, residential developments, public water supply wells, and undeveloped land.

Purpose and Need: Willow Street experiences year-round congestion during peak periods with average daily traffic (ADT) volumes within the project area recorded at 24,600 vehicles in 2001 and are expected to increase to 28,600 vehicles in 2021. In addition, the current peak hour volumes exceed 2,000 vehicles per hour and are projected to increase to 2,200 by 2011. The two lane cross section provides insufficient capacity to meet the current and future demands. The high demands, inadequate capacity along with no turn lanes result in the low speeds, long queues and difficulties exiting the side streets. As a link to the Hyannis Transportation Center, the Barnstable Municipal Airport and the Steamship Authority, congestion on Willow Street not only affects people commuting by car but also travelers accessing other modes of transportation.

Vehicles exiting the Route 6 ramps and turning left onto Willow Street experience long delays during peak periods. The effect is vehicle queuing onto the Route 6 mainline. This queuing on the ramps delay motorists trying to make right turn movements from the Route 6 ramps on to Willow Street as well. Without improvements, the intersections operate at Level of Service "F". The congestion levels along Willow Street and the vehicle queuing onto the Route 6 mainline create a substantial safety problem. During much of the year, particularly the summer season, police control is employed to assist vehicle movement off the ramps. However, the manual stopping of flow on the existing two-lane Willow Street results in additional queuing in the immediate area of the ramps and Higgins Crowell Road. In addition to the Route 6 ramps, the high volume levels on Willow Street currently result in long delays to vehicles exiting the side streets such as Higgins Crowell Road, Ansel Hallet Road, Oak Avenue, and private driveways. Operations south of the project area (i.e. at Route 28) also affect movement on Willow Street. With only one travel lane per vehicle, there is inadequate queue capacity along the corridor that results in excessive blockage of driveways and side streets at times. Volumes are projected to increase to nearly 30,000 vehicles in the future that will generally exceed acceptable service levels of the two-lane section.

Proposed Improvements: In order to improve traffic operations and minimize congestion and improve flow to regional transportation facilities south of the project limits, Willow Street will be widened to a four-lane roadway with two 3.75 m (12.3 ft) travel lanes and a 1.25 m (4.1 ft) paved and 1.25 (4.1 ft) graded outside shoulder. Turning lanes and traffic signals are proposed at the existing Route 6, Exit 7 eastbound and westbound ramps. Double left turn lanes will be constructed on the Exit 7 ramps to provide additional movements and queue capacity from Route 6 onto Willow Street, southbound. In addition, a traffic signal and turning lanes will be constructed at the intersection of Higgins Crowell Road which will be relocated approximately 550 m (1,800 ft) to the south of its

current location under a separate project (EOEA #13085) funded by the Town of Yarmouth. (The Town anticipates that construction of the relocated Higgins Crowell Road will be completed in June 2004.) Oak Avenue will be relocated 160 m (525 ft) south of its current intersection with Willow Street to form a four-way intersection with the relocated Higgins Crowell Road. A 2.0 m (6.6 ft) wide landscaped median will be constructed from the relocated Higgins Crowell Road intersection to the Ansel Hallet Road intersection in order to prevent left-turn movements into and out of Ansel Hallet Road. Instead, traffic heading southbound on Willow Street will be required to access Ansel Hallet Road via the new Higgins Crowell Road/Willow Street Intersection. Traffic exiting Ansel Hallet Road looking to turn southbound on Willow Street will be required to turn right at the southern end of Ansel Hallet Road onto the new Higgins Crowell Road and travel 320 m (1050 ft) to Willow Street. The traffic signal design at the intersection of Willow Street and Relocated Higgins Crowell Road requires multiple travel lane approaches and exclusive turn lanes in order to provide an acceptable level of service, accommodate the safe movement of turning vehicles and adequately provide for vehicle queuing on Willow Street. With the intersection designs for the two Willow Street intersections (i.e. Relocated Higgins Crowell Road and Route 6 eastbound ramps) both requiring multiple lane approaches, the remaining section of Willow Street between the two intersection approaches would not provide adequate length to transition from 4 lanes to 2 lanes and back to 4 lanes. For a safe, design consistency, the project requires a 4-lane section from the relocated Higgins Crowell Road through the Route 6 interchange. The traffic signals at the Exit 7 intersections and the relocated Higgins Crowell Intersection will be fully synchronized and fitted with emergency vehicle pre-emption capabilities. Proposed shoulders on Willow Street will be widened enough to accommodate bicycle traffic and all signalized intersections will be fitted with bicycle loop-detectors and signing to alert bicyclists to stop on the line for the GREEN signal.

Alternatives Analysis: Several other alternatives for this project were studied including the following:

1) Alternative 1 consisted of signal installations at Willow Street with the Route 6, Exit 7 Westbound and Eastbound Ramps, Higgins Crowell Road and Camp Street. This alternative did not include any widening at the intersections and retains the current two-lane cross-section of Willow Street. This alternative didn't address the capacity needs along the corridor.

2) Alternative 2 included signal installations at the intersections of Willow Street with Route 6 Westbound Ramps, Higgins Crowell Road and Camp Street. Under this alternative, some widening and turn lane provisions on Willow Street resulted in a four all-purpose lane cross-section from the Route 6 Westbound Ramp to the existing Higgins Crowell intersection. The Eastbound ramps would be redesigned to accommodate vehicles heading southbound on Willow Street onto Higgins Crowell Road. There is a transition to the current two-lane cross-section from south of Higgins Crowell Road to the Barnstable Town Line. This alternative improved capacity in the area of the interchange, but it didn't provide enough queue length between the realigned eastbound ramp on Higgins Crowell Road and Willow Street. In addition, this alternative would require significant reconstruction of the eastbound ramps and a portion of Route 6.

3) Alternative 3 provided signal installations at the intersections of Willow Street with Route 6 Westbound and Eastbound Ramps, Higgins Crowell Road and Camp Street. In addition, Higgins Crowell Road would be relocated to intersect Willow St. at the Ansel Hallet Road intersection. Willow Street would increase to a four-lane cross-section from the Route 6 Westbound Ramp to the relocated Higgins Crowell Road (at the Ansel Hallet Road intersection) and transition to the current two-lane cross-section south of Higgins Crowell Road to the Barnstable Town Line. While this alternative addressed many of the issues, it didn't address conditions south of the relocated Higgins Crowell Road. In addition to the above, a couple of other alternatives similar to the current proposed project were also considered. During the preliminary design phase, the engineering design consultant had worked closely with the Massachusetts Highway Department in revising the proposed alternative to best meet the project goals while minimizing impacts.