



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Deval L. Patrick
GOVERNOR

Timothy P. Murray
LIEUTENANT GOVERNOR

Ian A. Bowles
SECRETARY

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

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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Plymouth Rock Studios
PROJECT MUNICIPALITY : Plymouth
PROJECT WATERSHED : South Coastal Watershed
EOEA NUMBER : 14345
PROJECT PROPONENT : Plymouth Rock Studios
DATE NOTICED IN MONITOR : November 24, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of a mandatory Environmental Impact Report (EIR) and that the proponent may fulfill its MEPA obligations through the filing of a Single EIR. In a separate Draft Record of Decision (DROD) also issued today, I propose to grant the request for a Phase 1 Waiver that will allow construction of the access road to proceed prior to completion of MEPA review for the overall project.

Project Description

Plymouth Rock Studios proposes to develop the east coast's first independent, full-service film and television studio facility in Plymouth, MA. It will create an economic engine that will generate more than 2,000 jobs, provide a unique tourist attraction, serve as an educational resource for potential employees and students and support the Commonwealth's efforts to attract the film industry to Massachusetts. The project includes a noteworthy commitment to design and build a state-of-the-art, green and sustainable studio that will minimize the project's environmental footprint, provide exposure for renewable energy

technologies, including a 500 kilowatt (kw) solar photovoltaic (PV) system, and serve as a model for developers in Massachusetts and studio heads in Hollywood. The proponent has worked closely with the Town of Plymouth and its residents to identify an appropriate site for the project and to address local concerns. The comment letters received on this project reflect genuine support and excitement for the project and its goals.

The project consists of the construction of a 1,292,000 gross square feet (gsf) Studio Production Campus (including 14 sound stages, a 10-acre back lot, production service buildings, office buildings, a theater and a visitor center), a 519,000 gsf Studio Amenities Campus (including shops, restaurants, a hotel and housing) and a 189,000 gsf Research/Education Campus (including research and education buildings). Primary access to the site will be provided by a new access road extending from Clark Road to the project site. The access road will include extensions to the South School Educational Complex and to Forges Field. In addition, a multi-use path will be constructed within the same corridor as the roadway. Secondary access will be provided from Long Pond Road via the existing Waverly Oaks Drive. Other roadway improvements include: construction of a modern roundabout at the Clark Road/Long Pond Road intersection; completion of the Route 3/Exit 3 interchange; signalization of the access road/Clark Road intersection; widening of Clark Road between the Route 3 southbound ramps and Long Pond Road; and pedestrian, bicycle and traffic calming improvements along Long Pond Road. Wastewater will be conveyed from the site to the Camelot Drive Wastewater Treatment Plant (WWTP) via a new sewer extension. Water supply will be provided either through connection to the municipal supply or through construction of an on-site well. The sewer extension and water supply will be designed to serve the project and the South School Educational Complex. The project will include approximately 4,190 parking spaces located in surface parking lots and parking garages.

Project Site

The 242-acre site is located between Long Pond Road and Route 3 near Interchange 3. The site is bounded by Crosswinds Golf Course to the west and northwest, Forges Field Recreational Complex to the north, Route 3 to the east, the South School Educational Complex to the south and east and Long Pond Road and existing residences to the southwest. The northeast portion of Myles Standish State Forest is located to the west of the site. The site consists of a 27-hole golf course, a club house, ancillary support structures, parking lots, access roads, an irrigation system, drinking water wells, three lined ponds associated with the irrigation and stormwater management systems, a single family home and 9 housing lots. The site contains forested upland areas and three isolated wetland resource areas (only one of which is subject to jurisdiction under the Wetlands Protection Act). It is located within the Eel River Subwatershed of the South Coastal Basin.

The project includes off-site transportation improvements and utility infrastructure which may extend from the Route 3/Clark Road corridor north to the Camelot Drive Wastewater Treatment Plant and the Bradford Water Supply. The geographic extent of these improvements will depend on the preferred alternatives identified through the MEPA process. The utility

corridor is located within areas identified in the Massachusetts Natural Heritage Atlas (13th Edition) as *Priority Habitat*.

Construction of the access road will extend from the Route 3/Clark Road corridor through a 207-acre parcel of conservation land to the South School Educational Complex, the site and to the Forges Field Recreational Complex. The conservation land is bounded by Route 3 to the east, Clark Road to the south, Long Pond road to the west and the South School Educational Complex to the north. The site is owned by the Town of Plymouth and is protected by Article 97 of the Articles of Amendment to the Constitution of the Commonwealth of Massachusetts under a conservation restriction held by the Wildlands Trust of Southeastern Massachusetts. It is an undeveloped, wooded parcel and includes two certified vernal pools. In addition, the Town of Plymouth has identified a potential water supply on the site.

Environmental Impacts

Potential environmental impacts associated with redevelopment of the project site include the alteration of 112 acres of land, creation of an additional 53 acres of new impervious area for a total of 65 acres of impervious area and generation of an additional 8,950 average daily vehicle trips (adt) for a total of 9,916 adt. Water use and wastewater generation will decrease by approximately 144,000 gallons per day (gpd) and 162,420 gpd compared to the previously reviewed Waverly Oaks Golf Club.

Potential environmental impacts associated with the access road include alteration of 19.4 acres of conservation land and creation of 6.3 acres of impervious surfaces. Potential environmental impacts associated with the other traffic improvements proposed along the Clark Road/Route 3 corridor include alteration of 104.6 acres of land, including 30.8 acres of undeveloped land, and creation of 6.8 acres of new impervious surfaces.

Potential impacts associated with the utility corridor include 11.6 acres of land alteration, creation of 1 acre of new impervious surfaces and work within wetland resources and rare species habitat.

Measures to avoid, minimize and mitigate project impacts presented in the Expanded Environmental Notification Form (Expanded ENF) include: redevelopment of an existing site; certification at the Silver Level under the Core and Shell category for campus development by the US Green Building Council's Leadership in Energy and Environmental Design (LEED); installation of a 500 kw solar PV system; installation of solar hot water systems; water conservation measures; avoidance of wetland impacts; use of pervious pavement, green roofs and rainwater reuse (for irrigation and greywater); compliance with the Wetlands Protection Act Stormwater Management Standards; roadway and signal improvements; development of a Transportation Demand Management (TDM) program including operation of a fixed shuttle system and pedestrian, bicycle and traffic calming improvements; and measures to minimize construction period impacts. In addition, utility corridor alternatives minimize land alteration through location within existing roadways or previously disturbed areas. The utility corridor will

also include construction of a water reuse line from the Camelot Drive WWTP to facilitate reuse of wastewater by the Town for irrigation of Forges Field, the school complex and Crosswinds.

Permits and Jurisdiction

The project is undergoing MEPA review and is subject to preparation of a mandatory Environmental Impact Report (EIR) pursuant to 301 CMR 11.03(1)(a)(1), 11.03(1)(a)(2), 11.03(6)(a)(6) and 11.03(6)(a)(7) because it requires a state permit and consists of alteration of more than 50 acres of land, creation of ten or more acres of impervious area, generation of 3,000 or more new adt on roadways providing access to a single location and construction of 1,000 or more new parking spaces at a single location. The project requires a Construction and Access Permit from the Massachusetts Highway Department (MassHighway) and a Sewer Connection/Extension Permit from the Department of Environmental Protection (MassDEP). It may require a New Source Approval (for on-site water supply alternative), Water Management Act Permit (for on-site water supply alternative), Groundwater Discharge Permit (for ground source heat pump) and various air quality permits (for fuel burning equipment and and/or production of pyrotechnic special effects) from MassDEP. The project may require review by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP) and will require review by the Massachusetts Historical Commission. Also, the project requires an Order of Conditions from the Plymouth Conservation Commission (and a Superseding Order of Conditions in the event the local Order is appealed). The project may receive state funds through the Infrastructure, Investment and Incentive program (I-Cubed) for the transportation and utility infrastructure components of the project.¹ In addition, the project requires a National Pollutant Discharge Elimination System (NPDES) Construction General Permit for Stormwater.

Because the project may include financial assistance from the Commonwealth, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment as defined in the MEPA regulations. These include land alteration, greenhouse gases, traffic/transportation, air quality, water supply, wastewater, open space, wetlands/drainage, rare species and construction period impacts.

Phase 1 Waiver Request

The proponent has requested a Phase 1 Waiver that will allow the proponent to proceed with Phase 1 of the project prior to preparing an EIR for the entire project. Based on a review of the Expanded ENF and comment letters received, and after consultation with state agencies, I propose to grant the Phase I Waiver for this project. This decision is detailed in the DROD which will be published in the next issue of the Environmental Monitor on January 21, 2009 and will be subject to a fourteen-day comment period, after which I shall reconsider, modify or confirm the waiver.

¹ The proponent and the Town of Plymouth intend to jointly submit an Economic Development Proposal for these funds.

Single EIR Request

In accordance with Section 11.05(7) of the MEPA regulations, the proponent has submitted an Expanded ENF with a request that I allow the proponent to fulfill its EIR obligations under MEPA with a Single EIR, rather than the usual process of a Draft and Final EIR. The Expanded ENF received an extended comment period pursuant to Section 11.06(8) of the MEPA regulations. In addition, the proponent submitted a supplemental traffic analysis and extended the comment period by 16 days to provide additional time for its review. The MEPA regulations indicate that I may allow a Single EIR provided that I find that the Expanded ENF:

- describes and analyzes all aspects of the project and all feasible alternatives, regardless of any jurisdictional or other limitation that may apply to the Scope;
- provides a detailed baseline in relation to which potential environmental impacts and mitigation measures can be assessed; and
- demonstrates that the planning and design of the Project use all feasible means to avoid potential environmental impacts.

Review of the Expanded ENF

The Expanded ENF includes a detailed project description supported by project plans; a detailed description of the site and baseline environmental conditions; an alternatives analysis; identification and analysis of potential environmental impacts; and commitments to avoid, minimize and mitigate all potential impacts associated with the project.

Alternatives Analysis

The Expanded ENF includes an alternatives analysis that identifies a no-build alternative, redevelopment of the site as a 102-lot subdivision with continued operation of a golf course, the preferred alternative, five alternative site layout designs and two alternative access plans (which are developed into 10 alternatives in the traffic study) including use of Long Pond Road and direct access to the site from Route 3. In addition, it analyzes four alternatives for water supply and two alternatives for wastewater management.

The alternative site layout designs include: Preferred Alternative (location of studios at the lowest topographical point of the site with landscaping and earthen berms to minimize visual impacts from Long Pond Road, studio amenities located closer to Route 3 and research/educational facilities at the site entrance); Layout Alternative #1 (siting of the studio facilities along Route 3 to minimize visual impacts to residences on Long Pond Road with studio amenities and education/research located closer to Long Pond Road); Layout Alternative #2 (consolidated development footprint and maximization of open space with studios located in the center of the site and studio amenities and education/research facilities located closer to Long Pond Road); Layout Alternative #3 (consolidated development footprint and maximization of

open space with studios located in the center of the site, studio amenities located in the northern area of the site and education/research facilities located at the entrance); and Layout Alternative #4 (a variation on Alternative #3). Criteria used in selection of the alternatives included the ability to meet the programming objectives of the proponent, preservation of open space, protection of wetland resource areas and wellhead protection areas and provision of a buffer between project elements and the residences on Long Pond Road and the South School Educational Complex.

The Expanded ENF indicates that the preferred alternative was selected for its ability to meet the programming objectives of the proponent, to provide strong connections between the studios and the studio amenities, to provide a buffer between the studios and residences on Long Pond Road and to avoid alterations and provide adequate buffers to resource areas. The Expanded ENF indicates that the preferred alternative will create 53 acres of additional impervious area for a total of 65 acres, will alter 38.6 acres of natural forested areas and will restore approximately 34.9 acres of previously disturbed natural areas. Resource agency comments do not identify any concerns with the preferred alternative for the site layout or request additional analysis of alternatives. Comments from the Old Colony Planning Council (OCPC) identify the consistency of the proposed project with its regional plan. In addition, comments from others are supportive of the overall project and do not request additional review of site layout alternatives. Commentors do request that the proponent consider design changes and provide significant input on transportation, water supply and wastewater alternatives which will be addressed in subsequent sections of this Certificate.

Sustainable Design and Greenhouse Gas Emissions

The Expanded ENF indicates that a major objective of the project is to serve as an example of progressive design that integrates innovative, practical and proven architectural and engineering methods to both conserve energy and to reduce the emission of greenhouse gasses. The Expanded ENF identifies how the project has been designed to achieve LEED Certification at the Silver Level and to comply with the MEPA Greenhouse Gas Emissions Policy and Protocol. The analysis reflects the proponent's commitment; it is detailed, thorough and reflects consideration of a wide range of aggressive measures to reduce GHG emissions, from high-performing building envelopes to renewable energy elements.

As required, the Expanded ENF includes an analysis of the greenhouse gas (GHG) emissions associated with the project using the EQUEST model to estimate carbon dioxide (CO₂) emissions from direct and indirect stationary sources and a mesoscale analysis using U.S. EPA's MOBILE 6.2 program to estimate CO₂ emissions from transportation. It identifies measures to reduce GHG emissions and models CO₂ emissions associated with the Base Case (Case 1) and the Preferred Alternative (Case 2). The Preferred Alternative includes: installation of a 500 kilowatt (kw) solar photovoltaic (PV) array on studios 1 and 2; solar hot water for the commissary, hotel and spa, apartments and retail; enhanced building envelope design; high-efficiency HVAC equipment; reduced area lighting; and use of highly efficient equipment (e.g. 93% efficient boilers). It also includes emissions reductions associated with the roadway and signal improvements and the TDM program. As required, the analysis includes discussion of an alternative with greater GHG reductions than the Preferred Alternative (Case 3) including

additional on-site renewable energy resources (e.g. cogeneration and additional solar photovoltaic arrays) and extension of the Plymouth Area Link (PAL) bus service to the site. It includes an exhaustive list of measures that are being considered for inclusion in the project. Because the proponent is evaluating the feasibility and effectiveness of additional renewable energy measures with significant potential to reduce CO₂ emissions, the analysis does not model CO₂ emissions associated with Case 3.

The analysis indicates that the Preferred Alternative will reduce stationary source CO₂ emissions by approximately 20.4%² and transportation CO₂ emissions by 4%. Comments from MassDEP and the Division of Energy Resources (DOER) underscore the proponent's commendable commitment to a sustainable design, identify its consistency with the GHG Policy and Protocol and provide detailed comments on the analysis and measures the proponent should analyze in the Single EIR.

Traffic/Transportation

The Expanded ENF describes how access will be provided to the site, includes a traffic study and identifies mitigation measures. Primary access to the site is proposed via a new access road extending from Clark Road to the project site. The access road will include extensions to the South School Educational Complex and to Forges Field. In addition, a multi-use path will be constructed within the same corridor as the roadway. Secondary access is proposed from Long Pond Road via the existing Waverly Oaks Drive and will be used for access to the single family homes and limited access to the studios (up to 500 vehicles per day). Access to the movie studios will be controlled by fencing and staffed gates. The project will include construction of 3,948 new parking spaces for a total of 4,190 spaces. Approximately 1,530 spaces will be located within parking garages and 2,660 spaces will be located in surface lots.

Other roadway improvements include: construction of a modern roundabout at the Clark Road/Long Pond Road intersection; completion of the Route 3/Exit 3 interchange; signalization of the access road/Clark Road intersection; and widening of Clark Road between the Route 3 southbound ramps and Long Pond Road. The construction of the roundabout is a mitigation commitment associated with the River Run project (EEA #13580). Completion of the Route 3/Exit 3 interchange requires a transfer of land owned by The Pinehills (EEA #11519) which The Pinehills is required to provide consistent with its mitigation commitments.

The Expanded ENF indicates that the project will include on-site and off-site improvements to pedestrian and bicycle access including links to existing and proposed bicycle routes.

The traffic study generally conforms to EEA/Executive Office of Transportation and Public Works (EOTPW) Guidelines for EIR/EIS Traffic Impact Assessment. It clearly describes the methodologies used to develop the information and provides supporting documentation. The study identifies trip generation, analyzes impacts and provides a level-of-service (LOS) analysis. It indicates that the project will generate a total of 9,916 adt based on empirical trip generation

² This estimate does not include emissions associated with tenant equipment which is the single largest source of CO₂ emissions associated with the project.

data obtained from Paramount Studios in California for the studio components of the project and Institute of Traffic Engineers (ITE) Land Use Codes for the remainder of the project components.

The study area includes Clark Road, Long Pond Road and Route 3 including seven major intersections and four ramp junctions. The traffic analysis evaluates ten alternatives based on the ability to minimize project-related impacts along Long Pond Road, maintain the rural character of the Clark Road/Long Pond Road corridors and ensure that the state highway system will continue to function in a safe and efficient manner with sufficient reserve capacity to accommodate future traffic growth. These alternatives include:

- Alternative 1: Clark Road Access with a Full Interchange Improvement;
- Alternative 1A: Clark Road Access with a Full Interchange Improvement and Long Pond Road Buffer;
- Alternative 1B: Clark Road Access with Interchange Improvement and Northbound Slip-Ramp;
- Alternative 1C: Clark Road Access with Route 3 Southbound Interchange Improvement;
- Alternative 2: Clark Road Access with Partial Interchange Improvement;
- Alternative 3: Clark Road Access with Route 3 Southbound Off-Ramp Connector;
- Alternative 4: Clark Road/Long Pond Road Realignment;
- Alternative 5: Route 3 Southbound Interchange;
- Alternative 6: Route 3 Southbound Off-Ramp; and
- Alternative 7: Clark Road Access with Full Interchange Improvement and Realignment of Long Pond Road.

Alternative 1A is identified as the preferred alternative from a traffic operations perspective. In addition, it will provide a buffer between the Long Pond Road neighborhood and the proposed roundabout. Under the 2018 Build with Mitigation scenario, it will provide overall operating conditions of LOS B or better during the peak periods along the Clark Road corridor. All movements at the access road intersection will operate at LOS C or better. The ramp junctions with Route 3 will operate at LOS D or better.

The majority of comment letters received on the project address traffic and access issues. Comments from MassHighway indicate that the traffic analysis should be revised to extend the horizon year to 2028 and to refine the trip generation methodology. In addition, MassHighway indicates that the Single EIR should include evaluation of an additional alternative consisting of slip ramps in the northeast and southwest quadrant. Many commentors are supportive of the Preferred Alternative including the Town of Plymouth, the Plymouth School Superintendent, the Old Colony Planning Council and many residents. In addition, the OCPC comment letter includes recommendations for implementation of the traffic monitoring plan. Comments from the Plymouth School Superintendent indicate that the School Department is committed to redesigning its traffic patterns to minimize access to Long Pond Road. Several residents suggest that additional review of alternatives that provide direct access to the site from Route 3 is warranted in order to assess the project's ability to provide visibility and direct access to the site, to provide access to Town facilities and the Myles Standish State Forest and to avoid alteration

of conservation land. Other comments identify additional issues that should be addressed in the Single EIR including provision of transit service and bicycle and pedestrian access.

Air Quality

In accordance with the State Implementation Plan (SIP) for ozone attainment, the proponent conducted a mesoscale air quality analysis for volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). The results indicate that VOCs and NO_x emissions will increase by 2.8 and 4.0 tons per year (tpy) respectively under the 2018 Build scenario compared to the 2018 No Build Scenario. Because hydrocarbon emissions are greater than the No Build scenario, the proponent is required to provide appropriate mitigation including the development of a TDM program. The Expanded ENF describes associated mitigation including roadway and signal improvements and development of a TDM program that includes the following: identification of an on-site transportation coordinator, encouragement of flex-time and telecommuting, operation of a fixed route shuttle system linking the project to other attractions in Plymouth, provision of transit subsidies, provision of information regarding public transportation, designation of parking spaces for car/vanpools, electric vehicle charging stations, accommodation of car-sharing services and support for bicycle commuting. In addition, the project will include pedestrian, bicycle and traffic calming improvements. The mesoscale analysis shows a slight increase in VOC and NO_x emissions of 0.1 and 0.2 tpy respectively from the 2018 Build Scenario to the 2018 Build with Mitigation Scenario. The analysis indicates that, although the improvements will address congestion during the peak periods, the length of the ramps may be contributing to the increases. The project will include a traffic monitoring and reporting program that will identify actual trip generation and patterns associated with the project and support analysis of the effectiveness of mitigation measures.

Although the TDM program proposes measures that should be effective in reducing project related emissions, MassDEP comments indicate that additional measures should be considered to address the increase in emissions from the 2018 Build to 2018 Build with Mitigation scenario.

Water Supply

The Expanded ENF indicates that the existing potable and irrigation wells at Waverly Oaks will be abandoned. Water supply alternatives presented in the Expanded ENF include connecting to the Town's public water supply (PWS) within the Bradford Service Zone (Alternative 1), replacing the existing irrigation wells with a PWS well (Alternative 2), connecting to and upgrading the Town of Plymouth wells servicing the South School Educational Complex (Alternative 3), and developing a new well on the conservation land located to the south of the South School Educational Complex (Alternative 4). The alternatives analysis for water supply assesses each alternative for its ability to meet water demands, to provide a stable water supply with redundancies, to provide adequate pressure, to service additional properties through the PWS system including the schools complex, for consistency with permitting requirements and for permitting timelines.

Construction of an on-site well would require the proponent to register as a PWS. It would include construction of a new well, a building to house the pumping and monitoring

equipment, chemical storage and feed facilities and a 500,000 gallon water tower for pressure stabilization. This alternative requires a WMA permit and New Source Approval by Mass DEP. The proponent has filed applications with MassDEP for a WMA permit and for approval to site and conduct a pumping test. The WMA application requests a daily average water withdrawal of 0.171 million gallons per day (MGD), for an annual withdrawal of 62.45 million gallons per year (MGY), through 2019. In 2020, the requested withdrawal would increase to an average daily volume of 0.174 MGD, for an annual withdrawal of 63.5 MGY. The Expanded ENF summarizes results of the groundwater modeling previously conducted by the United States Geological Survey (USGS) groundwater flow model and includes plans identifying the associated Zone I and Zone II (estimated) wellhead protection areas. Water withdrawn from the well will be contributed from the aquifer underlying the Zone II area which is recharged through precipitation. The Expanded ENF asserts that drawdowns will be very slight because of the high hydraulic conductivity of aquifer materials and that wells outside of the 400-foot radius should experience little or no drawdown from pumping of the production well. In addition, it notes that previous testing indicated good water quality.

The Expanded ENF identifies the Town of Plymouth's Water Management Act (WMA) authorization as 6.36 million gallons per day (MGD). It indicates that the average day demand is 4.91 MGD and maximum day demand, between 1990 and 2004, was between 6.09 MGD and 10.55 MGD. Selection of a municipal supply alternative would require a Mass DEP permit (Distribution Modification for Systems that serve more than 3,300 people). Based on the analysis included in the Expanded ENF, Alternative 1 and Alternative 4 appear to be the most feasible municipal supply alternatives.

Proposed measures to reduce water use include use of ultra-low flow fixtures, waterless urinals, dual flush toilets and re-use of rainwater for irrigation and greywater (for flushing and cooling tower water make-up). MassDEP provided extensive comments regarding water supply including a request for additional analysis of impacts to the Town PWS and the identification of permitting requirements. Comments from the Eel River Watershed Association indicate concern with the proposed water withdrawal and impacts to the baseflow of the Eel River.

Wastewater

The project will generate approximately 166,000 gpd of wastewater. The Expanded ENF includes analysis of wastewater treatment alternatives including conveyance of wastewater from the site to the Camelot Drive wastewater treatment plant (WWTP) via a new sewer extension (Preferred Alternative), construction of an on-site wastewater treatment plant (Alternative 1) and upgrades to the South School Educational Complex WWTP. The proponent indicates that the Preferred Alternative was selected based on public benefit, construction costs and minimization of environmental impacts. The Expanded ENF indicates that the existing capacity of the Camelot Street WWTP is 2.5 million gpd and current flows are approximately 2 million gpd. The project will include construction of a grit screening facility at the WWTP. The extension will also serve the South School Educational Complex. In addition, the proponent proposes to install a water reuse line to facilitate reuse of wastewater as irrigation for Forges Field, for the schools and Crosswinds.

The Expanded ENF identifies three potential alignments for the sewer extension including: cross country route to Jordan Road and Russell Mills Road (Proposed Alignment), Long Pond Road/Jordan Road (Alternative 1) and Long Pond Road to Camelot Drive (Alternative 2). Analysis of these alternatives includes consideration of sewer capacity, environmental impacts, ability to provide additional connections for adjoining property owners and replace Title 5 systems, community impacts including construction impacts, construction costs and construction timelines. The Proposed Alignment was selected based on costs, environmental impacts and ease of construction.

MassDEP comments request additional analysis of the sewer alignment based on each alignment's potential to provide additional connections and reduce nitrogen contributions through removal of septic systems. In addition, MassDEP comments identify permitting requirements associated with the wastewater infrastructure. Comments from the Eel River Watershed Association note that all withdrawal and wastewater discharge will contribute to the Eel River watershed. These comments request that the proponent further consider an on-site wastewater treatment system.

Open Space/Recreation

The Preferred Alternative includes land alteration within the conservation land located between Clark Road and the South School Educational Complex and the creation of 6.3 acres of impervious surfaces. The conservation restriction includes allowances for construction of an access road to adjacent properties and its ownership will not change; therefore, the project is not considered a change in use. Some of the roadway improvement alternatives may result in additional alteration to conservation land located on the southwestern side of the Clark Road/Route 3 corridor. The Expanded ENF does not identify the amount of alteration or describe resources that could be affected by these changes.

The project is located in close proximity to the Myles Standish State Forest which is owned and operated by the Department of Conservation and Recreation (DCR). The Expanded ENF does not assess potential impacts to the park from the project and associated traffic. Comments from DCR and the Friends of Myles Standish State Forest identify analysis that should be included in the Single EIR and suggest potential mitigation alternatives.

Wetlands/Drainage

The Expanded ENF identifies wetland resource areas within the project site and associated with the off-site improvements. It identifies measures to avoid, minimize and mitigate impacts to wetland resources including avoidance of wetlands and direct alteration to wetlands and development of a stormwater management plan that incorporated LID techniques. The utility corridor is the only project element proposed within a wetland resource area. It involves a stream crossing within an area that includes Riverfront Area, Bordering Vegetated Wetlands (BVW) (310CMR10.55), Inland Bank (310CMR10.54), Land Under Water (LUW) (310CMR10.56) and Bordering Land Subject to Flooding (BLSF) (310CMR10.57). Comments from MassDEP identify permits required for the proposed work, including an Order of Conditions from the Plymouth Conservation Commission, and applicable standards. Comments

from the Plymouth Conservation Commission do not identify significant concerns with impacts to wetland resource areas nor do other commentors.

Rare Species

The Expanded ENF indicates that the project will have minimal impacts on rare species. The project site, access road and proposed roadway improvements are not located within rare species habitat as identified by NHESP. The proposed utility corridor does extend through Priority Habitat at a location within Forges Field and within within Russell Mill Road. To minimize impacts to rare species and other resources, the utility corridor is located within the roadway ROW at both locations. The Expanded ENF asserts that, because the project activities consist of construction within a paved roadway, it is exempt from review under the Massachusetts Endangered Species Act (MESA). Comments from NHESP confirm elements of the project are proposed within *Priority Habitat* and that the proposed work may be exempt from review. In addition, NHESP comments indicate that work associated with upgrades at the Bradford Well Treatment Plant may be subject to its review.

Historic/Cultural Resources

The Expanded ENF indicates that the project site, proposed access road and proposed utility corridor do not contain any historic or archaeological resources that are listed on the State and National Registers of Historic Places or the Inventory of the Historic and Archaeological Assets of the Commonwealth. Some pre-historic archaeological sites are located in the vicinity of, but not within, the proposed access road and other areas where transportation improvements are proposed. In addition, several pre-historic archaeological sites and historic archaeological sites are located in the immediate vicinity of the proposed utility corridor. A Project Notification Form (PNF) and, subsequently, existing and proposed project plans were submitted to the Massachusetts Historical Commission (MHC). MHC requested that the proponent conduct an intensive (locational) archaeological survey for a limited area consisting of the undisturbed portions of the cross-country utility corridor and access road right-of-way (ROW). Comments from MHC indicate that the Expanded ENF provides an accurate summary of consultation with MHC and requests that, if significant historic or archaeological resources are identified, the proponent consider alternative alignments to avoid impacts to identified resources.

Construction Period Impacts

The Expanded ENF identifies construction phasing (based on development zones and off-site work), construction period impacts and identifies measures to avoid, minimize and mitigate impacts. It indicates that construction of the access road is proposed as Phase 1 and traffic management plans will be developed to minimize the impacts associated with construction period traffic. Separate traffic management plans will be prepared for the utility corridor work. Initial site grading will include construction of the earthen berms around the studios site to minimize noise impacts by providing a buffer between the site and residences on Long Pond Road. If materials cannot be removed for reuse or needs to be broken up for removal, a hydraulic impact hammer will be used. Only if that is not effective will blasting be conducted. If blasting is required, the proponent will use blasting agents that do not contain perchlorate. The Expanded ENF notes that blasting activities are regulated by the State Fire Marshal's Office

and will be conducted in accordance with regulatory standards and that blasting activities within 250 feet of a state highway must be coordinated with MassHighway. The proponent has committed to use low-sulfur diesel fuel to reduce diesel exhaust fumes and particulate emissions associated with construction equipment. Street sweeping and water will be used to minimize dust generated from earthwork and other construction activities.

Conclusion

Comments from state agencies do not identify any concerns associated with preparation of a Single EIR and many commentors express overall support for the project as well as efforts to facilitate it; however, some commentors express concern that issues identified in the Expanded ENF cannot be addressed adequately through a Single EIR. Based on a review of the Expanded ENF and after consultation with state agencies, I am satisfied that the Expanded ENF meets the regulatory requirements and I am hereby permitting the proponent to file a Single EIR in fulfillment of Section 11.03 of the MEPA regulations. The following Scope identifies the issues that should be addressed in the Single EIR.

Scope

Project Description

The Single EIR should include a thorough description of the entire project and all project elements and construction phases. The Single EIR should include an existing conditions plan illustrating resources and abutting land uses (including water supply zones) for the entire project area and a proposed conditions plan (or plans) illustrating proposed elevations, structures, access roads, stormwater management systems, and sewage connections. The Single EIR should also include a site circulation plan illustrating how motor vehicles, pedestrians and cyclists will be accommodated on the site and identify pedestrian and bicycle connections to adjacent sites and/or recreational trails. Plans must be provided for the entire site at a reasonable scale.

Alternatives Analysis/Land Alteration

As noted previously, based on a review of the comment letters there appears to be support for the site layout associated with the Preferred Alternative. In addition, this alternative will not alter resource areas and provides adequate buffers to resource areas. The Preferred Alternative will create an additional 53 acres of impervious surfaces and includes alteration of 38.6 acres of undisturbed natural areas. The proponent proposes to mitigate associated impacts through design of an effective stormwater management system, including use of Low Impact Development (LID) techniques such as use of pervious pavement and structured parking and restoration of 34.9 acres of previously disturbed natural areas. The proponent is not required to further analyze alternative site layouts in the Single EIR. The proponent should consider additional mitigation to minimize land alteration and creation of impervious surfaces and to minimize impacts associated with the preferred alternative. In particular, the proponent should consider refinements to its design that can further minimize alterations to undisturbed natural areas. The Single EIR should

identify total land alteration, including grading, associated with on-site and off-site project elements.

Greenhouse Gas Emissions

As noted previously, the proponent has proposed significant investments in renewable energy and other GHG emission reduction measures consistent with its emphasis on designing a sustainable site and green buildings. At the same time, energy demand associated with the studio is much higher than a traditional office building or housing development. To offset a significant portion of its GHG emissions the proponent will need to develop additional mitigation measures.

The Single EIR should include a revised GHG analysis including modeling of Case 3 that incorporates significant additional measures to increase energy efficiency and produce renewable energy. In particular, the proponent must evaluate how it can reduce energy associated with tenant equipment which is the largest single source of GHG emissions associated with the project. The Single EIR should identify measures the proponent will commit to for reducing tenant energy use which may range from requirements included in leases/contracts to encouragement of good practices. The analysis, estimated reductions and percentage reductions should include all GHG emission sources including energy associated with tenant equipment. In addition, Case 1 (code-compliant case) should be based on the revised energy code which adopts and integrates the IECC 2006 with 2007 supplement. As the analysis is revised, the proponent should consider recommendations included in the MassDEP/DOER comment letter. I strongly encourage the proponent to consult with the MassDEP, DOER and the MEPA Office regarding the revised analysis prior to filing the Single EIR.

Traffic/Transportation

The Single EIR should include a revised traffic analysis that responds to MassHighway comments. At a minimum, the Single EIR should include additional analysis of Alternative 1A, Alternative 1B and an alternative that includes slip ramps in the northeast and southwest quadrant of the Route 3/Exit 3 corridor. I strongly encourage the proponent to continue its consultations with MassHighway, OCPC, the Town of Plymouth and its residents to develop consensus around preferred roadway improvements prior to filing the Single EIR. In addition, the proponent should consult with the Town and residents regarding whether additional analysis of Alternatives 1C, 2, 4 or 7 is warranted and, if so, those alternatives should be carried forward into the Single EIR.

The Single EIR should identify relevant design standards for roadway improvements (local, state and federal) and identify all associated impacts including land alteration, creation of impervious surfaces and impacts to environmental resources. It should describe how stormwater will be managed. The Single EIR should address recommended and proposed improvements along Long Pond Road and at the Long Pond Road/Jordan Road intersection in more detail and provide design plans. In particular, it should address how such improvements could benefit the entrance to the Myles Standish State Forest and address any potential impacts to the park.

Comments from The Pinehills identify alternatives 1B and 1C as consistent with its planning goals and indicate that it will transfer the land required in the southeast quadrant for a full loop ramp and is prepared to transfer a portion of land in the northeast quadrant for construction of a slip ramp. The letter also expresses concern regarding the impact of a loop ramp in the northeast quadrant because of the extent of required land takings and impacts on planned development and express opposition to an interchange on Route 3 which would provide a direct connection to the project site because of its impact on the forested buffer located on the eastern side of Route 3.

The Single EIR should identify the parking ratios associated with each aspect of the project, explain how the number of parking spaces was determined and describe how shared parking has been incorporated into the project. The Single EIR should demonstrate that the parking supply is the minimum necessary to accommodate project demand.

Air Quality/Transportation Demand Management (TDM)

Comments from MassDEP request revisions to the mesoscale analysis and recommend the development of additional TDM measures to offset increases in NO_x and VOCs associated with traffic increases and roadway improvements. Comments from MassHighway, MassDEP, OCPC and Walk Boston include numerous recommendations to encourage transit use, walking and bicycling. The proponent should consider these recommendations as it further develops the TDM program. The Single EIR should include a strengthened TDM Program, clearly identify and describe all on-site and off-site measures to promote non-vehicular access to the site, to promote bicycle and pedestrian safety and to create connections between the proposed multi-use trail and existing and/or planned trails in the vicinity of the project site. Many commentors, including the Town and The Pinehills, have requested that the roadway improvements along the Clark Road/Route 3 corridor incorporate safe pedestrian and bicycle access. This should be a priority.

The proponent should consult with the Greater Attleboro Taunton Regional Transit Authority (GATRA) to ensure the site design and roadways support safe and accessible transit service and to discuss provision of operating subsidies to provide transit access to the site.

In addition, MassDEP comments indicate that the project may require air quality permits associated with fuel burning equipment. Pyrotechnics and other special effects may require a Plan Approval under 310 CMR 7.02. The proponent should consult the relevant regulations identified in the MassDEP comment letter, identify any required air quality permits and describe how the project is consistent with regulatory standards and requirements.

Water Supply

The Single EIR should provide further analysis of Alternatives 1, 2 and 4 based on comments received on water supply. The Single EIR should identify how each alternative will be developed consistent with regulatory standards and requirements. For the on-site alternative, the Single EIR should include the results of the pumping test and analysis. It should identify how the proponent will meet requirements for 10% unaccounted-for water and an average day residential use of 65 gallons per capita per day and include a water conservation program and a seasonal demand management plan. MassDEP comments indicate that portions of both of the existing lined ponds would be located within the Zone I wellhead protection area of the on-site well. The Single EIR should indicate whether the well would be relocated or the ponds filled to eliminate the potential for groundwater to be contaminated by the surface water or identify how the project will be developed consistent with the Surface Water Treatment Rule. I note that connection to the Town PWS would eliminate this issue and allow the existing lined ponds to be used for stormwater collection and irrigation. Also, MassDEP comments recommend that the project provide interconnections with other PWS systems to avoid disruptions in water supply and protect public health and safety. The Single EIR should address how the proponent will address any potential disruption of its supply.

The Single EIR should include additional discussion regarding the impact of the Plymouth Rock Studios demand on the Plymouth system as a whole and on the Bradford Park Zone in particular. This discussion should take into account any planned projects and associated water withdrawal within the Town. The Single EIR should address discrepancies between the information in the Expanded ENF regarding the maximum day demand and projected demand and re-assess projections.

For all alternatives, the Single EIR should include an estimate of water demand associated with irrigation. In addition, the Single EIR should provide an estimate of reduced water demand based on proposed water conservation measures and may choose to include the GHG benefits associated with reduced water consumption within its revised GHG analysis.

Wastewater

MassDEP comments indicate that the Plymouth Harbor estuary is listed as an impaired waterbody due to excessive nutrients (likely nitrogen) and indicates that this project is likely to increase the nutrient load in this estuary by adding increased flow to the Plymouth WWTP. The preferred alternative avoids densely populated roadways many of which are located in the watershed that contributes to the estuary. However, MassDEP's comments suggest that, if the sewer main were located in these roadways and the adjacent homes connected, a net reduction of nutrients entering the estuary could occur due to the reduction in the number of onsite septic systems. Furthermore, these roadways could be reconfigured as necessary to improve safety and be designed to more efficiently address stormwater. The Single EIR should carry forward each sewer extension alignment alternative presented in the Expanded ENF for additional review and evaluate each for the potential to tie-in adjacent onsite septic systems. The Single EIR should also address potential secondary growth issues associated with each alternative and identify

growth management measures that could be instituted by zoning or other directly applicable requirements to mitigate growth impacts. I note that the connection of this project to the municipal system was not contemplated in the approved Plymouth Comprehensive Wastewater Management Plan (CWMP) (EEA #8228). The Town of Plymouth should file a Notice of Project Change (NPC) for the CWMP in conjunction with the Single EIR to facilitate coordinated review of the projects.

MassDEP comments indicate that wastewater generated during the production of movies is defined as industrial wastewater which may require pretreatment and/or flow equalization before it can be discharged for treatment at the Plymouth WWTP. The Single EIR should discuss the types and volumes of industrial wastewater that will be generated by the project. This analysis should identify how this wastewater will be captured, treated and stored.

Regulations that regulate and permit the reuse of treated wastewater (314 CMR 20.00) will be promulgated prior to the construction of this project. MassDEP comments indicate that the proposed wastewater reuse pipeline should be designed and constructed consistent with these regulations. MassDEP will consider the pipeline as a modification to the effluent structure of the wastewater treatment facility which will require the Town to submit a permit application. The proponent should consult with MassDEP and the Town regarding development of the permit application.

In addition, the Groundwater Discharge Permit regulations (314 CMR 5.00) are undergoing revision and will be promulgated in the near future. If a geothermal heat pump is included as a component of the project's GHG mitigation, the proponent should review the draft and/or final regulations prior to submitting the Single EIR and consult with MassDEP to determine whether it will require a Groundwater Discharge Permit. If a permit is required, the Single EIR should identify the project's consistency with the regulations.

Open Space/Recreation

The Single EIR should identify all impacts to open space, including those associated with the access roadway and other transportation improvements. All conservation land and open space resources within the vicinity of the project site should be described and identified on a project plan, including the Myles Standish State Forest. The proponent should consult with DCR prior to the filing of the Single EIR regarding concerns identified in its comment letter and regarding the revised traffic analysis which should also assess traffic impacts to Myles Standish and provide an assessment of traffic traveling from the west to the project site which may use parkways as a cut-through.

The Single EIR should identify mitigation for open space impacts including consideration of participation in land acquisition efforts within the vicinity of the project site and measures to minimize impacts to the Myles Standish State Forest.

Wetlands/Drainage

The local conservation commission will review the project for consistency with the Wetlands Protection Act and associated Stormwater Management Standards. The utility corridor may require a 401 Water Quality Certificate and/or a Chapter 91 License. The proponent should consult with MassDEP to identify permitting requirements and address these in the Single EIR.

The Single EIR should include plans for the utility corridor that illustrate most recently approved delineation of all applicable resource area boundaries including riverfront areas, buffer zones, 100-year flood elevations, priority and/or estimated habitat, wetland replication areas, and waterways associated with the utility corridor.

MassDEP comments note that new statewide stormwater regulations are being promulgated (314 CMR 21.00) which will require new projects with larger impervious areas to meet specific statewide stormwater management requirements. These new rules are anticipated to take effect in the first half of 2009 and, pursuant to proposed Transition rules, will apply to all projects that have not commenced 6 months after the proposed general permit is issued. MassDEP recommends that all projects such as this one that will result in 5 acres or more of impervious area (including roofs) and that are scheduled to commence on or after October 1, 2009 be designed consistent with the revised stormwater regulations and associated performance standards. The Single EIR should include a stormwater management plan that demonstrates compliance with these standards.

Rare Species

As noted previously, the project may be exempt from MESA review. The proponent should consult with NHESP prior to filing the Single EIR to confirm whether proposed activities will be exempt. If MESA review is required, the Single EIR should identify which project elements will require review, identify how the project will be conducted consistent with regulatory standards and requirements including the identification of additional mitigation.

Construction Period Impacts

The project has potentially significant construction impacts, including extensive earth moving and potential blasting. The Expanded ENF identifies measures to minimize construction period impacts. The Single EIR should address comments related to construction period impacts (on- and off-site) and mitigation for construction period impacts should be incorporated into the Project's draft Section 61 Findings. Additional information should be provided on blasting, including the extent of blasting and potential locations for blasting.

The proponent should consider expansion of its air quality mitigation to include installation of after-engine emission controls such as diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs) to reduce air emissions and consider use of ultra low sulfur diesel (ULSD) fuel rather than low sulfur diesel fuel.

Mitigation

The Single EIR should include a separate chapter on mitigation measures. It should include a Draft Section 61 Finding for all required state permits that includes a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation, and the identification of the parties responsible for implementing the mitigation. A schedule for the implementation of mitigation, based on the construction phases of the project, should also be included.

Response to Comments


The Single EIR should contain a copy of this Certificate and a copy of each comment received. The Single EIR should respond to the comments received to the extent that the comments are within MEPA jurisdiction. This directive is not intended to and shall not be construed to enlarge the scope of the Single EIR beyond what has been expressly identified in this certificate. I recommend that the proponent use either an indexed response to comments format, or else direct narrative response. The Single EIR should present any additional narrative or analysis necessary to respond to the comments received.

Circulation

The Single EIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to any state agencies from which the proponent will seek permits or approvals, to the list of "comments received" below, and to Plymouth officials. A copy of the Single EIR should be made available for review at the Plymouth public library.

January 16, 2009

Date



Ian A. Bowles

Comments Received:

1/9/09	Department of Conservation and Recreation (DCR)
12/23/08	Division of Fisheries and Wildlife/Natural Heritage and Endangered Species Program (NHESP)
1/9/09	Executive Office of Transportation and Public Works (EOTPW)
12/3/08	Massachusetts Historical Commission
12/1/08	Therese Murray, Senate President

12/9/08	Thomas J. Calter, State Representative
12/2/08	Vinny deMacedo, State Representative
1/8/09	Plymouth Public Schools/Superintendent of Schools
12/29/08	Town of Plymouth/Conservation Commission
1/6/09	Town of Plymouth/Board of Selectmen
12/17/08	Town of Plymouth/Planning Board
12/18/08	Destination Plymouth
1/9/09	Eel River Watershed Association, Ltd.
1/8/09	Friends of Myles Standish State Forest
12/15/08	Greater Attleboro Taunton Regional Transit Authority (GATRA)
1/2/09	Old Colony Planning Council
12/19/08	Plymouth 1000
1/7/09	The Pinehills
1/3/09	Walk Boston
1/8/09	Wildlands Trust of Southeastern MA
1/7/09	William S. Abbott, P.C.
1/9/09	John Adelman
1/8/09	Patricia N. Adelman
1/5/09	Aileen Sanger Chase
12/30/08	James Concannon
1/8/09	James Concannon (second letter)
12/26/08	Fr. Richard G. Curran, Ed. D.
1/6/09	Joseph J. DeSilva
1/5/09	Oliver H. Durrell III
1/7/09	Betsy Hall
1/3/09	Steven Lydon
1/8/09	Malcolm A. MacGregor
1/7/09	Paul McAlduff
1/6/09	Roger W. Monks
1/5/09	Lois and Douglas Post
1/7/09	Craig Richards
1/8/09	Larry Rosenblum
12/12/08	Richard Silva
12/12/08	Loring Tripp III

IAB/CDB/cdb