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February 27, 2009

CERTIFICATE OF THE SECRETARY OF ENERGY & ENVIRONMENTAL AFFAIRS
ON THE
SINGLE ENVIRONMENTAL IMPACT REPORT

PROJECT NAME: Regency at Methuen
PROJECT MUNICIPALITY: Methuen
PROJECT WATERSHED: Merrimac
EOEA NUMBER: 14167
PROJECT PROPONENT: Toll Brothers, Inc.
DATE NOTICED IN MONITOR: January 21, 2009

As Secretary of Energy and Environmental Affairs, I hereby determine that the Single Environmental Impact Report (Single EIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA) (G. L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

Project Description

As described in the Single EIR, the project involves the phased (Phase I-IV) development of a 240-unit age-restricted residential community on a 73-acre site containing an existing sand and gravel mining operation, forested uplands and wetlands located off Wheeler and Lowell Streets in Methuen. The project includes the demolition of a garage/office building and weigh scale associated with the existing sand and gravel mining operation, and the construction of 136 detached single family residential houses, 104 attached residential townhouse units, a 2,500 square foot community clubhouse building with fitness center, meeting room, changing room, kitchen, lavatory and media room/library, in-ground swimming pool, tennis court, bocce court and utilities and stormwater management infrastructure. The project will also include the construction of approximately 8,800 linear feet of internal roadway with sidewalks, and a total of

approximately 1,002 parking spaces (480 resident surface parking spaces, 42 clubhouse surface parking spaces and 480 parking spaces housed in structured garages).

The project is expected to generate approximately 1,350 average daily vehicle trips (adt). Vehicle access to the site will be provided via a site drive located along the project site's Wheeler Street frontage. This project will consume approximately 104,130 gallons per day (GPD) of water and will generate approximately 64,350 GPD of wastewater flows. The project also includes the construction of approximately 4,310 linear feet of new water and sewer main within municipal roadway right-of-ways and the construction of roadway improvements to Wheeler Street. As currently designed, the project's total carbon dioxide (CO₂) emissions related to energy use and transportation is estimated in the Single EIR at 4,809 tons per year (tpy).

Jurisdiction and Permitting

The project is subject to a mandatory Environmental Impact Report (EIR) pursuant to Sections 11.03(1)(a)(1), 11.03(1)(a)(2) and 11.03(6)(a)(7) of the MEPA regulations because it requires state permits and will result in the alteration of more than 50 acres of land, the creation of more than 10 acres of new impervious surface, the construction of 1,000 or more new parking spaces at a single location. The project also exceeds the review threshold at Section 11.03(6)(b)(14) of the MEPA regulations because it will generate 1,000 or more new adt on roadways providing access to a single location.

The project requires an Order of Conditions from the Methuen Conservation Commission (and hence Superseding Order(s) from the Department of Environmental Protection (MassDEP) if any local Orders are appealed) for proposed construction activities and alteration within the 100-foot buffer zone to Bordering Vegetated Wetlands (BVW) and within BVW; a Sewer Extension Permit from MassDEP; a National Pollutant Discharge Elimination System (NPDES) Construction General Permit for stormwater discharges from a construction site of over one acre from the U.S. Environmental Protection Agency (EPA); a Massachusetts Highway Department (MassHighway) Access Permit; and a Special Permit and Final Site Plan Review from the City of Methuen. The project is subject to the EEA/MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol.

The proponent is not seeking financial assistance from the Commonwealth for the project, therefore, MEPA jurisdiction applies to those aspects of the project that are within the subject matter of required or potentially required state permits and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to stormwater, wetlands, traffic, wastewater and greenhouse gases.

Review of the Single EIR

The purpose of MEPA review is to ensure that a project proponent studies feasible alternatives to a proposed project, fully discloses environmental impacts of a proposed project, and incorporates all feasible means to avoid, minimize, or mitigate Damage to the Environment

as defined by the MEPA statute. I have fully examined the record before me, including but not limited to the Scope issued on March 7, 2008; the Single EIR filed in response; and the comments entered into the record. I find that the Single EIR is sufficiently responsive to the requirements of the MEPA regulations and the Scope to meet the regulatory standard for adequacy. The proponent has provided a considerable amount of detailed information about the project and its potential impacts and proposed mitigation and has responded to comments that were submitted on the Expanded Environmental Notification Form (EENF). Remaining issues outlined in this Certificate may be addressed during permitting.

Wetlands

An Order of Resource Area Delineation (ORAD) was issued by the Methuen Conservation Commission in September 2005 (extended to September 2010) that approved the wetland boundaries on site. The wetland resource areas are primarily BVW, isolated vegetated wetlands (IVW) and floodplain. Six Certified Vernal Pools have been identified in the vicinity of the site.

The project will impact approximately 3,473 square feet (sf) of BVW. This includes 1,400 sf of temporary BVW alteration associated with installation of the sewer and water lines which will be restored in place and 2,073 sf of permanent BVW alteration as a result of the Wheeler Street roadway widening. The proponent proposes to mitigate impacts to the wetlands by creating a wetlands replication area at a minimum ratio of 2:1. The proponent requires an Order of Conditions from the Methuen Conservation Commission for the project. A 401 Water Quality Certificate is not required under 314 CMR 9.00 because the total amount of wetland impacts are under 5,000 sf for the entire site and the site is not a real estate subdivision. The proponent should ensure their wetlands replication plan demonstrates compliance with the Massachusetts Inland Wetland Replication Guidelines.

I note the comments from MassDEP indicating that the wetlands replication area depicted in the Single EIR is located close to an adjacent roadway which may impact the project's ability to meet applicable wetlands performance standards. The proponent should review MassDEP's comments regarding this topic and consider revising its wetlands replication plan to ensure replicated wetlands will meet all required performance standards.

Rare Species

The EENF identified portions of the project site that were located within rare species habitat for the Bald Eagle (*Haliaeetus leucocephalus*), Clubtail Dragonfly (*Stylurus spiniceps*), and the Umber Shadowdragon (*Neurocordulia obsoleta*). As described in the Single EIR, the updated October 2008 Natural Heritage Atlas (13th Edition) was revised and the Estimated and Priority Habitat mapping now excludes the entire project site including the roadway improvements.

Six Certified Vernal Pools were identified proximal to the site; two are located on-site and four are located off-site, west of Wheeler Street. No work is proposed within 50 feet of the two on-site vernal pools. In efforts to avoid wetland impacts, the majority of the roadway

widening is proposed along the eastern edge of Wheeler Street. Based on MassGIS coordinates and aerial interpretation, CVP 4088 and CVP 4087 are approximately 17 linear feet (lf) and 28 lf from Wheeler Street. To ensure impacts to these resource areas are avoided to the maximum extent feasible, no work should be proposed within 50 feet of the off-site vernal pools during the roadway improvements to Wheeler Street.

Historic and Archaeological Resources

The Single EIR included a description of the proponent's archaeological survey activities and a summary of their results. The Massachusetts Historical Commission (MHC) had previously requested that the proponent conduct an intensive (locational) archaeological survey for the entire Regency at Methuen project site. As described in the Single EIR, this survey was conducted by Public Archaeological Laboratory and included review of the MHC files and MHC consultations. The survey did not identify any potentially significant archaeological sites within the project site.

Traffic

The Single EIR included a traffic impact and access study that generally conforms to the EOEEA/EOTPW Guidelines for Traffic Impact Assessment. The proponent has committed to a number of proposed off-site roadway improvements to Wheeler Street, the Wheeler Street/Lowell Street intersection and the Wheeler Street/Lowell Boulevard (Route 110) intersection as mitigation for the proposed project's impacts to traffic. Specific mitigation commitments have been outlined in the Mitigation section of this Certificate. As described further below, the Single EIR also included a commitment to a Transportation Demand Management (TDM) program.

The proponent requires a MassHighway Access Permit for elimination of the intersection jog at Wheeler Street between Lowell Street and Lowell Boulevard (Route 110). Comments received from MassHighway on the Single EIR indicate that traffic associated with the project will have minimal impact on state highway. However, comments from MassHighway indicate the proponent should investigate measures to further reduce the number of single occupant vehicle trips. The proponent should also meet with MassRides, the Commonwealth of Massachusetts travel options service, regarding potential TDM measures, such as provision of preferential parking spaces for carpoolers, a carpool matching program, posting of Massachusetts Bay Transportation Authority (MBTA) commuter rail and Merrimack Valley Regional Transit Authority bus schedule information, coordination with the Methuen Senior Center, and a car share program, such as ZipCar. MassHighway encourages the proponent to designate an on-site employee as the project's transportation coordinator. Subsequent to the above discussions, the proponent should provide to the Office of Transportation Planning a revised letter of commitment, which will be the basis for MassHighway's Section 61 findings for the project.

The Certificate on the EENF asked the proponent to consider constructing sidewalks along Wheeler Street. The proponent responded in the Single EIR that sidewalks are present on a very limited basis in the City of Methuen, and that Wheeler Street, Lowell Street and Lowell Boulevard (Route 110) are narrow and are not wide enough to provide sidewalks for pedestrians

nor encourage bicycling. However, I strongly encourage the proponent to reconsider discussing the feasibility of providing a sidewalk along Wheeler Street. A sidewalk would facilitate accessing the bus route at Lowell Boulevard where, according to the City of Methuen Engineering Department there is a sidewalk on the north side of the street. Increased pedestrian traffic would minimize traffic impacts and the proponent is responsible for minimizing GHG emissions. The proponent should work closely with MassHighway and the City of Methuen to evaluate the feasibility of constructing a sidewalk along Wheeler Street towards the intersection with Lowell Street.

Stormwater

The Single EIR included a Stormwater Report and detailed the project's compliance with the MassDEP Stormwater Management Policy, including the Low Impact Development (LID) standards. Comments from MassDEP indicated that the project is subject to MassDEP's latest Stormwater Management Standards (January 1, 2008) and that the site must be designed to meet these regulations (not just to the extent practicable, as stated in the Single EIR). In addition, the proponent should review MassDEP's comments concerning its Stormwater Report and make the revisions necessary to ensure compliance with MassDEP's Stormwater Management Standards prior to submitting the Stormwater Report and Plan to the Methuen Conservation Commission for review.

The Stormwater Management System for the proposed project has been designed to include structural Best Management Practices (BMPs) which include: deep sump, hooded catch basins, water quality swales, sediment forebays, and infiltration basins. Several of these BMPs are consistent with the goals of LID stormwater management techniques. The proponent should commit to develop and implement a long-term operation and maintenance plan for the Stormwater Management System. The proponent will also prepare and implement a Stormwater Pollution Prevention Plan in accordance with the U.S. EPA's NPDES General Permit requirements.

Wastewater

The project will generate approximately 64,350 GPD of wastewater flow. The Single EIR notes that the proponent will be filing a Sewer Connection Permit with MassDEP. The City of Methuen Department of Public Works (DPW) has verified that their water and sewer infrastructure has adequate capacity for the needs of the project.

Sewer laterals will be installed to approximately nine abutting properties with existing homes to allow for the future connection to the extended sewer system. These homes would contribute approximately 2,970 GPD of secondary sewage flow to the system. A 68.80 acre parcel of land could also potentially connect to the extended sewer and contribute approximately 36,000 GPD. The proponent should verify that there is sufficient capacity in the City of Methuen sewer system to accommodate these flows.

Water Supply

The Single EIR estimated potable water supply demand at 104,130 GPD, which includes approximately 64,350 GPD for domestic use and approximately 39,780 GPD for seasonal irrigation use. The Single EIR described an integrated planning approach to water conservation efforts, including design, construction and operations measures to reduce water demand. Key conservation components include the individual metering of utilities, landscape design and irrigation management. The City of Methuen DPW has verified that water supply demand of approximately 64,350 GPD can be accommodated by the existing infrastructure. The proponent should verify that there is sufficient availability in the City of Methuen water supply system to accommodate the additional irrigation demand.

Greenhouse Gas Emissions

The project is subject to the EEA Greenhouse Gas Emissions Policy and Protocol. As required by the Policy, the EENF included a GHG analysis. The analysis quantified carbon dioxide (CO₂) emissions associated with direct and indirect stationary sources and transportation sources. The analysis uses the Tech Environmental Energy Model, which replicates the output of the U.S. Environmental Protection Agency (EPA) Energy STAR Target Finder using data and algorithms from the U.S. Department of Energy (DOE) Energy Information Administration (EIA) and the American Society of heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The Single EIR includes an updated and revised GHG analysis. Revisions to the analysis include: an updated Base Case that accurately reflects gas usage and incorporates changes in the State Building Code; analysis of additional mitigation measures and addition of a Mitigation Alternative; and a reduction from 5% to 2% in the amount of CO₂ emissions avoided through implementation of the Transportation Demand Management (TDM) program.

The analysis in the EENF indicated that the Base Case would result in the generation of approximately 5,009 tons per year (tpy) of stationary source CO₂ emissions and 646.3 tpy of indirect transportation source CO₂ emissions for a total of 5,655 tpy of CO₂ emissions. It indicated that mitigation measures incorporated into the Preferred Alternative would reduce stationary source CO₂ emissions by 1,202 tpy and transportation emissions by 32.3 tpy for a total reduction of 1,234 tpy. Total CO₂ emissions would be reduced by approximately 22% to approximately 4,421 tpy.

The revised analysis indicates that the Base Case would generate 5,509 tpy of stationary source emissions¹ and 646 tpy of transportation source emissions for a total of 6,155 tpy. The Mitigation Alternative would reduce stationary source CO₂ emissions by approximately 1,333 tpy and transportation source CO₂ emissions by 12.9 tpy for a total reduction of 1,345.9 tpy. Total CO₂ emissions would be reduced by approximately 21.9 % to 4809 tpy. The Single EIR

¹ An email dated February 24, 2009 provides additional information regarding the change in the Base Case from the EENF to the Single EIR. It indicates that the revisions to incorporate the revised Building Code reduced stationary source emissions associated with the Base Case scenario; however, the correction of natural gas estimates for hot water heating and cooking from the EENF to the Single EIR was on the order of a 30% increase. Therefore, stationary source emissions associated with the Base Case increase because the increase in gas use is greater than the reductions in energy use brought about by the change in the Building Code.

indicates that the proponent is committed to the Mitigation Alternative and, therefore, will reduce GHG emissions by 21.9 %.²

The following mitigation measures are included in the Mitigation Alternative: roof and wall insulation with R-values of R-38 and R-19, respectively; increased furnace efficiency, HVAC system with Energy Efficiency Rating (EER) of 13, duct sealing, energy efficient windows (U-.35), programmable thermostats in all units, use of compact fluorescent lighting (CFLs) in model homes and the community clubhouse (and a commitment to offer installation in CFLs in residential units), and installation of Energy Star Dishwashers and Refrigerators with the lowest energy rating. In addition, as noted in the Transportation Section of this Certificate, the proponent has committed to implementation of a TDM Program to reduce transportation related GHG emissions.

As noted previously, the revisions to this analysis included updates to the Base Case to reflect the current Building Code as of July 2008. The revisions to the State Building Code (780 CMR 61.00 7th Edition) adopt and integrate the International Energy Conservation Code (IECC) 2006 with 2007 supplement. Although the Base Case was updated to incorporate requirements of the 7th Edition, this update did not include standards associated with the IECC 2006/2007 supplement. As a result, comments from MassDEP/ Division of Energy Resources (DOER) indicate that several of the measures proposed within the Mitigation Alternative, including R-values for walls and roofs and U-values for windows are required by the current Building Code. Because the Scope for this project was issued prior to the effective date of revisions to the Building Code, I am not requiring the proponent to further revise its Base Case. I also note that the changes to the Base Case associated with the Code revisions and the corrected natural gas usage make it difficult to assess the effectiveness of the Mitigation Alternative compared to what was previously presented; however, the proponent developed a program to mitigate GHG emissions and it does include several measures that are not required by the Building Code including installation of Energy Star Appliances and installation of CFLs.

Comments from MassDEP/DOER urge the proponent to reconsider several measures that were rejected including the use of high albedo roofing materials and water conserving fixtures that perform better than required by the Plumbing Code. An email from the proponent dated February 25, 2009 indicates that to reduce solar heat gain on the residential roofs the proponent will install a "Weathered Wood" or equivalent, non-black asphalt shingle on the roof of the townhouses and will offer owners of the single-family dwellings a selection of shingle colors that includes lighter colored gray tones. In addition, bathroom fixtures for the residential units will include 1.28 gallon/flush toilets which will use less water than the 1.6 gallon/flush fixtures required by the Building Code.

Comments from MassDEP/DOER and MassHighway also indicate that the proponent should strengthen its TDM Program. As described in the Transportation Section, the proponent should work with MassHighway and other transportation programs during the permitting process to identify measures that could effectively reduce single occupancy vehicle (sov) trips associated with the project.

² An email dated February 25, 2009 confirms this commitment.

Upon completion of construction, the Proponent should provide a certification to the MEPA Office signed by an appropriate professional (e.g., engineer, architect, general contractor) indicating that the all of the mitigation measures referenced in the Section on Mitigation and Section 61 Findings below, or equivalent measures that collectively will reduce GHG emissions by 21.9 percent, have been incorporated into the project. The certification should be supported by as-built plans. For those measures that are operational in nature (i.e. TDM, recycling) the Proponent should provide an updated plan identifying the measures, the schedule for implementation and how progress towards achieving the measures will be obtained. MassHighway should incorporate this self-certification requirement into its Section 61 finding for both the mobile and stationary source GHG emission components of this project.

Construction Period

The Single EIR included a discussion of construction phasing and mitigation. I encourage the proponent to consult with MassDEP and coordinate demolition and construction activities with town officials and abutting property owners. I also encourage the proponent to adapt the project design, infrastructure and contractual requirements as necessary to incorporate waste reduction, recycling and recycled products. I refer the proponent to the MassDEP comment letter for additional guidance on developing a successful waste management program and use of recycled materials. I encourage the proponent to integrate recycling at the planning and design stage to enable the project's management and occupants to establish and maintain an effective waste diversion program.

Mitigation

The Single EIR included proposed mitigation and Draft Section 61 findings for use by State permitting agencies. The proponent has committed to the following mitigation measures which should be included in the agencies' Section 61 findings for the project:

Wetlands

Proposed wetlands mitigation includes:

- Locating the utility crossing at the narrowest section of the wetland system;
- Restoring 1,400 sf of temporarily altered wetlands in place following utility installations;
- Providing a wetland replacement area (4,160 sf) at a minimum ratio of 2:1 in accordance with the Methuen Wetlands Project Ordinance for permanent wetland alteration of 2,073 sf. Wetland replacement will be accomplished consistent with the Massachusetts Wetlands Replication Guidelines; and
- Propose to treat the wetland replacement area in a manner consistent with wetland restoration. This requires hands-on supervision and decision making during the construction process to a degree greater than that required for a typical replacement.

Stormwater

Proposed stormwater mitigation includes:

- Construction of on-site Stormwater Management System involving the installation of BMPs: deep sump, hooded catch basins, stormwater drainage pipes, water quality swales, sediment forebays, and stormwater management basins. Several BMPs are consistent with LID goals;
- Incorporating Integrated Management Practices (IMPs) such as grassed swales, infiltration catch basins, and infiltration basins; and
- Implementation of erosion and sediment controls during construction including silt fence and hay bales.

Traffic

Proposed traffic intersection improvements include:

- Widening and realigning a 4,575 lf section of Wheeler Street including 3,450 lf adjacent to the project site along Wheeler Street, 1,025 lf between the project parcel and Lowell Boulevard (Route 110) and approximately 100 lf beyond the northern property boundary. In addition, 150 lf of improvements along Lowell Street at the intersection jog;
- Removing paved intersection jog area and replacing with loam and seed;
- Employing mitigation measures outlined on pages 38-39 of the Single EIR; and
- Implement transportation mitigation measures including signage, street striping, intersection lighting, and roadway improvements to Wheeler Street (widening and repaving).

Components of the Travel Demand Management Program include:

- Accommodate pedestrians and bicycles within the project site;
- Promotion of carpooling, vanpooling and ridesharing programs;
- Promote ADA and Non-ADA Curb-to-Curb Share Ride Services;
- Providing materials regarding park-and-ride facilities and encourage residents to utilize MBTA;
- Provision of bicycle storage racks; and
- Making commuter rail and shuttle bus schedules available for employees and residents.

Wastewater

Proposed wastewater mitigation measures include:

- Infrastructure improvements to extend sewer along Lowell Street; and
- Provide sewer laterals to nine abutting properties to allow for future connection to municipal sewer.

Water Supply

Proposed water supply mitigation measures include:

- Infrastructure improvements to extend water along Lowell Street;
- Reducing dead end length of water pipe in Lowell Boulevard (Route 110) and eliminating dead end in Wheeler Street, and improving water quality across this section. In addition, looping will provide a desired redundancy in the event of a water main interruption;
- Provide water service laterals to nine abutting properties to allow for future connection to municipal water service; and
- Individual metering of community building, irrigation system and dwellings.

GHG Emissions

Proposed GHG emissions mitigation measures include:

- Roof and wall insulation with R-values of R-38 and R-19, respectively;
- Increased furnace efficiency;
- HVAC system with Energy Efficiency Rating (EER) of 13;
- Duct sealing;
- Energy efficient windows (U-.35);
- Programmable thermostats in all units;
- Use of compact fluorescent lighting (CFLs) in model homes and the community clubhouse (and a commitment to offer installation in CFLs in residential units);
- Installation of Energy Star Dishwashers and Refrigerators with the lowest energy rating; and
- Committed to implementation of a TDM Program to reduce transportation related GHG emissions.

The Single EIR included proposed Section 61 findings for state agencies to use in permitting. While the proposed findings include some mitigation measures for stationary sources and traffic-related GHG emissions, these Section 61 findings should be expanded to include all of the GHG mitigation measures in accordance with the GHG Policy during permitting. The final Section 61 findings will be included with all state permits issued for this project, and will be considered binding upon the proponent as mitigation commitments. In accordance with Section 11.12(5)(e) of the MEPA regulations, final Section 61 findings must be forwarded by each permitting agency to the MEPA Office, which will publish a Notice of Availability in the Environmental Monitor.

As noted elsewhere in this Certificate, the Proponent should provide a certification to the MEPA Office signed by an appropriate consultant (e.g., engineer, architect, general contractor) indicating that the all of the above referenced GHG-related mitigation measures have been incorporated into the project. The certification should be supported by as-built plans. For those measures that are operational in nature (i.e. TDM, recycling) the Proponent should provide an

updated plan identifying the measures, the schedule for implementation and how progress towards achieving measures will be obtained. MassHighway should incorporate this self-certification requirement into its Section 61 finding for both the mobile and stationary source GHG emission components of this project.

Future Development

As described in the Single EIR, the 73-acre project site proposes three levels of open space, each with differing use restrictions. The proponent will evaluate creating two separate deed restrictions, one for the undisturbed natural land and the other for the passive common land to ensure these areas are adequately protected, but has currently not committed to placing a Conservation Restriction on any portion of the site. At this time, these open spaces are potentially developable.

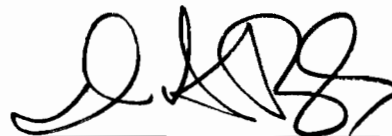
I am therefore requiring that a Notice of Project Change (NPC) be filed with the MEPA Office for any future development that may be proposed for these open space areas. The NPC will need to discuss the site planning issues and the potential cumulative infrastructure and environmental impacts, including Greenhouse Gas (GHG) emissions, arising out of the full build-out development of the future development parcels and the proposed Regency at Methuen development project. The proponent for the open space area future development parcel should consult with the MEPA Office prior to filing the NPC.

Conclusion

I find the Single EIR to be adequate and am allowing the project to proceed to the state agencies for permitting. The Single EIR contained adequate information on project impacts and mitigation, and provided the state permitting agencies with sufficient information to understand the environmental consequences of their permit decisions. No further MEPA review is required.

February 27, 2009

Date



Ian A. Bowles

Comments received:

01/22/2009 Massachusetts Historical Commission (MHC)
 02/20/2009 Massachusetts Department of Environmental Protection (MassDEP), Northeast
 Regional Office
 02/24/2009 Executive Office of Transportation and Public Works (EOT)

SEIR #14167
 IAB/PPP/ppp