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

November 12, 2010

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE/DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: ADM Tihonet Mixed Use Development
PROJECT MUNICIPALITY	: Carver, Plymouth and Wareham
PROJECT WATERSHED	: Buzzards Bay
EEA NUMBER	: 13940
PROJECT PROPONENT	: ADM Development Services LLC
DATE NOTICED IN MONITOR	: September 22, 2010

As Secretary of Energy and Environmental Affairs, I hereby determine that the Notice of Project Change (NPC)/Draft Environmental Impact Report (DEIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00). The Proponent should prepare a document containing Responses to Comments and Proposed Section 61 Findings, which shall be filed, circulated and reviewed as a Final EIR in accordance with 301 CMR 11.08(8)(b)(2)(b).

Project Description

The proposed project as described in the NPC/DEIR constitutes Phase B of a larger Master Plan for the ADM land holdings comprising approximately 6,079 acres in the towns of Carver, Plymouth and Wareham. Phase B of the project has been revised and reduced in scale since the filing of the Expanded Environmental Notification Form (EENF) to include 344,700 square feet of medical and general office, retail and residential buildings as well as two large-scale solar energy projects, a 3.6 megawatt and a 0.5 megawatt facility, that will generate 6,400 megawatt hours per year (MWh/yr) of renewable energy.

The mixed-use development portion of Phase B and the RoseBrook Solar Project (0.5 MW) will be located on parcels of land in the vicinity of Lou Avenue in Wareham. The larger solar project, the Charlotte Furnace Solar Project (3.6 MW) will also be located in Wareham on a parcel of land in the northwestern portion of the project site off Charlotte Furnace Road near the Carver town line. I commend the Proponent for undertaking these significant renewable energy projects which will supply clean renewable energy power to businesses and homes in southeastern Massachusetts without generating air pollution or greenhouse gas emissions.

The Phase B project area encompasses 337 acres of land of which 259 acres will remain in agricultural use and 78 acres will be used for Phase B development. The environmental impacts associated with the project include alteration of approximately 62 acres of land, including 12 acres of impervious area, and impacts to 34 acres of state-listed endangered species habitat. The NPC/DEIR proposes construction of 931 parking spaces and estimates traffic impacts for Phase B to be 6,450 vehicle trips per day on an average weekday and 4,396 trips on an average Saturday. The proposed project, including off-site transportation improvements, will result in alteration of approximately 14,000 square feet (sf) of Riverfront Area, 33,500 sf of wetlands Buffer Zone, and 450 sf of Bordering Land Subject to Flooding (BLSF).

Phase B of the project will connect to the Town of Wareham's municipal system for its water supply and wastewater discharge. Phase B is expected to discharge a maximum flow of 43,773 gallons per day (gpd) to the municipal sewer system; the average daily wastewater flow is expected to be less than this. The average daily water demand for Phase B is approximately 25,278 gpd.

MEPA History and Context

The ADM Tihonet Mixed Use Development project is proposed as a phased development over the next 25 years or more. The site currently contains the corporate headquarters of the A.D. Makepeace (ADM) Company, and includes cranberry bogs as well as undeveloped lands considered ecologically significant due to the presence of BioMap Core Habitat, Priority Habitat for rare and endangered species, and the underlying sole source aquifer. The conceptual Master Plan for the entire project site envisions a mixed-use village community that will incorporate principles of smart growth, open space preservation, low impact development, traditional village design, and pedestrian orientation. The Proponent proposes the use of Transfer of Development Rights (TDR) to concentrate development in certain areas and ensure conservation of ecologically significant lands.

A Final Amended Record of Decision was issued on October 28, 2009 granting a waiver to allow the Proponent to proceed with Phase A of the project prior to completing an EIR for the entire project. Portions of Phase A, including the Phase A2 medical office building, are under construction.

The NPC/DEIR for Phase B, located in Wareham, has been filed in accordance with the Special Review Procedure (SRP) established for the project (January 29, 2007) and the Certificate on the Expanded Environmental Notification Form (EENF) dated September 12, 2008. An ENF for the proposed Phase C-1 Wankinco Cranberry Bog Expansion was filed concurrently with the NPC/DEIR in September 2010. The cranberry bog expansion is located in

Carver, within the Phase C portion of the project site. A Certificate on the ENF for the Wankinco Bog Expansion is also being issued today. The Phase C-1 bog project does not require an EIR.

The Proponent requested a "roll-over" such that the Draft EIR would be reviewed as a Final EIR in accordance with 301 CMR 11.08(8)(b)(2)(a). As noted above, I have agreed to allow a Response to Comments on the Draft EIR and Proposed Section 61 Findings to be filed in lieu of a Final EIR in accordance with 301 CMR 11.08(8)(b)(2)(b).

Project Change

Phase B, as previously proposed in the EENF, was located on a 1,140-acre portion of the site and included 24 development areas within the Business Development Overlay District (BDOD) and two additional development areas within General Commercial zoned portions of the site. The Proponent has reduced the scale of development proposed at this time due to market conditions and proposes to defer further development of the BDOD to a future date as part of the project's Phase C. The Project Change proposed in the NPC/DEIR reduces the development area to 337 acres of land (within the Town of Wareham) and proposes four development areas comprising 78 acres of land (the remainder of the Phase B area is agricultural land and open space). The development proposed for Phase B consists of 344,700 gross square feet of commercial and residential use as well as two solar energy projects, compared to 1.7 million sf of development as proposed in the EENF.

Permits and Jurisdiction

The project is undergoing environmental review and subject to the requirements for an EIR because it requires state agency permits and exceeds MEPA review thresholds, including several thresholds for a mandatory EIR. Phase B of the project exceeds the following thresholds: Section 11.03(1)(a)(1) and (2) of the MEPA regulations because it will involve alteration of 50 or more acres of land and creation of 10 or more acres of new impervious area; Section 11.03(2)(b)(2) of the regulations because it will involve alteration of two or more acres of Priority Habitat and result in a taking of a state-listed species; Section 11.03(6)(a)(6) because it will result in generation of 3,000 or more new vehicle trips; and Section 11.03(6)(b)(15) because it will result in 300 or more new parking spaces. Phase C may exceed other MEPA review thresholds.

The proponent may apply for financial assistance from the Commonwealth, including grants from the Massachusetts Technology Collaborative and the Massachusetts Opportunity Relocation and Expansion (MORE) Program. If the project involves financial assistance from the Commonwealth, MEPA jurisdiction will be broad and extend to all aspects of the project likely to cause damage to the environment as defined in the MEPA regulations. In the absence of financial assistance, MEPA jurisdiction would extend to aspects of the project within the subject matter of required state permits that are likely to cause damage to the environment as defined in the MEPA regulations. In this case, MEPA jurisdiction for the entire project, including Phase C, would extend to water supply, wastewater, wetlands, water quality, rare species, historical and archaeological resources, transportation, land alteration and stormwater.

Phase B requires a Vehicular Access Permit from the Massachusetts Department of Transportation (MassDOT), a Conservation and Management Permit from the Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program (NHESP), and an Order of Conditions from the Wareham Conservation Commission (and, on appeal only, a Superseding Order from the Massachusetts Department of Environmental Protection (MassDEP)). The project is subject to the Executive Office of Energy and Environmental Affairs (EEA)/MEPA Greenhouse Gas Emissions Policy and Protocol. The project is also subject to review by the Massachusetts Historical Commission (MHC) and may be subject to federal consistency review by the Massachusetts Office of Coastal Zone Management (CZM)

Future phases of the project will require will require additional permits including a 401 Water Quality Certification, Groundwater Discharge Permit, Water Supply System Distribution Modification, Sewer Extension/Connection Permit, and New Source Approval from MassDEP.

REVIEW OF NPC/DEIR

Phase A Update

The NPC/DEIR includes an update on Phase A of the project, located within the Town of Wareham, which includes: Phase A1, located in the Tihonet Technology Park, a 80,000 sf office and light industrial development with associated infrastructure; Phase A2 - a 68,500 sf medical office building, 5,000 sf gatehouse, and associated infrastructure; and Phase A3 - a five acre cranberry bog expansion. Phases A2 is under construction and expected to be completed by March 2011. Phase A3 is also under construction and expected to be completed by the end of 2010. Phase A1 is not anticipated to be constructed in the immediate future. The timeframe for Phase A1 depends on market conditions and identification of a tenant.

The Proponent has received local permits for Phase A2 including a sewer connection permit and Order of Conditions, as well as a MassDOT permit for required crossings related to water and sewer connections. The NPC/DEIR includes information regarding the town's evaluation of the municipal sewer system and the impact of Phase A and B. The NPC/DEIR indicates that the Wareham system can accommodate Phase A and B with certain system upgrades in place. Transportation improvements proposed for Phase A are expected to be completed by the end of 2010.

Project Description

Rosebrook Place

The Rosebrook Place development area is approximately 14.1 acres. A mixed-use development is proposed consisting of eight buildings, a gatehouse, and a bridge connecting buildings A and B. the development will connect to municipal water and sewer services. The NPC/DEIR includes a phasing plan for Rosebrook Place which is likely to be constructed in three phases. Proposed uses are office, retail, residential, tenant storage, a fitness center, restaurant, bank and hotel. The proposed buildings are: Buildings A and B, 40,000 square foot (sf) each plus a connecting bridge (15,400 sf) for retail, residential and tenant storage; Building

C - 14,000 sf fitness and retail; Building D – 5, 000 sf retail; Building E – 5,000 sf retail; Building F – 4,800 sf restaurant; a 4,000 sf Bank; a 5,000 sf Gatehouse - office and storage; and a 106,000 sf Hotel. The gross square footage proposed for Rosebrook Place is 206,300 sf. The Rosebrook Place component of Phase B also includes widening and re-orientation of the Phase A subdivision roadway (Lou Avenue extension and Road A). The NPC/DEIR proposes construction of 530 parking spaces for Rosebrook Place.

Rosebrook Business Park

The Rosebrook Business Park will include a mix of office and medical uses on a 8.4-acre portion of the site. Two buildings are proposed for Phase B: a 68,000 sf medical office building; and a 35,000 sf general office building. The development will connect to municipal water and sewer services. The gross square footage proposed for the Business Park is 103,000 sf. A total of 401 parking spaces are proposed. The development will be accessed by two 24-foot wide driveways from the Lou Avenue extension cul-de-sac and a driveway off Road A (for the general office building).

Charlotte Furnace Solar Energy

Phase B includes a 3.6 MW solar energy development on a 50-acre portion of the site. Approximately 17.5 acres of land will be used for solar panel installation. The solar panels will produce approximately 5,600 megawatt hours per year (MWh/year) of electricity which will be transmitted to the power grid via an existing electrical transmission line located directly south of the development area.

Rosebrook Solar

The proposed 0.5 MW Rosebrook solar energy development is located on a 5.5 acre portion of the site and will include 3.2 acres of solar panels that are expected to produce approximately 800 MWh/yr of electricity. This solar energy development will connect to the existing electrical distribution system at the transformer at the Phase A2 medical office building area. The electricity generated will be used to supply the medical office building, existing agricultural operations and Makepeace's office.

Alternatives

The NPC/DEIR evaluates several alternative development scenarios and compares the proposed Phase B development with the moderate and maximum build alternatives evaluated in the EENF.

Alternative development scenarios for Rosebrook Place

The preferred alternative for Rosebrook Place consists of a 241,700 sf mixed-use development that will require widening and realignment of the Lou Avenue extension (proposed for Phase A2) to accommodate traffic increases. The NPC/DEIR indicates that shared parking

will be analyzed during local permitting and it is expected that the amount parking constructed will be less than the 530 spaces proposed.

The Rosebrook Place development area includes a 4.4-acre parcel, identified as GC1 in the EENF, an additional 5 acres acquired by the Proponent since the EENF filing, and the Phase A2 development area. The moderate build alternative in the EENF proposed 90,000 sf of mixed use development for the GC1 parcel and the maximum build proposed 138,000 sf. However, since the development parcel has more than doubled in size, the EENF alternatives and related impacts are not directly comparable. Two additional development alternatives were considered: 1) a 183,400 sf mixed-use development and 2) a 125,035 sf medical office and retail pharmacy with a two-level decked garage. Although alternative 1 has less development space, impervious estimates are higher due to parking required for office use. Development alternative 2 is on a smaller site (11.5 versus 14 acres in the preferred) and was rejected because it does not provide the desired mixed-use development and would require a decked garage which the Proponent has determined financially infeasible for this development. Trip generation for alternative 2 would also be higher than other alternatives.

Rosebrook Business Park Alternatives

The proposed development area for the Business Park includes Area Z (6.2 acres) and 50 percent of Area Y (6.6 acres) as identified in the EENF concept plan for Phase B. The remainder of Area Y was included in Phase A2 development. The moderate and maximum build programs for Areas Y and Z as described in the EENF were, respectively, 35,000 sf and 89,000 sf of general and medical office use. The preferred development alternative includes 106,000 sf of general and medical office. Alternative 1 is an expansion (an additional 6.5 acres) to include two satellite parking areas that would allow for an increase in development to 263,000 gsf.

The moderate build alternative would result in less land alteration and impervious area compared to the preferred alternative but greater wetland impact due to development in Riverfront Area. The preferred alternative concentrates development by building 3-story versus 1.5 story buildings, thereby resulting in less impervious area compared to either the EENF maximum build or the development alternative 1, and almost half the land alteration of alternative 1 (8 acres versus 15 acres). The EENF moderate build would result in significantly less vehicle trips per day (tpd); 770 tpd for the moderate build compared with 2,952 tpd for the preferred alternative, 2,394 for the EENF maximum build, and 4,712 for development alternative 1. Water demand and wastewater generation are also substantially less for the EENF moderate build alternative due to the smaller development program (35,000 sf).

Charlotte Furnace and Rosebrook Solar Alternatives

The NPC/DEIR compares the impacts associated with the proposed Charlotte Furnace Solar Project to those of the EENF moderate and maximum build development scenarios for the development area. The NPC/DEIR indicates that the proposed solar project is similar to the maximum build scenario in terms of its land alteration and impacts to state-listed endangered species habitat. However, it will avoid impacts related to transportation, impervious area, water demand and wastewater that would result from a commercial or mixed use development. In

addition, more than half of the 50-acre solar project area will remain vegetated after installation of the panels.

The area selected for the Rosebrook Solar Project was not identified as a development area in the EENF for the Phase B moderate or maximum build scenarios. Alternatives considered in the NPC/DEIR include use of this portion of the site as a cranberry bog and development of a 20,000 sf general office building. The preferred alternative would result in less impacts compared to a commercial development since it would not result in creation of new impervious area, traffic, water demand or wastewater flow. While a cranberry bog alternative would also reduce or eliminate environmental impacts associated with impervious area, traffic and wastewater, it would require approximately 21,500 gpd of water for its operation.

Independent/Assisted Living Facility

An independent/assisted living facility was considered as part of Phase B. The expansion of Phase B to accommodate this facility would result in development of an additional 15 acre parcel of land and result in greater impacts compared with the preferred alternative due to increased land alteration, impervious area, traffic, water demand and wastewater flow.

Parking and Impervious Area

The NPC/DEIR indicates that shared parking will be evaluated during local permitting and porous pavement will be used for parking in an overflow lot to reduce impervious area. The project should be designed to limit parking supply to the maximum extent feasible thereby minimizing land alteration and impervious area. Reducing the parking supply is an important consideration in reducing land alteration and in the context of promoting public transit.

Air Quality and Greenhouse Gas Emissions

Mesoscale Analysis

The NPC/DEIR includes a mesoscale analysis which evaluates Volatile Organic Compounds (VOC) and Nitrogen oxide (NOx) emissions in the project area under existing conditions and the future 2015 no-build and 2015 build with transportation mitigation scenarios. The Proponent used the EPA Mobile 6.2 program for the analysis. The study area includes all roadway links and intersections projected to experience a 10 percent potential increase and/or reduction in level of service (LOS) to Level D or lower. The NPC/DEIR identified the links and intersections in the study area and provides the results of the analysis, which indicates that for Phase B, the 2015 Build with mitigation will result in a one ton per year (tpy) increase in VOC and NOx emissions of compared to 2015 no-build conditions (i.e. from 13 tpy to 14 tpy for VOC and 24 tpy to 25 tpy for NOx). The proposed mitigation includes roadway improvements and Transportation Demand Management (TDM) measures as described in the transportation section below.

Greenhouse Gas (GHG) Emissions Analysis

The NPC/DEIR includes a GHG analysis for Phase B stationary and mobile sources, and proposes mitigation to achieve an approximately 14.5 percent reduction in Carbon dioxide (CO_2) emissions from building-related sources and a 3.5 percent reduction for mobile source emissions. Overall, the Proponent expects that the proposed project (build with mitigation) will achieve a 10.5 percent reduction in GHG emissions from stationary and mobile sources when compared with the code-compliant base case. The code-compliant base case is expected to generate 4,737 tons per year (tpy) of CO_2 and the proposed Phase B is expected to generate 4,237 tons of CO_2.

As described in the NPC/DEIR, the Proponent is also constructing two solar projects as part of Phase B which will offset approximately 2,900 tons of CO_2 per year that would otherwise be produced from fossil fuels. The additional credit for GHG reductions from the proposed solar project is not accounted for in the 14.5 percent stationary source CO_2 reduction noted above. The Proponent indicates it may use these credits for future phases of the project to offset GHG emissions.

The NPC/DEIR identifies a range of GHG mitigation measures proposed for Phase B, which include:

- Extension of natural gas service to the Phase B project area;
- High-efficiency HVAC systems and other equipment;
- Increased R-value insulation;
- Cooling with gas heat pump for the hotel;
- Motion sensors for lighting and climate control;
- Provision of construction and design guidelines and energy efficiency consulting services to facilitate sustainable design build-out by tenants;
- Work with the Town of Wareham to develop guidelines that include incentives for end-users to include energy-efficient building materials and appliances;
- Financial incentives, which will be market-dependent;
- Third Party Building Commissioning;
- Installation of meters to monitor energy use and efficiency will be considered;
- Construction materials recycling;
- Building orientation and landscaping to minimize energy use;
- Skylights and other measures to maximize interior daylighting;
- Water conservation including efficient fixtures that exceed building code, rainwater collection/use, and xeriscaping;
- Window glazing;
- Building materials with recycled content and materials sourced regionally;
- Purchase and installation of energy-star rated appliances;
- Use of wood certified in accordance with Forestry Stewardship Council's principles and criteria;
- Use of low VOC adhesives, sealants, paints, concrete and wood;
- Reduce or eliminated refrigerants in HVAC system; and
- Transportation Demand Management (TDM) measures including financial support to GATRA for a low emission bus.

The GHG analysis for stationary sources was performed using eQUEST 3.63.6510. The NPC/DEIR includes information on the eQUEST model inputs and outputs. The analysis indicates that the hotel and other Phase B buildings will have higher energy consumption in the preferred build with mitigation scenario compared to the baseline case, even though CO_2 emissions will be reduced by 14.5 percent. Apparently this is due to the switch from electric heat to natural gas heating as noted in a letter from the Proponent to the MEPA Office dated November 4, 2010. The eQUEST model assumes greater energy use by natural gas heating systems in comparison to electric heating systems. The Department of Energy Resources (DOER) has confirmed that this is in fact the expected outcome from modeling the change from electric resistance heating to natural gas using eQUEST. However, when viewed from the perspective of the fuel energy required by ISO-NE generating stations to produce the ERH at the site (i.e. the source energy use index), natural gas is much more efficient. Thus the Phase B buildings are expected to result in the predicted decrease in net GHG emissions, as presented in the NPC/DEIR.

During consultations with the Proponent, DOER recommended additional energy efficiency measures to consider for Phase B. These include ventilation energy recovery, reduced lighting power density and HVAC improvements with rooftop units that have an energy-star rating of 13 or higher. In its letter of November 4th, the Proponent indicates that it is not feasible to commit to these energy efficiency measures at this time because end-users have not been identified and they may have specific lighting or HVAC needs that would preclude the measures suggested by DOER. The Proponent notes that NSTAR rebates may facilitate additional lighting improvements once final needs are determined, as was the case with Phase A2. The Proponent has committed to evaluate the additional DOER recommendations in terms of the needs of the occupant and the financial feasibility of incorporating the efficiency measures once a specific user is identified.

Upon completion of project construction, the Proponent will be required to provide a certification to the MEPA Office signed by an appropriate professional (e.g. engineer, architect, general contractor) indicating that all of the GHG mitigation measures, or equivalent measures that are designed to collectively achieve the proposed stationary source GHG emission reduction committed to in the FEIR, 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, use of Energy Star-rated equipment), the Proponent will be required to provide an updated plan identifying the measures, the schedule for implementation and how progress toward achieving these measures will be achieved. The revised Section 61 Findings should include a commitment to self-certification as outlined below.

Phase C GHG Emission Analysis

The timeframe and details of Phase C development is uncertain, therefore a complete and reasonably accurate evaluation of impacts and mitigation is not realistic at this point. However, as required in the Scope and as discussed during an April 1, 2010 meeting between MEPA, DOER and the Proponent, the NPC/DEIR includes a preliminary analysis of GHG emissions for Phase C with proposed metrics for different types of stationary uses. The analysis estimates total CO_2 emissions from Phase C stationary sources to be 38,800 tons per year (baseline case) and

mobile emissions to be 5,870 tons per year for a total of 44,670 tons per year of CO_2 emissions (entire project). As described in the NPC/DEIR, mitigation measures will include at a minimum, those that are proposed for Phase A and B. The Proponent will reconsider mitigation for Phase C as technology advances in the future. Combined Heat and Power systems, rejected as an infeasible alternative for Phase B, will be re-evaluated for Phase C in addition to renewable energy and alternative fuels.

Endangered Species

Phase B will result in impacts to approximately 34 acres of mapped habitat for state-listed species, located at the site of the proposed Charlotte Furnace Solar Project, and will require review under the Massachusetts Endangered Species Act (MESA) and a Conservation and Management Permit from NHESP. As described in the NPC/DEIR, land clearing will be limited to the areas required for solar panels. Fencing around the perimeter of the solar project site will be raised to allow some wildlife passage and the areas beneath panels will be re-vegetated with input from NHESP on appropriate plant species. The Proponent is consulting with NHESP to identify an appropriate location for endangered species mitigation.

NHESP, in its comment letter, notes that the Conservation and Management Permit is expected to result in important habitat protection for Eastern Box Turtles and other state-listed species elsewhere on the property, most likely in the vicinity of other abutting open space. The MESA permitting for the solar energy project will be coordinated with the permitting of the Wankinco Cranberry Bog Expansion (Phase C1). The Proponent and NHESP are working together to develop a site-wide MESA permitting scheme that will address endangered species impacts associated with future potential development.

Land Alteration

Construction of Phase B will result in alteration of 62 acres of land including creation of up to 12 acres of new impervious area. The NPC/DEIR proposes stormwater management and Low Impact Development (LID) features as outlined below. The project should be designed to limit parking supply to the maximum extent feasible in order to minimize land alteration and creation of new impervious area. The majority of the Phase B area (337 acres) will continue to be used for cranberry bog operations. The area proposed for Rosebrook Place and Business Park development is located in and near previously disturbed land on the southern portion of the site where there is access to roadway, water, wastewater, and natural gas infrastructure. Although the density of development on this portion of the site is higher than what was proposed for these parcels in the EENF, the overall scale of Phase B has been reduced, and selection of this location near Lou Avenue for development is generally consistent with the EENF Master Plan. The draft Master Plan identified areas considered suitable for development (including Phase B parcels) as well as high quality habitat in other parts of the site that are more conducive to conservation of larger areas of unfragmented open space. I expect that in its Response to Comments and in future filings the Proponent will elaborate on its plans for land conservation and Transfer of Development Rights (TDR).

Historical and Archaeological Resources

The NPC/DEIR includes an update on archaeological field investigations conducted for Phase B development areas. No historic resources were identified within Phase B. No significant archaeological resources were found during surveys of the Rosebrook Place, Rosebrook Business Park and proposed solar project areas, and no further investigations are recommended. The Proponent has been in consultation with Massachusetts Historical Commission (MHC) and MHC has reviewed the technical reports submitted by the Proponent. MHC indicates in its comment letter that the DEIR is responsive to its comments on the EENF including its request for a comprehensive cultural resource summary. I expect the Proponent will continue its consultations with MHC during the planning of Phase C.

Stormwater and Low Impact Development (LID)

The NPC/DEIR includes a drainage analysis and stormwater management plan to address impacts related to the proposed addition of 12 acres of impervious area. A combination of Conventional and Low Impact Development (LID) stormwater measures are proposed for Rosebrook Place and Rosebrook Business Park. LID measures include treebox filters, bioretention areas, water quality swales, xeriscaping, porous pavement, subsurface infiltration chambers, and infiltration basins. Vegetated swales and infiltration basins are also proposed for the Charlotte Furnace Solar Project area. Rooftop runoff will be collected and used for irrigation and overflow will be infiltrated using subsurface infiltration chambers. The Proponent has committed to include approximately 0.8 acres of porous pavement at Rosebrook Place and 1.2 acres of porous pavement at Rosebrook Business Park, which will allow groundwater recharge on-site.

As described in the NPC/DEIR, the proposed Phase B development will be designed to comply with MassDEP stormwater management standards. A Long-Term Pollution Prevention Operation and Maintenance Plan was included in the filing (Appendix A).

Transportation

The NPC/DEIR includes a transportation study that generally conforms to the EEA/MassDOT Guidelines for EIR/EIS Traffic Impact Assessment. As noted in MassDOT's comment letter, the DEIR has adequately identified and analyzed the project's study area future build conditions and determined appropriate mitigation measures to address traffic impacts. The data on accidents included in the traffic study indicates low accident totals at some intersections. Supplemental information and analysis, to include accidents investigated by local police, will be required for permitting as noted in the MassDOT comment letter.

The traffic impact analysis indicates that at full build the proposed Phase B would result in significant delays and degradation at several locations within the study area. The Proponent has committed to a comprehensive mitigation package that includes the following highway and traffic signal improvements:

- Reconstruction of the Route 28/Lou Avenue intersection to provide three exiting lanes and two entering lanes separated by an island, widening of the northbound Route 28

approach to provide two general purpose lanes and extending the Route 28 southeastbound left-turn lane;
- Installation of traffic signals at the Route 28/Charge Pond Road intersection and Route 28/Charlotte Furnace Road intersection;
- Upgrades to the Route 28 intersections with Tihonet Road, Charge Pond Road, and Charlotte Furnace Road, as well as Cranberry Road/Federal Road intersection with new signs and pavement markings; and
- Monitoring of traffic volumes and operating conditions at the I-495/route 58 northbound and southbound ramp intersections.

The NPC/DEIR indicates that most intersections would operate at an acceptable level of service (LOS) with the proposed improvements in place. In order for MassDOT to ascertain that sufficient storage lanes are provided and that queues would not impact operations of the I-195/Route 28 interchange, the Proponent should submit to MassDOT a composite illustration of intersection and lane group/movement LOS, 50 percent and 95 percent queues, and associated storage lengths as a supplement to the LOS summary tables. A large-scale conceptual plan as required by MassDOT should also be provided. I refer the Proponent to MassDOT's comment letter for guidance on proposed mitigation and relevant design standards.

The NPC/DEIR describes a comprehensive set of Transportation Demand Management (TDM) measures that include pedestrian improvements, bicycle accommodations, and traffic reduction strategies. Pedestrian connections on-site and at the Lou Avenue intersection will connect the project site with Lou Avenue sidewalks that extend to the proposed Rosebrook Business Park. These improvements will also allow connection to the existing sidewalk system along Route 28. The Proponent has committed to bicycle accommodations on-site and along the Route 28/Tihonet Road Connector and will include bicycle detection and associated signs and pavement markings at all traffic signals to be constructed or modified as part of Phase B. However, the Proponent should also provide bicycle lanes along the segment of Route 28 in which mitigation work will occur, and ensure safe and appropriate transitions to adjacent segments of Route 28. Plans should be revised to show bicycle lanes and future connections with the potential Wareham Bikeway that is under development to ensure that this is an integral part of the larger ADM Tihonet project transportation system.

The NPC/DEIR identified trip reduction strategies to be incorporated as part of the project's TDM program. These include an on-site transportation coordinator, alternative work schedules, preferential parking for those who rideshare and use alternatively fueled vehicles, rideshare matching program through the local Transportation Management Association and through joint programs with area commercial tenants and coordination with MassRides. The proposed TDM program includes on-site amenities such as ATMs, direct deposit, showers, microwaves and refrigerators to reduce midday trips. The Proponent should also coordinate with Council on Aging of the Towns of Wareham, Carver and Plymouth.

As described in the NPC/DEIR, the Proponent will work with the Town of Wareham, MassDOT, Southeastern Regional Planning and Economic Development District (SRPEDD), and the Greater Attleboro Taunton Regional Transit Authority (GATRA) to implement TDM measures. The Proponent should ensure that the site is designed to accommodate the GATRA

bus operational needs, and that the Proponent's commitment to financial assistance is acceptable to GATRA to expand the fixed bus service to the site. I note the comments from GATRA, SRPEDD and MassDOT with respect to these issues, and I expect that the Proponent will respond to these in the FEIR. In a recent email from the Proponent, dated November 10, 2010, the Proponent committed to provide $20,000 to GATRA as a matching fund toward a low emissions bus, which will allow GATRA to obtain an $80,000 grant for the bus. The contribution will be made when the project proceeds with construction prior to occupancy of the first building in Phase B.

Wastewater and Nutrient Loading

Phase B is expected to generate a peak day flow of approximately 43,000 gallons per day (gpd) of wastewater (average daily flow approximately 22,500 gpd). Other sources of nutrients (nitrogen and phosphorus) include stormwater runoff and fertilized lawns. The NPC/DEIR proposes that Phase B nitrogen and phosphorus loads will be reduced by treatment at the Wareham Water Pollution Control Facility (WWPCF) and stormwater management measures.

The NPC/DEIR includes calculations for the nitrogen output expected from the proposed Phase B development. Nitrogen output under existing and proposed conditions is presented (as lbs per year) for treated wastewater, natural areas, lawn areas, impervious area, and as a cumulative total for the net increase in nitrogen. The nitrogen output rates used in the analysis are based on coefficients provided by the Buzzards Bay National Estuary Program (NEP) that are consistent with those used by the Massachusetts Estuaries Program (MEP). Based on the calculations in the NPC/DEIR, Phase B would result in a net increase of 713 lbs per year of nitrogen, which includes 585 lbs/year of nitrogen associated with wastewater flows from the proposed Phase B Rosebrook Place and Rosebrook Business Park. These flows will be directed to the WWPCF, which discharges to the Agawam River. The nitrogen loads calculations in the NPC/DEIR represent gross nitrogen outputs and not the actual nitrogen load or impact to specific water bodies, which would require additional analysis that considers factors such as sub-watershed divides and attenuation rates.

As indicated in the MassDEP comment letter and in the NPC/DEIR, methods to calculate nitrogen outputs, attenuation, and final impacts are not well developed and watershed divides in the Wareham River watershed are not yet approved by the MassDEP. The Proponent has agreed to work with the MassDEP Wastewater Management Program on a process to develop standardized methods for nitrogen impact analysis, which will take some time. The proposed joint efforts between the Proponent and MassDEP will likely include, but not be limited to: refinements in groundwater models; a better method for cranberry bog impact assessment based on bog design, construction and operation; and a system to account for nitrogen removal that may occur before a Groundwater Discharge Permit is issued for the project. Although the Scope for the DEIR required a comprehensive nitrogen management plan, including a nitrogen-neutral alternative and offset measures, I am satisfied that the Proponent has made a good faith effort to respond to the Scope at this point in time, based upon the data and models currently available. Furthermore, the scale of Phase B has been substantially reduced and will not required a Groundwater Discharge Permit as previously envisioned because the Phase B development will connect to the Town of Wareham sewer system. This is a substantial changed condition from

what was presented in the original EENF. Therefore, I believe the nitrogen analysis provided is adequate for the revised Phase B, and a more in-depth analysis of nitrogen impacts and off-set measures may be deferred for inclusion in a subsequent project filing. Cumulative nitrogen impacts will be addressed at a later stage when a Groundwater Discharge Permit is required.

Water Supply

Drinking water for the project will be supplied by the Wareham Fire District, which has sufficient available water to meet the needs of the revised Phase B (approximately 25,000 gpd). MassDEP, as indicated in its comment letter, is in discussion with the Proponent regarding permitting for the proposed irrigation well and possible inclusion of the well in the Proponent's existing (non-cranberry) Water Management Act permit for the Buzzards Bay Basin. The NPC/DEIR includes estimates for irrigation water needs during average daily and extreme drought conditions, and proposes water cisterns to collect and store rainwater and thereby minimize withdrawal from groundwater.

Wetlands

Phase B will result in alteration of 14,000 sf of Riverfront Area, 33,500 sf of Buffer Zone, and 450 sf of Bordering Land Subject to Flooding (BLSF). The proposed off-site transportation improvements account for the BLSF impacts and 4,300 sf of the Buffer Zone impacts. There are no vegetated wetland or stream crossings proposed as part of Phase B.

In addition to the mitigation required for Phase A2 impacts, the Proponent is undertaking restoration of 65,990 sf of previously developed Riverfront Area and 42,810 sf of other Riverfront Area that has been disturbed as a result of agricultural activities. A portion of this restoration will be applied as mitigation for Phase B and will be implemented prior to the impact it is offsetting. The area selected for mitigation will improve a portion of the riparian corridor along Rose Brook. The NPC/DEIR indicates that if additional mitigation is required for Phase B or future project phases, the Proponent will consider projects recommended by the Nature Conservancy to restore connectivity in terrestrial and aquatic habitats.

Cumulative Impacts

The NPC/DEIR includes estimates for cumulative impacts of Phases A, B and C on water, wastewater, nutrient output, GHG emissions, traffic, cultural resources, and wetlands. It is important to note that, given the uncertainty regarding the development details and timeframe for Phase C, the cumulative analysis is of course based on general estimates and some impacts are unknown at this time. The cumulative analysis will be revised in subsequent filings as the Master Plan development proceeds and specific projects are identified for Phase C.

As described in the NPC/DEIR: cumulative wastewater generation is estimated to be 788,209 gpd (Phase A and B account for approximately 54,000 gpd); water demand is estimated to be 481,686 average gpd (56,000 gpd for Phase A and B); the increase in nitrogen output is estimated to be 98,000 lbs/year (1,637 lbs/yr for Phase A and B); traffic impacts are estimated at 36,186 vehicle trips per day (tpd) (9,378 tpd for Phases A and B); and as noted above, GHG

emission estimates amount to 44,670 tons per year of CO_2 for the entire project (this includes 4,237 tons/year generated by Phase B and does not account for future reductions from Phase C mitigation measures). On-site wetlands impacts for Phase C are not fully known at this time. The NPC/DEIR includes estimates for wetland impacts associated with off-site transportation improvements, which are: 20,790 sf for Bordering Vegetated Wetlands (BVW); 43,050 sf of Buffer Zone impacts for Phase C; and 33,630 sf of Buffer Zone impact for Phase B. The total amount of land alteration proposed for Phase A, B, and C-1 combined is 134.6 acres (62 acres for Phase B) and of this, the total amount of impervious area proposed for Phases A, B, and C-1 combined is 25.9 acres.

The NPC/DEIR summarizes the cultural resources investigations conducted to date, which includes an archaeological assessment survey that has assigned moderate to high archaeological sensitivity to all of the Proponent's properties for use as an in-house planning tool to guide future development. As noted above, Phase B is not expected to impact cultural resources and a potentially significant resource at the Wankinco Bog area (Phase C-1) will be avoided.

The Proponent is working with NHESP to finalize mitigation plans that will address cumulative impacts to state-listed species habitat from Phase A, Phase B, and the Wankinco Bog expansion. It is anticipated that mitigation areas, which will be permanently protected, will be located adjacent to existing conservation lands to expand areas of unfragmented habitat. The Proponent is also continuing to work with the towns to adopt zoning changes that would facilitate preservation large tracts of open space and has identified several sending areas in Carver for Transfer of Development Rights (TDR) as part of the updated Master Plan.

Mitigation and Section 61 Findings

The NPC/DEIR includes a chapter with a mitigation summary and proposed Section 61 Findings for state agency permits. Revised Section 61 Findings should be included in a FEIR as outlined further below. The Proponent has committed to a range of measures to avoid and minimize or mitigate Phase B impacts. These measures include:

- Air Quality and GHG – renewable energy/solar projects, energy efficiency measures, use of natural gas in lieu of electric heat, and transportation measures to reduce emissions;
- Land alteration – stormwater management system including LID and other Best Management Practices (BMPs);
- Wetlands and water quality – Riverfront Area restoration and erosion and sedimentation controls during construction;
- Rare Species – measures to protect species during construction and permanent protection of land adjacent to state-owned conservation areas;
- Transportation – a range of roadway improvements including traffic signal installation and optimization, and a TDM program that includes funding for a low emission bus; and
- Water Conservation - measures include xeriscaping and use of rainwater for irrigation.

Final EIR

Response to Comments

In order to ensure that the issues raised by commenters are addressed, the FEIR should include a comprehensive response to the comments that were submitted on the NPC/DEIR. Because I have decided to allow the Response to comments and Proposed Section 61 Findings to serve as the Final EIR, I expect that the Response to Comments will thoroughly address the comments from State permitting agencies, SRPEDD and others. Additional data or analysis should be provided as necessary to adequately address the comments. The FEIR should include a copy of each comment letter received on the NPC/DEIR.

Mitigation and Section 61 Findings

The FEIR should include revised Section 61 Findings for the MassDOT Permit that include details on the Proponent's commitment to subsidize GATRA bus service to the project site as well as any other mitigation commitments arising from consultations during FEIR preparation. The proposed Section 61 Findings for the MassHighway Access Permit should also include self-certification language for GHG mitigation. The self-certification requirement will be incorporated by MassDOT/MassHighway into its final Section 61 Findings for the Project.

Revised Section 61 Findings for the NHESP Conservation and Management Permit should be included in the FEIR. The proposed findings should elaborate on the mitigation plan referenced in the NPC/DEIR to describe at a minimum the acreage that will be permanently protected and the schedule for implementation.

The FEIR should also include a draft Section 61 Finding for MassDEP to use in case a Superseding Order of conditions is required for the project.

Circulation

The FEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to the list of "comments received" below. A copy of the FEIR should be made available for public review at the Carver, Plymouth and Wareham Public Libraries.

November 12, 2010
DATE

Ian A. Bowles, Secretary

Comments received

10/05/10	Town of Plymouth
10/15/10	Wareham Ford
10/19/10	Sagamore Plumbing and Heating Inc.
10/15/10	Wareham Fire District
10/19/10	Architectural Caulking and Waterproofing, Inc.
10/19/10	Horner Commercial Sales
10/20/10	J.R.D. Incorporated
10/21/10	Newton Roofing Company
10/25/10	Town of Carver
10/25/10	S&F Concrete Constractors, Inc.
10/25.10	Cape Cod Canal Region Chamber of Commerce
10/26/10	Imperia
10/29/10	Plymouth Area Chamber of Commerce
10/29/10	United Brotherhood of Carpenters and Joiners of America
11/01/10	Massachusetts Historical Commission
11/02/10	Southeastern Regional Planning & Economic Development District
11/04/10	Greater Attleboro Taunton Regional Transit Authority
11/04/10	Contract Flooring Installations
11/04/10	Joyce Landscaping Inc.
11/04/10	Beals and Thomas (on behalf of the Proponent)
11/05/10	Massachusetts Department of Transportation
11/05/10	Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program
11/05/10	Division of Marine Fisheries
11/05/10	Barbara Eckstrom
11/05/10	The Coalition for Buzzards Bay
11/08/10	Baron Industries, Inc.
11/09/10	Department of Environmental Protection, Southeast Regional Office

IAB/AE/ae