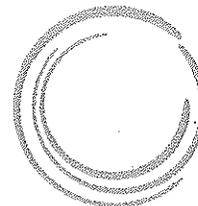


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BARNSTABLE, MASSACHUSETTS 02630



CAPE COD  
COMMISSION

(508) 362-3828 • Fax (508) 362-3136 • [www.capecodcommission.org](http://www.capecodcommission.org)

Date: March 17, 2011

To: Robert H. Ament  
Ament & Ament  
39 Town Hall Square  
P.O. Box 919  
Falmouth, MA 02541

From: Cape Cod Commission

Re: Limited Development of Regional Impact Hardship Exemption  
Cape Cod Commission Act, Sections 12 and 13

Applicant and  
Owner: Woods Hole Oceanographic Institution

Project: WHOI LOSOS Building  
360 Woods Hole Road, Quissett Campus  
Woods Hole, Falmouth, MA 02540

Project #: TR11001

Lot / Plan: Lot 6, Plan 5348-I on Certificate of Title Number 94908 and 44053

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**DECISION OF THE CAPE COD COMMISSION**

**SUMMARY**

The Cape Cod Commission ("Commission") hereby approves with conditions, the application of Woods Hole Oceanographic Institution (hereinafter "WHOI" or the "Applicant") as a Limited Development of Regional Impact (DRI) Hardship Exemption pursuant to Sections 12 and 13 of the Cape Cod Commission Act (Act), c. 716 of the Acts of 1989, as amended, for the construction of a 26,600 square foot (s.f.) building to house a Laboratory for Ocean Sensors and Observing Systems (hereinafter "LOSOS building") at 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth, MA. This decision is rendered pursuant to a unanimous vote of the Commission on March 17, 2011.

## PROJECT DESCRIPTION

The project site (as described in the application) is located at 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth, Massachusetts within the existing Ring Road on WHOI's Quissett Campus, which consists of approximately 124 acres of land, and includes fourteen (14) main buildings. The project site is approximately 1.8 acres of presently undeveloped land. The site is zoned for Public Use, the definition of which includes educational and research institutions.

According to the application materials, WHOI, the Applicant, is the largest private, nonprofit ocean research, engineering and education organization in the world. The Applicant proposes to develop and construct a new building within the existing Ring Road on the campus, which will house the Laboratory for Ocean Sensors and Observing Systems ("LOSOS") with a total overall floor area of 26,600 square feet on a footprint of approximately 13,500 sq. ft., and will have associated parking, drainage and landscaping. The proposed project is identified on Exhibit A attached to this decision and incorporated by reference. The applicant has applied for and received funding from the National Institute of Standards and Technology (NIST) to allow the construction of the proposed new building.

The LOSOS will be an interdisciplinary center for scientists and engineers developing the next generation of sensors and supporting technology for ocean observation and will be the primary facility for such purposes in the United States. With respect to the proposed building, WHOI plans to achieve Leadership in Energy and Environmental Design (LEED) Silver or Gold certification.

## PROCEDURAL HISTORY

The application for a Limited Development of Regional Impact ("Limited DRI") and a Hardship Exemption was received by the Commission on January 4, 2011. The project qualifies as a Development of Regional Impact (DRI) pursuant to Section 3(e)(i) of the Commission's *Enabling Regulations* (Revised May 2010, Corrected June 2010) as new construction of a building with a Gross Floor Area greater than 10,000 square feet. The Applicant filed additional application materials with the Commission on January 24, 2011, January 31, 2011, February 1, 2011, and February 18, 2011, as shown in the *Materials Submitted for the Record* below. The DRI / Limited Review and DRI Hardship Exemption applications were deemed to be substantially complete to proceed to a public hearing in a letter dated February 22, 2011.

In accordance with the Cape Cod Commission Act, the Limited DRI and DRI Hardship Exemption hearing period was opened on February 22, 2011. A site visit was conducted on February 22, 2011 and a duly noticed public hearing was held on the DRI / Limited Review and DRI Hardship Exemption applications by an authorized subcommittee of the Commission at 6:00 pm at the Falmouth Public Library in the Hermann Meeting Room. The subcommittee voted to continue the hearing to March 17, 2011 at 3:00 PM at the Assembly of Delegates Chamber of the First District Courthouse in Barnstable. At the subcommittee meeting which immediately followed the February 22, 2011 hearing, the subcommittee voted to limit the DRI review to the areas of Transportation/Congestion Management, Water Resources, Natural Resources, Landscaping and Economic Development, and to approve the DRI/Limited Review and DRI Hardship Exemption request and directed staff to draft a Limited DRI Hardship Exemption approval decision with conditions.

The Subcommittee held a public meeting on March 9, 2011. At this meeting, the subcommittee reviewed the Limited DRI Hardship Exemption approval decision and voted unanimously to forward the decision to the full Commission for consideration at its meeting on March 17, 2011.

A final public hearing was held before the full Cape Cod Commission on March 17, 2011. At the close of this hearing, the Commission voted to approve the project as a Limited DRI Hardship Exemption, subject to conditions.

### MATERIALS SUBMITTED FOR THE RECORD

In addition to the list of materials submitted for the record (see Table 1 below), the application and notices of public hearing relative thereto, Commission staff's notes and correspondence, the minutes of public meetings and hearings, and all other written submissions received in the course of the proceedings are hereby incorporated into the record by reference.

<b>TABLE 1: Materials Submitted for the Record</b>	
<b><i>Materials from Cape Cod Commission</i></b>	<b><i>Date Sent</i></b>
Email from Elizabeth Enos to Paula Kelly re: application materials (certification of local filing/list of permits)	1/6/11
Email from EE to Bob Ament regarding electronic copy of the application materials	1/7/11
Email correspondence between Elizabeth Enos and Gabriele Bruce regarding an electronic copy of the application materials	1/7/11
Additional material regarding groundwater discharge permits submitted through email correspondence between Scott Michaud and Joel Kubick	1/11/11
Additional material regarding NHESP provided through email correspondence between Heather McElroy and Amy Coman – no take letter from NHESP	1/11/11
Email and letter from EE to BA and PK regarding completeness of application	1/13/11
Email from EE to GB confirming receipt of supplement to application materials	1/25/11
Email correspondence between Heather McElroy and Mark Manganello from LEC Environmental Consultants, Inc. regarding Natural Resources Inventory	2/9/11
Email from Gail Hanley to Michael Palmer, Falmouth Town Clerk, with attached meeting notice for Feb 22 <sup>nd</sup> following the hearing	2/17/11
Letter from EE to Bob Ament deeming the application complete	2/22/11
Materials from the 2/22 public hearing, including Staff Report, PowerPoint, sign-in sheet, and hearing outline	2/22/11
Email from Gail Hanley to Michael Palmer with attached hearing notice for March 17, 2011	2/23/11
Email from GH to MP with attached meeting notice for March 9, 2011	3/1/11

Email correspondence between GB and EE regarding Lot & Plan numbers for decision	3/2/11
Email correspondence between GB and EE regarding typographical error on plan C1.3	3/3/11
Email correspondence between GB, BA, and EE regarding changes to the Draft Decision and a Landscape Maintenance Contract (Contract attached)	3/7/11
Email correspondence between GB, BA and EE regarding red line version of draft decision (decision attached)	3/8/11
Email from EE to Brian Currie with attached Draft Decision and Staff Report	3/16/11
<b>Materials from Applicant</b>	<b>Date Received</b>
Application for Hardship Exemption and Limited DRI including attachments and payment	1/4/11
Email from Paula Kelly regarding certification of local filing	1/6/11
Email from Bob Ament to EE regarding electronic copy of the application materials.	1/7/11
Email from Gabriele Bruce with attached supplement to application materials	1/24/11
Letter from Bob Ament with supplement to application materials	1/24/11
Email from Gabriele Bruce with attached supplement to application materials, including traffic report and letter from MDFW	1/31/11
Email from Bernice Wahler to Andrea Adams regarding Lighting	2/1/11
Letter from Bob Ament with supplement to application materials referenced in email of 1/31/11	2/2/11
Email from Bernice Wahler to Andrea Adams regarding lighting	2/9/11
Letter from Bob Ament delivered with 7 copies of the completed application and certification of filling with Falmouth Town Clerk, Building Commissioner, Board of Health, and Town Planner	2/10/11
Letter from Susan Avery, President and Director of WHOI, to Richard Hill addressing his concerns regarding the construction of the new building	2/16/11
Email from Gabriele Bruce regarding a letter from the Town of Falmouth regarding the Selectmen's resolution on Feb 7 <sup>th</sup>	2/18/11
Email from Gabriele Bruce/Letter from Bob Ament responding to the Staff Report comments and addressing Water Resources	2/18/11
Letter from Bob Ament with updated copies of Plan C1.3 with corrected page numbers	3/7/11
Email from BA to EE regarding additional materials relating to Economic Development and LEED certification	3/8/11
<b>Materials from Public Agencies/Towns/State/Federal</b>	<b>Date Received</b>
Letter from Brian Currie, Falmouth Town Planner regarding consistency with the local zoning bylaw	2/1/11

Letter from Town of Falmouth regarding Board of Selectmen endorsement of the LOSOS building	2/16/11
<b><i>Materials to/from Members of the Public</i></b>	<b><i>Date Received</i></b>
Email from EE to L. Warren, property abutter, including site maps	2/7/11
Letter from Richard Hill, property abutter, regarding concerns about noise from the development	2/14/11
Email correspondence between Nancy Hossfeld, Rich Lovering, and Elizabeth Enos regarding site plans and the DRI review process	2/14/11

## TESTIMONY

### February 22, 2011 Public Hearing

Lynne Pleffner opened the hearing at 6:00 PM on February 22, 2011. Mario DiGregorio read the hearing notice aloud. Ms. Pleffner asked the rest of the subcommittee and staff to introduce themselves. Ms. Pleffner noted that the purpose of the hearing is to consider the WHOI LOSOS Building DRI Hardship Exemption and Limited Review applications and take public testimony on the project. She then asked the Staff for their presentation on the project.

Elizabeth Enos, Regulatory Officer for the Commission then provided a PowerPoint presentation on the project which outlined the existing setting, a project description, a procedural overview, the standards of review and approval, Commission staff analysis, and conclusions and recommendations.

Ms. Enos summarized staff's analysis by stating that staff suggests the scope of DRI review include natural resources, transportation/congestion management, landscaping, water resources, and economic development. She reviewed the requirements for a Hardship Exemption and stated that if the Commission finds Hardship exists, financial or otherwise, staff suggests Commission can grant relief from the requirements of MPS WPH1.5, which prohibits new development within the 350 ft buffer to vernal pools and MPS TR3.1, which requires Level of Service analysis at all site driveways. She noted that staff is recommending approval with conditions to include a requirement that the Applicant commit to the preservation of the 4.45 acre conservation area described in the application materials, a landscape maintenance agreement for all development for a minimum of three growing seasons be provided for Commission staff review and approval to ensure vegetation is properly established and maintained with habitat needs in mind, that wastewater and stormwater treatment and management complies with MPS WR6.2, WR6.7, WR6.8, and the standards within Goal WR7 of the RPP, and that the Applicant meets the four waiver criteria selected under MPS ED1.3. Finally, she noted that in written correspondence from Brian Currie, Falmouth's Town Planner he stated that the project is consistent with the Town's Local Comprehensive Plan and local zoning. The project is not located in a DCPC and is therefore consistent with that criterion as well. The development can be found consistent with the Regional Policy Plan if hardship relief is granted in the areas of Natural Resources and Transportation. Finally, she stated that the subcommittee will need to deliberate on the probable benefits of the projects versus the probable detriments and asked for any questions from the subcommittee.

Mr. Mario DiGregorio stated that it seems there will be an increase in stormwater runoff with the proposed project and that it is within a 350 foot buffer to a vernal pool. He asked for some

assurance that water quality within the vernal pool will not be impacted by stormwater runoff because organisms in vernal pools are very sensitive to changes in water quality.

Scott Michaud, Hydrologist for the Commission, stated that the vernal pool is upgradient of where the stormwater discharging will take place. The runoff from the pavement will be directed to a bioretention basin and the groundwater flow is away from the vernal pool. Therefore, Mr. Michaud stated, there should be no impacts to the vernal pool from stormwater.

Mr. Michael Blanton then asked about the Green Design criteria under ED1.3. He asked whether it is the intention to obtain LEED silver or actually obtaining LEED silver that meets the criteria.

Kristy Senatori, Chief Regulatory Officer for the Commission, stated that as the waiver criteria reads, the project must obtain LEED Construction Certification at the base level, so that potentially could be a condition of the project. Staff is suggesting that the information that we have suggests that the project would meet this criterion.

Ms. Pleffner asked the Applicant to provide an overview of the project.

Attorney Bob Ament introduced himself as the Attorney representing Woods Hole Oceanographic Institution, as well as Larry Madin, Executive Vice President and Director of Research for WHOI, Ernie Charette, Manager of Construction Projects for WHOI, Tim Santos, Engineer at Holmes & McGrath, Mark Manganello, Environmental Consultant with LEC Environmental, and Neil Cahalane, Architect with Ellenzweig Design. He thanked the Commission staff for working with the project team.

Dr. Madin described the proposed LOSOS building in the context of WHOI's overall research and said it would become part of a global ocean research system. He said the proposed project could help understand global climate change and how the ocean figures into global weather patterns. Mr. Madin said WHOI's LOSOS system is part of a larger ocean sensing effort supported by a grant from the National Science Foundation. He described the proposed sensor systems, both in the near coastal and open ocean. He said WHOI was selected for federal stimulus funding to construct the project on WHOI's Ring Road. He said the facility would also house several other ocean sensing and laboratory programs. Dr. Madin said the LOSOS building would allow several technologies to be integrated and the building will house 25-27 people, and would result in the hiring of approximately 30 new staff. Dr. Madin said the project would contribute to the region's economic development.

Mr. Putnam said one of the Subcommittee's tasks is to identify possible project benefits. He suggested the project's new technology development and increases in economic development in the region could be benefits.

Dr. Madin suggested a potential benefit was the information the new technology and LOSOS network would provide, including those in local waters. He suggested the technology and data could provide better data on local ocean conditions. Dr. Madin said the data would also be integrated into the National Oceanic and Atmospheric Administration (NOAA) system, to provide valuable information to individuals including Harbor Masters, fisherman, and those involved in search and rescue operations.

Attorney Ament suggested the location of the proposed building would allow consolidation of staff currently working in various locations onto the Quissett Campus. He suggested this would reduce traffic from people in different locations having to come together for meetings.

Attorney Ament suggested there was no need for his presentation to address those areas where Commission staff suggests no further review is needed. He focused on areas where Commission staff suggests the project does not meet the Regional Policy Plan (RPP). Attorney Ament said a Hardship Exemption would be appropriate in those RPP issue areas where the staff or Subcommittee believes the project may not be consistent with the RPP.

Attorney Ament addressed the project's proposed location as it relates to the vernal pool. He said the building and pavement will be more than 200 feet away from the vernal pool. He said the LOSOS project meets the RPP requirement for a 350-foot buffer to vernal pools, because the MPS says that development is prohibited within a 350-foot undisturbed buffer. Attorney Ament said the buffer in this case is already disturbed related to a 2001 Commission Exemption decision for the Ring Road. He said the Ring Road was installed at a time when the vernal pool buffer requirement was only 100 feet. He noted that the Applicant will be placing a conservation restriction on approximately 3.6 acres of upland as well as around the vernal pool so that everything on the other side of the road surrounding the vernal pool will be subject to a permanent conservation restriction. Although Natural Heritage has deemed the area a Significant Natural Resource area, they did issue a "no take" letter.

Mr. Ament then discussed the Level of Service analysis at Oyster Pond Road and stated that he did not think it would be an issue after discussions with Commission Transportation Staff because they were told they should only study the Woods Hole Road entrance, which they did and have provided that information for staff. He mentioned the incomplete circle of the Ring Road and the fact that Oyster Pond Road is a second entrance onto the campus and that MPS TR3.1 does state that Level of Service analysis must be provided for all site entrances and he said that they now have to ask for a Hardship Exemption in that area. Mr. Ament addressed Water Resources and stated that he feels the project is in compliance with MPS WR6.2 and 6.7 and that the Applicant has submitted nitrogen loading calculations which Tim Santos has told him satisfies the analysis that staff has requested.

Mr. Graham asked Glenn Cannon from Transportation staff to explain what the issues are related to traffic. Mr. Cannon stated that when the Applicant was preparing the traffic study they called him and asked what needed to be done. Without going out and doing a site visit, Mr. Cannon said he told them to look at the main driveway for level of service and site distance to make sure that it is safe and that is what they did. He said a member of staff later conducted a site visit and informed him about the back driveway and conducted a site distance analysis. Mr. Cannon said that he knows from previous knowledge of that area that it is a safe, low traffic area and the project is a low traffic generator. He said he does not feel that there would be any issue with granting a hardship relief for the Level of Service analysis requirement for Oyster Pond Road.

Mr. Graham asked Mr. Cannon if the two charts provided by staff indicate that the site entrance at Oyster Pond Road is safe.

Mr. Cannon answered in the affirmative.

Mr. Richard Roy stated that when driving around the campus he did not see a stop sign.

Mr. Ament stated that they just recently have made some improvements to the area and ordering new stop signs was one of them but that they had not been put up yet. He then mentioned the suggestion that staff had made about the Ring Road being closed during wet spring evenings during nighttime migrations but stated that people on the campus work around the clock and to close the Ring Road would cause little benefit for the amphibians since the road has been there for 8 years but would be a great inconvenience to the people working on the campus and could be unsafe on dark rainy nights and the Institution had a negative reaction to that suggestion.

Mr. Roy asked if staff was in agreement with the new numbers provided for nitrogen loading.

Mr. Michaud stated that the new numbers provided by the Applicant indicate that the project is in compliance with the applicable Minimum Performance Standard.

Ms. Pleffner asked for comments from Federal, State, or Local Officials. There were none.

Mr. Pleffner asked for comments from the public.

Mimi Frank, an abutter of the Quissett Campus, stated that everyone in Falmouth appreciates the Institution. However, she said that she feels the people were left out of the concerns with the project and that with every new building that goes up on the Campus, it gets brighter and louder. She stated that she cannot leave her windows open at night because of the hum of electricity coming from the Campus and stated that the lights are on all the time and asked how much louder and brighter it would get.

Bob Gee, a resident of Falmouth, discussed the benefit of education that the Institution is providing and mentioned the Oyster Pond Road entrance and stated that he never sees anyone using it.

Mr. Graham asked the Applicant if they could assure Ms. Frank of a light-sealed building.

Mr. Neil Cahalane, Architect with the project, stated that in terms of the new building, the lights that will be used are down lights and there will be no upward contribution. He said the heights of the poles will be limited, and there will be rooftop mechanical equipment and an acoustical enclosure to verify that there will be no noise contribution either.

Mr. Graham mentioned a letter from Susan Avery, President and Director of WHOI to a concerned resident addressing issues that were raised by the resident with a previous project and stated that it sounds like she takes complaints very seriously and told Ms. Frank that she should contact Ms. Avery or Mr. Charette with any complaints. He also assured her that Commission staff had a lighting specialist to work with the Applicant on the project.

Mr. Graham moved to continue the hearing and the record to March 17, 2011 at 3:00 PM at the Assembly of Delegates Chamber of the First District Courthouse in Barnstable.

Adjourned at 7:42 PM.

February 22, 2011 Subcommittee Meeting

Lynne Pleffner opened the subcommittee meeting at 7:43 PM on February 22, 2011.

The subcommittee voted that the Limited DRI review scope include the issue areas of Transportation/Congestion Management, Water Resources, Natural Resources, Economic Development, and Landscaping and that a hardship exists, financial or otherwise in conducting a Level of Service analysis at Oyster Pond Road in accordance with MPS TR3.1 and in locating the site outside of the 350 foot buffer area to a vernal pool in accordance with MPS WPH1.5 and that relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Act, and that the relief is the minimum necessary to address the hardship

The subcommittee voted to adopt the written testimony of Brian Currie and find that the project complies with the Town of Falmouth's Local Comprehensive Plan and local bylaws, and as the project site is not located within a DCPC, the project is consistent with this criterion.

The subcommittee discussed the probable benefits of the project versus the probable detriments, and voted that the probable benefits of the project, including new taxpayers, a new revenue stream, new technology, new information which will benefit national safety and emergency planning, and opportunities for educational development outweigh the probable detriments.

Finally, the subcommittee voted that the project, with appropriate conditions and hardship relief granted, complies with the Minimum Performance Standards of the Regional Policy Plan and they voted to approve the Limited DRI Hardship Exemption with conditions for the proposed WHOI LOSOS building at 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth, MA and to direct staff to draft a Limited DRI Hardship Exemption decision with conditions for subcommittee review and approval.

The meeting was adjourned at 8:05 PM.

## **JURISDICTION**

The application for a Limited Development of Regional Impact ("Limited DRI") and a Hardship Exemption was received by the Commission on January 4, 2011. The project qualifies as a Development of Regional Impact (DRI) pursuant to Section 3(e)(i) of the Commission's *Enabling Regulations* (Revised May 2010, Corrected June 2010) as new construction of a building with a Gross Floor Area greater than 10,000 square feet.

## **FINDINGS**

The Commission has considered the Limited DRI / Hardship Exemption application of Woods Hole Oceanographic Institution for the proposed construction of a 26,600 s.f. Laboratory for Ocean Sensors and Observing Systems ("LOSOS"). Based on consideration of such application and upon the information presented at the public hearings and submitted for the record, makes the following findings, pursuant to Sections 12 and 13 of the Act:

### **General Findings**

- GF1. The Commission finds that the project Limited Review is limited to the issue areas of Economic Development, Natural Resources, Water Resources, Transportation/Congestion Management, and Landscaping.

- GF2. As the date of the first substantive public hearing was February 22, 2011, this project was reviewed subject to the 2009 Regional Policy Plan (RPP), as amended in May 2010.
- GF3. The project location is 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth. The site is zoned for Public Use, the definition of which includes educational and research institutions.
- GF4. The project site, as described in the application, is approximately 1.8 acres of presently undeveloped land within the existing Ring Road on the Woods Hole Oceanographic Institution's Quissett Campus, which consists of approximately 124 acres of land, and includes fourteen (14) main buildings.
- GF5. Woods Hole Oceanographic Institution (the Applicant) proposes to redevelop the site and construct a new building that will house the Laboratory for Ocean Sensors and Observing Systems ("LOSOS") with a total overall floor area of 26,600 square feet on a footprint of approximately 13,500 square feet, and will have associated parking, drainage and landscaping.
- GF6. The Applicant has applied for and received funding from the National Institute of Standards and Technology (NIST) to allow the construction of the proposed new building.
- GF7. Woods Hole Oceanographic Institution is the largest private, nonprofit ocean research, engineering and education organization in the world. The LOSOS will be an interdisciplinary center for scientists and engineers development the next generation of sensors and supporting technology for ocean observation.
- GF8. The Commission adopts the February 1, 2011 written testimony of Mr. Brian Currie, Falmouth Town Planner, which states that the LOSOS project "is consistent with the requirements of Article VII, Public Use Districts, of the Falmouth Zoning Bylaw pursuant to Section 240-30 A." As such, the Commission finds that the project is consistent with the Town's local development by-laws.
- GF9. The Commission adopts the resolution passed by the Town of Falmouth Board of Selectmen on February 7, 2011 stating that the location of the project is consistent with the Local Comprehensive Plan and capital facilities planning or plan as per the Municipal Endorsement criteria in ED1.3.
- GF10. As the project is not located in a District of Critical Planning Concern, the Commission finds that the project is consistent with this criterion.
- GF11. The Commission finds that the probable benefits of the project outweigh the probable detriments of the proposed project. Probable benefits of the proposed project include new taxpayers and new revenue for the Town, opportunities pursuant to the new development, including new information and technology, the local benefit of having this facility to research local waters, having a central location for scientists and engineers to work together and the resulting possibility of reduction in traffic, and educational benefits.

GF12. The Commission finds that the project will be constructed in accordance with the following plan set entitled "Laboratory of Ocean Sensors and Observing Systems" designed by Ellenzweig Design Architect & Planner, Stephen Stimson Associates Landscape Architect, Holmes and McGrath, Inc. Civil Engineer, LeMessurier Consultants Structural Engineer, BR+A Consulting Engineers Mechanical/Electrical/Plumbing Engineer, and Columbia Construction Co. Construction Manager dated December 2010 (attached to this decision as Exhibit A and incorporated by reference):

- Sheet EXF-01 titled "Northeast View"
- Sheet EXF-02 titled "Northwest View"
- Sheet EXF-03 titled "Southwest View"
- Sheet EXF-04 titled "Southeast View"
- Sheet LVL-01 titled "First Floor Level"
- Sheet LVL-02 titled "Second Floor Level"
- Sheet LVL-03 titled "Penthouse Level"
- Sheet LVL-04 titled "Roof Level"
- Sheet EL-01 titled "East and West Elevations"
- Sheet EL-02 titled "North South and Miscellaneous Elevations"
- Sheet C1.1 titled "Proposed Campus Map Location Plan"
- Sheet C1.2 titled "Existing Conditions"
- Sheet C1.3 titled "Erosion Control Plan"
- Sheet C1.4 titled "Proposed Site Layout Plan"
- Sheet C1.5 titled "Proposed Utilities Plan"
- Sheet C1.6 titled "Sewer System"
- Sheet C1.7 titled "Grading & Drainage"
- Sheet C1.8 titled "Proposed Stormwater System Details"
- Sheet C1.9 titled "Pressure Wash System Details"
- Sheet C1.10 titled "Proposed Water System Details"
- Sheet C1.11 titled "Proposed Sewer System Details"
- Sheet L1.2 titled "Planting Plan"
- Sheet L1.4 titled "Lighting Plan"
- Exhibit 10 in the application materials titled "Proposed Developed Area & Open Space Plan for LOSOS Laboratory" designed by Holmes & McGrath, dated December 7, 2010.

GF13. The Commission finds that the Applicant has met the burden of proving that a hardship exists in complying with Minimum Performance Standards TR3.1 and WPH1.5 of the Regional Policy Plan as outlined in Findings TF6 and NRF7 and that desirable relief from the standards may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Act. The Commission further finds that the relief granted relates directly to the nature of the identified hardship and is the minimum relief necessary to address the hardship.

### **Land Use**

LUF1. The Commission finds that the Town of Falmouth does not have an endorsed Land Use Vision Map. As such, the Commission finds the project is consistent with the applicable Land Use Minimum Performance Standards of the Regional Policy Plan and is not included in the scope of review.

### **Affordable Housing**

AHF1. The Commission finds that neither the Applicant nor the proposed use of the building is commercial in nature, nor is it residential, and therefore the project is not a commercial DRI and the Minimum Performance Standards of Affordable Housing do not apply.

### **Exterior Lighting Design**

ELF1. According to the information submitted to date, including a December 2010 Lighting Plan L1.4 by Stephen Stimpson Associates (received 1/4/11) and email correspondence from Bernice Wahler of Stephen Stimpson Associates on 2/1/11 and 2/10/11, exterior lighting is consistent with Commission requirements, with the exception of 6 BEGA bollards. However, the Commission finds that the fixtures are being used as a safety feature, are limited in number, and will not be visible off the Quissett Campus. Therefore, the Commission finds that project is consistent with the applicable Exterior Lighting Standards of the Regional Policy Plan and is not included in the scope of review.

### **Waste Management**

#### *Hazardous Waste*

WMF1. MPS WM1.5 requires that “[a]ny development or redevelopment that uses, handles, generates, treats, or stores Hazardous Waste...” shall be in compliance with the State’s Hazardous Waste Regulations, and specifies three items be provided to show this compliance: 1) notification or registration with the Massachusetts Department of Environmental Protection, 2) a written plan to manage the Hazardous Waste, 3) a signed disposal contract with a registered, licensed company. According to the 1/4/11 and 1/24/11 application materials, the LOSOS project will involve the use of various Hazardous Materials and the generation of Hazardous Wastes. WHOI is currently registered with the Massachusetts Department of Environmental Protection (DEP) as a Small Quantity Generator (SQG) of Hazardous Waste, but has recently petitioned the DEP for a change to Large Quantity Generator (LQG) status. If the status change is granted, WHOI could generate a significantly larger amount of Hazardous Waste (1,000 or more Kilograms per month). WHOI has a sophisticated Hazardous Waste management regime managed by the Facilities Department and support staff, as indicated by materials submitted as part of the application for the LOSOS project. WHOI Hazardous Waste management protocol must, as an SQG or particularly as an LQG, include all of the three items described in MPS WM1.5. Although this issue area from the scoping checklist applies to the development, the project does not involve substantial deviation from the Minimum Performance Standards of the RPP and does not have significant impacts on the purposes and values identified by Section One of the Act. As such, the Commission finds that the RPP Hazardous Waste issue area is not included in the DRI review scope.

#### *Solid Waste*

WMF2. MPS WM2.1 requires that “[d]evelopment and redevelopment projects shall address the disposal of construction waste...” and that “a plan shall be provided to demonstrate how the applicant proposes to handle solid wastes, construction and demolition waste and recyclable materials currently categorized by the [DEP] as a waste ban material.” MPS WM2.2 describes the requirements of a construction and demolition (C&D) waste management plan. MPS WM2.3 requires a post-construction waste and recyclables management plan. The additional application materials submitted by Attorney Ament on 1/4/11 and 1/24/11 indicate that the

Columbia Construction, the construction contractor for the LOSOS project, will seek to achieve a LEED Certification by achieving recycling of 75% of C&D debris. The application materials also include a series of detailed protocols, including descriptions of end recycling/disposal facilities that will be used to achieve the desired recycling rate and LEED Certification. The 1/4/11 and 1/24/11 narratives provided by Attorney Ament indicate that once operational, the LOSOS project will become part of the WHOI existing solid waste and recycling management program supervised by the Facilities Department. The program includes details on training provided for new WHOI staff in recycling programs, and methods for recycling management including onsite collection in buildings. As such, the Commission finds that the project as proposed will comply with MPS WM2.1, WM2.2 and WM2.3. The project does not involve substantial deviation from the MPS of the RPP and does not have significant impacts on the purposes and values identified by Section One of the Act. As such, the Commission finds that DRI review under the RPP Solid Waste/Recycling section is not warranted.

- WMF3. MPS WM2.4 deals with post-construction management of food waste. This MPS targets *those developments (primarily supermarkets) generating significant amounts of food wastes* and requires them to provide a plan to demonstrate how they will recycle organic materials. The 1/4/11 application narrative provided by Attorney Ament indicates there is an existing cafeteria on the Quissett Campus. While Commission staff encourages WHOI to implement a composting program for food wastes, since the cafeteria is not part of the LOSOS Building, the Commission finds that MPS WM2.4 does not apply to this development.

### **Energy**

- EF1. The Applicant has sought consultation for energy efficient design, as evidenced by preliminary project plans that demonstrate a commitment to pursuing Leadership in Energy and Environmental Design (LEED) Gold or Silver certification for the WHOI LOSOS building. LEED is a higher standard for energy efficient design than Energy Star certification. In addition, although the Applicant has proposed a building in a town without an adopted Land Use Vision Map, the WHOI Quissett Campus (or "Core" campus) is a Commission DRI approved master planned development campus. For these reasons, the Commission finds that the proposed project does not involve substantial deviation from the MPS of the RPP and will not have significant impacts on the purposes and values identified by Section One of the Commission Act. As such, the Commission finds that energy issues are not included in the DRI review scope.

### **Natural Resources / Open Space**

- NRF1. The project site is located within a Significant Natural Resources Area (SNRA) due to the presence of state listed endangered species habitat. The site is located within a loop of the Ring Road on the Quissett Campus that was previously permitted through DRI review. To the northwest of the project site, and across the Ring Road, is a vernal pool. As a condition of prior DRI approvals, WHOI protected portions of the buffers to the vernal pool through a conservation restriction.
- NRF2. Due to the project's location within SNRA, rare species habitat, and the wooded buffers to a vernal pool, the project will be reviewed in the areas of Wildlife, Plant Habitat, and Open Space.

- NRF3. The Applicant has provided a natural resources inventory that is consistent with the requirements of WPH1.1 (though the NRI inaccurately reports that the site is not located in SNRA). According to the NRI, the site does not contain any unique or rare natural communities or habitat types.
- NRF4. The placement of the project within the loop of the Ring Road takes advantage of wooded habitat that was fragmented through the construction of the Ring Road, minimizing any further habitat fragmentation and clearing and grading on the Quissett Campus, thereby meeting the requirements of WPH1.2 and 1.3.
- NRF5. The proponents filed with the Natural Heritage and Endangered Species Program (NHESP) to determine whether the proposed project would adversely affect state listed rare species. In a letter dated December 30, 2010, the NHESP indicated that the project “will not result in a prohibited “take” of state-listed rare species.” As such, the Commission finds the project is consistent with MPS WPH1.4.
- NRF6. The project is located within the buffer to a vernal pool, located across the Ring Road to the west. MPS WPH1.5 prohibits new development within the 350 ft buffer to vernal pools. The Ring Road was approved as a DRI prior to the RPP change that increased the protected buffers to vernal pools from 100 ft to 350 ft. While the DRI approval for the Ring Road did not establish that additional development would be sited within the loop, reviewers anticipated that future development likely would be proposed at this location.
- NRF7. The Applicant has proposed to permanently protect the vernal pool and 3.6 acres of upland buffer area adjacent to the previously protected conservation area. The total area that would be protected is equal to 4.45 acres. The entire conservation area is located within the unfragmented wooded area to the northwest of the project site, and will result in meaningful protection of vernal pool species habitat. The 3.6 acres of upland area to be protected exceeds the area of impact from the portion of the project located within the 350 ft vernal pool buffer by a ratio of 2:1. The Commission finds that a hardship exists in siting the building to avoid the 350 ft buffer to vernal pools. The Commission finds that relief from MPS WPH1.5 may be granted without substantial detriment to the public good and without substantially derogating from the intent or purpose of the Act and that the relief granted is the minimum relief necessary to address the hardship.
- NRF8. The Applicant has provided a landscaping plan within the vernal pool buffer area that may provide habitat for amphibians. The planting plan will retain existing areas of understory supplemented by appropriate native plantings in the northern project area as depicted on the plan submitted by Stephen Stimpson Associates on December 3, 2010 with specification to maintain seasonal leaf drop and understory detritus as habitat for vernal pool fauna.
- NRF9. The Applicant may wish to consider closing the Ring Road during night-time migrations of amphibians during spring “congresses.” Strategic closings of the road during warm rainy nights in spring may reduce amphibian mortality as animals move from winter habitats toward the vernal pool.
- NRF10. The Commission finds that the Applicant’s proposal to place 4.45 acres into conservation through a permanent conservation restriction is consistent with the open space requirements of MPS OS1.1 – 1.4. The project, located within SNRA, is required to provide upland open space in an amount equivalent to twice the total developed area. The total disturbed area is 1.8 acres and the Applicant proposes to

meet the Open Space requirement by permanently protecting 4.45 acres, of which 3.6 is upland, meeting the Open Space requirement. The conservation restriction area is adjacent to existing protected open space, protects the most sensitive and significant habitat resources on the project site, and maintains habitat connections/corridors.

### **Heritage Preservation and Community Character**

- HPCCF1. The proposed project is located outside of any historic districts and there are no historic structures or cultural landscapes on site. In a letter dated December 18, 2001 the Massachusetts Historical Commission (MHC) noted that there was one archaeological site on the campus but was not a significant archaeological resource nor was it eligible for listing on the National Register of Historic Places and not in the vicinity of the proposed LOSOS building. Therefore, the Commission finds that the project is consistent with the Heritage Preservation section of the RPP and is not included in the DRI scope.
- HPCCF2. The proposed building will be located within the perimeter Ring Road of the Quissett campus, which is an area that has limited visibility from scenic or regional roadways or other distinctive areas. MPS HPCC2.7 allows the use of non-traditional materials, forms and site designs in areas not visible from scenic or regional roads, provided adequate buffers are maintained to screen views. The proposed building may be partially visible from Oyster Pond Road in places, but it is unlikely that the new structure will have any significant visual impact as it will be seen in context with the other campus buildings that are of similar mass and bulk. Therefore, the Commission finds that the project is consistent with the applicable standards of the RPP and will not involve deviation from Minimum Performance Standard HPCC2.7 and will not have significant impacts on the purposes and values identified by Section One of the Commission Act with respect to building design or cultural resources.
- HPCCF3. The Commission finds that the project is consistent with MPS HPCC2.8 which specifies parking lot placement to the side and rear of the building. The project effectively incorporates a significant topographic and landscape buffer with good landscape and parking design practices.
- HPCCF4. The Commission finds that the project is not subject to MPS HPCC2.9 regarding landscaping for redevelopment, as it is a new development project.
- HPCCF5. The Commission finds the Applicant has submitted a well-designed landscape plan (as submitted by Stephen Stimpson Associates Dec 3, 2011) which emphasizes sustainable practices and addresses the functional aspects of landscaping, including landscape design elements such as accessible pathways, bio-retention areas, low water plantings, and minimal lawn. As such, the proposed plan complies with MPS HPCC2.10. Due the site's location adjacent to a vernal pool buffer area, this plan depicts northern zones as keeping the existing understory in accordance with habitat restoration needs. These areas shall be maintained according to the conditions of this finding.

### **Transportation**

- TF1. Pursuant to MPS TR0.1, the Applicant has provided trip generation data prepared by BETA Group, Inc. Using data from Trip Generation, ITE 8<sup>th</sup> Edition, the trip generation estimates were based on the number of new employees, rather than the

building's proposed square footage. With consideration towards the nature of the research facility, the Commission finds this methodology complies with MPS TR0.1.

- TF2. The proposed facility is expected to generate 171 additional daily trips to the Campus. There are an additional 21 vehicles estimated in the morning peak hour with 23 peak hour trips in the afternoon.
- TF3. The project is not expected to add more than 250 daily trips to the transportation network, and as such, the Commission finds the Trip Reduction Standards of the Regional Policy Plan (RPP) are not included in the DRI scope.
- TF4. The project is not expected to add more than 250 daily trips to the transportation network, and as such, the Commission finds the Congestion Management standards of the RPP are not included in the DRI scope with the exception of review of compliance with MPS TR3.1. To address potential safety concerns at the site driveways, MPS TR3.1 requires Level of Service analysis at all site driveways. Level of Service provided on behalf of the Applicant demonstrates the project will have no adverse effects on the operational performance of the main campus entrance on Woods Hole Road, and therefore complies with MPS TR3.1.
- TF5. The WHOI Campus has secondary access onto Oyster Pond Road. Level of Service analysis was not provided for this secondary access. Based on historical traffic counts conducted by Cape Cod Commission transportation staff, Oyster Pond Road is a low volume road and the LOSOS development is expected to generate less than 25 additional trips during either the morning or afternoon peak hours. The Applicant has requested hardship relief for outstanding transportation analysis omitted during the review process. Based on the low volume of traffic on Oyster Pond Road and the low additional use of this secondary access combined with the cost of preparing the Level of Service analysis, the Commission finds a hardship exists, financial and otherwise, in preparing additional traffic analyses, and that relief from the Level of Service analysis at the Oyster Pond Road driveway, as required by MPS TR3.1 may be granted without substantial detriment to the public good and without substantially derogating from the intent or purpose of the Act and that the relief granted is the minimum relief necessary to address the hardship.
- TF6. According to Registry of Motor Vehicles crash records accessed via the Massachusetts Department of Transportation, the intersection on Woods Hole Road is not a high crash location. Furthermore, the project will not generate more than 25 peak hour trips during either the morning or afternoon peak hours and as such, the Commission finds that the project conforms to MPS TR1.2 and TR1.3.
- TF7. To comply with the RPP (MPS TR1.8), the Applicant must demonstrate that acceptable stopping sight distance is available at all site driveways.

Measurements performed by BETA Group, Inc. on behalf of the Applicant indicate that Woods Hole Road's stopping sight distances at the Quissett Campus main entrance exceed minimum RPP requirements. The following table identifies the required sight distances as compared to the existing.

Intersection	Traveling	Stopping Sight Distance	
		Required	Measured
WHOI Main Site	Woods Hole Road NB	305'	>1,500'
Driveway	Woods Hole Road SB	305'	490'

The stopping sight distances exceed the minimum requirements for a 40 mph road, and therefore satisfy MPS TR1.8.

The traffic study submitted by BETA Group, Inc. on behalf of the Applicant did not address the secondary entrance to the Quissett Campus located on Oyster Pond Road. Oyster Pond Road is also a regional roadway, and needs to be included in the site driveway safety evaluation. However, Commission staff conducted stopping sight distance measurements at the intersection. Those measurements are reported in the following table.

Intersection	Traveling	Stopping Sight Distance	
		Required	Measured
WHOI Oyster Pond	Oyster Pond Road NB	155'	425'
Road Site Driveway	Oyster Pond Road SB	155'	365'

The Commission finds that stopping sight distances exceed the minimum requirements for a 25 mph road, and therefore satisfy MPS TR1.8.

### **Water Resources**

- WRF1.** The Commission finds that as the proposed project will increase stormwater and treated wastewater effluent discharges to groundwater, that the RPP issue area of Water Resources is included in the DRI review scope.
- WRF2.** The project is required to meet MPS WR1.1 which establishes a maximum 5 milligrams-N per liter (ppm-N) nitrogen-loading limit for Developments of Regional Impact. The calculated nitrogen-loading concentration for the WHOI Quissett Campus, including the LOSOS project, is 3.4 ppm-N. Calculations were revised and submitted by the applicant on February 18, 2011 and prepared pursuant to the Commission's Technical Bulletin 91-001.
- WRF3.** The project site is not located in a Wellhead Protection Area, a Marine Water Recharge Area, or a Freshwater Recharge Area as depicted on Water Resources Classification Maps I & II. As a result, RPP Sections WR2, WR3, & WR4 do not apply.
- WRF4.** The LOSOS project increases process wastewater design flows to 38,500 gallons per day (gpd) from 38,000 gpd presently permitted under an existing State-issued groundwater discharge permit. The project also increases sanitary wastewater design flows to 34,075 gpd from 32,500 gpd presently permitted under an existing groundwater discharge permit. The existing groundwater discharge permits for wastewater treatment facilities approved by the Commission in 2004 require campus wastewater to be treated to a nitrogen strength of no more than 10 ppm-N.

The project is required to meet MPS WR6.2, whereby *“All public and private wastewater treatment facilities with greater than a design flow of 10,000 gallons per day shall be designed to achieve tertiary treatment with denitrification that meets a maximum 5-ppm total nitrogen effluent discharge standard either through advanced treatment to achieve 5 ppm in the effluent or 5 ppm in groundwater at the downgradient property boundary.”* As a condition of 2004 DRI decision, the WHOI Campus Core Redevelopment project is presently required to achieve a maximum total-nitrogen concentration in groundwater at the property boundary downgradient of the campus’ wastewater leaching facility.

The project is required to meet MPS WR6.7, whereby *“The long-term ownership, operation, maintenance and replacement of private wastewater treatment facilities shall be secured as a condition of approval in accordance with Commission, state, and local guidelines.”* The project is also required to meet MPS WR6.8, whereby *“Applications for approval of public and private wastewater treatment facilities shall include a plan for sludge disposal.”* The State-issued groundwater discharge permit presently in force for the sanitary wastewater treatment facility contains conditions requiring a contract for sludge disposal and a financial security amount consistent with requirements of MPS WR6.7 and WR6.8.

- WRF5. The project is required to meet MPS WR7.1, whereby *“New direct discharge of untreated stormwater, parking-lot runoff, and/or wastewater into marine and fresh surface water and natural wetlands shall not be permitted.”*
- WRF6. The project is required to meet MPS WR7.2, whereby *“On-Site Infiltration Stormwater for all roadways and parking areas shall be managed and infiltrated on site, close to the source, to minimize runoff and maximize water quality treatment. Stormwater water quality treatment shall be provided for the first inch of rainfall (25-year 24-hour storm) consistent with 310 CMR and the Massachusetts Stormwater Management Handbook to attain 80-percent total suspended solids removal and to reduce nutrients. All designs shall provide for at least 44-percent total suspended solids removal shall be designed prior to discharge into structured infiltration systems.”*
- WRF7. The project is required to meet MPS WR7.4, whereby *“Stormwater design for the first inch of stormwater flow from development parking and roadways shall use biofiltration practices including, but not limited to, vegetated swales and filter strips, constructed wetlands, tree box filters, bio-retention basins and rain gardens for treatment of stormwater runoff. Bioretention areas shall be constructed in accordance with the Massachusetts Storm Water Management Volume One: Stormwater Policy Handbook, March 1997.”*

Preliminary grading and drainage plans submitted with the DRI application (Plan C1.7, dated December 2010) incorporate biofiltration practices. Therefore, the Commission finds that grading and drainage plans are consistent with MPS WR7.4. Grading and drainage plans describe an outdoor vehicle wash pad and a collection & treatment system to recycle washwater runoff.

- WRF8. The project is required to meet MPS WR7.9, whereby *“Construction best management practices for erosion and sedimentation controls shall be specified on project plans to prevent erosion, control sediment movement and stabilize exposed*

soils.” The Commission finds that preliminary erosion control plans submitted with the DRI application (Plan C1.8, dated December 2010) contain fundamental elements required by MPS WR7.9.

WRF9. The project is required to meet MPS WR7.10, whereby “*Development and redevelopment shall submit a Professional Engineer-certified stormwater maintenance and operation plan demonstrating compliance with the Massachusetts Stormwater Guidelines including a schedule for inspection, monitoring, and maintenance. The plan shall identify the parties responsible for plan implementation, operation and maintenance. The identified responsible party shall keep documentation of the maintenance and inspection records and make these available to the Commission or local board of health upon request. One year from completion of the system, a Professional Engineer shall inspect the system and submit a letter certifying that the system was installed and functions as designed.*”

In 2004, the Commission approved a stormwater operations & maintenance (O&M) plan for the WHOI Campus Core Redevelopment project. The Commission finds that the plan should be updated to include the drainage system for the LOSOS project.

### **Economic Development**

EDF1. Given that the Town of Falmouth does not have a Land Use Vision Map the issue area of Economic Development from the Scoping Checklist applies to the development. As such, the Commission finds that this issue area is included in the DRI review scope.

EDF2. Pursuant to MPS ED1.1, projects in towns without a Land Use Vision Map must meet the waiver requirements under MPS ED1.3. This project is located in the Town of Falmouth which to date has not adopted a Land Use Vision Map.

EDF3. The waiver requirement in MPS ED1.3 is designed to off-set the impact of projects not located in accord with the Land Use Vision Map. The proposed project is new development and as such the Applicant must meet four criteria to satisfy the waiver requirement.

EDF4. The Applicant has chosen to meet the following four criteria under MPS ED1.3:

1. Green Design
2. Shared Infrastructure
3. Emerging Industry Clusters
4. Municipal Endorsement

The Applicant has stated their intention to obtain LEED silver certification for new construction which would satisfy the Green Design criteria under MPS ED1.3. The Applicant provides the submission materials required for this certification in Exhibit 3 of their application. The Applicant has also provided the applicable LEED Rating System checklist with criteria (or points) the project will pursue to achieve LEED certification and satisfied the 26 point minimum requirement, and provided the name and resume of the Applicant’s LEED accredited professional.

In terms of the Shared Infrastructure criteria, the project is located within the Quissett Campus Ring Road, will share the wastewater treatment facilities already developed for the campus and hook into the existing utility and telecommunications infrastructure of the campus.

The Laboratory will employ 27 people, the majority of which will be scientists and engineers working within the marine sciences and technology industry cluster. As such, the project is consistent with the Emerging Industry Clusters criteria for MPS ED1.3.

The Town of Falmouth Board of Selectmen passed a resolution on February 7, 2011 stating that the location of the project is consistent with the Local Comprehensive Plan and capital facilities planning or plan as per the Municipal Endorsement criteria in MPS ED1.3.

### **CONCLUSION**

Based on the above findings, the Commission hereby concludes:

1. That the probable benefits of the proposed project are greater than the probable detriments. This conclusion is supported by finding GF11.
2. That upon satisfaction of the conditions identified in this decision and with the specified relief granted, the proposed project is consistent with the 2009 (as amended) Regional Policy Plan.
3. The project can be found consistent with Falmouth's Local Comprehensive Plan and its local development by-laws/ordinances, as outlined in finding GF8 and GF9.
4. The project is not located in a District of Critical Planning Concern and therefore can be considered to be consistent with this criterion.

### **CONDITIONS**

The Commission hereby approves, with conditions, the Limited DRI / Hardship Exemption application of Woods Hole Oceanographic Institution for the proposed LOSOS building located at 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth, MA provided the following conditions are met:

#### **General Conditions**

- GC1. This decision is valid for a period of seven (7) years and local development permits may be issued pursuant hereto for a period of seven (7) years from the date of this written decision.
- GC2. The applicant shall obtain all necessary federal, state, and local permits for the proposed project.
- GC3. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, and remain in compliance herewith, shall be deemed cause to revoke or modify this decision.

GC4. No development work, as the term “development” is defined in the Cape Cod Commission Act, shall be undertaken until all appeal periods have elapsed or, if such an appeal has been filed, until all judicial proceedings have been completed.

GC5. All development shall be constructed in a manner consistent with the following plans and other information (attached to this decision as Exhibit A and incorporated by reference):

- Sheet EXF-01 titled “Northeast View”
- Sheet EXF-02 titled “Northwest View”
- Sheet EXF-03 titled “Southwest View”
- Sheet EXF-04 titled “Southeast View”
- Sheet LVL-01 titled “First Floor Level”
- Sheet LVL-02 titled “Second Floor Level”
- Sheet LVL-03 titled “Penthouse Level”
- Sheet LVL-04 titled “Roof Level”
- Sheet EL-01 titled “East and West Elevations”
- Sheet EL-02 titled “North South and Miscellaneous Elevations”
- Sheet C1.1 titled “Proposed Campus Map Location Plan”
- Sheet C1.2 titled “Existing Conditions”
- Sheet C1.3 titled “Erosion Control Plan”
- Sheet C1.4 titled “Proposed Site Layout Plan”
- Sheet C1.5 titled “Proposed Utilities Plan”
- Sheet C1.6 titled “Sewer System”
- Sheet C1.7 titled “Grading & Drainage”
- Sheet C1.8 titled “Proposed Stormwater System Details”
- Sheet C1.9 titled “Pressure Wash System Details”
- Sheet C1.10 titled “Proposed Water System Details”
- Sheet C1.11 titled “Proposed Sewer System Details”
- Sheet L1.2 titled “Planting Plan”
- Sheet L1.4 titled “Lighting Plan”
- Exhibit 10 in the application materials titled “Proposed Developed Area & Open Space Plan for LOSOS Laboratory” designed by Holmes & McGrath, dated December 7, 2010.

Any deviation to the proposed project from the approved plans, including but not limited to changes to the design, location, or other site work, shall require approval by the Cape Cod Commission through its modification process, pursuant to the Commission’s *Enabling Regulations*. The Applicant shall submit to the Commission any additional information deemed necessary to evaluate any modifications to the approved plans.

GC6. Prior to the issuance of a Building Permit for development, the Applicant shall obtain a Preliminary Certificate of Compliance from the Commission that states that all conditions in this decision pertaining to issuance of a Preliminary Certificate of Compliance / Building Permit have been met. Such Certificate of Compliance shall not be issued unless all conditions connected to the Preliminary Certificate of Compliance have been complied with.

- GC7. Prior to the issuance of a Certificate of Use/Occupancy, the Applicant shall obtain a Final Certificate of Compliance from the Commission that states that all conditions in this decision pertaining to issuance of a Final Certificate of Compliance / Certificate of Use/Occupancy have been met. Such Certificate of Compliance shall not be issued unless all conditions connected to the Final Certificate of Compliance have been complied with.
- GC8. The Applicant shall notify Commission staff in writing at least thirty (30) calendar days prior to its intent to seek each Preliminary and each Final Certificate of Compliance. Such notification shall include a list of key contact(s), along with their telephone numbers, mailing addresses, and email addresses, for questions that may arise during the Commission's compliance review. Commission staff shall complete an inspection under this condition, if needed, and inform the Applicant in writing of any deficiencies and corrections needed. The Commission has no obligation to issue any Certificate of Compliance unless and until all conditions are complied with.
- GC9. The Applicant agrees to allow Commission staff to enter onto the property, which is the subject of this decision, after reasonable notice to the Applicant, for the purpose of determining whether the conditions contained in this decision including those required prior to issuance of the Preliminary and Final Certificates of Compliance have been met.

#### **Natural Resources / Open Space**

- NRC1. In accordance with Finding NRF7, prior to the issuance of a Preliminary Certificate of Compliance, the Applicant shall provide to the Cape Cod Commission a conservation restriction consistent with Massachusetts General Laws Chapter 184, Section 31 – 33 and accompanying plan which provides that 4.45 acres identified as open space on the plan titled "Proposed Developed Area & Open Space Plan for LOSOS Laboratory" (Exhibit 10 of the application materials) dated December 7, 2010 and prepared by Holmes and McGrath shall be preserved as permanent open space. The restriction and site plan shall be provided for review and approval by Commission counsel, and shall be executed and recorded at the Registry of Deeds or Registry District of the Land Court. Proof of recording shall be provided to the Commission prior to issuance of a Final Certificate of Compliance.

#### **Landscaping**

- HPCCC1. Prior to the issuance of a Final Certificate of Compliance/Certificate of Use/Occupancy, due to the site's location adjacent to a vernal pool buffer, and to ensure compliance with MPS HPCC2.10, the Applicant shall implement the landscape plan submitted by Stephen Stimpson Associates on December 3, 2010 which retains existing areas of understory supplemented by appropriate native plantings in the northern project area and specifies the retention of seasonal leaf drop and understory detritus as habitat for vernal pool fauna.
- HPCCC2. Prior to the issuance of a Final Certificate of Compliance, a landscape maintenance agreement with tailored specifications regarding the treatment of habitat restoration areas described above shall be submitted for Commission staff review and approval for a minimum of three growing seasons to ensure vegetation is properly established and maintained with amphibian habitat needs in mind. A draft agreement is available from the Commission for the Applicant to review, upon request.

## **Water Resources**

- WRC1. To ensure compliance with MPS WR1.1, WR6.2, WR6.7, WR6.8, WR7.1, WR7.2, WR7.4, WR7.9 and WR7.10, the following information shall be submitted for Commission staff review and approval prior to the issuance of a Preliminary Certificate of Compliance:
- Copy of formal application to Massachusetts Department of Environmental Protection for groundwater discharge permit and corresponding materials.
  - Engineered grading & drainage plans, runoff calculations, detailed erosion control plans, and an updated operations and maintenance (O&M) plan consistent with preliminary plans described in Findings WRF6, WRF7, and WRF 8. The O&M plan shall detail specifications and operation & maintenance procedures for the washwater recycling system. Final stormwater plans shall be stamped by a licensed professional engineer (PE) certifying that plans meet MPS WR7.1, WR7.2, and WR7.4.
- WRC2. To ensure compliance with MPS WR1.1, WR6.2, WR6.7, WR6.8, WR7.1, WR7.2, WR7.4, WR7.9 and WR7.10, the following information shall be submitted for Commission staff review and approval prior to the issuance of a Final Certificate of Compliance:
- Amended sanitary and process groundwater discharge permits consistent with increased wastewater design flows described in Finding WRF4 of this decision. Process and sanitary wastewater design flows shall not exceed 38,500 gpd and 34,075 gpd, respectively.
  - MADEP-approved plans necessary to satisfy groundwater discharge permit conditions requiring
    1. a contract for sludge disposal, consistent with requirements of MPS WR6.7; and
    2. a financial security amount, consistent with requirements of MPS WR6.8.
- WRC3. To ensure compliance with MPS WR1.1 and WR6.2, groundwater discharge permit monitoring reports shall be submitted to the Commission when the reports are filed with MADEP.
- WRC4. To ensure compliance with MPS WR6.2, total nitrogen concentrations in groundwater at the downgradient property boundary shall not exceed 5-ppm-N. To demonstrate compliance with MPS WR6.2, the quality of water shall be monitored, recorded and reported for existing monitoring well MW-1 according to the following schedule:
- Static water level - quarterly;
  - Specific conductance - quarterly;
  - pH - quarterly;
  - Total Nitrogen (NO<sub>2</sub> + NO<sub>3</sub> + TKN) - quarterly;
  - Ammonia - quarterly;
  - Nitrate – quarterly;
  - Total Phosphorus - quarterly<sup>1</sup>;
  - Orthophosphate – quarterly<sup>1</sup>;
  - Chlorides - quarterly;

<sup>1</sup> Unless discontinued for other monitoring wells per GWDP 774-1.

- Sodium - quarterly;
- Volatile organic compounds – annually<sup>2</sup>.

WRC5. To ensure compliance with MPS WR7.10, as-built grading and drainage plans consistent with plans approved pursuant to Condition WRC.1 shall be submitted for review and approval by Commission staff prior to issuance of a Final Certificate of Compliance. Final as-built grading and drainage plans shall be stamped by a licensed professional engineer (PE) certifying that plans meet MPS WR7.1, WR7.2, and WR7.4.

WRC6. To ensure compliance with MPS WR7.10 at the time of the one (1) year report, a licensed professional engineer (PE) shall inspect the drainage system, including the washwater recycling system, and submit a letter to the Commission certifying whether the system was installed and is functioning as designed. If the system is not functioning as designed, a plan to bring the system into compliance shall be submitted for Commission staff review and approval.

**SUMMARY**

The Cape Cod Commission hereby approves with conditions the application of Woods Hole Oceanographic Institution for the construction of a 26,600 s.f. LOSOS building at 360 Woods Hole Road, Quissett Campus, Woods Hole, Falmouth, MA as a Limited DRI Hardship Exemption as outlined in this decision pursuant to Sections 12 and 13 of the Act, c. 716 of the Acts of 1989, as amended.

Royden Richardson  
 Royden Richardson, Commission Chair

03-17-2011  
 Date

**COMMONWEALTH OF MASSACHUSETTS**

**Barnstable, ss**

March 17, 2011

Before me, the undersigned notary public personally appeared Royden Richardson in his capacity as Chairman of the Cape Cod Commission, whose name is signed on the preceding document, and such person acknowledged to me that he signed such document voluntarily for its stated purpose. The identity of such person was proved to me through satisfactory evidence of identification, which was  photographic identification with signature issued by a federal or state governmental agency,  oath or affirmation of a credible witness, or  personal knowledge of the undersigned.

Gail P. Hanley  
 Notary Public  
 My Commission Expires:  
10.13.11

<sup>2</sup> As required for other monitoring wells per GWDP 774-1.