



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Article XIV, Andover Wetlands Protection By-Law

Provided by MassDEP:
090-1269

MassDEP File #

eDEP Transaction #

Andover

City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: Andover
Conservation Commission

2. This issuance is for
(check one): a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:
F. Mark and Phillip W. D'Annolfo
a. First Name b. Last Name

c. Organization
95 Suffolk Road

d. Mailing Address
Chestnut Hill MA 02467
e. City/Town f. State g. Zip Code

4. Property Owner (if different from applicant):
a. First Name b. Last Name

c. Organization

d. Mailing Address
e. City/Town f. State g. Zip Code

5. Project Location:
Frederick Drive Andover
a. Street Address b. City/Town
63 9, 9H
c. Assessors Map/Plat Number d. Parcel/Lot Number

Latitude and Longitude, if known: 42d37m11Ns 71d07m15Ws
d. Latitude e. Longitude



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A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Essex North 14360
 a. County b. Certificate Number (if registered land)
 114 285
 c. Book d. Page
7. Dates: June 7, 2016 January 16, 2018 Feb. 5, 2018
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 Subdivision Modification Plan, Frederick Drive
 a. Plan Title
 Andover Consultants Dennis A. Griecci, P.E.
 b. Prepared By c. Signed and Stamped by
 January 9, 2018 1"=40'
 d. Final Revision Date e. Scale
 See attached list of Reviewed Documents
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
 Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- a. Public Water Supply b. Land Containing Shellfish c. Prevention of Pollution
 d. Private Water Supply e. Fisheries f. Protection of Wildlife Habitat
 g. Groundwater Supply h. Storm Damage Prevention i. Flood Control
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	_____ a. square feet _____ e. c/y dredged	_____ b. square feet _____ f. c/y dredged	_____ c. square feet	_____ d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment	<u> </u> d. nourishment
14. <input type="checkbox"/> Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment	<u> </u> d. nourishment
15. <input type="checkbox"/> Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
17. <input type="checkbox"/> Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u> a. c/y dredged	<u> </u> b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	<u> </u> a. square feet	<u> </u> b. square feet		



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B. Findings (cont.)

* #22. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

22. Restoration/Enhancement *:
- a. square feet of BVW _____ b. square feet of salt marsh _____
23. Stream Crossing(s):
- a. number of new stream crossings _____ b. number of replacement stream crossings _____

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 090-1269 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. The work associated with this Order (the "Project") is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
 - iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
 - v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See Attached.

FREDERICK DRIVE – Denial Order of Conditions

DEP FILE NO. 090-1269 FINDINGS

1. **FINDING - JURISDICTION UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT, M.G.L.C. 131, S. 40.** The Andover Conservation Commission (Commission) hereby finds that all or part of the property on which the work is proposed is subject to jurisdiction under the Massachusetts Wetlands Protection Act, M.G.L.C. 131, s. 40.
2. **FINDING - JURISDICTION UNDER THE ANDOVER WETLAND PROTECTION BYLAW.** The Commission finds that all or part of the property on which the work is proposed is subject to jurisdiction under the Andover Wetlands Protection Bylaw, Article 14.
3. **FINDING – STORMWATER MANAGEMENT STANDARDS.** The Commission finds that stormwater runoff from the proposed project is subject to regulation under 310 CMR 10.05 (6)(k) Massachusetts Stormwater Management Standards as further defined and specified in the Massachusetts Stormwater Handbook (Handbook).
4. **RELIANCE UPON PEER REVIEW.** The Commission is in partial reliance upon a peer review of the filing completed by Thomas Peragallo, CPSS and Ann Marton, President of LEC Environmental Consultants, Inc. (LEC) and Daniel MacRitchie, PE of D.C. MacRitchie Inc. (MacRitchie). The documentation for this review is comprised of the following letter reports and/or their representations at Working Sessions held on February 2, 2017, April 13, 2017, and November 28, 2017 or during the Public Hearings attended by the Commission’s Peer Review consultants. This matter was on the Commission’s agenda for 14 meetings including June 21, 2016, September 6, 2016, May 16, 2017, June 6, 2017, June 20, 2017, July 5, 2017, August 1, 2017, August 15, 2017, September 5, 2017, October 3, 2017, November 7, 2017, December 5, 2017, December 19, 2017, and January 16, 2018. This matter received more than ample hearing time during the hearings that included discussion. During at least two hearings the applicants representatives were asked if they had or wished to present any alternatives to the design they were proposing in an attempt to mitigate the problems with their current design. The applicant never proposed any alternative design.
 - 4.1. MacRitchie Initial Peer Review and Recommendations dated August 16, 2016;
 - 4.2. MacRitchie Peer Review and Recommendations dated May 23, 2017;
 - 4.3. MacRitchie Peer Review and Recommendations dated June 23, 2017;
 - 4.4. MacRitchie Peer Review and Recommendations dated July 31, 2017;
 - 4.5. MacRitchie Peer Review and Recommendations dated October 18, 2017;
 - 4.6. MacRitchie Peer Review and Recommendations dated January 8, 2018; and
 - 4.7. MacRitchie Peer Review and Recommendations dated January 9, 2018.
 - 4.8. LEC Environmental Memorandum dated August 16, 2016;
 - 4.9. LEC Environmental Peer Review dated January 17, 2017;
 - 4.10. LEC Environmental Follow-Up Peer Review dated March 1, 2017;
 - 4.11. LEC Environmental Memorandum dated September 5, 2017;
 - 4.12. LEC Environmental Memorandum dated January 12, 2018

The Commission and its consultants, in evaluating the Notice of Intent submittal and supporting documents, have relied solely upon the data and representations made by the Applicant and its

representatives. Accordingly, the Applicant shall indemnify and save harmless the Commission, its consultants, Agents, and the Town of Andover.

5. FINDING – STORMWATER DISCHARGE. The Commission finds that the information submitted by the applicant pertaining to the stormwater discharge from the proposed infiltration basin is insufficient to describe the effect of the work on the interests identified in the Wetlands Protection Act.

5.1. Background:

- 5.1.1. Standard 1 requires the applicant to demonstrate that stormwater “discharge velocities will not cause erosion or scouring at the point of discharge or downstream. Discharge velocities from BMPs should take into account factors such as soils, slope and the type of receiving resource.” (v1,c1,p5)
- 5.1.2. The proposed infiltration basin discharges stormwater through a 30-inch diameter pipe to a riprap apron followed by a level spreader followed by a steeply sloped section of naturally vegetated ground cover followed by the B flag series bordering vegetated wetland (BVW B). Contours provided on the plan indicate that the ground elevation at the lower end of the apron is 190 +/- and the elevation at BVW B is approximately 182 +/- which equates to a ground slope in the 26% to 32% range between the riprap apron and BVW B.
- 5.1.3. The applicant modelled the area between the riprap apron and BVW B in HydroCAD as a 24-foot wide by 1-foot deep uniformly sloped and graded channel. However, there is no existing or proposed channel in this area.
- 5.1.4. According to the applicant’s HydroCAD model:
- the maximum stormwater discharge flow rate out of the basin is 33 cubic feet per second (cfs), and
 - if there was a 24-foot wide by 1-foot deep uniform channel (as modelled) between riprap apron and BVW B, that channel would have a 7” depth of flow and a flow velocity of 3.44 feet per second (fps) during the peak flow condition.
- 5.1.5. Because the area below the level spreader is steep and irregular (not uniformly sloped or graded) the flow will not be uniform as modelled. There is a significant likelihood that flow will re-concentrate on the slope resulting in higher velocities than 3.44 fps.

5.2. Information which is lacking:

- 5.2.1. Calculations of the maximum expected discharge velocity between the riprap apron and BVW B based upon assumptions consistent with proposed ground conditions. (v1,c2,p2)
- 5.2.2. A demonstration that the ground and ground cover between the riprap apron and BVW B will resist erosion from the maximum discharge velocity.

- 5.3. Why this information is necessary: Stormwater discharging to the steeply sloped ground surface has the potential to cause erosion and scour which could destabilize the basin and/or result in sediment transport into the BVW B. The applicant proposed, as a contingent alternative to be implemented if and only if unacceptable scouring occurred from the area below the level spreader, that additional riprap be installed in the 25-foot No Disturbance

Zone, causing a permanent disturbance of 925± square feet of the 25-foot No Disturbance Zone. The Commission finds that this amount of disturbance in a No Disturbance Zone is contrary to the interests of the Andover Wetland Bylaw.

6. FINDING – INFILTRATION BASIN. The Commission finds that the infiltration basin fails to meet Massachusetts stormwater management standards.
 - 6.1. An infiltration basin is proposed to comply with Standards 1 through 4 (no untreated discharges, peak flow attenuation, recharge and water quality).
 - 6.2. Logs included in the stormwater report from test pits at the proposed basin location describe the following soil conditions:
 - A layer of existing fill of varying depths (18” to 48”)
 - In some locations a 6” to 7” A layer
 - No B layer in one location and a 29” B layer in another.
 - Seasonal high groundwater ranging from 38” to 48” below the ground surface
 - C layer material descriptions ranging from fsl (fine sandy loam) to gleyed material with “very high silt content, gray soil, some clay”
 - 6.3. The proponent proposes to remove existing unsuitable material within proposed basin elevation 194 to elevation 190 and backfill with clean fill. (sheet 2,4,5)
 - 6.4. A large infiltration basin embankment is proposed to be constructed over the existing fill along the property line.
 - 6.5. The Handbook’s Structural Best Management Practices (BMP) Specifications for Infiltration Basins cites high failure rates of infiltration basins due to improper siting, inadequate pretreatment, poor design and lack of maintenance. This section provides additional requirements specific to infiltration basins to minimize the probability of failure. One of the additional provisions is the requirement that infiltration basins should never be located above fill:
 - 6.5.1. Table IB.1 includes a requirement that “Infiltration basins should not be placed over fill materials.”
 - 6.5.2. The Infiltration Basin Design section includes an additional statement to “never locate infiltration basins above fill.”, (v2,c2,p90)
 - 6.6. General guidance from volume 3, chapter 1 of the Handbook regarding the placement of fill under infiltration BMPs (v3,c1,p12) does not relieve the applicant from compliance with volume 2, chapter 2 Handbook BMP specifications specific to infiltration basins precluding the placement of fill under the infiltration basin. The Commission is concerned that the placement of fill material under the basin increases the likelihood that the basin will fail, especially considering the poor and variable characteristics of the soils proposed to remain under the basin. The clear ban on the placement of infiltration basins above fill in the DEP Stormwater Handbook carried great weight for the Commission as a deciding factor. Therefore, the Commission finds that the infiltration basin as proposed fails to meet Massachusetts stormwater management standards.
7. FINDING – CONSTRUCTION PERIOD EROSION, SEDIMENTATION, AND POLLUTION PREVENTION PLAN. The Commission finds that the information submitted by the applicant

pertaining to construction period erosion, sedimentation, and pollution prevention is insufficient to describe the work and the effect of the work on the interests identified in the Wetlands Protection Act.

7.1. Background:

- 7.1.1. A construction period erosion, sedimentation, and pollution prevention plan is required by Standard 8.
- 7.1.2. An incomplete Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan was included in the 12/18/17 Stormwater Management Report.
- 7.1.3. The Handbook states that the construction period pollution prevention and erosion and sedimentation control plan should ordinarily be included in the Stormwater Report submitted with the Notice of Intent. For highly complex projects, where the proponent demonstrates that submission with the Notice of Intent is not possible, the issuing authority has the discretion to issue an Order of Conditions authorizing a project prior to submission of the construction period pollution prevention and erosion and sedimentation control plan.
- 7.1.4. The proponent has not demonstrated that the project is a highly complex project nor has it demonstrated that submission of the plan with the Notice of Intent was not possible.

7.2. Information which is lacking:

- 7.2.1. Identification of all stormwater management activities that are needed during land disturbance and construction, including source control and pollution prevention measures, BMPs to address erosion and sedimentation, stabilization measures, and procedures for operating and maintaining the BMPs, especially in response to wet weather events and frost.
- 7.2.2. A schedule for sequencing construction and stormwater management activities that minimizes land disturbance by ensuring that vegetation is preserved to the extent practicable, and disturbed portions of the site are stabilized as quickly as possible
- 7.2.3. Demonstration that the BMPs used during construction will be different from the BMPs that will be used to handle stormwater after construction is completed and the site is stabilized. Many stormwater technologies (infiltration technologies) are not designed to handle the high concentrations of sediments typically found in construction runoff, and thus must be protected from construction-related sediment loadings.
- 7.2.4. Demonstration that construction period BMPs are properly designed, and sediment traps are sized to provide adequate capacity and retention time to allow for proper settling of fine-grained soils.
- 7.2.5. Requirements for the proper O&M of construction period BMPs.
- 7.2.6. The plan should include specific details regarding the sequencing of the work including the construction/stabilization of permanent BMPs and details regarding the timing of placing the BMP's online.
- 7.2.7. The plan should provide provisions to ensure that the infiltration basin is not used as a temporary sediment trap for construction activities and to ensure that construction equipment does not drive over the infiltration basin area.
- 7.2.8. Details for temporary BMPs need to be included in the plan as necessary prior to placing permanent BMPs online.
- 7.2.9. E&S details pertaining to the constructed earthen embankments need to be provided

to prevent embankment erosion and ensure that embankment materials do not wash offsite or into jurisdictional areas.

7.3. Why this information is necessary:

- 7.3.1. to prevent pollutants from moving offsite or entering wetlands or waters during land disturbance and construction activities;
- 7.3.2. to prevent damage to permanent BMPs including the infiltration basin and the infiltration basin receiving soils; and
- 7.3.3. to verify that the plan is consistent with Standard 8 requirements.

ADDITIONAL FINDINGS FOR DENIAL THAT THE PROPOSED WORK CANNOT BE CONDITIONED TO MEET THE STANDARDS SET FORTH IN THE ANDOVER WETLANDS PROTECTION BYLAW:

8. FINDING – NO DISTURBANCE BUFFER ZONE. The Commission finds that the information submitted by the applicant is insufficient to protect the interests identified in the Bylaw and its Regulations in Section 4 (2) Vegetated Buffer Zone and Section 7 (6) Buffer Zone.

8.1. Background:

- 8.1.1. Section 4 (2) Vegetative Buffer Zone states that “there shall be no removal of vegetation, excavation or filling within 25 feet of any...isolated vegetated wetland...except as permitted as a limited project, wetland crossing or water dependent structure.”
- 8.1.2. Section 7 (6) Buffer Zone (b) Presumption 1. states that “There shall be no removal of vegetation, excavation or filling (except as permitted as a limited project, wetland crossing or water dependent structure) within 25 feet of any...isolated vegetated wetland.
- 8.1.3. The applicant did not file this project as a limited project under 310 CMR 10.53 or Section (4) Limited projects of the Bylaw Regulations. The project involves filling isolated vegetated wetlands, but not a wetland crossing or water dependent structure.
- 8.1.4. The applicant is proposing to alter a total of 36,366 square feet of the 25-foot No Disturb Buffer Zone or Buffer Strip. More specifically, the applicant is proposing to alter 28,101 square feet of the 25-foot No Disturbance Zone or Buffer Strip extending laterally from isolated vegetated wetland “D” (Wetland “D”). All of the 25-foot No Disturbance Zone or Buffer Strip to Wetland “D” is naturally vegetated forested upland. The applicant is proposed to alter 8,265 square feet of the 25-foot No Disturbance Zone or Buffer Strip extending laterally from isolated vegetated wetland “E” (Wetland “E”). All of the 25-foot No Disturbance Zone or Buffer Strip to Wetland “E” is regularly mowed and managed as lawn.
- 8.1.5. The applicant has proposed to enhance 7,459 square feet of Wetland “E,” to stop mowing 4,626 square feet of the 25-foot No Disturb Buffer Zone to Wetland “E” and allow it to naturally grow follow, and continue to mow and maintain as lawn 4,777 square feet of the 25-foot No Disturb Buffer to Wetland “E”.

8.2. Information which is lacking:

- 8.2.1. The applicant did not file as a limited project, wetland crossing or water dependent use. The Commission finds no provision in the Bylaw or Bylaw Regulations that would allow for the proposed alteration of 25-foot No Disturbance Buffer Zone.
- 8.2.2. The applicant has failed to fully protect the 25-foot Buffer Zone surrounding the unfilled portions of Wetland "E" by proposing to continue maintain 4,777 square feet of the 25-foot No Disturb Buffer Zone to Wetland "E" as lawn.
- 8.2.3. The applicant has proposed to create Wetland Replication Area 1 (encompassing 15,715 square feet) to provide 1:1 mitigation for filling of Wetland "D" and Wetland "E". This wetland replication area is located on Lot 21 immediately adjacent to the proposed stormwater infiltration basin and the abutting property boundary.
- 8.2.4. The applicant has failed to adequately protect the 25-foot No Disturbance Buffer Zone surrounding Wetland Replication Area 1. 13,443 square feet of the Buffer Zone to Wetland Replication Area 1 will be maintained as lawn, or drainage swales and a stormwater basin. In addition, an unknown quantity of the 25-foot Buffer Zone to the Wetland Replication Area 1 extends across the property boundary and onto the abutting property.
- 8.2.5. The applicant has proposed to create Wetland Replication Area 2 (encompassing 3,600 square feet) to mitigate for filling a wetland that is only federally protected.
- 8.2.6. The applicant is proposing 4,205 square feet of Buffer Zone replanting adjacent to Wetland Replication Area 2, but this Wetland Replication Area is not large enough to be protectable under the Bylaw. Therefore the 4,205 square feet of "Buffer Zone" replanting surrounding Wetland Replication Area 2 is not afforded any protection under the Bylaw and cannot be counted as Buffer Zone mitigation under the Bylaw.
- 8.2.7. In summary, the applicant has proposed to alter 36,366 square feet of the 25-foot No Disturbance Zone and only provided 6,226 square feet of vegetated or fallow Buffer Zone to mitigate for this impact.
- 8.2.8. The applicant has not overcome the presumption of significance afforded the 25-foot No Disturbance Zone in Section 4 (2) Vegetated Buffer Zone and Section 7 (6) Buffer Zone.

A. 8. Additional Plan or Document References

Materials Submitted and Reviewed by the Commission and/or its Consultants:

Doc Date:	Prepared By:	Document:
06-07-2016	Andover Consultants Inc.	WPA Form 3-Notice of Intent, NOI Wetland Fee Transmittal Form, Drawing List, Notice of Intent Report (dated 03-17-16), Abutter Notification Materials, Wetland Replication Detail (dated 03-21-16)
05-26-2016	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
05-26-16	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 6
06-22-2016	DEP-NERO	File Number Review Comments
07-18-2016 (revised)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
07-18-2016 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 6
07-19-2016	Andover Consultants Inc.	Letter to Conservation Commission, Frederick Drive Subdivision Modification, Response to IDR Comments
07-19-2016	Andover Consultants Inc.	Letter to Conservation Commission, NOI for Frederick Drive Subdivision Modification
12-05-2016	Andover Consultants Inc.	11x17 Wetland Mitigation Plan Frederick Drive, Andover, MA (DEP File #090-1269)
12-07-2016	Wetland Consulting Services	Wetland Mitigation Plan Frederick Drive, Andover, MA (DEP File #090-1269)
02-06-2016 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 8
02-06-2016 (revised)	Wetland Consulting Services	Wetland Mitigation Plan Frederick Drive, Andover, MA (DEP File #090-1269)
12-14-2016 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 8
03-17-2017 (revised)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
03-17-2017 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan, Sheets 1 through 8
06-06-2017 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 8

A. 8. Additional Plan or Document References (cont'd)**Materials Submitted and Reviewed by the Commission and/or its Consultants:**

06-14-2017 (revised)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
06-14-2017	Andover Consultants Inc.	Three Letters Responding to 5-23-17 Peer Review Comments
07-11-2017 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1 through 8
07-11-2017 (revised)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
07-11-2017	Andover Consultants Inc.	Three Letters Responding to 6-23-17 Peer Review Comments
09-28-2017 (revised thru)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1-8
09-28-2017 (revised thru)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
10-03-2017	Andover Consultants Inc.	Letter Responding to September 20, 2017 Dan MacRitchie Peer Review Email
Undated	Andover Consultants Inc.	Unstamped Subdivision Modification Plan Received by email PDF format 12-17-2017 Frederick Drive, Sheets 1-8 (Sheet 9 excluded)
12-05-2017	Wetland Consultants Inc.	Additional Plantings Along Detention Basin Slope
12-07-2017	Andover Consultants Inc.	11x17 Alternative Rip Rap Slope Design
12-18-2017 (revised thru)	Andover Consultants Inc.	Stormwater Management Report, Frederick Drive
01-08-2018 (revised)	Andover Consultants Inc.	11x17 Alternative Rip Rap Slope Design
01-09-2018	Wetland Consultant Services	Revised Contingency Planting Plan Memo
01-09-2018 (revised)	Andover Consultants Inc.	Frederick Drive Subdivision Modification Plan Sheets 1-9
01-10-18 (revised)	Wetland Consultant Services	Revised Contingency Planting Plan Memo



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Article XIV, Andover Wetlands Protection By-Law

Provided by MassDEP:
090-1269
MassDEP File #

eDEP Transaction #
Andover
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Andover Conservation Commission hereby finds (check one that applies):
Conservation Commission
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:
Article XIV, Andover Wetlands Protection By-Law By-Law
1. Municipal Ordinance or Bylaw 2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw	2. Citation
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3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):
See Attached



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 090-1269
 MassDEP File #

eDEP Transaction #
 Andover
 City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Feb 5, 2018
 1. Date of Issuance

Please indicate the number of members who will sign this form.
 This Order must be signed by a majority of the Conservation Commission.

6
 2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Signature]
[Signature]
[Signature]

[Signature]
[Signature]
Alexandra Driscoll

by hand delivery on

by certified mail, return receipt requested, on

Date

February 5, 2018
 Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Article XIV, Andover Wetlands Protection By-Law

Provided by MassDEP:
090-1269
MassDEP File #

eDEP Transaction #
Andover
City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Andover
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Andover
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Frederick Drive
Project Location

090-1269
MassDEP File Number

Has been recorded at the Registry of Deeds of:

Essex North
County

Book

Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant